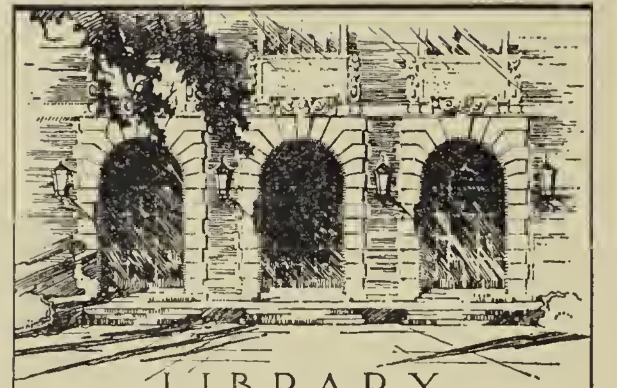

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# CONTRIBUTION TO THE SURGERY OF BONES, JOINTS AND TENDONS

JOHN B. MURPHY, A.M., M.D., LL.D.
President of the American Medical Association
CHICAGO

In treating this subject I have divided the work into three distinct groups, and will present it as three separate papers, each one, however, interdependent on the others. In order that the genetic elements may be more readily appreciated, it is essential that I mention, in a cursory way, at least, elemental embryologic, histologic and anatomic factors at the beginning of each separate paper.

These papers constitute only an illustrative synopsis of the work as it would be impracticable to publish it in The Journal in full. It will appear in its entirety in a monograph later.

## *SURGERY OF BONES*

### ANATOMY AND EMBRYOLOGY OF BONE

Grossly, bones are divisible into four classes: long, short, flat and irregular. The long bones are found in the limbs, where they form a system of levers which have to sustain the weight of the body and confer the power of locomotion. The shaft of a long bone is contracted and narrowed to afford greater space to the bellies of the muscles. The extremities are generally somewhat expanded for greater convenience of motor connection, for the purpose of articulation and to afford a bony surface for muscular attachment. The long bones are not straight, but curved, the curve generally taking place in two directions, thus affording greater strength to the bone.

Where a part of the skeleton is intended for strength and compactness, and its motion is at the same time slight and limited, it is divided into a number of small pieces united by ligaments, and the separate bones are short and compressed. The patella and the other sesamoid bones may be regarded as short bones.

Where the principal requirement is that of extensive protection or the need of large bony surfaces for muscular attachment, we find the osseous structure expanded into flat bony plates, as is the case in the bones of the skull and scapula. In the cranial bones there are layers of compact tissue known as tables. The outer table is thick and tough; the inner table is thinner, denser and more brittle, and hence termed the vitreous table, while the intervening cancellated tissue is called the diploë. The irregular bones are those which, because of their peculiar form, cannot be grouped under any of the preceding heads. Their structure is similar to that of the cranial bones, consisting of a layer of compact tissue externally, with spongy tissue underneath.

Studying more minutely the structure of bone, we find that it nearly always develops from a connective tissue foundation, even when it occurs in places formerly occupied by cartilage. The inorganic substance of the bone is compressed in or between the fibers of connective tissue, while the cells of the latter are transformed into bone cells.

As in connective tissue, so in bones, the ground substance is fibrous. Between the fibers are uncalcified cells, bone cells, each of which rests in a cavity of the matrix, called a lacuna.

Primarily, bone consists of a single thin lamella, its later complicated structure being produced by the formation of new lamellæ in apposition to the first. During its development the bone becomes vascularized, and the vessels are enclosed in especially formed canals, known as haversian canals.

The bone cells have processes that anastomose with the processes of other cells. They lie in special canals known as canaliculi (Fig. 1).

The appearance presented by a transverse section of a shaft of a long bone is as follows: In the center is a large marrow cavity, and at the periphery the bone is covered with a dense connective tissue membrane, the periosteum. In the new-born, and in young individuals, the periosteum is composed of three layers, the outer layer consisting mainly of rather coarse white fibrous tissue, a middle fibro-elastic layer, and an inner osteogenetic layer. The latter is vascular and rich in cellular elements. In the adult, the osteogenetic layer has practically disappeared, leaving here and there a few of its cells, a factor that must be reckoned with in every effort at osteal transplantation or grafting. While the fibro-elastic layer is correspondingly thicker, a large number of haversian canals containing blood-vessels, seen mostly in transverse sections, are found in compact bone-tissue. Lamellæ of bone are plainly visible throughout the ground substance and are arranged in the following manner:

First, there is a set of bone lamellæ running parallel to the external surface of the bone, while another set is similarly arranged around the marrow cavity. These are the so-called fundamental lamellæ, known also as periosteal and marrow lamellæ, or outer and inner circumferential lamellæ. Around the haversian canals are the concentrically arranged lamellæ, forming systems of haversian lamellæ. Besides the systems already mentioned there are found interstitial lamellæ wedged in between the haversian systems of lamellæ. Scattered between the lamellæ are found the spaces known as lacunæ, containing the bone-cells (Fig. 2).

It is very probable that all lamellæ are in more or less direct communication with each other by means of the fine canals or canaliculi. The canaliculi of the haversian lamellæ empty into the haversian canals. The lamellæ of bone are composed of fine white fibrous tissue fibrils imbedded in a ground substance in which they are arranged in layers superimposed in such a way that the fibers in the several layers cross at a right angle, forming an angle of 45 degrees with the long axis of the haversian canal. It is as yet undecided whether the mineral salts are deposited in the ground substance or in the fibrillæ.

In each lacuna there is found a bone-cell, the nucleated body of which practically fills the lacuna, while its processes extend out into the canaliculi.

The haversian canals contain blood-vessels, either an artery or a vein, or both. Between the vessels and the walls of the canals are perivascular spaces bounded by endothelial cells. Into these spaces empty the canaliculi of the haversian system. All the lacunæ and canaliculi should be considered as filled by lymph plasma which circulates throughout the bone, bathing the bone-cells and the processes (Fig. 3).

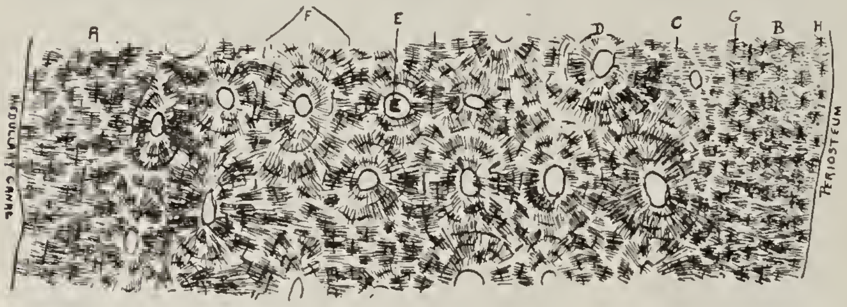

Fig. 1.—Cross-section of long or compact bone showing (A) inner and (B) outer circumferential lamellæ. (C), interstitial lamellæ; (D), haversian lamellæ; (E), haversian canals; (F), haversian system; (G), bone-cells lying in lacunæ; (H), canaliculi. (After Piersol.)

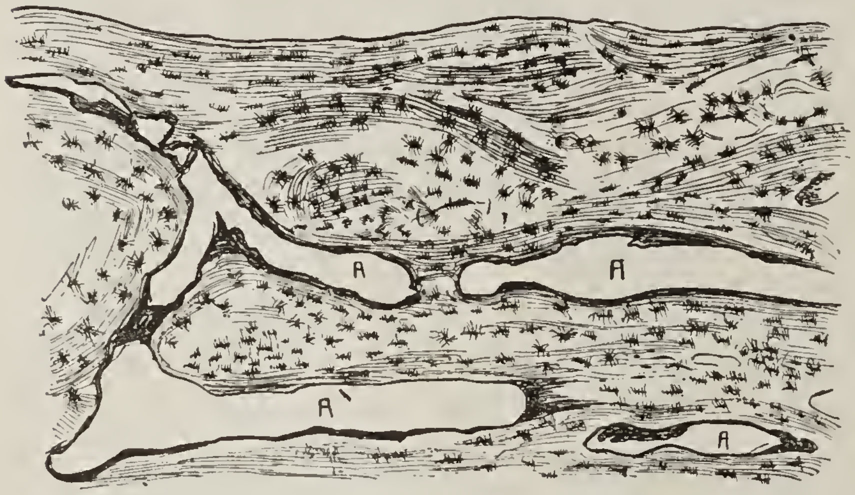

Fig. 2.—Longitudinal section of long or compact bone showing the haversian canals (A) and the lamellæ with lacunæ and canaliculi between them. (After Piersol.)

The marrow not only fills up the cylindrical cavity in the center of the shaft of the long bones, but also fills the spaces of the cancellous tissue and extends into the haversian canals. It varies in composition in different bones. In the shaft of the adult long bone the marrow is yellow, contains areolar tissue and vessels, and consists of a matrix of fibrous tissue supporting the blood-vessels. In short and flat bones and in the articular ends of the long bones the composition is somewhat different, consisting of seventy-five parts of water and twenty-five parts of solid matter. In the marrow numerous cells are found, known as the marrow cells of Kölliker. They resemble in appearance lymphoid corpuscles. Among them may be seen the smaller cells, the normoblasts, from which the red corpuscles are derived

### DEVELOPMENT OF BONE

In the study of the embryology of the fetal skeleton it is found that some bones are formed from a white fibrous elastic membrane, such as those forming the roof and sides of the skull. Others, such as the bones of the extremities, are formed from cartilage. Hence, two kinds of ossification are described, intrafibrous or intramembranous, and intracartilaginous.

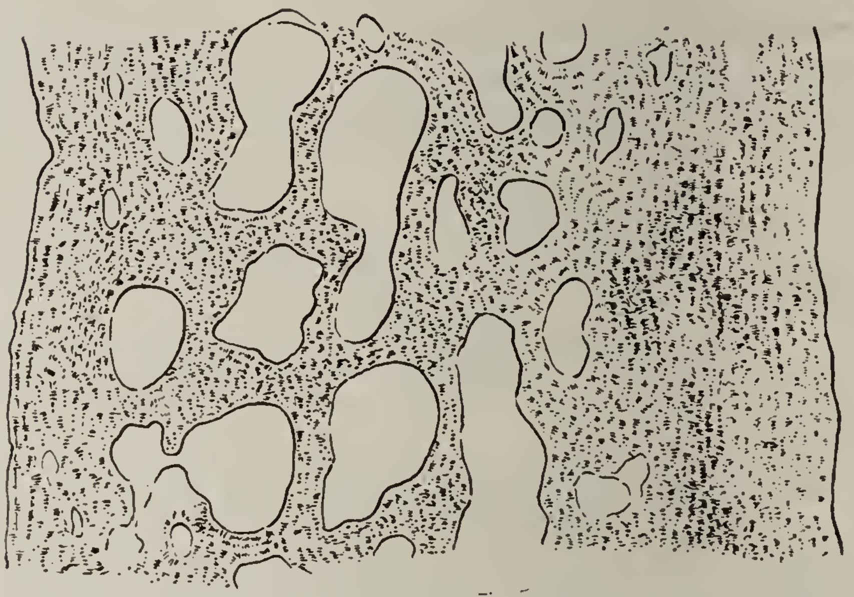

Fig. 3.—Cross-section of a flat or cancellous bone (frontal) showing spaces which normally contain red marrow and the cancellous or porous structure of the bone. These bones do not contain lamellæ or haversian canals. The outer and inner portions are more compact than the intervening or central portion. The former are known as outer and inner tables; the center, diploë. (After Piersol.)

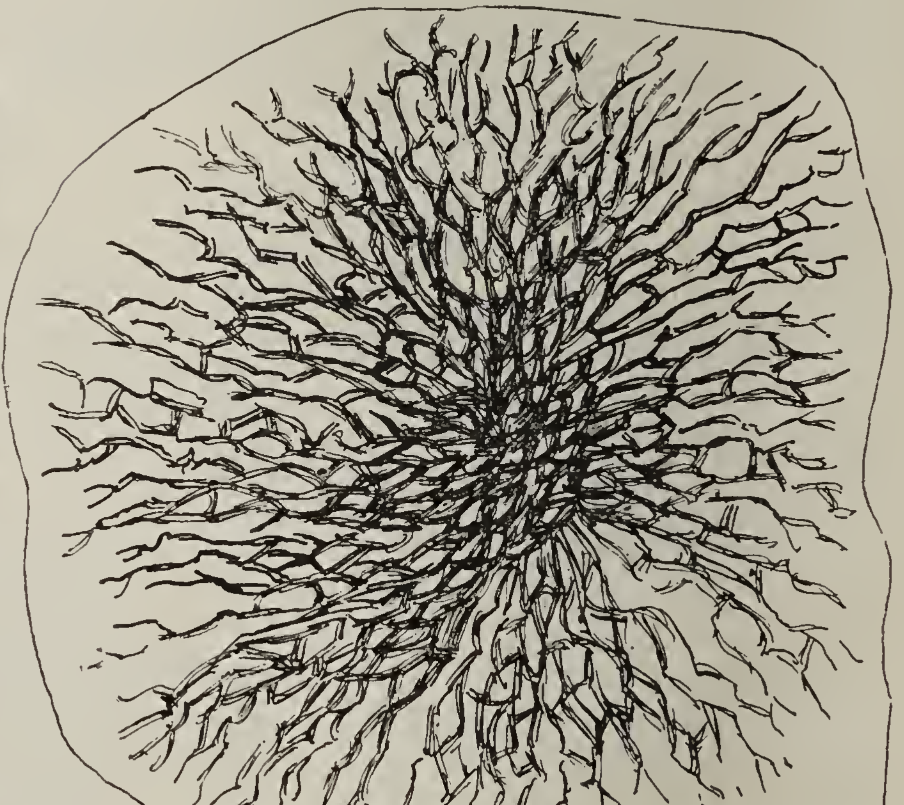

Fig. 4.—A developing flat bone showing ossifying process proceeding outward from the center of ossification. The branching radiating lines represent the ossifying connective tissue fibers on which osteoblasts are being deposited. The intervening spaces will eventually contain red marrow. (After Piersol.)

*Intrafibrous Ossification.*—In the case of bones which are developed from membranes, no cartilaginous mold or stage precedes the appearance of the bone tissue. The membrane which occupies the place of the future bone is of the nature of connective tissue, and ultimately forms the periosteum. The outer portion is more fibrous than the internal, in which the cells or osteoblasts pre-

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dominate. The whole tissue is richly supplied with blood-vessels.

At the onset of the process of bone formation, a little network of bony spiculæ is first noticed, radiating from the point or center of ossification. Microscopically, it consists of a network of fine clear fibers with an intervening ground substance (Fig. 4). These are termed osteogenetic fibers. They soon take on a dark and granular appearance from the deposit of calcareous granules in the fibers and the intervening matrix. As they calcify, they are found to enclose some of the granular corpuscles or osteoblasts. The latter form the corpuscles of the future bone, and the spaces in which they are enclosed are the lacunæ. As the osteogenetic cells grow to the periphery they calcify and then give rise to fresh bone spiculæ.

Thus a network of bone is formed, the meshes of which contain the blood-vessels and a delicate connective tissue crowded with osteoblasts. These bony spiculæ thicken by the accretion of layers formed by the osteoblasts and the meshes become smaller. Subsequently, separate layers of bony tissue are deposited in the periosteum and around the large vascular channels.

*Intracartilaginous Ossification.*—Just before ossification begins to take place, the bone is entirely cartilaginous, and in the long bone the process commences in the center (shaft ossification) and proceeds toward the extremities, which for some time remain cartilaginous. Subsequently, a similar process commences in one or more places in these extremities (epiphyseal ossification), and gradually extends from them. The extremities do not, however, become joined to the shaft by bony tissue until growth is completed, but are attached to it by a layer of cartilaginous tissue termed the epiphyseal cartilage.

The first step in the ossification of cartilage is the enlargement of the cartilage cells, which arrange themselves in rows at a point termed the center of ossification. The matrix in which they are imbedded increases in quantity, so that the cells become farther separated from each other. A deposit of calcareous matter now takes place in this matrix, between the rows of cells, so that they become separated by longitudinal columns of calcified matrix, presenting a granular and opaque appearance. Here and there the matrix between two cells of the same row also becomes calcified and the transverse bars of calcified substance stretch across from one calcareous column to another. Thus, there are longitudinal growths of the cartilaginous cells enclosed in oblong cavities, the walls of which are formed of calcified matrix, which cuts off all connection between the cells, and they form spaces called the primary areolæ.

At the same time that this process is going on in the center of the solid bar of cartilage of which the fetal bone consists, certain changes are taking place on its surface. This is covered by a vascular membrane, the perichondrium, on the inner surface of which, that is to say, on the surface in contact with the cartilage, are gathered the formation cells (genetic cells), the osteoblasts. By these cells a thin layer of bony tissue is formed between the perichondrium and the cartilage. There are in this first stage of ossification two processes going on simultaneously — in the center of the cartilage the formation of a number of oblong spaces, and on the surface of the cartilage the formation of a layer of true bone.

The second stage consists of the prolongation into the cartilage of processes of the osteogenetic layer of the perichondrium, which has now become periosteum. The processes consist of blood-vessels and cells, osteoblasts or bone formers, and osteoclasts or bone-destroyers. The latter are similar to the giant cells found in the marrow. They excavate passages through the new-formed bony layers and grow through into the calcified matrix.

Wherever these processes come in contact with the calcified walls of the primary areolæ they absorb them, and thus cause assimilation of the original cavity and the formation of larger spaces, known as medullary spaces. These spaces become filled with embryonic marrow, consisting of vessels carrying osteoblasts on their walls, and derived in the manner described above from the osteogenetic layer of the periosteum. The walls of these medullary spaces are at this time of inconsiderable thickness, but they become thickened by the deposit of layers of new bone in their interior in the following manner:

Some of the osteoblasts arrange themselves as an epithelioid layer on the surface of the wall of the canal. This forms a bony stratum and thus the space becomes gradually covered with a layer of true osseous substance. By the repetition of this process, the original cavity becomes very much reduced in size, and at last remains a small circular hole, containing blood-vessels and a few osteoblasts. This small cavity constitutes the haversian canal of the perfectly ossified bone. These canals play the most important rôle in the osteogenesis of transplanted or grafted bone fragments; in fact, they are absolutely necessary to the regeneration of bone in a graft. For that reason I have gone into the minute histology of their osteogenetic changes and potency.

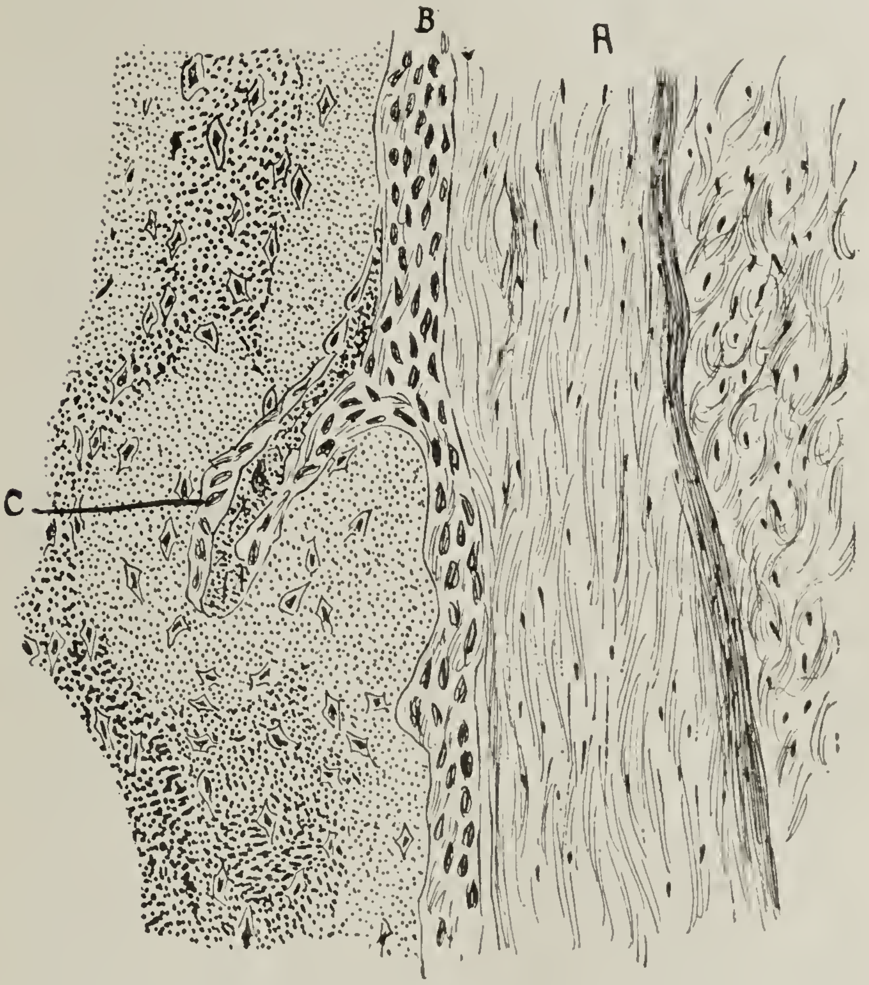

Fig. 5.—Longitudinal section of young periosteum showing the outer fibrocellular layer (A) and the inner cellular or osteogenetic layer (B) which plays an active rôle in bone formation. At C is seen a so-called periosteal bud consisting of osteoblasts, nerves and blood-vessels. This bud is growing into the cartilaginous matrix, depositing bone as it proceeds inward. (After Piersol.)

Other changes may be observed at the centers of ossification. A similar process has been set up elsewhere and has been gradually proceeding toward the end of the shaft, so that in the ossifying bone all the changes described above may be seen in different stages, from the true bone in the center of the shaft to the hyaline cartilage at the extremity.

This process of ossification, however, is not the origin of the whole of the skeleton, for even in the bones in which the ossification proceeds in a great mass from a single center situated in the cartilaginous shaft of a long bone, a considerable part of the original bone is formed by intramembranous ossification beneath the perichondrium. The shaft of the bone is at first solid, but later a tube is hollowed out in it by absorption around the vessels passing into it, and this tube becomes the medullary canal. This medullary canal, with the haversian canals, lacunæ, canaliculi and the deep periosteal layer, forms a continuous network, the spaces of which are filled with the essential medullary structures — fat, blood, lymphatics, osteoblasts and osteoclasts. They form the "genetic tree" of bone production, reproduction and absorption.

This absorption is attributed to the activities of the osteoclasts, which vary in shape and size and are recognized by their large number of clear nuclei. The presence of similar cells in some bone tumors has led to the designation "myeloid" tumors. These are the cells that remove the transplant or bone graft as ossification advances in it by the osteoblasts in the genesis of the new bone to supplant the graft.

As more and more bone is removed by this process of absorption, and the medullary canal becomes larger, so more and more bone is deposited on the exterior from the periosteum, until at length the bone has attained the shape and size which it was destined to retain during adult life.

As the ossification of the cartilaginous shaft extends, the articular ends of the cartilage grow as they ossify, and thus the bone is increased in length. The epiphysis remains for some time entirely cartilaginous; then a bony center appears in it, in which occurs the same process of intracartilaginous ossification as described above. The epiphysis remains separated from the shaft by a cartilaginous layer for a definite time. This layer ultimately ossifies and the bone assumes its complete form and shape. This cartilaginous layer — epiphyseal line — inhibits the advancement of infective processes which originate in the epiphysis of bone, such as tuberculosis, from passing into the shaft, and also inhibits the acute osteomyelitic infections, which always originate in the shaft, from passing into the epiphysis or into the joint.

It plays a major rôle in the control and guidance of the infective processes in bones, which must be clearly understood to appreciate the action of pathologic processes in the bone. It is a barrier of non-infectible cartilaginous material. The same remarks also apply to the processes of bone which are separately ossified, such as the trochanters of the femur.

The bones which have been formed continue to grow until the bone has acquired its full growth. The number of ossific centers varies in different bones. In most short bones ossification commences at a single point in the center and proceeds toward the periphery. In the long bones there is a center of ossification for the shaft and one or more for each extremity. The ossifying center for the shaft is the first to appear.

The union of the epiphysis with the shaft takes place in the reverse order to that in which the ossification begins, with the exception of the fibula, and appears to be regulated by the direction of the nutrient artery of the bone. Thus, the nutrient artery of the bones of the arm and forearm is directed toward the elbow and the epiphyses of the bones forming this joint become united to the shaft before those at the opposite extremity. This accounts for the early invasion of the elbow by the pathologic processes which originate in the shaft of the humerus or ulna, and for the shaft involvement in processes beginning in the epiphysis, which is true only in this joint.

In the lower limb, on the other hand, the nutrient arteries pass in a direction from the knee, that is, upward in the femur, downward in the tibia and fibula, and in them it is observed that the upper extremities of the femur and the lower epiphysis of the tibia and fibula become first united to the shaft. Where there is only one epiphysis, the medullary artery is directed toward that end of the bone in which there is no additional center of ossification, as toward the acromial end of the clavicle, toward the distal end of the metacarpal bone of the thumb and great toe, and toward the prox-

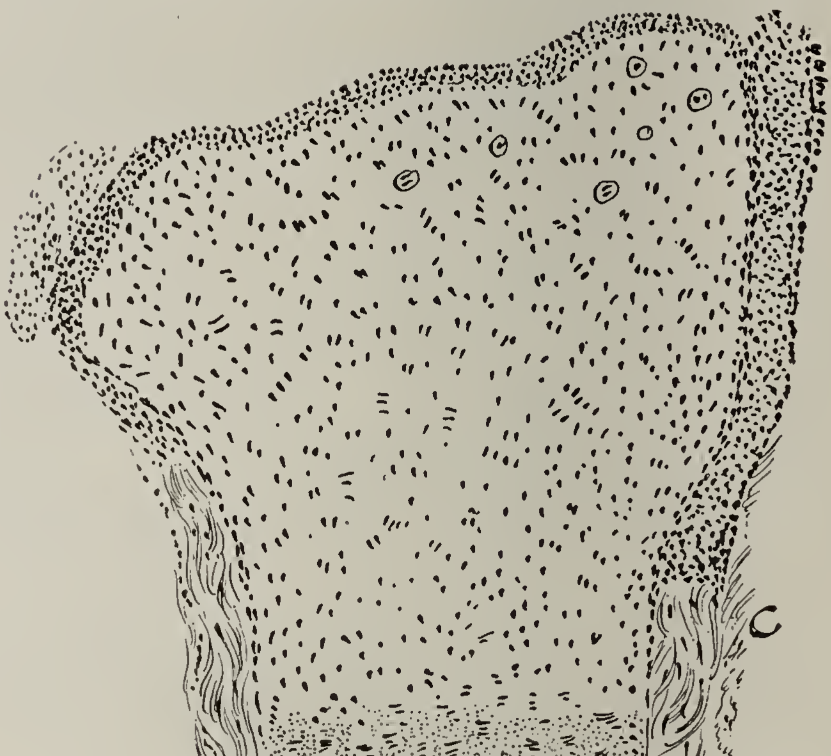

Fig. 6.—Longitudinal section of a long bone showing graphically the various stages of bone development as proceeds from the ossification center in the shaft or diaphysis of the bone toward the epiphysis. At A is seen the enlargement and columnar arrangement of the cartilage-cells and the beginning of ossification. At B there is only the cartilage-cell change. At C the cartilage has not as yet taken any part in the bone development. (After Piersol.)

inal end of the other metacarpal and metatarsal bones. Besides these epiphyses for the articular ends, there are separate centers of ossification for trochanters, tuberosities and condyles.

These centers of ossification and the epiphyseal line of osteogenesis must be borne in mind in every arthroplasty performed on persons under adult development, as any interference with the osteogenetic epiphyseal line causes deficiency of growth in length; or if part of the line is removed, deviations in conformation often occur.

### INDICATIONS FOR BONE TRANSPLANTATION

In order to achieve the best results in the work of bone-grafting and bone transplantation, the following laws must be observed:

I. The periosteum fully detached from bone and (1) transplanted into a fatty or muscle-tissue bed in the same individual, if he be young, may produce a lasting bone deposit; (2) transplanted into another individual or animal of the same species and under the same conditions, it rarely, if ever, produces a permanent bone deposit; (3) transplanted into another species it never produces a permanent bone deposit.

II. Periosteal strips elevated at one end from the bone and attached at the other, if turned out into muscle or fat, reproduce regularly bone on their under surface for a greater portion of their entire length.

III. Transplanted into other individuals or animals of same species and contacting at one end with exposed or freshened bone it rarely produces permanent bone, even for a small extent at its basal attachment, and never produces bone for its full length.

IV. Bone with its periosteum transplanted into muscle, fat, etc., in the same individual, and free from bony contact, practically always dies and is absorbed, except in the case of very young children or infants. Transplanted into another species it is always absorbed.

V. Bone transplanted without the periosteum into the muscle or cellular tissue always dies and is ultimately absorbed.

VI. Bone with or without periosteum transplanted in the same individual and contacted with other living osteogenetic bone at one or both of the ends of the transplanted fragment always becomes united to the living fragments and acts as a scaffolding for the reproduction of new bone of the same size and shape as the transplanted fragment if asepsis is attained. This new bone increases to such size as is necessary to give the support required by Nature in the extremity in which it has been placed. It will scaffold the production of new bone even into the joint when it is surrounded by capsule, and tuberosities are produced in about the regular location, as in the normal anatomic conformation.

VII. The transplanted fragment, no matter how large or how small, is always ultimately absorbed. The rôle it plays is to give mechanical support to the capillaries and blood-vessels with their living osteogenetic cells, as they advance from the living bone at both ends of the transplanted fragment into the haversian canals, canaliculi and lacunæ of the transplant. New lamellæ are deposited around the new capillaries and these lamellæ fit into and adjust themselves in the graft, so that the bony union is actually formed and mechanical support given long before the transplant is entirely absorbed and replaced by new bone. Ultimately all of the transplant disappears as new lamellæ are formed by the osteoblasts, and the graft lamellæ are removed by the osteoclasts.

This conclusion is based on my observations and on analysis of the microphotographs and pathologic specimens, clinical and experimental, presented by others. The graft is *per se* not *osteogenétic*, but *osteoconductive*. The regenerative force and cells are entirely supplied from the osteogenetic cells on the capillaries growing from the living bone. The graft, however, is an absolute necessity in the regeneration.

VIII. The graft increases in size on the surface as bone increases in size histologically, i. e., by deposits beneath its newly-formed periosteum.

IX. The muscles should be fixed or directed to the graft in the same relation as the normal anatomic fixation, if the muscular control is expected after the graft has become united, and the musculotendinous attachments should be accurately sutured to the graft at the point of desired union, either with catgut or phosphor-bronze wire.

X. Bone covered at the ends by cartilage and on the sides by periosteum, such as the phalangeal bones, even when contacting with living bone denuded of periosteum, dies, and is wholly absorbed. When the graft is covered with periosteum at the point of contact with the living bone, the haversian vessels do not penetrate the fibrous periosteum of the transplant, and regeneration fails. If the periosteum of the graft is split into shreds, then regeneration through it may take place.

XI. Periosteum attached to the transplanted portion, if the graft is taken from young individuals, has a plus osteogenetic influence; in the middle-aged it is neutral; in those of advanced years it plays a minus rôle and, in fact, it is detrimental.

While these theories may finally be found defective in some of their details, they represent my observations in the experimental and clinical work I have carried on. Bone reproduction, from a practical standpoint, is permanently and for all time settled both as to its feasibility and its practicability, and the extent to which it can be carried out to meet the mechanical conditions essential to its evolution.

The indications for bone transplantation are:

A. To correct deformities resulting from defects of development, as aplasic extremital bones — radius, ulna, humerus, tibia, fibula and femur, and congenital saddle-nose, aplasic mandible, etc.

B. To produce union in ununited fractures.

C. To replace bone removed by destructive infections, osteomyelitis, tuberculosis, lues, etc.

D. To restore or supplant fragments dislodged or destroyed by fractures, as the head of the humerus, head of femur, shaft of tibia, etc.

E. To replace bone removed for non-malignant neoplasms, cysts, myeloma, osteitis fibrosa, etc.

F. To replace bone removed for encapsulated malignant disease, as giant-cell and chondral sarcoma, etc.

A. Congenital or acquired defects of the nasal bones can be remedied by transplanting a periosteal covered fragment of the patient's ulna, tibia or fibula of such shape and size as is required to remedy the defect. The periosteal covering should be directed outward, and the free medullary margin of the bone inward.

The transplant must have a bony contact with the frontal bone itself, with a surface that is freed of periosteum, or with the nasal process of the frontal bone, or with the periosteum-free surface of the nasal bones. It must be fixed in this position.

The incision in these cases should be made on the side of the nose, and the flap elevated so that the graft will be completely covered with skin, and there will be no tendency to separation of the edges or exposure of the graft to air after its implantation. If possible, it is best to make a small incision near the tip of the nose, and then elevate the periosteum and make a subcutaneous pocket extending from tip upward to the frontal bone. Into this pocket the transplant can be placed safely and securely and the opening then closed accurately. Phosphor-bronze wire or chromicized catgut may be used to secure the fragment. A long fragment of bone should always be prepared, and when it is inserted it can be cut to the desired size and fitted into its bed.

If the nasal or frontal sinuses are open, the operation should be abandoned for the time being, because if air comes in contact with the graft, the latter will become infected and necrotic, and it must subsequently be removed.

In 1899, I grafted the second phalanx from a case of dactylism into the nose. All the periosteum and both of the cartilaginous ends were retained. It healed in beautifully and for some months it seemed to be a perfect result. Within fourteen months the entire transplant had disappeared. The reason for this occurrence was that the graft was entirely covered with periosteum and cartilage, so that haversian vessel invasion from the nasal or frontal bones was not possible.

In 1901 I grafted the hypothenar eminence of the hand to the nasal bones by a two weeks' fixation of the hand to the head. I took with the graft the fifth metacarpal bone shaft and without bony contact it continued to live, because it was a part of a continuous living tissue transplant, and fulfilled the purpose for which it was intended.

In this case the bone retained its vitality because of its being contained within the fleshy flap. It did not become a dead fragment at any time, and therefore it did not need bony contact with the nasal or frontal bones.

The defects of the upper and lower extremities are supplied by taking the graft from the crest of the tibia of the same patient and implanting it into the desired position to restore the defect. Normal anatomic muscle, nerve and arterial relationship to the bone should be established at the line of implantation. The implant should contact with living bone at, at least, one end.

If the epiphysis has been destroyed, the bone will not grow in length from this implant at the point of epiphyseal absence, unless an epiphysis is transplanted. I have not yet demonstrated that a transplanted epiphyseal line of young bone will become osteogenetic. In the next case that presents itself with an absent epiphysis, I shall take the upper or lower end of the tibia with its epiphysis and transplant it, because I feel that in young individuals it should become osteogenetic.

If the entire shaft of the tibia, humerus, radius or ulna be absent, then the bone must contact with the neighboring bone laterally or at one or the other end of the extremity across the normal line of the joint in order to get its osteogenetic supply. Subsequently an arthroplastic joint can be made at the desired position.

(*To be continued*)

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**Heredity.**—The doctrine of heredity should never be forgotten by parents or remembered by children. To the first it is the assertion of their responsibility; to the second a reminder of their helplessness. Fortunately our Darwinians and Weissmannians have between them left the doctrine in such a state that it is prudent for parents to believe the worst, and possible for children to hope the best. There is no man of science who will dare say that the child of the drunkard "must" take to drink, and none that will venture to tell the drunken parent that the child "won't suffer."—"Comments by Bagshot."

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# THE CHORUS-GIRL'S VOCAL TROUBLES

CHARLES PREVOST GRAYSON, M.D.
Clinical Professor of Laryngology, University of Pennsylvania
PHILADELPHIA

It is but seldom that the chorus-girl is made the subject of anything but jest, the target of cheap and too often coarse wit, and anything in the way of serious and sympathetic consideration is rarely given her. When we are consulted by the great artists of the lyric world, those who have had every educational advantage and whose throats are jealously guarded against every injurious influence, we are apt to be prodigal of our professional skill and our personal solicitude. We spare ourselves neither time nor thought nor trouble that may prove of service to them, and yet when this humble member of the same profession, the poor, inglorious girl of the chorus, ventures to enter our waiting-rooms, there are some of us, I fear, who are inclined to treat her more as a worthless derelict than as one who is deserving of our scientific interest and our conscientious care. I do not deny that she may be frequently responsible, through yielding to her social and convivial instincts, for much of her vocal failure, but, in spite of this, I cannot say with too much emphasis that of all the men and women who sing or play for a living, there is none who appeals so strongly to my compassion and even to my humanity as the chorus-girl. We all of us, no doubt, are perfectly willing to agree with the singing-master that from an elevated musical point of view she is vocally the exponent of all that is technically incorrect and inartistic, a pitiful and painful burlesque of the divine art of singing, and yet, from the more comprehensive and what should be the more charitable point of view of the laryngologist, we can nevertheless maintain that she is in reality the unfortunate victim of an uneducated and unrefined public that cares more for facial and corporeal than for vocal beauty—a public that would turn flashing eyes on Venus, but dull, unappreciative ears to Euterpe — a public, in fact, that in so far as the singing voice is concerned, is much more deeply impressed by an ear-splitting volume than by a pure and mellow quality of tone. If any premium were placed on the voice of the chorus-girl, if it were regarded as a valuable asset, it would be in all probability not only carefully trained, but carefully protected; but what is the discouraging truth? I think it very likely that of the fifteen or twenty dollars a week that she receives, the relative value of her voice should be quoted at about two dollars, and yet, poorly remunerated and cared for as she is, it is she who in the preparation and production of one of these so-called musical comedies from the very first rehearsal bears the brunt of the work. For three or four or more weeks, from 9 in the morning until very often long after midnight, with but brief intervals for a hasty meal, she is under the lash of the stage manager's tongue. She usually learns and sings her music wholly by ear and consequently fatigues her voice unnecessarily by having to go over her choruses many more times than would be required if she were anything of a reader. She practices "starts" at the stroke of the conductor's baton just as the sprinter practices them at the crack of the trainer's pistol. Few of these girls know enough to keep themselves in good general condition and therefore the end of an hour's work in dancing and ambling their way up and down and across the stage finds them with tired hearts and wet skins. The frequent calls for quick changes of costume send them to a dressing-room that is usually many degrees cooler than they are, and even if it is not, its atmosphere is laden with talcum powder and the odors and dust left by hundreds of other chorus-girls on many of whom, perhaps, the curtain has long ago fallen for the last time. These are but a few of the physical and hygienic hardships with which these poor girls have to struggle, and although they are bad enough in the larger cities, yet they become even worse when the show has lost its drawing-power in these and it goes "on the road" with its "one-night stands," traveling night after night in our impossible sleeping-cars, playing at theaters which, from a sanitary standpoint, are scarcely comparable with the well-appointed modern stable, stopping at cheap and uncleanly boarding-houses, exposed to all sorts of weather and to but one sort of food — the worst.

What I have said at such length may be justly classified under the head of causation, and having mentioned these facts, I ask if it is not surprising, not that many of these young women come to us with seriously damaged throats, but rather that not all of them need our help and protective guidance frequently. Indeed scarcely enumerate the inevitable effects of such a life on so delicate and sensitive an organ as the larynx, but that the large majority of chorus-girls suffer at least from a more or less pronounced chronic laryngitis almost goes without saying. Even if there were no other predisposing or exciting causative factors, the almost universal ignorance among them as to both the principles and the practice of correct tone production would be sufficient of itself gradually to establish this simple laryngeal catarrh. And once provided with this pathologic bridge between health and disease, the other morbid events are apt to cross it in quick succession. It is but the question of a short time when the catarrhal hyperemia, instead of remaining limited to the surface, shall pass to the deeper submucous tissues. Coincidently the vocal cords become thickened, they lose the sharp, straight edge of health and in its stead we find one that is broader and at times almost fluted in its appearance because of the slight infiltration on its upper and under surfaces. Certainly it is bad enough even to talk with a larynx in this condition, but to sing or, to be accurate, to try to sing is simply to invite further disaster, and this speedily takes form in the involvement of certain muscles — first, the delicate tensors, the internal and external thyroarytenoids. Purity and brightness of tone have probably long since been lost, but now the voice begins to weaken, its compass is curtailed, certainty of intonation fails, and before long at some morning rehearsal the sharp rap of the conductor's stick is heard, the chorus halts and the girl is brusquely told that she is singing "off key." If she has been in the front row she soon moves to the rear and a fresher voice takes the place of hers. Of course, no life is without its great or little tragedies, but, however trivial and insignificant this one may seem to us, to the girl herself it means the blasting of all her hopes. Her ambitious dreams of some day singing a principal part, of having her name featured in the show-bills, of becoming perhaps a prima donna of stellar radiance dictating to eager managers her own terms, all these vanish into thin air and she knows that she has fallen, like Wolsey, never to rise again. It will require but a few additional words to describe the final collapse of her singing voice and in all likelihood the termination of her stage career. She goes on for a little time longer perpetrating the few notes of her chest or middle registers that still remain to her, and then the cricothyroid and arytenoideus muscles abandon the struggle and go down in the general ruin, the air waste between the unapproximated cords increases, the secretory disturbance within the larynx provokes frequent hemming and an occasional dry cough, and finally, some night after the performance, the tender-hearted manager calls her aside and, with thinly veiled sarcasm, tells her that she is really too good for his show and that, though he hates to let her go, he cannot conscientiously keep her out of grand opera any longer.

However hopeless, at first view, the treatment of this type of undertrained and overworked throat may seem, yet if our patients be intelligent and clever enough—and few of them are not—to cooperate with us as far as they are able, a very great deal may be accomplished in retarding or even arresting the failure of their vocal powers. Whether early or late in the course of the catarrhal process, laryngeal rest is the most important aid to cure. The "silence treatment," which is of such invaluable assistance in the control of tuberculous laryngitis, would be of even greater efficiency in relieving the chorus-girl type of laryngeal catarrh, but, unfortunately, it is seldom practicable. Most of these girls enter the chorus not for the sake of diversion, but as a means of subsistence, and therefore a six weeks' or two months' rest in the middle of their season would be as impossible a luxury as a winter on the Nile. Usually the nearest approach to physiologic rest that we can obtain is to have the patient renounce altogether the conversational use of her voice and take advantage of every possible opportunity to spare her singing voice. If the score calls for notes beyond her easy reach she must avoid or, to adopt her own expression, "fake" them. In other words, her singing must be as pantomimic as possible, and if in this way she conscientiously shirks the vocal work that is expected of her, the good effects of our direct treatment of her throat will be much more completely and quickly secured. If there be one thing that should distinguish the direct or local treatment of the singer's throat, it should be, I think, its gentleness and simplicity. It surely must be very seldom that there can be either occasion or excuse for the adoption of such vigorous measures as might be perfectly legitimate in the catarrhal throat of the alcoholic, of the plethoric gourmand, or that of the yelping stock broker.

If, incidentally, I should venture to criticize anything, it would be the anything but exceptional employment of cocain and the suprarenal preparations in the vocalist's larynx. And speaking of cocain, I invariably caution these patients against resorting to any of those worse than useless medical beverages, such as Vin Mariani and similar stuff. So far from being in any sense genuine tonics, they are, in reality, nothing but goading spurs to a group of already jaded nerves and muscles, and if they be used in any quantity they are certain to increase the vascular relaxation and engorgement that we are endeavoring to overcome. It is because of this catarrhal hyperemia and the mild degree of tissue infiltration associated with it that I am apt to defer until late in the treatment, if indeed I resort to them at all, the use of electricity and strychnin. Although these remedies may be of some moderate value in promoting restoration of function after the catarrhal process has been arrested, yet if they are employed before this has been accomplished I think that their effect is to delay rather than to hasten its subsidence.

I fear that what I have to say concerning the local treatment of these cases will be considered rather commonplace and perhaps disappointing, for I say frankly that I have discovered nothing of magical curative power either in the form of a single remedy or of any combination of remedies. It stands to reason that the slowly developed vocal fag such as we encounter in the overtaxed chorus-girl is not to be quickly overcome by any medical *coup de théâtre.* It is on the simple astringents that we must depend to check the progress of the catarrh and to remove its effects, and while I have no doubt that in judicious hands a number of these may prove efficient, yet of all those that I have tested I give my preference to such very simple ones as alum and chlorid of zinc, the alum in an atomized 2 or 3 per cent. solution, the zinc in a 1 or 2 per cent. solution, used either as a spray or on the applicator. I suppose that there are plenty of atomizers that will answer the purpose more or less well, but to me the Burgess with its long smooth tip and its finely divided spray has proved the most satisfactory. It enables me to medicate the larynx most thoroughly and with the least provocation to glottic spasm and cough. The removal of any catarrhal or other pathologic condition of the nose, pharynx or mouth is so obviously essential to the successful treatment of the larynx that I mention it only to prevent any suspicion that I am not fully conscious of its importance. And in view of the daily and nightly strain to which the chorus-girl's throat is subjected, the more frequently this strain receives an antidote by treatment the more rapid and continuous will be her progress toward cure. Let me say a final word about the use and abuse of the lozenge. The very frequent abuse of this convenient and often valuable form of medication is largely due to the fact that the selection of the lozenge is so commonly left to the judgment of the series of apothecaries' clerks whom the girl consults during her travels. In the course of a season's tour her throat and stomach are apt to be harassed by a number and variety of therapeutic absurdities in lozenge form that would permanently disable those of anything but a human being. It is nothing less than appalling to read the formulas of some of these pastilles and troches and lozenges that are made and exploited by the manufacturing chemists. Probably most of them contain opium in some of its forms, codein, cocain, lactucarium or hyoscyamus, and many of them are made up with a base of sweetened gum or a fruit paste that in any quantity is almost certain to provoke more or less gastric disturbance. Without dwelling on the equally silly and objectionable features of these grotesque combinations, I would only suggest that simplicity is just as desirable here as in our direct treatment of the larynx.

In conclusion I venture to say that much of what I have said of the chorus-girl and her vocal troubles may be fittingly applied to thousands of clamorous amateur vocalists who are as grievously ignorant of the art of singing as is the chorus-girl. They are daily inflicting irreparable injury on their throats by sacrificing tone beauty to volume, and faultless technic to extent of compass. The same fundamental principles of preventive management and curative treatment are applicable to all types of laryngeal catarrh due to imperfect tone production. The chorus-girl represents but one of them, and the only hope for her vocal salvation will depend on her saving as much as she can of her scanty wages and embracing every opportunity for study under competent masters.

1435 Spruce Street.

# THE THERAPEUTIC USE OF CITRIC ACID AND THE CITRATES *

HENRY BIXBY HEMENWAY, A.M., M.D.
EVANSTON, ILL.

Some five or six years ago, in a paper on the opsonins, Professor, now Sir Alfred Wright incidentally mentioned that in a case of "brawny swelling" he had used successfully 60 gr. of citric acid administered every two or three hours. Under the old conditions as to therapeutic knowledge such a case gave one a feeling of helplessness and a loss of confidence in the science of medicine. I had previously lost a patient whose case was typical. Beginning as a mild infection in the mouth, showing practically no objective symptoms, it rapidly intensified. No antiseptics, no constitutional remedy which was suggested seemed to have the slightest beneficial effect. The swelling increased in geometrical ratio. The lip, cheek and then the neck were involved. To relieve the tension, before the neck was specially involved, deep incisions were made externally and internally into the cheek and lip. The only result was the exudation of a colloid substance resembling the gum on a cherry-tree. Within three days after the first objective symptoms, the strong man, in his prime as to age, had ceased to breathe.

The condition may be likened to a bargain-sale, to which the leukocytes rush in such number that half of them cannot get near the table. Those which manage to capture microbic victims cannot find a quiet corner in which to eat their lunch. Professor Wright explained that the citric acid, by reducing the viscosity of the blood, assisted the circulation, bringing fresh leukocytes to the fray, and helping the gorged cells out of the way. His patient recovered promptly.

Some time after reading the above-mentioned article, I was called to see a woman in the ninth month of pregnancy. Her face was so edematous that she could with difficulty open her eyes to see. The urine contained nearly 95 per cent. of albumin. A month previously there had been no albuminuria, but a mitral regurgitant murmur was noted. Eclampsia was confidently predicted, and there seemed slight hope for the patient. Remembering a former case in which, after phlebotomy, only a few drops of tarry blood could be obtained, and comparing the condition with that in Wright's patient, citric acid was prescribed with the sodium phosphate solution. The edema rapidly disappeared, and the urine became more free. The amount of albumin in the urine was reduced to about 5 per cent. before the confinement, which was normal in every regard. After confinement, the condition of the mother became better than it had been for years, and the mitral bruit could not be found. The child, though poorly nourished for some time, finally became strong and healthy.

Dr. E. J. Ford, of Evanston, had a case of edema of the pharynx which had developed rapidly. He feared death in a few hours. The citric acid treatment was tried. The patient began to improve immediately, and within a few days was entirely recovered.

Lemonade, the citric fruits and the citrate salts, either alone or in combination, had long been used empirically in a variety of conditions with most excellent results. The action was explained as due to diaphoresis and diuresis. Often credit was given to the basic element of a salt, lithium, for example, which rightly belonged to the acid radicle. Recent chemical investigations have rendered the study of the action of this acid still more interesting. It illustrates what may be expected from more searching investigations as to the action of other chemical remedial agents.

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* Read before the Evanston Pharmacological Society, Feb. 9, 1912.

Viscosity of the blood is due to its colloid constituents. When the viscosity is increased the velocity of the blood-current will be reduced, unless the force behind it is increased. It takes four pipes with a diameter of 1 inch to equal the capacity of one of 2-inch diameter. Since the circumferential friction is increased inversely with the diminution in the squares of the diameter of the vessels, it is easy to see that the smaller the vessels the greater will be the retarding effect of viscosity on the velocity of the blood-current. This effect is noted especially in the capillaries, through which all of the blood of the body must pass. We might even get complete capillary stasis. Without any added factor, under these conditions the heart must work harder to keep the blood in motion, and the strain will be intensified on the cardiac valves. If the valves are weak, we may expect a regurgitant bruit, as in the eclamptic patient mentioned. With greater force applied by the heart, the walls of the arteries must be strengthened, and thus, in a slowly developing case, we may get arteriosclerosis. In the place of whipping the horse, lighten his load. In the place of using heart stimulants in such a case, if we decrease the viscosity of the blood, will not the results be far more satisfactory? Sometimes the load has been lightened temporarily in these cases by administering the nitrites, thus dilating the capillaries. Such action must at the best be simply palliative, and it does not strike at the root of the difficulty.

Viscosity is distinct from coagulability. While they may be coincident, they are independent characters. The viscosity may be low, and the coagulability high; and vice versa. Still, the retarded current favors the production of thrombosis. Thus, in thrombotic apoplexy I have obtained most excellent results by the early reduction in the viscosity of the blood.

Given obstruction to the circulation through the capillaries, with heart-power normal or above, the tendency is to force the more fluid portion of the blood into the tissues, or to produce rupture of the weaker vessels. Thus we have edema, or minute hemorrhages. We may have semiorganization of the serum in the tissues, as in parenchymatous nephritis. Apparently, local conditions may increase the viscosity in certain portions of the body, above the general degree for the entire system. The effusion into the tissues increases the intercellular tension, and we may thus have a reabsorption of the more watery portion by the veins and lymphatics, leaving the organized elements of the blood behind. In this way the final result will be a lowering of the viscosity on the arterial side, with decreased intravascular tension, and anemia. I have seen, under the use of the citric acid, or its salts, lips that were almost colorless become a bright scarlet color, and colorless cheeks show the glow of returned circulation. This condition has even been mistaken for a hectic flush.

With increased obstruction to the capillary circulation, and that in the arterioles, as before remarked, the heart attempts to overcome the difficulty by increased force, either in the individual beat, or by increased frequency. Digitalis is not so much indicated as the reduction in the obstruction. If the walls of the blood-vessels are not sufficiently strong, the increased heart action will dilate the proximal arteries. This increase in the size of the thoracic vessels may seriously obstruct respiration. This difficulty in respiration was sometimes relieved by the empiric use of citrates and acetates. Now, with an appreciation of the part played by viscosity, one may better understand why these benefits were obtained, and in what class of cases the treatment is indicated.

We have thus briefly sketched the physics of the condition, showing the mechanical relationship of the symptoms. The laws of physics are universal, as are those of chemistry. That mysterious power known as life uses these universal laws, and it is not impossible that all of the phenomena of life may be finally explained by a better knowledge of the two branches of science—physics and chemistry.

We owe much of our knowledge of colloids to the Glasgow chemist, Thomas Graham. In 1861, while still engaged as Master of the Mint, he published his "Liquid Diffusion Applied to Analysis." He proposed osmosis as a means for the separation of crystaloids from colloids, and suggested the terms "sols" and "gels" to characterize the physical character of the colloids. These terms are relative only, the sol being in solution, and the gel being more jellylike in composition. The gum of the cherry tree is never a true sol, as the molecules simply absorb water and thereby become swollen, but not dissolved. The molecules of cooked starch, or of glue, on the other hand, first swell forming viscid masses. With the addition of more water this viscosity is finally reduced to a minimum, as the molecules become so diffused as to become imperceptible except by the use of the ultramicroscope. The colloids of protoplasm are generally in the sol form.

It is found that whatever causes the sols of colloids to swell, thus increasing the size of the molecules, tends to increase the viscosity. Conversely, those agents which tend to convert sols into gels, tend to reduce the viscosity. Francis Hofmeister, of Strasburg, and others have found that one of the most efficient agents of the latter nature is citric acid. The reduction of the viscosity of the blood when this drug is used may therefore be directly traced to the action of the agents on the individual sols of the colloid content. But the beneficial action of the acid is not limited to the mechanical effect on the circulation.

For convenience of study, plant-cells furnish the basis of many of our conclusions as to the chemistry of life. We are justified, however, in presuming that probably the same relative changes are wrought in animal bodies.

All cells must depend on their powers of diosmosis and dialysis for their physiologic efficiency. It was formerly supposed that this power of diosmosis was dependent on the relative size of the molecules of the substance, as compared with the openings through the membranes. This is not strictly true. Benzin is soluble in ether, but not in water. Ether is soluble in both water and benzin. When the ether is separated from benzin by a simple membrane diosmosis readily takes place; but if the membrane is filled with water the benzin does not pass to the ether side. In other words, a substance cannot pass by osmosis through a medium in which it is insoluble. Quincke long ago suggested that the hyaloplasm, or outer layer of cytoplasm, consists of an oily film. More recently Gibbs and Overton have made further demonstrations to the effect that the hyaloplasm consists partially of an emulsion of oil; and in accord with the general law stated above as to diosmosis, only those substances which are soluble in oil may pass by osmosis through the cell walls. Overton for example points out that the reason why chloroform acts so profoundly on the nervous tissue is that the nerve cells have hyaloplasm especially rich in oil. Chloroform is soluble in oil. So is alcohol. Citric acid or the citrates may favor exosmosis from the cells, by raising the specific gravity of the external media. If too much fluid is thus extracted from the cells, impairment of activity must result. To counteract this tendency for exosmosis the citrates (not the acid) tend to raise the specific gravity of the cell contents by dialysis.

Czapek, of Prague, has apparently shown that the hyaloplasm consists partially of a solution of colloid substances. In other words, we have the colloid solution intermixed with an oil emulsion. A sol has relatively no power of plasmolysis when in solution, but the gels of most colloids are anion in nature. They therefore attract the cation base of electrolytes. This action is favored by the precipitation of the sols of colloids. A citrate salt readily looses its basic element to the hyaloplasm because of the precipitating action of the acid, and the acid is left free to continue this precipitating action. Hoffmeister was the first to show that, owing to its catalytic nature, alkaline metal salts have a graduated effect on colloid solutions. This action is relatively graded in the following order, the first being the most efficient: citrate, tartrate, sulphate, acetate, chlorid, nitrate, chlorate. According to Overton the non-acid alcohols, aldehyds, ketones, esters of fatty acids and alkaloids produce least plasmolysis, passing readily into the cells. Salts of organic acids readily produce plasmolysis.

The salts of magnesium and the light metals show the faculty of precipitating the sols from an albumin solution, and then being redissolved. Such salts therefore readily yield the basic element to the hyaloplasm, and then the gel combination may be redissolved in the cytoplasm, ready for use in the cell. When the albumin is precipitated by salts of iron, copper, the other heavy metals, strontium or calcium, the reversal of the process — the redissolving of the precipitation — is relatively impossible. The union is permanent. This seems to explain why we used to see so many patients who were saturated with mercury taken years before, or who showed the typical blue color of silver, the result of drugs long since discarded. It may also point to an explanation of the action of lead, as found in many industrial diseases.

We see, therefore, that if we wish only the mechanical effect of the acid in the blood, for its effect on the circulation, it is better to use the acid plain: but if we desire the action of a base on the contents of the cell it should be used in combination with an organic acid, of which class the citrate is apparently the most active. We get increased action from the kidneys with the acid, probably by mechanical effect. With a salt we might expect a better physiologic effect.

No physician worthy of the name uses a set formula in his prescriptions. Each case demands individual treatment. Simply as indicating to some degree my individual methods and doses the following general suggestions are given.

In such a case as that mentioned of threatened eclampsia, the indications seemed to be immediate reduction in the viscosity of the blood, stimulation to bowel action, and diuresis. This is met by the following:

| | |
|---|---|
| ℞. Acidi citrici | 30 |
| Liquoris sodii phosphatis com | 80 |
| Aquæ | 40 |

Misce, Sig. Take a teaspoonful in a full glass of water every three hours. (Later, twenty minutes before each meal and at bed time. This mechanically washes out the stomach before the meal, and prepares it for digestion.)

If there is a rheumatic or gouty condition present, so that it is necessary to use the salicylates, the pure acid may not be used, but a citrate should be substituted. Thus:

| | |
|---|---|
| ℞. Sodii citratis | 30 |
| Sodii salicylatis | 20 |
| Aquæ | 120 |

Misce, et Sig. Take a teaspoonful in cup of hot water half an hour before each meal and at bed time.

(Such a prescription is useful even before the painful symptoms develop, in cases in which there is gastric and intestinal fermentation. If the intestinal fermentation is more marked than that in the stomach a portion of the salicylates may be given in the form of phenol salicylate, and because of its insolubility, the drugs might better be given in capsule, with directions to drink water freely afterward.)

When we desire only, or chiefly, the action on the blood the acid may be given thus:

| | |
|---|---|
| ℞. Acidi citrici | 60 |
| (Strong. For milder case 10.) | |
| Aquæ | 120 |

Misc, et Sig. Take a teaspoonful in glass of sweetened water three times a day.

If the stomach objects to the acid, or if the prescription is for an infant, a portion, or all of the acid may be given in the form of sodium or potassium citrate.

In cases of anemia, in which we wish to increase the amount of iron in the red blood corpuscles, the following is suggested:

| | |
|---|---|
| ℞. Acidi citrici | 15 |
| Ferri citratis solubilis | 4 |
| Aquæ | 120 |

Misce, et Sig. Take a teaspoonful with water before each meal and at bed time.

The doses above indicated are all for adults. Experience shows that patients who at first object to doses of 10 cg., later take many times that amount without ill effects. In catarrhal conditions of the stomach, with large quantities of viscid mucus, the citric acid frequently gives quick relief, and digestion is improved. It is my experience that these cases are generally complicated with amylaceous dyspepsia, and the carbohydrates must be withheld from the dietary. In acute gastritis, the sodium, or potassium citrate, is generally to be preferred to the acid, and large quantities of water should be given. In acute gastritis the mucous membrane of the stomach is abnormally dry, and the acid tends to extract from the cells the little water which they contain, intensifying the evils of the disease.

Animal therapy has the very decided disadvantages of great cost, and danger of deterioration, or of unexpected mixture. With our present methods the danger of tetanus from the use of vaccine virus, or serums, is reduced apparently to the lowest possible minimum. Still that danger exists. Then, too, there is the further danger of anaphylaxis. It is possible that these disadvantages may be still further reduced. By way of contrast, chemical substances are generally far more stable, and the cost is therefore less. Though it takes time to produce an individual bacterin solution, chemical medicaments may be quickly obtained in any community. Is it not possible that relatively too little time has been devoted to the exact action of common drugs? Our books on materia medica have been concerned only with the gross results observed. They have not gone to the root of the matter, thus to explain why we sometimes get one action from a drug, and sometimes another. With all our boasted science, are we not to-day still adhering too closely to the bonds of empiricism? Feeling this to be true, and because of my own lack of information, I have endeavored to open the shutters that others may see more clearly that which is as yet dimly perceived.

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# INFANTILE ECZEMA *

C. A. SIMPSON, M.D.
WASHINGTON, D. C.

A disease of such varied forms, causes and remedies as eczema naturally can be fully described only in a lengthy paper, and it is my desire therefore to mention only briefly the chief causes, and to pay more attention to the therapeutics of this common disease, from which probably the majority of infants suffer in one form or another. In many instances the disease emanates from a single isolated spot and spreads over large tracts of the body, thus making rapid cure a matter of some difficulty. The inquiry often made by relatives, as to whether it is not the doctor's drug which first brought out the rash, is frequently difficult to answer when one knows the powerful irritant actions some ordinary mild drugs have on an eczematous skin. Unfortunately, no two authorities have a uniform mode of treatment, and it is therefore not remarkable that the treatment recommended by one authority is looked on by another medical man as being faulty.

As to the etiology of eczema in children, it has rightly become the endeavor of the school of dermatology to keep pace with the giant strides made in late years by the science of bacteriology, and investigation on these lines has not failed to leave its imprint on the inquiry as to the origin of eczema. In opposition to the view, chiefly supported by Hebra, that local irritation is the principal factor concerned in the production of this disease, forces have not been lacking to emphasize the importance of the parasitic theory. It is, indeed, true that in the height of the inflammatory process, during the moist stage, staphylococci are found in the secretion and it is also possible that by some trifling traumatism the penetration of staphylococci into the lymph spaces of the cutis is allowed, and that there, owing to disintegration of the bacterial body, toxins are set free. Since these toxins are known to differ in their nature, it is conceivable that various pathologic phenomena may be produced by them. Some of these pathologic conditions are now classified as infectious eczematous dermatosis.

Bockhert was one of the first to show that by experimental inoculation of staphylococci lesions indistinguishable from eczema could be produced, and this seemed to correspond with the fact that the child's skin is particularly susceptible to traumatism of a trifling sort, especially from the too frequent use of strong soaps and water. It is true that many children with more resistant skin are able to bear bathing morning and night; but on others whose skin is more delicate the too frequent use of these irritants is responsible for a catarrhal condition of the skin, in other words, eczema. Sabouraud was the first to use the names "acute" and "chronic staphylococcus epidermatosis," after their supposed etiologic factors, while later writers, as Engman, Fordyce and others have gone further, pointing out the fact that these patients show an increased susceptibility to eczema after the beginning of an attack, or when it becomes more marked. They cite the lower resistance occurring after poisoning by exposure to poison ivy, and the cases of eczema on the hands of doctors and nurses, caused by such irritants as formaldehyd.

This increased susceptibility may, perhaps, be explained by an analysis of Bruck's experiments on guinea-pigs. He had a patient who had been poisoned by eating pork and who, since then, was unable to eat it without getting an attack of urticaria. Using six guinea-pigs, four for controls, Bruck sensitized two with the serum taken from the patient during an attack of urticaria, and twenty-four hours later gave intraperitoneal injections of hog-serum. Both of the animals showed typical signs of anaphylaxis, dying in eighty minutes; the four control animals remained perfectly well. The experiment demonstrated a hypersensibility in the patient which could be transferred to the guinea-pig, and also a specific anaphylaxis in the pig against hog-serum. This lends support to the hypothesis that such conditions occur in man, explaining many of the easily acquired recurrent attacks of eczema as really due to a hypersusceptibility produced, no doubt, by the presence of some sensitizing substance in the blood, due either to bacterial irritation from without, or, as in Bruck's case, by food products from within. The question must be raised as to whether the food plays any part in the production of eczema. From the earliest time eczemas supposed to come under this category have been termed "milk scab." I must confess that I have never been able to satisfy myself that milk of a particular kind has any influence on the production of eczema, as this disease occurs in children irrespective of whether they are nursed naturally or artificially. If, however, coarse pathologic changes exist in the digestive apparatus, the milk given may play the rôle of heterogeneous proteid and may thus produce changes of a toxic nature in the skin. This may of course happen in breast-fed children as well as in those reared artificially, or in both cases if proteid is not assimilated. Change in the diet is indicated in some cases by overnourishment, in others by undernourishment, and again in others by irregularities in nourishment. As a general rule, however, in the treatment of eczema in children, providing the child is thriving on its diet, I allow it to continue without changes. Before doing anything else, I usually forbid baths of every kind. Time after time I have observed that baths of starch, oatmeal, boric acid and other substances have exerted directly harmful effects, and even an ordinary cleansing bath, used too early, may delay cure or bring about a relapse. To obtain a complete cure of eczema, therefore, I require that the patient shall be neither washed nor bathed. In acute cases the purpose of the treatment must be to allay weeping from the affected parts as quickly as possible. To this end we may apply either the astringent fomentations or drying-up powder. In the former method both resorcin and acetate of aluminum are especially to be recommended; in one case resorcin acting well, in another, apparently identical, case better results being obtained with official solution of aluminum acetate. I dissolve 10 gm. of resorcin in one-half liter of water and use the fluid for a continuous series of fomentations; of the solution of aluminum acetate I give two tablespoonfuls in 250 c.c. water. If the desired effect is not produced

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* From the Dermatological Clinic, George Washington University Hospital.

in a few days, the treatment is changed, powder being substituted. The best form is rice-powder, with which the affected parts are well powdered several times a day until, after the lapse of some days, we are successful in allaying the weeping and bringing the eczema into the dry stage. The skin, now being in a state of some tension, requires inunction with an indifferent ointment. Here it is again largely a question of experience, since it cannot be foretold with certainty which ointment will act best in a given case. In one case a serviceable application will be a 3 to 5 per cent. solution of boric petrolatum. In other cases good results may be produced with Kaposi's unguentum vaselin plumbicum. This preparation is made by the addition of petrolatum in equal quantity to Unguentum Diachylon-Hebra. Hebra Diachylon Ointment is made according to the following prescription:

| ℞ | Gm. | | |
|---|---|---|---|
| Plumbi oxidi .................... | 90 | | ℥iii |
| Olei olivæ ...................... | 450 | or | ℥xv |
| Olei lavandulæ .................. | 8 | | ʒii |

Aquæ q. s. to make a rather stiff ointment.

In spite of initial benefit, however, we often see relapses, the diseased parts again returning to the weeping stage. We may then make use of Lassar's paste, which contains fat and powder in equal proportions so that its action is both drying and emollient. In acute eczema we may use a zinc paste composed of zinc oxid, 6 drams, starch, 2 drams, petrolatum album, 1½ ounces. This must be applied, about the thickness of a knife-blade, two or three times a day and covered with gauze. Every third day it is necessary to remove the ointment with olive oil, in order to decide whether or not the treatment shall be continued. As soon as absolute dryness is established and hyperemia begins to be less pronounced, we may proceed to the more comfortable employment of the lotion introduced by Jadassohn, composed of zinc oxid and starch, each 5 drams; glycerin 3½ drams; distilled water 3 ounces. This fluid should be well shaken and applied to the whole of the affected part by means of a large brush several times a day; it dries by itself in a few minutes and further dressing is unnecessary. It is easy to imagine how comfortable such a form of treatment may be, both for the child and the nurse. Instead of this the lead-water liniment of Boeck is sometimes to be preferred, as pulverized talcum and starch, each 5 drams; glycerin, 2 drams; lead-water, 3 ounces. This is to be used in the same way as the above-mentioned lotion.

In many cases, however, no progress is made with any of these prescriptions. The child is tormented with itching, which continues both day and night. In order to allay this, tar is the remedy which stands at our disposal, though it should always be borne in mind that the early use of tar is a two-edged sword, and that often enough recurrence of weeping follows on apparent improvement. I therefore advise that the transition to tar should be made only when absolute dryness is established, and when hyperemia is no longer a prominent feature. A less irritant action is possessed by liquor carbonis detergens, which should be used while the skin is still in a state of tension, in the form of an ointment, mild at first but stronger afterward, as liquor carbonis detergens, 2 drams, and rosewater ointment, 3 ounces. Should the skin remain quite dry, and thus be able to bear more powerful medication, we may proceed to a tar solution, such as liquor carbonis detergens 2 drams, zinc oxid 5 drams, glycerin 7 drams, distilled water 3 ounces. The convenience of this method renders tar in this form almost indispensable in eczema of children. It must be said, however, that pathologic processes are encountered in practice in which all the measures abovementioned do not suffice and in which the itching continues in spite of treatment. We are then obliged to proceed to the use of stronger preparations of tar and phenol (carbolic acid) such as oil of cade (oleum cadinium), birch tar (oleum rusci) or beechnut oil (oleum fagi). The greatest caution must here be exercised, as too drastic a preparation may place in jeopardy results already achieved with the greatest trouble, and we should therefore begin with a very weak dose incorporated in a paste and gradually increasing as time goes on, such as phenol ½ dram; oil of cade 1½ drams; zinc oxid 6 drams; starch 6 drams; petrolatum album 2½ ounces. As a rule the desired result is obtained with this application and it only seldom happens, and then chiefly in cases in which the disease has assumed a chronic form, that it is necessary to resort to the use of pure tar. Should this be necessary, however, the diseased parts should be painted with pure oil of cade, and the child should afterward be placed for ten minutes in a lukewarm bath, and after drying anointed with boric acid petrolatum, finishing with powder. On account of its antipruritic and keratoplastic properties tar has become so indispensable that one often wishes that there were more preparations of this substance at our disposal. It cannot be denied that some individuals show a certain intolerance to a particular tar preparation, while they may tolerate another perfectly well. In many cases I employ a preparation called anthrasol, a fluid tar from which the coloring matter has been removed; it forms a light yellow oily liquid with a faint odor of ordinary tar, and is insoluble in water, but forms a solution in all proportions of alcohol, acetone, or olive oil. Anthrasol is very little poisonous even when used on large tracts of skin; in my experience it has given rise to no toxic effects. A special feature is that irritant effects on the kidney have never been observed. I employ it in the following formula: anthrasol, 25 drops; lanolin, 2½ ounces; starch and zinc oxid, each 5 drams. Lenigallol, the triacetate of pyrogallic acid, is also well in place in the treatment of the subacute stage of eczema; it reduces hyperemia and exudative infiltration. It is sometimes to be recommended combined with anthrasol, as follows: anthrasol and lenigallol, each 25 drops; Lassar's paste, 1½ ounces. The general treatment here briefly sketched requires modifications or additions on certain parts of the body in each individual case, this being particularly true in cases of eczema of the scalp. Paste should never be employed on the scalp, owing to the difficulty with which the powder is afterward removed from the hair.

Attention should also be drawn to the sulphur preparations, especially when the eczema is dependent on a seborrheic element. Thiol is often capable of producing surprisingly good effects in this disease; one of its best properties consists in the alleviation it affords to burning and itching, which it will sometimes entirely abolish from the first moment of application; hyperemia and swelling also speedily disappear. Thiol is antiseptic, desiccating and keratoplastic; it is in no way irritant to tender skin, but is rather sedative. It may be used in various convenient ways, such as the following: as for painting: thiol liquid, 7 drams; glycerin, 2 drams; distilled water, 2½ ounces; or as a powder for dusting: thiol dry, 25 grains; starch, 10 drams; or as an ointment it can be combined with thiol liquid, 2½ drams; petrolatum, 5 drams; lanolin, 15 and 17 drams. Finally, in obstinate cases, one is sometimes obliged to resort to internal medication. Often the administration of arsenic is good, especially if the eczema is of an infiltrated, chronic thickened type. I generally administer it by the formula suggested by Neuberger, as Fowler's solution, 15 drops, and distilled water, 1 dram. For an infant of 6 months, 1 drop is to be taken daily for fourteen days; this is increased each week until a dose of 5 or 6 drops is reached. For older children a correspondingly larger dose is to be employed.

One would imagine that the only scientific means of combating eczema, in the face of the bacteriologic and pathologic findings, would be by vaccines; but this form of treatment, especially in children, has been successfully carried out only by a few investigators, the majority of whom agree that in acute and subacute vesicular eczemas vaccines are of no avail. Where the disease has been associated with crust and pus formation vaccines have been able to eradicate the suppurating condition without markedly influencing the underlying catarrhal process. Gilchrist apparently gets good results with seborrheic eczema. In long-standing cases of simple sycosis and chronic furunculosis of the nape of the neck, just the lesions in which brilliant results would be expected with vaccines, Engman, of St. Louis, and Towle, of Boston, failed to obtain cures.

Apparently the stock vaccines of *Staphylococcus albus* in most cases give quite as good results as autogenous vaccines; they should be given in small continuous doses, the interval and dose being controlled by clinical symptoms alone. This by no means should constitute the sole treatment, but instead is to be combined with the lotions and suitable ointments previously mentioned. At the same time the attempt should be made to find and eradicate the underlying cause, whether it be gastro-intestinal troubles, napkin dermatitis, ear or nasal discharges, scabies or pediculosis. These conditions, when mild, and many other troubles found in infants often lead to violent scratching and subsequent infection with *Staphylococcus albus*, which is always present on epithelial surfaces. It is in these secondarily infected cases that vaccines sometimes eliminate the pus element, so that we have a simple catarrhal condition to deal with instead of a complicated infected one.

1217 Connecticut Avenue, N. W.

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# CHRONIC CONSTIPATION

ALFRED C. REED, M.D.
Assistant Surgeon, U. S. P. H. and M.-H. S.
TOMPKINSVILLE, N. Y.

While it is generally recognized that the use of cathartics tends to aggravate chronic constipation, it is none the less true that all too often mercurials and the vegetable purgatives are made the first resort in this condition. In part at least, this is because of carelessness in ascertaining the cause and a more or less confused idea of the rational basis for treatment. Chronic constipation may accompany or be a symptom of some general organic or functional morbid process, or it may exist as an independent affection. Inability of the bowel to empty itself depends of course on a disturbance of some part of the mechanism involved in defecation. The essential physiology of the impulse to defecation and the factors on which it depends are but imperfectly understood. A certain rhythmical periodicity as well as a fairly definite acceleration by taking food into the stomach are somewhat characteristic.

A peculiar form of constipation is that due to spasmodic contraction of entire sections of the intestine at once, without the recurring relaxation-rings which characterize normal peristalsis, and with no forward movement of the contents. This is seen, for instance, in lead-poisoning, and independently in neurasthenic and melancholic individuals. The intestinal spasticity is indicated by the configuration of the feces, which are hard and of small diameter. The real cause of this cramp is not known, except in the case of lead-poisoning, but the condition is amenable to symptomatic treatment.

No better antispasmodic is available for the relief of this condition than belladonna. It may be administered by mouth combined with a carminative in some such prescription as the following:

| | | |
|---|---|---|
| ℞ | Tr. belladonnæ fol. ........................ | |
| | Fl. ext. rhamni purshianæ ................ āā | 5 |
| | Tr. zingiberis ............................ | 4 |
| | Tr. cardamom. comp., q. s. ................ ad | 60 |

Misce et fiat solutio.
Sig.: 1 teaspoonful after each meal.

Another measure which often meets with success is the use of oil enemas. Two methods may be suggested. By means of a smooth glass cannula, a rubber tube, and a funnel, from 350 c.c. to 500 c.c. of pure olive oil are very slowly introduced into the rectum, the patient keeping the dorsal position with the hips elevated. The operation should consume ten minutes or more. Again, 60 c.c. of olive oil may be injected into the rectum by means of a large irrigating syringe, just before retiring, and be retained by the patient. This should be repeated for five or six days.

Chronic habitual constipation can be reduced to two general types. In the first, the irritability or motile ability of the intestinal wall is decreased or in abeyance. In the second, the normal stimulus to defecation is lacking.

1. Loss of all or part of the normal irritability of the intestine may be due to an abnormality in the mucosa, musculature or nervous mechanism (local or central). Constipation due to a lesion of the mucosa is illustrated in chronic intestinal catarrh and in atrophy of the mucosa of the large intestine. As Nothnagel[1] points out, constipation is often present in such cases, and a decreased arousability of the mucosa is most probably the reason. It is also evident that no stimulus will be effective if there is atrophy of the muscular coat of the colon, and Nothnagel, who has contributed largely to our knowledge of this subject, says that while muscular atrophy is at times associated with mucosal atrophy, it may also exist as an independent affection, with no demonstrable lesions of the mucosa. Of no less importance is paralysis of the muscular coat as seen in inflammatory conditions affecting the peritoneum. Peritoneal inflammations can involve the intestinal muscle even to the point of complete paralysis. The relation between the two is obscure and deserves more study.

In cases of muscular insufficiency not associated with acute inflammatory processes, stimulating and tonic treatment is indicated. Nux vomica, quinin and general tonic measures may be employed.

Disorders of motility referable to the local nervous system (ganglion cells and their branches, in the intestinal wall) are most difficult to determine. Degeneration of these ganglion cells has been observed in cases of lead-poisoning, and in chronic constipation, and have been described as the cause of the disturbed motility, but similar degenerations are found in many other diseases, and anatomic anomalies of ganglion cells are notoriously difficult to assign certainly as the source of functional disturbances. That the central nervous system exerts a powerful influence over intestinal motility is clearly shown by the frequency of chronic constipation in psychic disorders, such as melancholia and neurasthenia, as well as in many diseases of the brain and cord. The real nature of this nervous control in life is unknown, and Krehl[2] well says that influences are operative in the motile function of the intestine of which we as yet know very little.

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[1] Nothnagel: Ztschr. f. klin. Med., iv, 422.

Here the physician can hope for success only by measures designed to relieve the underlying nervous or psychic disorder. Regular habits, especially as to meals, sleep and recreation, combined with a carefully outlined dietary and judicious use of baths, must be supplemented by such suggestive treatment as the physician can bring to bear. Suggestion, of course, depends on confidence of the patient in the physician and care not to arouse antagonism.

It is recognized that the decreased normal stimulation of the intestine is to a great degree due to an overconcentrated food-supply, and a diet lacking in those elements which normally exert a mild irritant action on the intestinal tract, increasing peristalsis and aiding evacuation of the bowels. Such elements are found in the more indigestible parts of the food, the cellulose and the refuse which traverses the intestine unaltered. Correction of diet, with a judicious and minimal employment of laxatives, and supplemented by physical measures for improving abdominal circulation and bodily habits, is the acceptable line of treatment for such cases.

Foremost among physical measures should be reckoned regularity in going to the water-closet, exercise which will stimulate and develop the abdominal muscles, massage, copious water-drinking, and a diet which contains abundant cellulose and waste. Such a diet may well include coarse, fibrous vegetables like spinach, carrots, cabbage, cauliflower, lettuce, corn, beets and turnips. Fresh fruits are also advisable.

A. Schmidt[3] advances the view that especially in atonic cases, the explanation just given does not tell the whole story, but must be at least qualified by the addition that in cases of chronic habitual constipation the food is overdigested as compared with normal conditions, and that as a result the feces are insufficient in amount, and too hard in consistency. He regards this abnormality of digestion as the primary cause, and disordered motility as secondary, and concludes that the deficient quantity of undigested food residue is responsible for a much-decreased development of bacteria, and the correspondingly low proportion of bacterial decomposition products such as volatile and higher fatty acids and gases, is insufficient to induce peristalsis. In the cases under his observation he noted a very small proportion of water in the feces, together with an extremely low percentage of dry material, and microscopically very scanty traces of food. Strassbourger[4] confirmed these results and in addition found that the proportion of bacteria in the feces of chronically constipated persons averaged about two-thirds that in the feces of normal individuals. Lohrisch[5] determined that the tender cellulose of fresh vegetables was more thoroughly digested in the intestinal canal of constipated than of normal individuals. Also the freshly evacuated constipated stools show neither fermentation nor putrefaction by the incubation test. These facts explain why so often an addition to the dietary of salads, fruits and coarse vegetables, does not relieve the chronic constipation, the cellulose being more completely digested in the constipated than in the normal intestine.

It is evident then, Schmidt continues, that a material less digestible than cellulose is required, and after experimenting with a great variety of substances, he concludes that the most satisfactory for this purpose is agar-agar, so familiar in the bacteriologic laboratory. Agar-agar has high hygroscopic properties, is non-irritant and absolutely insoluble and unabsorbable. It yields its moisture with great difficulty and is very resistant to decomposition. When administered dry, cut in scale form or small lumps, as a part of the food at each meal, it swells somewhat in the mouth, still more in the stomach, and emerges unchanged in the feces which are softer and usually evacuated more quickly. Agar can be best given in the scale form, a teaspoonful or more with each meal. It is tasteless and readily eaten with a breakfast food or a vegetable.

A careful routine examination of the feces in patients with intestinal disorders would go far toward elucidating obscure cases as well as facilitating an accurate diagnosis and establishing a rational basis for therapy. This routine examination need not be the disagreeable ordeal so many dread, and the additional light thrown on digestive disorders, anemias, unsuspected infection with intestinal parasites, etc., would amply repay the time and labor expended.

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[2] Krehl: Pathologische Physiologie, Ed. 6, p. 397.
[3] Schmidt, A.: München. med. Wchnschr., 1905, xli.
[4] Strassbourger: Ztschr. f. klin. Med., xlvi, 413.
[5] Lohrisch: Deutsch. Arch. f. klin. Med., lxxix, 383.

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# THE STUDY OF TROPICAL DISEASES IN THE PHILIPPINE ISLANDS

## A SUMMARY OF THE WORK PERFORMED DURING THE LAST TWO YEARS BY THE UNITED STATES ARMY BOARD *

WESTON P. CHAMBERLAIN, M.D.
Major, Medical Corps, United States Army; President of the United States Army Board for the Study of Tropical Diseases
MANILA, P. I.

Scientific study of the various problems presented in the Philippines was begun by medical officers of the Army shortly after the American occupation of the Archipelago. Reports of various laboratory investigations bearing on tropical diseases were made by many officers of the medical department, notably Drs. Strong, Calvert, Musgrave, Curry, Craig, Jackson and Vedder. Early in 1906, the United States Army Board for the Study of Tropical Diseases as they Exist in the Philippine Islands was organized by orders from the war department and has been in continuous existence ever since. The following medical officers have been detailed on this board in the order named: Major P. M. Ashburn, Captain C. F. Craig, Captain H. J. Nichols, Captain J. M. Phalen, Captain E. D. Kilbourne, Major W. P. Chamberlain, Major H. D. Bloombergh, Captain E. B. Vedder and Captain John R. Barber. I have served as president of the board for the last two years (1910 and 1911), and the following paragraphs deal with the work which has been reported on during that period. As this represents only a part of the scientific work which is

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being done by the Army Medical Corps, it is apparent that much opportunity for original research is offered to those who enter the military service.

*An Experiment with Orange-Red Underwear.*—This experiment lasted one year and was carried out on 900 soldiers, one-half of whom were clothed as usual, while the other half wore shirts, drawers and hat-linings dyed orange-red, with a view to excluding the actinic rays of the solar spectrum. The pulse, respiration, temperature, blood-pressure and weight of these men were recorded quarterly, elaborate blood-examinations and extensive photographic experiments were made, and the comparative sick-records of the two groups were carefully analyzed. No difference could be detected between the two bodies of soldiers and the conclusion was reached that no benefit resulted from the use of garments which exclude the actinic rays of the tropical sunlight.[1]

*The Influence of the Philippine Climate on Blonds and Brunettes.*—The investigations on this subject were carried out during a period of about two years, more than 1,500 men being under observation. One-half of these belonged to the blond type and the remainder to the brunette type. One thousand of these individuals had an average of two years of continuous tropical residence and the remainder an average of 5.5 years. The same kinds of observations were made as are referred to in the preceding paragraph, and in addition there were strength tests, examinations of stools and urine, determinations as to the condition of the men after exercise, and a study of the symptoms of which the men complained when exposed to the sun. The relative amount of invaliding home among the two complexion types in the Philippine forces was also investigated. It was concluded that the blonds were fully as able as the brunettes to withstand the influences of the Philippine climate as encountered by our soldiers at the present time. As a result of this study, and of the one regarding orange-red garments, the board is of the opinion that the main causes of tropical deterioration are infections, heat and humidity, and that the chemical action of the sunlight is probably not a factor in tropical morbidity.[2]

*The Occurrence in the Philippines of Spirochetes and Fusiform Bacilli in Various Lesions.*—For a couple of years the board has been on the lookout for the symbiotic organisms which were first described by Plaut and by Vincent. We have shown that in over 50 per cent. of the oral and faucial ulcers met with in the Philippines, spirochetes and fusiform bacilli are present in greater or less numbers, while in over 30 per cent. they are found in preponderating numbers. The same organisms are seen occasionally in ulcers of the skin and in pulmonary diseases in the Philippines. We are in doubt as to whether they are ever causative of any of the multiform lesions in which they are encountered.[3]

*Typhoid Fever in the Philippines.*—For two and one-half years the board has been making the agglutination and cultural examinations of all military patients in the Philippines who had typhoid or were suspected of having it. Many of these patients were Filipino soldiers. We also have made Widal tests on 591 healthy Filipinos, from widely separated localities, to determine what evidence there might be of a previous attack of typhoid among them. As a result of the laboratory work, the analysis of the case histories, and a study of the available statistics for the civil and military population, the board reached the following conclusions:

1. Typhoid is a widely scattered and common disease in the Philippines; its incidence in Manila is above the average rate for the United States and is exceeded by only a few of the worst American cities; the average admission rate among the American soldiers in the Philippines exceeds that for the troops serving in the United States; medical officers from many regions report its frequent occurrence among the Filipinos.
2. The statistics from the Filipino (native) scouts show a much lower typhoid rate than for white troops, possibly owing to failure to diagnose the atypical cases.
3. Widal reactions performed on the blood of 591 healthy Filipinos suggest a comparatively recent attack of typhoid in about 6 per cent. of adults, but do not indicate that the disease is prevalent in childhood.
4. Many epidemics have occurred among soldiers in the Philippines and three outbreaks among natives have been studied. Epidemics of great severity among the Filipinos are either rare or unnoticed.
5. The occurrence of the disease in the Philippine Islands is quite evenly distributed throughout the year. The incidence is least in the second quarter.
6. The appearance of the Widal reaction in typhoid fever in the Philippines is not as a rule delayed.
7. Paratyphoid organisms are occasionally isolated in the Philippines.
8. The leukocyte count in typhoid usually remains normal for whites and is slightly increased for natives. The differential count is normal for both races.
9. The mortality for white troops in the Philippine Islands during the last five years has been no higher than at home. It appears somewhat higher for Filipinos, but this may be due to failure to diagnose all the mild cases.
10. More than a third of the cases of enteric fever, whether among Americans or Filipinos, are entirely atypical and cannot be diagnosed without laboratory methods.
11. Over half of the cases occurring in the Philippine Islands can be diagnosed clinically and differ in no essential particular from typhoid fever as seen at home. This is true for both American and Filipino patients.
12. Much work still needs to be done among the natives to estimate the actual amount of mild and atypical typhoid which is occurring and to determine why extensive and destructive epidemics are not more often seen.[4]

*Antityphoid Vaccine.*—The preparation of antityphoid vaccine for the Philippine Division is carried out in the laboratory of the board, and during the last ten months 25,000 c.c. of this prophylactic have been made and issued to the various commands for administration by the post surgeons.

*Experiments Undertaken to Test the Efficacy of the Ipecac Treatment of Dysentery.*—So far as is known, the first attempt to determine the value of the ipecac treatment of dysentery by laboratory methods has been made by a member of this board.[5] In these experiments cultures of amebas from a human stool were treated with preparations of ipecac from various sources and in different dilutions. As a result it was determined that fluid-extract of ipecac was capable of killing amebas in dilutions of 1 to 10,000 up to 1 to 50,000, the amebacidal power depending on the particular extract used, and that emetin killed amebas in dilutions of 1 to 100,000. The commercial extracts of ipecac were further shown to vary considerably in total alkaloids, some being below the standard of the Pharmacopeia and some slightly above. The conclusion was reached that the ipecac treatment of dysentery should be given a more extended trial, that before treatment great care should be taken to be sure that the dysentery was caused by amebas, and that an ipecac should be used which is shown by actual analysis to contain the proper amount of emetin.

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[1] Phalen: An Experiment with Orange-Red Underwear, Philippine Jour. Sc., Sec. B, 1910, v, 6.

[2] Chamberlain: Observations on the Influence of the Philippine Climate on White Men of the Blond and of the Brunette Type. Philippine Jour. Sc., Sec. B, 1911, vi, 6.

[3] Chamberlain: Occurrence in the Philippines of Associated Spirochetes and Fusiform Bacilli in Ulcers of the Throat and Mouth, and of the Skin, and in Lesions of the Lungs, Philippine Jour. Sc., Sec. B, 1911, vi, 6. Bloombergh: Vincent's Angina, Bull. Manila Med. Soc., 1910, ii, 7.

[4] Chamberlain: Typhoid Fever in the Philippine Islands, Philippine Jour. Sc., Sec. B, 1911, vi, 4.

[5] Vedder: Preliminary Account of Some Experiments to Test the Efficacy of the Ipecac Treatment of Dysentery, Bull. Manila Med. Soc., 1911, iii, 3; also in Mil. Surg., 1911, xxix, 3.

*Effects of Ultraviolet Rays on Amebas.*—In view of the recently reported successes in the use of ultraviolet radiations in the sterilization of drinking-water the board carried out a series of experiments to determine the effect of these rays on amebas.[6] It was found that the ultraviolet radiations would kill amebas, whether motile or encysted, as readily as they would kill *Bacillus typhosus* or *Bacillus dysenteriæ*. *Balantidia* were also readily killed. These results are of much practical importance in the sterilization of water-supplies in the tropics because sand-filters cannot be relied on to remove amebas.

*Examinations of the Stools and Blood Among the Igorotes at Baguio.*—The board made an examination of the stools and blood of 119 Benguet Igorotes, a wild race inhabiting the higher mountains in northern Luzon. The Igorotes are an industrious, well-developed and vigorous people living in a climate comparatively temperate. It was found that 92.5 per cent. showed the ova of one or more intestinal parasites in the stools. Twenty-nine per cent. were infested with uncinaria, but apparently did not suffer from the presence of these worms, the infections being in general light ones. Malarial organisms and filaria embryos were not found in any case. The blood showed the following average percentage of white cells: polymorphonuclears, 46.9; eosinophils, 8.9; small lymphocytes, 37.2; large lymphocytes and transitionals, 6.7; mast cells, 0.4.[7]

*The Occurrence of Hookworm Infections Among American Soldiers in the Philippines.*—Infestation with uncinaria is common among the Filipinos, but it was not to be expected that American soldiers, living in a sanitary manner, would often become the hosts of these parasites. An extensive series of stool examinations supported this view.[8] Out of 8,000 routine examinations of feces at the Division Hospital in Manila, only seventy-one showed ova of uncinaria. Out of 800 stools examined at Fort William McKinley, near Manila, only nineteen were found to contain the eggs. These figures show that hookworm infections, sufficiently well marked to be detected by the usual routine stool examination, are unusual among our white soldiers serving in the islands. Most of those in whose stools the ova were found had been admitted to hospital for causes other than uncinariasis. In the case of about one-third of the men who did show ova, there was good reason to suppose that the worms had been brought from the United States. The opportunities for infection there are ample since it has been found that 70 or 80 per cent. of the southern-bred recruits for the Army have some hookworm eggs in their feces.

*A Study of Arneth's Nuclear Classification of the Neutrophils in Healthy Adult Males and the Influence thereon of Race, Complexion and Tropical Residence.*—The board has recently completed a series of observations on the leukocytes in the tropics which indicate that the Arneth picture shows a marked shift to the left in Filipinos as compared with that of white men living in the same locality.[9] The conclusions reached were as follows:

1. Both Filipinos and Americans residing more than a year in the Philippines had a normal average number of white cells per cubic millimeter.
2. In both races the percentage of polymorphonuclear neutrophils was much decreased below the minimum considered normal for white men in temperate regions.
3. Probably the polymorphonuclear neutrophils are the only actively phagocytic cells in the circulating blood.
4. The average Arneth picture showed a marked shift to the left in the case of Filipinos and a slight drift in the same direction for Americans resident more than a year in the Philippines.
5. A shift to the left in the Arneth count probably indicates a diminution in the phagocytic power of the blood in question.
6. From the first five conclusions it will be apparent that the Filipinos show an actual absolute reduction in the number of polymorphonuclear neutrophils (phagocytes), and that of this reduced number an abnormally large proportion are deficient in phagocytic power. In other words, the Filipino has absolutely fewer efficient phagocytes than are found among white men either in the Philippines or at home.
7. This reduction in circulating phagocytic cells may be a visible indication of a lowered resistence to infections on the part of native races.

*The Erythrocytes and Hemoglobin of Healthy Americans in the Philippines.*—As a result of 1,400 red-cell counts and an equal number of hemoglobin estimations, made on 700 soldiers at two periods, separated by an interval of one year, the board found an average of 5,200,000 erythrocytes and 89.6 per cent. of hemoglobin for men who were living at sea level and had served on the average for twenty months in the Philippines. These results confirm the opinion of other observers that there is no such thing as "tropical anemia" due to climatic conditions *per se*. The pallor often seen in the tropics is probably due, in most cases, to superficial ischemia, and true anemia, when present, is generally caused by infections with parasites, notably uncinaria or plasmodia.[10]

*Blood-Pressure in the Philippines.*—It has been asserted by some observers that there is a decided falling off in the blood-pressure of persons residing in the tropics. The board has completed an extensive series of blood-pressure observations, comprising 5,368 readings on 992 healthy American soldiers and 552 observations on 386 healthy adult Filipino males.[11] For the age period of 15 to 30 years the systolic pressure, with a 12.5 c.c. armlet, averaged in both races from 115 to 116 mm. This is but little if at all below the average to be expected for the same age in the temperate zone, when a broad cuff is employed. Increasing length of tropical service did not alter the pressure. There was an average rise in tension with advancing age. The blood-pressure was slightly lower (2 or 3 mm.) during the hottest season of the year.

*Wassermann Reaction in Syphilis, Leprosy and Yaws.*—The board has done some work with the Wassermann reaction in a number of tropical diseases as well as in syphilis. The cases of yaws examined gave positive reactions. Of twenty-one lepers tested a positive reaction was obtained in only three instances. One of these three cases gave a clear history of syphilis and in the other two it was impossible to obtain a history, so antecedent yaws or syphilis could not be excluded.[12]

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[6] Chamberlain and Vedder: The Effect of Ultraviolet Rays on Amebas and the Use of These Radiations in the Sterilization of Water, Philippine Jour. Sc., Sec. B, 1911, vi, 5.

[7] Chamberlain, Bloombergh and Kilbourne: Examinations of the Blood and Stools of Igorots at Baguio, P. I., Philippine Jour. Sc., Sec. B, 1910, v, 5.

[8] Chamberlain: A Statistical Study of Uncinariasis Among White Men in the Philippines, Philippine Jour. Sc., Sec. B, 1910, v, 3.

[9] Chamberlain and Vedder: A Study of Arneth's Nuclear Classification of the Neutrophils in Healthy Adult Males and the Influence Thereon of Race, Complexion and Tropical Service, Philippine Jour. Sc., Sec. B, 1911, vi, 5.

[10] Chamberlain: The Red Corpuscles and Hemoglobin of Healthy Adult American Males Residing in the Philippines, Philippine Jour. Sc., Sec. B, 1911, vi, 6.

[11] Chamberlain: A Study of the Systolic Blood-Pressure and Pulse-Rate of Healthy Adult Males in the Philippines, Philippine Jour. Sc., Sec. B, 1911, vi, 6.

*Diphtheria in the Philippines.*—In the early days of the American occupation it was thought that diphtheria rarely if ever occurred in the Philippines. The laboratory experience of the board for the last two years and the health statistics for Manila have convinced us that the disease occurs by no means infrequently in the Philippines. Diphtheria is found among both whites and natives and the mortality statistics as well as laboratory experiments demonstrate the virulence of the organism. We believe the disease is much more common than the present statistics would indicate.[13]

*The Eradication of Beriberi from the Philippine (Native) Scouts.*—As a result of the recommendations of this board beriberi has been eliminated from the Philippine (native) scouts. The details of the earlier part of this work have been published previously under the above heading.[14] In that article it was shown that the disappearance of the disease was brought about by a reduction in the amount of rice consumed and the addition to the ration of a legume. Shortly after the disease had disappeared a change was made from highly milled (polished) rice to undermilled (unpolished) rice. We believe that this change alone would have eliminated beriberi, but owing to various circumstances, not under our control, it was impracticable to make this single alteration in the dietary. The thing which in our opinion is abundantly proved is that beriberi has been eradicated by a change in diet consisting of a reduction in the amount of rice from 20 to 16 ounces, a substitution of undermilled rice for the polished article, and the addition of a legume. In 1908 to 1909 there were 600 cases of beriberi annually. In the entire seventeen months since the alteration in the ration went into effect there have been but seven cases of the disease. An occasional case is to be expected, since now and then a soldier living with his family may subsist mainly on polished rice bought in the local market.

*Investigations into the Etiology of Beriberi and Polyneuritis Gallinarum.*—Believing that the form of polyneuritis gallinarum produced by polished rice is the result in fowls of the same deficiency in diet that causes beriberi in man, the board has been diligently investigating this disease for the past two years. Multiple neuritis does not develop among fowls fed on undermilled rice, or among those fed on polished rice and at the same time given some of the polishings removed from the grain during the process of milling and polishing. In other words, there is some protective substance in the outer layer of the kernel, and this outer layer is removed in the process of polishing. The details of our work appear in several papers.[15, 16] The results recorded in the later articles[16] are of very great importance and almost certainly overthrow Schaumann's theory that deficiency in phosphorus compounds is the cause of polyneuritis in fowls subsisting exclusively on polished rice. The general conclusions reached are as follows:

1. Polyneuritis gallinarum is not prevented by adding to a diet of polished rice any of the following substances: potassium phosphate, potassium citrate, potassium carbonate, potassium chlorid, magnesium phosphate, phytin, phosphoric acid or phosphoric acid combined with potassium chlorid, glycerin, sucrose, lime juice, extract of onions, egg albumin, nuclein, lecithin, histon bases, glycocoll, asparagin, succinamid and other amido-acids.

2. Polyneuritis gallinarum may be prevented by means of an extract of rice polishings containing only those substances soluble in *cold water and cold alcohol.* This extract, so far as at present known, has the following composition:

| | Per cent. |
|---|---|
| Total solids | 1.34 |
| Ash | 0.03 |
| Phosphorus pentoxid | 0.00165 |
| Nitrogen | 0.0406 |
| Sucrose | 0.88 |

3. Multiple neuritis in fowls fed on polished rice is probably not due to lack of phosphorus compounds in the grain, since out of each 1,000 parts of phosphorus contained in the rice polishings at least 999 parts are not concerned in preventing neuritis.

4. The neuritis-preventing substance contained in the extract of rice polishings is capable of dialysis through a parchment membrane. This excludes all colloids from consideration.

5. The neuritis-preventing substance is absorbed by animal charcoal and the filtrate through this charcoal fails to prevent neuritis.

6. The neuritis-preventing principle is insoluble in ether. After absorption by bone-black the neuritis-preventing substance is not dissolved out of the charcoal by either water or absolute alcohol.

7. An extract of dried beans when added to a diet of polished rice will prevent polyneuritis gallinarum.

*The Cure of Infantile Beriberi by an Extract of Rice Polishings.*—A malady, called by the natives *taon, taol* and *suba,* is one of the chief causes of infantile mortality in the Philippines. The disease usually occurs during the first four months of life, and is considered by many, including ourselves, to be infantile beriberi. Most of the mothers show symptoms of beriberi; the children nearly always die if they continue to feed at the breast, and they usually recover promptly if given modified cow's milk or canned milk. To eleven infants having the disease, and which continued to take the breast, we have administered the extract of rice polishings that prevented neuritis of fowls. Prompt and complete recovery occurred in all. The rapidity with which these patients recover reminds one of the marvelous improvement which follows the use of fruit-juices in infantile scorbutus. The extract is easy to make, is inexpensive, is agreeable to the infant's palate, and cures the child while it continues to nurse the mother. If the present promise is fulfilled we believe that the use of this extract of rice polishings will lead to a very marked decrease in infant mortality in the Philippines. The matter has been made the subject of a special report shortly to be published.[17]

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[12] Bloombergh: The Wassermann Reaction in Syphilis, Leprosy and Yaws, Philippine Jour. Sc., Sec. B, 1911, vi, 4; also in Mil. Surg., 1911, xxix, 2.

[13] Chamberlain: Diphtheria in the Philippines, Bull. Manila Med. Soc., 1910, ii, 7.

[14] Chamberlain: Eradication of Beriberi from the Philippine (Native) Scouts by Means of Simple Changes in Their Dietary, Philippine Jour. Sc., Sec. B, 1911, vi, 2; also in Mil. Surg., 1911, xxviii, 5.

[15] Chamberlain, Bloombergh and Kilbourne: A Study of the Influence of Rice Diet and of Inanition on the Production of Multiple Neuritis of Fowls and the Bearing Thereof on the Etiology of Beriberi, Philippine Jour. Sc., Sec. B, 1911, vi, 3; also in Mil. Surg., 1911, xxix, 2. Kilbourne: Food Salts in Relation to Beriberi, Philippine Jour. Sc., Sec. B, 1910, v, 1; Multiple Neuritis of Fowls Due to Inanition, Bull. Manila Med. Soc., 1910, ii, 9.

[16] Chamberlain and Vedder: Contributions to the Etiology of Beriberi, Philippine Jour. Sc., Sec. B, 1911, vi, 3; Philippine Jour. Sc., Sec. B, 1911, vi, 5. Chamberlain, Vedder and Williams: A Third Contribution to the Etiology of Beriberi, Philippine Jour. Sc., Sec. B; to appear, probably, in vol. vii, No. 2, 1912.

[17] Chamberlain and Vedder: The Cure of Infantile Beriberi by the Administration to the Infant of an Extract of Rice Polishings and the Bearing Thereof on the Etiology of Beriberi, Bull. Manila Med. Soc., 1912, iv.

*Miscellaneous Observations.*—Many series of observations of smaller scope than the above have been completed by the board during the last two years. Among these may be mentioned the following: temperature observations to show the unsuitability for tropical wear of certain new uniform materials;[18] tests to determine the fineness of mesh necessary in bronze gauze to exclude Philippine *Anophelinæ;* examinations to prove the wholesomeness of fresh beef and emergency rations which have been kept for many years in Manila, the former in cold storage; observations on the influence of the tropical climate on the weight and the body temperature of white men; the study of a fever of undetermined type, and of an epidemic of Koch-Weeks' bacillus conjunctivitis,[19] both occurring on Corregidor Island; a report on the so-called "X-bodies," which have been thought by some to be parasites and which the board has shown to be artefacts on glass slides;[20] the finding of the *Bacillus influenzæ* in the Philippines; reports of cases of bronchial spirochetosis and pulmonary blastomycosis in the Philippines; a discussion of yaws as a cause of chronic ulceration in the tropics.[21] The above matters for which no reference numbers are given are published from time to time in the quarterly reports of the board which appear in the *Military Surgeon.*

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# THE DIAGNOSIS OF PAIN IN THE UPPER ABDOMEN *

JUDSON DALAND, M.D.
Professor of Clinical Medicine in the Medico-Chirurgical College and Physician to the Medico-Chirurgical Hospital
PHILADELPHIA

Pain in the upper abdomen is usually due to gall-stones or a duodenal or gastric ulcer. Pain due to uncomplicated cholelithiasis appears and disappears suddenly, without warning, and may recur at intervals of hours, days, months or years. Gall-stone colic may occur at any hour independent of, and unrelieved by, food. The pain may be from mild to agonizing, and may be associated with spasm of the diaphragm or pylorus. It is localized in the epigastrium and may radiate to the scapula; its duration and intensity depend on (a) the size of the calculus; (b) the rate of progress through the ducts; (c) impaction of the stone; and (d) amount of obstruction to the flow of bile. A large stone lodged in the common duct, causing complete obstruction, produces maximum pain and jaundice, and the gall-bladder region may be tender on palpation. The pain in severe gall-stone colic may be due to overdistention of the ducts, the gall-bladder and capsule of Glisson, spasm of the duct around the calculus, and associated pylorospasm. Anxiety, fear and dyspnea may be due to spasm of the diaphragm. The feces may contain gall-stones after an attack of colic, but their absence need not modify the diagnosis. Biliary colic, unassociated with jaundice or stones in the feces, may be caused by a calculus impacted in the cystic duct.

Gall-stones may exist in the gall-bladder without symptoms. Cholecystitis and cholelithiasis are usually associated and the former occasions the formation of mucus, serum and hyperperistalsis, all tending to dislodge the gall-stones from the gall-bladder into the cystic duct. As the lumen of the common bile-duct is larger than that of the cystic duct, the stone may speedily enter the duodenum. A moderate-sized calculus is apt to be arrested in the ampulla of Vater.

Slight attacks of biliary colic may be due to obstruction from (a) swelling of the mucous membranes of the cystic and common bile-ducts from catarrhal inflammation; (b) from masses of mucus; (c) from biliary sand; (d) from small calculi in the cystic duct, and (e) from a small stone in the common bile-duct or the ampulla of Vater. Cessation of biliary colic may be due to (a) the passage of the obstructing calculus into the duodenum; (b) return of the calculus to the gall-bladder; (c) dilatation of the ducts so that the bile may pass the calculus, thus relieving pressure; and (d) cessation of hyperperistalsis of the gall-bladder due to (1) atony; (2) excessive overdistention causing paralysis, or (3) subsidence of inflammation.

If the common bile-duct is partially obstructed, jaundice may be absent or slight; if complete, it appears promptly and is intense. If the cystic duct alone is obstructed, jaundice is absent. Jaundice occurs in 25 per cent. of all cases of cholelithiasis.

If biliary colic recurs, or if chronic gastro-intestinal indigestion and hepatic insufficiency persist, despite thorough medical treatment, surgical diagnosis and treatment is absolutely necessary and should not be delayed.

A radiograph occasionally shows gall-stones in the gall-bladder; but a negative plate does not indicate the absence of gall-stones.

Some observers have described a friction fremitus, or a friction sound, heard and felt over gall-bladders containing gall-stones. Cholelithiasis is especially apt to occur in obese middle-aged women of sedentary habits. Complications, such as local peritonitis, adhesions, perforations or cancer, may so alter the clinical picture as to render an accurate differential diagnosis impossible; but the necessity for surgical interference is usually manifest.

Pain in the upper abdomen may also be due to *cholangeitis,* which causes swelling of the mucous membranes of the bile-ducts and obstruction to the flow of bile, which becomes more viscid than normal and is admixed with mucus. Pain in simple cholangeitis is usually moderate and is referred to the epigastric or hepatic region. As a rule, acute catarrhal cholangeitis is associated with cholecystitis and may be due to extension of inflammation from the duodenum, and, therefore, gastroduodenitis frequently coexists. Jaundice is usually present.

In suppurative cholangeitis, diffused dull pain may be present in the hepatic region, with tenderness or pain on pressure, and daily intermittent fever, ranging from 97 to 105 F., with chills and sweats, closely simulating quotidian intermittent malarial fever. Pain in the gall-bladder region, aggravated by pressure, may be caused by cholangeitis from overdistention or spasm.

Ulcerative calculous cholecystitis may cause adhesions to the duodenum or neighboring structures. A gall-stone from an adherent gall-bladder may escape into the duodenum through an ulcerated opening, and when the stone is large may cause pain from partial duodenal obstruction. Ulcerative cholangeitis may cause stricture or obliteration of the bile-ducts.

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[18] Chamberlain, Bloombergh and Kilbourne: Report of the Board for the Study of Tropical Diseases, quarter ending Sept. 30, 1910, Mil. Surg., 1911, xxviii, 1.

[19] Chamberlain: An Epidemic of Koch-Weeks' Bacillus Conjunctivitis Among Filipinos, Bull. Manila Med. Soc., 1910, ii, 5.

[20] Chamberlain and Vedder: The So-Called X-Bodies as Artefacts on Glass Slides, Philippine Jour. Sc., Sec. B, 1911, vi, 5.

[21] Phalen: Yaws as a Cause of Chronic Ulceration, Bull. Manila Med. Soc., 1910, ii, 2.

* Read, by invitation, before the Philadelphia County Medical Society, Feb. 14, 1912

Biliary obstruction may be produced by adhesions, by pressure from diseases of the liver, gall-bladder, pancreas, stomach, duodenum or lymph-nodes. The character, intensity, duration and radiation of the pain will depend on the cause, location and amount of obstruction to the flow of bile.

*Hyperchlorhydria* or *hyperacidity*, or both, may cause recurring attacks of pain in the epigastrium closely simulating ulcer or biliary colic. It occurs in patients of nervous temperament; the pain is less severe than that of ulcer or colic and recurs when the stomach is empty, and is relieved by food, alkalies or lavage. The gastric juice contains an excess of hydrochloric acid, or of lactic, acetic or butyric acids.

The pain in *chronic ulcer* is burning, boring, gnawing or lancinating, and is relieved by food, drink, alkalies, lavage or vomiting. These pains may recur regularly, two to five hours after one or more meals daily, and the attacks may persist for weeks followed by an interval of absence of symptoms lasting months or years. Pain may be slight, moderate or severe, and may occupy an area no larger than a silver quarter, and radiate to other parts of the abdomen. The epigastrium is usually sensitive or painful to pressure.

Pain in gastric ulcer depends on (a) the nature, location, extent and depth of the ulcer; (b) hyperchlorhydria or hyperacidity; (c) hypergastric peristalsis or pylorospasm; (d) overdistention by gas or swallowed air; (e) local peritonitis; (f) adhesions; (g) kind and quantity of food, and (h) sensitiveness to pain.

The location of the pain in gastric ulcer depends in part on the location of the ulcer in the stomach. The nearer the ulcer approaches the pylorus, the greater the probability that the pain will be low in the epigastrium, and will occur four or five hours after a meal, whereas an ulcer in the fundus causes pain in the upper epigastric region soon after eating. Graham and Mayo state that in pyloric ulcer the pain occurs late, four or five hours after a meal, and is located in the lower epigastrium to the left of the median line, while in duodenal ulcer the pain is in the same region, but to the right of the median line. They have doubtless observed many exceptions to this rule. *Chronic indurative ulcer* may exist and pain be absent. Evidences of gastro-intestinal indigestion are usually present, and not infrequently abnormal gastric sensations, abnormal appetite; or nausea and vomiting occur.

Hematemesis and melena are important signs of gastric ulcer, but their absence is unimportant diagnostically, and this is also true of the occult blood test. The gastric contents usually show marked excess of hydrochloric acid with lactic, acetic butyric acid and yeast-cells. Butyric acid is especially irritating to the stomach and incites vomiting. Food stagnation may be caused by pylorospasm. The fluoroscope may reveal an increase in the frequency and depth of the peristaltic waves, pylorospasm, or a spasmodic hour-glass contraction of the stomach.

Chronic indurative or indolent gastric ulcer usually occurs in the pyloric region, and is preceded by a history of recurring attacks of gastric indigestion and many of the usual characteristic symptoms of gastric ulcer may be absent. A marked peculiarity of this ulcer, masking diagnosis, is the prolonged interval of comparatively good health between attacks of gastric disorder and the disappearance of these symptoms under medical treatment. During the interval, which may be months or even years, the patient is supposed to be cured, although we know that the ulcer is present, but latent. Such an ulcer progresses intermittently, is frequently undiagnosed, and the recurring symptoms are erroneously regarded as gastric indigestion. These attacks of gastric indigestion and pain are associated with hypersecretion, hyperacidity, hyperchlorhydria, hypermotility, reverse peristalsis, gas, nausea, vomiting and acute ulceration of the base of the chronic ulcer; and when these conditions subside, symptoms disappear. This ulcer is most dangerous and it is fatal not to resort at once to surgical treatment. Medical treatment is purely palliative, and, if continued, death will ensue from hemorrhage, perforation or cancer.

The pyloric region is the most common location of ulcer and of cancer. The pain of acute perforation is sudden, agonizing and causes shock. The pain of chronic perforation cannot be differentiated from complications, such as peritonitis and adhesions. Ordinarily, chronic pyloric ulcer can be diagnosed, but when complicated by extensive ulceration, ulcer of the fundus, hour-glass contraction, perforation or adhesions, it cannot be distinguished from gall-stones or appendiceal colic. Mucous erosion or acute peptic ulcer is rare; it may be suspected, but usually cannot be diagnosed unless complicated by hemorrhages, peritonitis, perforation or obstruction.

Chronic duodenal ulcer is more common than gastric ulcer and occurs more frequently in males than in females, according to statistics gathered at the operating table by W. J. Mayo. In acute duodenal ulcer, the cause, character, location and extent of the subjective pain, and pain on pressure, closely resemble that of pyloric ulcer. Hyperchlorhydria and hyperacidity are less common in duodenal than in gastric ulcer. A differential diagnosis between pyloric and duodenal ulcer may be difficult or even impossible, but fortunately is usually unnecessary, both requiring surgical diagnosis and treatment. Combined pyloric and duodenal ulcer have been observed.

In pyloric and duodenal ulcer,the pain usually occurs three to five hours after a meal, corresponding in time to the physiologic activity of the pylorus and duodenum. If the gastric contents, secured when pain begins, three hours after a meal, show no hypersecretion, hyperacidity or hyperchlorhydria, the ulcer is probably duodenal. The pain is usually in or near the epigastrium and varies in location, duration and intensity from the same causes that produce pain in gastric ulcer. As a rule, there is localized tenderness on deep pressure over the epigastrium. Hemorrhages occur and, if they are small, the blood may be detected only in the feces; if they are large, it may be rejected by vomiting. Death from hemorrhage in duodenal ulcer has occurred from ulceration of the pancreaticoduodenal artery. Chronic indolent duodenal ulcer may occur precisely as does chronic gastric ulcer. It is accompanied by the same difficulties in diagnosis, the same dangers to life, and requires the same prompt surgical treatment.

The thin wall of the duodenum permits perforation to occur more frequently in duodenal than gastric ulcer. When complication exists, duodenal ulcer cannot be differentiated from gastric ulcer or gall-stones, but indications for surgical diagnosis and treatment are usually evident. Duodenal cancer is rare.

Kinking of the duodenum, due to adhesions which have been caused by a duodenal ulcer, may produce colicky pains in the epigastrium, which often recur regularly from three to five hours after meals. The presence of a duodenal kink may be diagnosed by a radiograph provided pyloric or duodenal ulcer or gall-stones be excluded.

In gastric carcinoma pain is more or less epigastric in location, dull and depressing in character, more or less constant and increased by pressure and food. The frequency and character of pain, when it occurs, are influenced by intercurrent hypersecretion, hyperacidity, local peritonitis, ulcer, perforation or adhesions. Cancerous pyloric stenosis may cause pain from distention of a dilated stomach by food, liquids or gas, and also from cramp-like peristaltic waves endeavoring to force the gastric contents through a stenosed pylorus. Cancer of the stomach, even when far advanced, may be painless, and in more than half the cases begins in the base of a gastric ulcer.

A palpable tumor in the upper abdomen, due to gastric carcinoma, is usually movable, influenced by respiration and painful when compressed. Such a tumor may be immovable because of adhesions. The gastric contents usually contain partially digested blood, food and liquid, achlorhydria, hypochlorhydria, hypersecretion, excess of lactic acid and yeast plants. The feces frequently give a positive occult blood test.

The diagnosis of gastric carcinoma may be easy, difficult or impossible; easy in hopeless, advanced cases with pyloric obstruction and tumor; difficult or impossible when complications occur, or when latent. As an early diagnosis and prompt removal of a gastric carcinoma is the only measure that will save life, and as an absolute early diagnosis of cancer of the stomach is seldom possible, search should be made for indications for a surgical diagnosis.

Any inexplicable persistence or recurrence of the familiar syndrome of chronic gastric indigestion, despite efficient medical treatment, demands immediate surgical diagnosis and treatment.

Space does not permit of a discussion of the diagnosis of pain in the upper abdomen due to neuritis; pressure on the roots of spinal nerves by vertebral osteo-arthritis; spinal meningitis; disease of the spinal cord; tabetic gastric crises; angina pectoris; pneumonia; pleuritis; diseases of the liver; subphrenic abscess; renal calculi, calculous pyelitis; hydronephrosis; sarcoma of the kidney; perinephritic abscess; cancer or abscess of the head of the pancreas; acute hemorrhagic pancreatitis; disease of the lymphatic glands; diseases of the intestines; intestinal obstruction; lead colic or appendicitis.

317 South Eighteenth Street.

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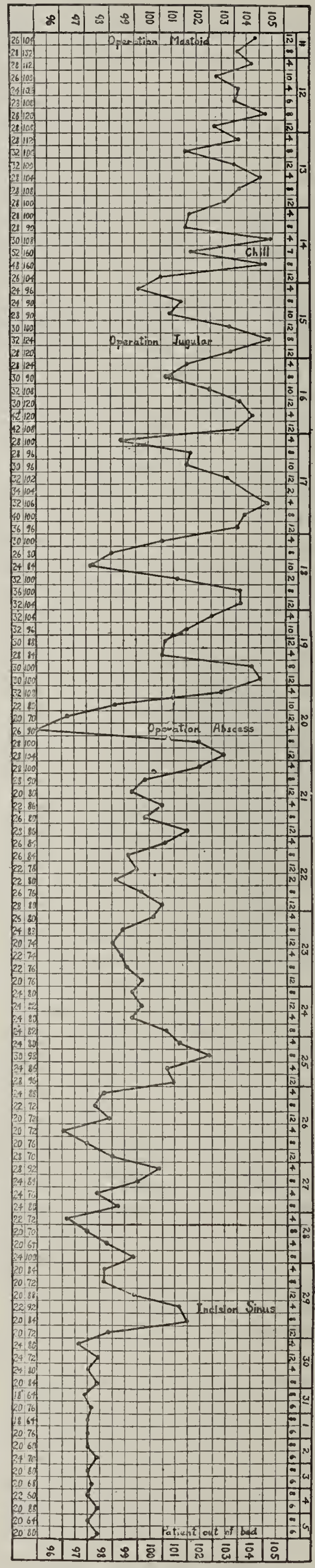
# ACUTE MASTOIDITIS, SINUS THROMBOSIS, SUPERFICIAL BRAIN ABSCESS; RECOVERY *

FRANK TUCKER HOPKINS, M.D.
NEW YORK

*Patient.*—In July, 1911, I was asked, by Dr. Walton Martin, to see a patient with mastoiditis who had that day been admitted to St. Luke's Hospital. The patient, a boy aged 15, well-developed and vigorous in appearance, had had a discharging ear for two weeks and mastoid pain for four days. Myringotomy had been done twice, the last time four days before I saw him.

*Examination.*—I found an abundant discharge in the right ear, the canal somewhat narrowed, the membrane bulging in its posterior and upper portions. The mastoid was very tender over the antrum and over the tip. The patient's temperature was 104.8 F. rectal, the pulse 104, respirations 26; his mental condition was dull, and he looked decidedly ill. A smear from the aural discharge showed a streptococcus infection. The heart, lungs and kidneys were apparently normal and there were no cerebral symptoms; but the very high temperature showed serious complications. An immediate mastoid operation was, of course, indicated, and at Dr. Martin's request I operated.

*First Operation.* — The mastoid was found to be very extensively involved; there was general necrosis with a good deal of free pus. The dura was exposed and appeared healthy. The sinus was also exposed. While it showed a lack of luster there was no apparent clot, for a small puncture caused free bleeding from below and from above. At the completion of the operation the usual dressing was applied, the sinus being carefully protected with a separate layer of iodoform gauze. I had hoped to extend my operation to include the jugular, but at this point the patient's pulse was so rapid and weak that I did not feel warranted in doing more at that time, and so postponed further operation until the next day. The family, however, were reluctant to have a second operation, and it was not until the fifth day, four days after the first operation, that they would consent to the removal of the jugular. In the meantime, as may be seen by the chart, the temperature had become typically that of a sinus thrombosis, and the boy had had two chills, one of which was severe. The blood-count, made the day after the operation, showed a leukocyte count of 17,000 white with 83 per cent. polynuclear. The blood-culture, negative for the first twenty-four hours, at the end of the second day showed streptococci in two flasks. Examination of the fundus of the eye was negative, and there were no cerebral symptoms except that of lethargy, which was easily accounted for by the fever.



Temperature chart of patient with acute mastoiditis, sinus thrombosis and superficial brain abscess.

*Second Operation.*— The chills, the sudden extremes of temperature and the prostration at last served to convince the family of the necessity of another operation, and on the fifth day I removed the jugular. The vein was found to be absolutely empty, making the operation difficult and prolonged, so that when it was completed the patient's condition did not permit an exploration of the sinus. I therefore deferred this operation for a day, but again the family's objections compelled a further postponement.

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* Read before the Otological Section, Academy of Medicine, Jan. 12, 1912.

The temperature on the day after the jugular was removed fell to 101.5 F. but rose again to 104.6 and for three days varied from 105.2 to 98.2. The patient was dull, much duller than before, and inclined to sleep a good deal. He was also slightly delirious at times; but, except that the pulse was not very rapid—not so rapid as the temperature would seem to demand, being rarely above 100 and sometimes as slow as 88—except for this there was no indication of cerebral involvement. There was no stiffness of the neck, no exaggerated reflexes. The Babinski reflex was absent and the other reflexes were dull. After five days of anxious waiting the family consented to an operation for the removal of the sinus clot. Just before the time arranged for the operation the patient had a hard and protracted chill, and the temperature dropped to 95.8.

*Third Operation.*—At this operation the sinus was found discolored, somewhat gray and necrotic in appearance and slightly flattened rather than full. Palpation showed nothing. I made an incision of an inch in length toward the bulb and at once a foul-smelling somewhat purulent and bloody fluid came away, while further exploration brought out small masses of disorganized brain-tissue. I had evidently opened into a brain abscess. The cavity was not apparently deep or extensive, but I made no very exact exploration of it, not wishing to disturb the brain-tissue more than necessary.

It is evident that we had here a broken-down thrombus forming an abscess on the brain surface, that the pus had invaded the brain-substance, forming an abscess in the brain close to the surface, and that the abscess so formed had distended the brain surface, pressing it into the overlying sinus cavity, so that when I opened the sinus I cut directly into the brain.

As there was no bleeding either from above or below, I drained the abscess by the insertion of iodoform gauze in the opening which I had made, and dressed the rest of the mastoid wound in the usual way. I did not attempt to explore the sinus further. The patient's condition was very serious when the operation was completed, and it was two hours before he rallied well.

*Postoperative Course.*—During the four days following this operation the temperature remained low, generally between 99 and 101, and the dulness and apathy of the patient passed off. Then there began again to be fluctuations of temperature, a rise to 102, a fall to 97.2, but until the fourth day these variations of temperature were not rapid or sudden, and there was no chill. On the fourth day at the bedside, dressing, I found that the upper portion of the exposed sinus extending toward the torcular was soft to the touch. So with an exploring-needle I drew off a little blood-stained serum, and followed this exploration by opening the sinus freely for about an inch toward the torcular, removing thereby an additional quantity of fluid, and then packing the cavity with iodoform gauze. The cavity of the sinus here stood open and was clearly discernible, with the solid clot showing farther up. The fluid removed by the exploring-needle showed the presence of streptococci.

After this, as the chart shows, there were no further disturbances of temperature and no other complications. The patient made steady improvement to a good recovery. The neck wound healed rapidly and satisfactorily, and the mastoid wound was absolutely healed in seven and a half weeks from the day of the first operation. The hearing was perfect.

The interest of this case lies largely in the unusual character of the brain abscess. This abscess might be termed a subdural abscess, but as the pus had invaded the brain-tissue it was, pathologically, more than subdural. Nor could it properly be called, in the ordinary acceptation of the term, a brain abscess as that implies an infection through intermediary channels, while this was clearly due to infection by contiguity. I have used therefore the term "superficial brain abscess" as being more satisfactory for its description.

Owing to the confusion of terms, references to this form of abscess are very hard to find. There are, I believe, two such cases in the list of brain abscesses published by Dr. Dench, in 1907, in a monograph entitled "Otitic Brain Abscess,"* but in the literature published since then I have been able to discover none.

182 West Fifty-Eighth Street.

# THE VALUE OF THE LOEFFLER METHOD OF SPUTUM EXAMINATION

CHARLES SPENCER WILLIAMSON, B.S., M.D.
Professor of Medicine and Clinical Medicine, University of Illinois
CHICAGO

In spite of the very great amount of attention which has been paid to the methods of detection of tubercle bacilli in the sputum, but little real progress was made prior to the introduction, by Uhlenhuth, of antiformin into the technic. The old and uncertain plan of endeavoring to pick out the caseous-looking particles, a procedure which involves much judgment, was only too often productive of nothing but disappointment. If no caseous particles could be found, as is so often the case with thin, mucoid sputa, recourse must needs be had to taking several portions at random and making from these the smear to be examined.

Prior to Uhlenhuth's communication[1] several methods existed for "enriching" the sputum, either by digestion or by sedimentation in various ways, but all of them were either inefficient or so cumbersome as to be totally unavailable for the daily needs of even the skilled worker, and, of course, much less adapted for general use. The method of Ellermann and Erlandsen,[2] by far the best of these, is probably quite as efficient as the original Uhlenhuth procedure, but is difficult to carry out and requires much time. When writing on the subject in 1910, I considered it the best method then existing.

Since the introduction of antiformin a rather widespread interest has again been aroused in the subject, and a number of modifications of the original Uhlenhuth procedure have been introduced. This is the best reason for believing that the original method was not entirely satisfactory. A faithful trial of these methods, as soon as they came to my notice, convinced me that none of these methods was entirely satisfactory, although several of them were a distinct advance on the older methods. Immediately following Loeffler's communication,[3] in the latter part of 1910, a careful trial was given his method too, and the results were such an improvement over those obtained by other procedures as to convince one that the method marked a substantial advance. A series of sputum examinations was undertaken to determine the utility of the method under ordinary laboratory conditions.

In all, my experience extends to well over 300 examinations, of which 171 were made by both the simple smear and the Loeffler procedure. The sputa were obtained, for the most part, from fourteen patients.

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* Dench: Tr. Am. Oto. Sc., 1907, x, 486.

[1] Uhlenhuth and Xylander: Arb. a. d. kaiserl. Gesundheitsamt, 1908, xxxii, 158.

[2] Ellermann and Erlandsen: Ztschr. f. Hyg., 1908, lxi, 219.

[3] Loeffler: Deutsch. med. Wchnschr., 1910, xxxvi, 1987.

Some of these had cases of early tuberculosis, in which bacilli were demonstrable in the sputum only with great difficulty, often only after numerous smears had been examined. Others were patients who had been under treatment for greater or less lengths of time, and in whom the bacilli, originally fairly easy to demonstrate, were becoming increasingly scarce.

In adopting this plan, two distinct advantages were obtained. First, the cases were all known cases of tuberculosis. Secondly, by observing the sputum of the same patients at intervals of a few days, a better judgment could be had as to the utility of the method in judging of the progress of the case. Whenever a sputum failed to show bacilli by the examination of two simple smears, a Loeffler preparation was made. In all cases each smear was examined for fifteen minutes before being called negative. Of the 171 sputa examined in both ways (all of which, as just stated, had failed to show bacilli in two simple smear preparations), sixty-four showed bacilli by the Loeffler procedure, an average of over 37 per cent. In other words, in nearly two-fifths of the sputa in which bacilli were so scarce as not to be demonstrable by the examination of two carefully made smears, they were readily demonstrated by the use of the Loeffler method. While such numerical results can never pretend to express the value of the method with mathematical accuracy, they at least demonstrate that bacilli can be found in this way very much more frequently than by any other method thus far published, and this, too, with ease, rapidity and certainty.

## TECHNIC

As described by Loeffler, the procedure is as follows:

1. To a given amount of sputum is added an equal amount of 50 per cent. antiformin, and the mixture placed in a Jena glass flask and brought to the boiling point. This occurs with the production of much foam, and even the toughest and most purulent sputa promptly go into solution.

2. To each 10 c.c. of the resulting solution is added 1.5 c.c. of a mixture of one part chloroform and nine parts alcohol. This is then violently shaken (best in a 25 c.c. glass-stoppered measuring-cylinder) for about two minutes, or until thorough emulsification has taken place. This has for its purpose the impregnation of the lipoid capsules of the bacilli with chloroform, whereby their specific gravity is greatly increased. The alcohol assists in the emulsification.

3. This emulsion is now placed in a centrifuge tube and revolved, preferably at as high a speed as is obtainable, for fifteen minutes. In the bottom of the tube will be found a few drops of clear chloroform, then a firm, narrow disk of sediment, which is sufficiently tenacious to be capable of removal *en masse,* and above this a thin fairly clear fluid. This small disk which contains undissolved matter and the tubercle bacilli, is now removed *in toto,* placed on a slide, the excess of antiformin removed by a bit of filter-paper, a small drop of egg albumin added and well mixed with the platinum loop, and the whole spread between two slides. These are then fixed in the usual way by passing through the flame, and are then stained in any way desired. Loeffler prefers staining with carbolfuchsin, decolorizing with 3 per cent. hydrochloric acid alcohol, and counterstaining lightly with 0.1 per cent. solution of malachite green.

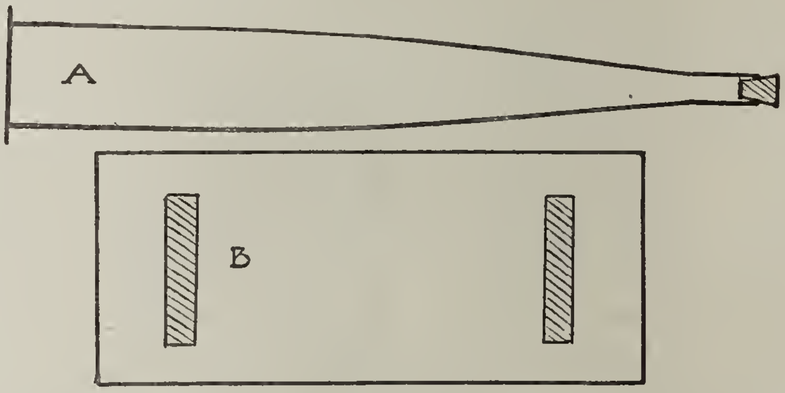
Prepared in this way, the slides are elegant in appearance, very uniform in thickness, and, most important of all, the distribution of bacilli is also very uniform. Their staining properties are unimpaired. The uniform thickness permits of rapid decolorization, only a few seconds being required. All organisms, excepting acid-fast bacilli, are destroyed.

To the experienced laboratory worker, the method is a simple one, and yet there are certain precautions which it may not be superfluous to mention.

1. The antiformin must be fresh and active, and should be kept in the dark. Any sample which does not readily, in the proper concentration, dissolve the sputum when brought to the boiling point is worthless. Many samples prepared extemporaneously and having a supposedly similar composition are worthless. One of my colleagues, an experienced worker, failed with the method because of inability to obtain solution of the sputum. On procuring antiformin in the original package, all difficulties vanished.

2. The emulsification should be thorough. This requires generally about two minutes of vigorous shaking.

3. The fixative should be egg albumin to which is added 0.55 per cent. phenol (carbolic acid) as a preservative. Fixatives containing glycerin are not suitable. In the preparation of this albumin, the phenol should be diluted to 1 per cent. and this added from a burette, drop by drop, with constant stirring to the white of egg until the proper amount has been added.



Schematic diagram of (A) improved centrifuge tube, and (B) copper bath.

In regard to a possible impairment of the staining-properties of the bacilli, Loeffler determined that as long as the boiling was not continued over fifteen minutes the bacilli took the stain as well as under the usual conditions. Since it is usually necessary to boil for only a few seconds, there is no danger to be apprehended from this source.

I have followed the technic, as thus given, with accuracy and can strongly recommend it, not only from the standpoint of exactness, but also of rapidity and simplicity. One of the features most appreciated is that because of the exceedingly uniform distribution of the bacilli in the preparations, they may generally be found after but a few seconds' examination, if they are to be found at all. This spares one the eye-straining and tiresome searching necessary in the old methods. Since the sputum is sterilized in the process of boiling with antiformin, it may be handled with impunity, a desideratum of considerable importance to a general practitioner, who is usually indifferently versed in the methods of handling virulent organisms.

Only in two respects have I encountered a serious difficulty. With the ordinary form of centrifuge tube, it was often very difficult to obtain the disk of sediment entire, as it almost invariably was broken up in the efforts necessary to extract it from the bottom of the tube. To obviate this, I have devised a centrifuge tube which is open at both ends and drawn out at the smaller end, so that the last half inch is of uniform caliber, and of a size to be properly closed by one of the little rubber stoppers commonly used in hypodermic phials. These can be readily made by drawing out an ordinary centrifuge tube and cutting off the smaller end, and with the tube, as thus modified, the obtaining of the sediment is a matter of only a moment's time. After the supernatant liquid is poured off and the stopper removed, the little disk, which is of the size and shape of a small tablet triturate, drops out of the small end by itself or after a few light taps. As the stoppers are inexpensive a new one may be used each time.

The second difficulty applies to all methods alike. To heat the staining fluid on the slide is generally untidy, and leads to "sloppy" work. A crust is apt to form on the slide, which interferes with uniform decolorization. If carried out in this manner, actual boiling of the fluid is difficult. Most laboratory workers are agreed that probably many of the bacilli take the stain with difficulty, so that a very intense overstaining is greatly to be desired. To this end a small copper vessel was devised which has proved a great convenience and time-saver. It is made of heavy copper, a little longer and wider than the slide and with small strips soldered in, so that the slide does not rest on the bottom. In this way possible overheating is prevented, since a thin layer (1/16 or 1/8 inch) of fluid is between the slide and the bottom of the copper bath. The depth is just enough (about 5/16 inch) to cover the slide with about 1/8 inch of staining fluid. In this bath the specimen may be readily boiled for several minutes, if desired, and any wished for degree of staining attained. The slide is easily removed by a pincette, and the staining is, of course, absolutely uniform.

In addition to the series of sputa which were examined with the specific intention of testing the practicability of this method, some of the other sputa examined showed interesting results. In one case, a patient apparently in robust health had several very large hemorrhages in rapid succession. Called to see the case in consultation, I found the physical signs so slight as hardly to warrant the diagnosis of pulmonary tuberculosis. There was no sputum in the ordinary sense of that word, and all that was obtained was a piece of an apparently pure blood-clot. Nevertheless, in this very unpromising specimen, bacilli in large numbers were readily demonstrated by the Loeffler method.

In pure, or nearly pure, watery sputa, the method is ideal. The specific gravity of these being low and the solution very complete, deposition of the sediment is most satisfactory and the supernatant fluid may be perfectly clear. These sputa, as is well known, are very difficult to examine by the usual smears.

The extreme uniformity of the preparations permits a much more accurate estimate of the number of bacilli present in a given sputum, since an average of all the different portions of the sputum is obtained in this method.

### SUMMARY

1. The Loeffler method will, under ordinary laboratory conditions, show tubercle bacilli in about 37 per cent. of sputa in which the organisms are so scare as not to be demonstrable in the usual way.

2. The entire procedure requires only about twenty minutes, or twenty-five at the most.

3. The actual time required is not infrequently less than that required for the examination of simple smears, since the distribution of the bacilli in the preparation is so uniform that, when present at all, they may usually be found after but a moment's search.

4. A much more accurate estimate of the progress of a given case may be had by this method (in so far as this is obtainable from the sputum alone) than by the examination of small particles alone.

31 North State Street.

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# AN EMERGENCY CANNULA

## TRANSFUSION IN A THIRTY-SIX-HOUR OLD BABY SUFFERING FROM MELENA NEONATORUM

BERTRAM M. BERNHEIM, M.D.
Assistant in Surgery, Johns Hopkins University
BALTIMORE

Jan. 1, 1912, I was called to transfuse a baby, 36 hours old, suffering from melena neonatorum. Following a very short and spontaneous labor the boy, who weighed 8½ pounds, had progressed nicely for ten hours, with several passages of meconium, when suddenly at 10:30 a. m. there was a large stool consisting almost entirely of bright red blood. From that time until 9:30 p. m. he passed considerably quantities of blood, at intervals of about every three hours. There had been no vomiting or apparent pain. He had retained a little mother's milk and water, to which had been added some calcium lactate.

While Drs. J. Whitridge Williams, Richard Follis and J. Mason Knox were discussing the advisability of transfusion, the baby had two more stools of this same bright red, practically unclotted blood. He looked colorless, his breathing was labored, while the pulse at the wrist was almost imperceptible.

Transfusion, made unusually difficult because it was of necessity performed at the home instead of at the hospital, and because of the minuteness and delicacy of the child's vessels, was successfully accomplished. Nine hours after operation all the blood which had accumulated in the intestinal tract had been expelled in the form of small dark-red clots, and the regular course of a new-born child's progress set in. No further hemorrhages occurred and within two and a half weeks the normal weight was regained.

In this instance the suture method of anastomosing blood-vessels was out of the question and my three-pronged cannula was used.[1]

Because of its size, the femoral vein of the infant was selected, but it was enormously difficult to secure even enough of this for easy manipulation — especially in the actual uniting of father and child.

The difficult performance of this transfusion caused me to recognize the reasons that it is not a generally successful procedure in an emergency. When the loss of a moment may count against a life, the complicated technic of the operation must be reduced. To this end a simpler cannula must be devised, although the instruments now in use are theoretically perfect and preferable in cases in which there is no hurry.

For emergency I believe that a cannula in two pieces, one of which can be rapidly inserted into the artery of the donor, and the other one into the vein of the recipient, by separate crews of operators, is best. A minimum of dissection is required here, and after the insertion of the two parts of the cannula, the patients can be apposed, the instruments immediately locked and the blood-flow started.

I have devised a simple instrument after this idea. Two hollow tubes, each 4 cm. long, are bulbous at one end in order to form a neck for a retaining tie, and bevelled to facilitate entrance into the vessel; the other ends are tubular and fitted for invagination. The instrument is constructed in two sizes as regards the bore of the smaller ends, thus fitting the vessel of any individual.

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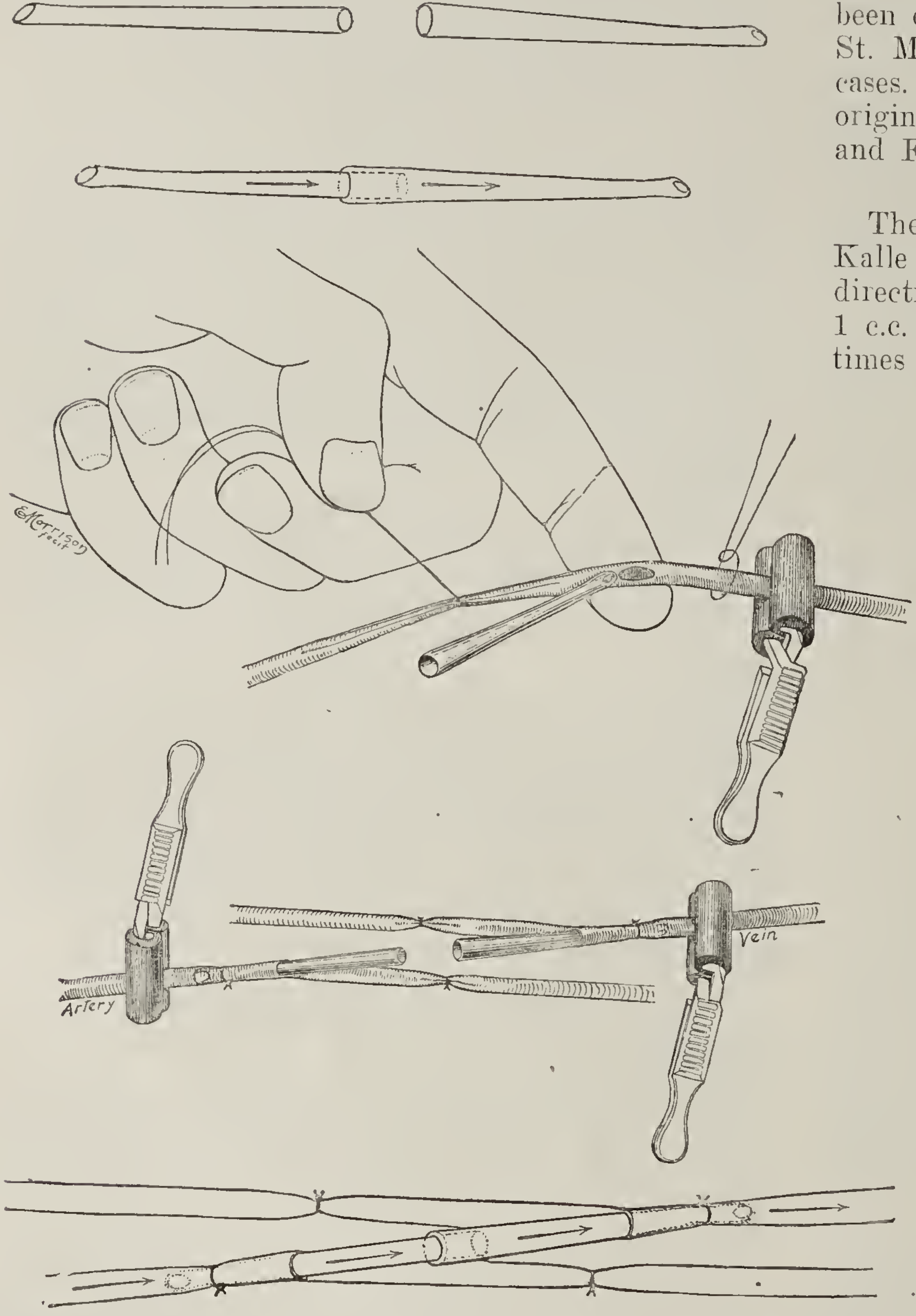
[1] Bernheim, B. M.: Ann. Surg., October, 1909.

In theory, intima should be apposed to intima to prevent clotting; in practice, however, it has been demonstrated that blood will flow through a paraffin-lined tube for quite a time without clotting. An oil, such as liquid petrolatum, which is easy to handle and always at hand, serves as well as paraffin and has been used in my experimental work.[2]



Emergency cannula and various steps of the transfusion process with its aid.

In one experiment, after only five minutes of transfusion, the donor (dog) was so nearly exsanguinated that it was necessary to discontinue. In another, the well-oiled cannula was simply inserted between the artery and vein of the same dog and the blood allowed to flow. At the end of fifteen minutes, the flow was as strong as at the beginning of the demonstration.

I feel justified in claiming that for all practical purposes this tube can be depended on to supply blood long enough to tide any individual over a grave emergency, saving lives formerly lost and enlarging the field for usefulness of transfusion.

2319 Linden Avenue.

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[2] The experimental work for this article was done in the Hunterian Laboratory of Experimental Medicine, Johns Hopkins University.

# A SIMPLIFIED TECHNIC FOR THE APPLICATION OF THE GLYCYLTRYPTOPHAN TEST TO GASTRIC CONTENTS

FRANK SMITHIES, M.D.
Gastro-Enterologist to St. Mary's Hospital (Mayo Clinic)
ROCHESTER, MINN.

For those who desire to make routine observations on the presence of peptid hydrolyzing enzymes in stomach extracts (particularly in cases of carcinoma ventriculi), the procedure here described may prove of value. It has been employed in the laboratory of gastro-enterology at St. Mary's Hospital (Mayo Clinic) in more than 800 cases. The results have been as dependable as with the original "glycyltryptophan test" described by Neubauer and Fischer.[1]

## GLYCYLTRYPTOPHAN TEST

The preparation of this dipeptid, regularly sent out by Kalle and Company (Biebrich am Rhein), under the direction of Neubauer and Fischer, consists of practically 1 c.c. of a glycyltryptophan solution, under about two times its volume of toluol. This is contained in a thick-walled, glass-stoppered bottle. The body of the bottle is marked, just below its neck, to indicate to what extent the volume of contained glycyltryptophan solution is to be diluted with filtered gastric extract. Examination of the bottle's capacity demonstrates that the proportion of glycyltryptophan and gastric extract, when the test is set up, is approximately, as one to ten. Carried out in this manner, each test costs about 65 cents.

Inquiry showed it possible to obtain a solution of the glycyltryptophan under toluol from Kalle and Company in bottles holding from 10 to 150 c.c. Accordingly, we have been accustomed to obtain the dipeptid in bulk in this manner.

The test is set up as follows:

1. Test-tubes of 10 c.c. capacity are employed. These should be carefully cleaned with boiling water and dried inside. They are numerically marked for identification with a wax pencil. Into each test-tube is carefully measured, by means of a sterile graduated pipette, 0.5 c.c. of the glycyltryptophan solution. (Closing the proximal end of the pipette with a finger allows the pointed distal end to pass through the toluol layer overlying the glycyltryptophan solution, and the dipeptid to be withdrawn with the minimum of contamination.) Five c.c. of the recently secured, filtered gastric extract are then measured by a clean, graduated pipette and poured into the correspondingly numbered test-tubes to which glycyltryptophan solution has been already added. Two control tubes are used. In one is placed 0.5 c.c. of glycyltryptophan solution and 5 c.c. of normal salt solution and into the other is placed 5 c.c. of normal salt solution, without added glycyltryptophan solution. In the entire series, each tube next receives 0.5 c.c. of toluol (Toluene, Merck). The contents of the tubes are then mixed by inverting several times. The tubes are next placed in a water-bath (an incubator may be used) at 37 C. for twenty-four hours.

2. At the expiration of the incubation period, the test-tubes are removed from the water-bath. Clean test-tubes

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[1] Neubauer and Fischer: Deutsch. Arch. f. klin. Med., 1909, xcvii, 499.

of 10 c.c. capacity and numbered to correspond with the gastric extracts tested, as well as the controls, are set in racks. Into each of these tubes is measured, by means of a graduated pipette, 2 c.c. of the glycyltryptophan-gastric-extract mixture lying below the toluol in the recently incubated tubes. To each tube are then added three drops of a 3 per cent. glacial acetic acid in distilled water solution. The tubes are well shaken. Bromin vapor is allowed to flow into each tube, until it appears amber yellow above the contained fluid. The tubes are again shaken. Examination by daylight (preferred) or by white, artificial light is now made for evidences of the characteristic rose-pink reaction between the amino-acid (tryptophan) and the bromin.

### TRYPTOPHAN TEST

As suggested by Weinstein,[2] this is made, as routine, on the fresh gastric extracts, inasmuch as occasionally, swallowed saliva, amino-acids, regurgitated duodenal contents and the like may give the bromin vapor reaction, before incubation or without the addition of a dipeptid such as glycyltryptophan. Five c.c. of each fresh, filtered gastric extract is poured into test-tubes of 10 c.c. capacity, acidulated with the 3 per cent. acetic acid solution and treated with bromin vapor as above. If no characteristic rose-pink color results, the tubes are incubated with the corresponding specimens that have been mixed with glycyltryptophan solution. For accurate work, it has seemed best to us to cover these "tryptophan test" contents with a layer of toluol. At the end of twelve, twenty-four and forty-eight hours, note is made of changes in color, and these results are compared with those obtained with the preparations in the first series.

Advantages of the modification:

1. The expense of the test is reduced to one-tenth of the commercially marketed, sealed bottle method. This is a considerable saving where hundreds of tests are made as routine, or where frequent tests are made in a given case.
2. Interpretation of color-changes in the thick-walled glass bottles is often difficult. Slight changes in color are readily distinguished in the small, thin glass test-tubes.
3. Breakage is not infrequent where the thick-walled, sealed bottles are used. This means another test-bottle or a questionable result.
4. Occasionally 10 c.c. of filtrate, as required by the bottle method, cannot be obtained. If less be used, the extract may not contain sufficient enzyme to hydrolyze the glycyltryptophan.

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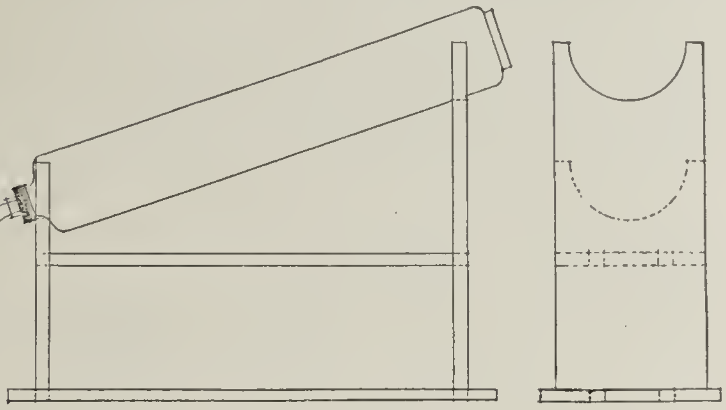
## A SIMPLE METHOD FOR MAKING CARBON DIOXID SNOW[*]

Maurice B. Ahlborn, M.D., Wilkes-Barre, Pa.

I have found all the methods for the production of carbon dioxid snow to be extremely unsatisfactory, as with a piece of chamois skin over the vent of the tank nothing could be produced at best but soft snow, which was almost melted by the time one kneaded it into a mold or crayon. Filter-paper tubes and other porous materials gave little satisfaction because of the frequent bursting of the paper, to say nothing of the necessity of swaddling the cone of paper with towels or other insulating materials during the flow of gas from the vent. I found that in the first place tilting of the gas tank to an angle of about 45° gave a sufficient pressure at the vent to insure utilization of all the gas contained in liquid form in the ordinary tank of carbon dioxid, used in drug stores for soda-water charging, which can be purchased in any town from the local druggist, in varying sizes. The commercially exploited apparatus for the production of carbon dioxid snow is costly and because of the trouble and expense involved in the use of a small tank of special size, which is soon emptied, is unpractical for men who live outside of larger cities. Some simpler method of producing this material quickly and cheaply, in sufficient quantity for practically any use, was greatly needed. In the first place some form of holder was necessary for the ordinary-sized tank used by the drug-stores, which would support it firmly at the right angle, allowing it to be moved about easily (as these tanks are somewhat explosive and very heavy), and which could be built at a small cost. Such an inexpensive frame, strongly built of oak and mounted on casters, is shown in the diagrams, Figures 1 and 2. The tank should not be kept for any length of time in a room the temperature of which is much above 70 F. as the gas is explosive. A cool cellar is the best place to store the tank when not in use.



Figs. 1 and 2.—Position of tank on stand and detail of stand construction.

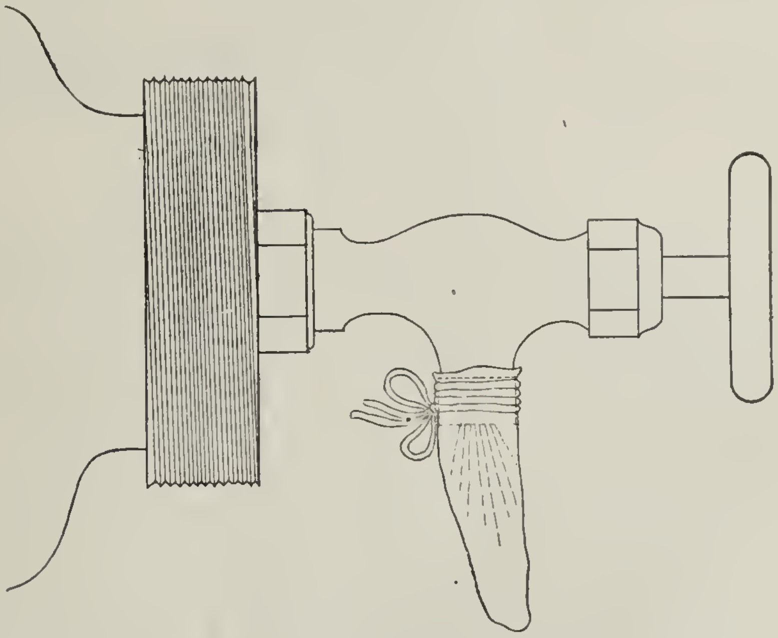


Fig. 3.—Finger of old glove tied securely to outlet of tank.

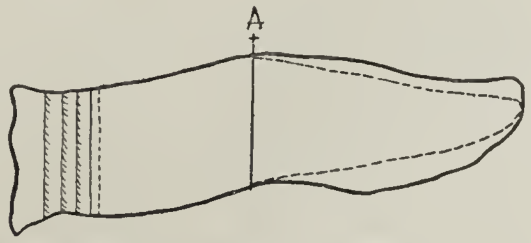


Fig. 4.—Glove-finger removed from outlet of tank, dotted line showing snow molder before cutting leather at Point A.

I found the best material in which to make my snow was an ordinary glove-finger, one of porous leather preferred. The glove-finger should be tied firmly over the vent of the tank with a shoe-string tied in a single bow-knot, which is best because it can be untied quickly, so that there will be little melting of the crayon. This should be firmly wrapped two or three times about that part of the finger which is pulled over the vent (Figure 3). There should be no pin-holes in the glove-finger. The wrench is placed on the tap of the tank and turned gradually until a moderate stream of gas enters the finger and balloons it just to tightness, as further pressure will do no good and will usually end by bursting the finger. In about a minute the finger will feel as if filled with putty, which means that the snow is forming right. Now the flow of gas should be continued with the same pressure and in a short time the glove-finger will be found to be as hard as an icicle. The string is then untied and the finger pulled off the vent. If the snow is to be kept for a time it should be placed in a large test-tube or closed porcelain dish and set directly on the ice, in a refrigerator, where it will keep for some hours if care is exercised. It is best, however, to use the snow at once. To make the crayon a sharp knife should be run around the glove-finger about 1 or 1½ inch from the end, so that it severs the end of the leather finger but does not cut deeply into the snow (Figure 4). When the loose end of the finger is pulled off an ice mold protrudes. The remainder of the glove-finger becomes the holder of the crayon while the snow is applied to the patient. The protruding end of the crayon of snow can now be sharpened like a lead-pencil with a sharp knife, and can be thus applied to a very minute area. The size of the crayon is readily regulated by tying a string anywhere along the length of the glove-finger.

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[2] Weinstein: The Journal A. M. A., Oct. 28, 1911, p. 1420.

[*] For other articles on the method of making carbon-dioxid snow see The Journal A. M. A., May 7, 1910, p. 1519; Oct. 3, 1909, p. 1205; Aug. 7, 1909, p. 459; March 6, 1909, p. 786; Feb. 6, 1909, p. 464.

This method of making carbon dioxid snow is so simple that I am sure it will be a help to the busy man who wants to use a therapeutic agent of known value and is hampered by the expense or difficulty as to its easy production.

99 North Franklin Street.

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# REPORT OF A CASE OF SIMULATED, AND ONE OF A TRUE MAXILLARY EMPYEMA, BOTH OF DENTAL ORIGIN *

M. R. Bren, M.D., Denver

Case 1.—*History.*—Mr. A. S., aged 38, a laborer, was first seen Nov. 27, 1911. Twelve years before all the teeth of the upper jaw had been extracted, and about one year before he had suffered from a condition similar to the one present at this time, although considerably less severe, from which he quickly recovered without treatment, except the use of home remedies. Three days previous his work necessitated standing in water for a considerable length of time. The right side of his face became swollen and painful in the evening. The next day the swelling had increased to such an extent that by night the eye could not be opened. When observed at the office the following day, the right side of his face was so swollen as to be almost level with his nose. The eye was nearly closed by a superficial edema of both lids. He complained of some pain, though not very severe.

*Examination.*—There was a hard swelling about the size of a walnut in the region of the canine fossa, with some heat and tenderness. The edema of the eyelids appeared to involve only the skin and not the deeper tissues. Nasal examination showed a normal mucous membrane and absence of pus. There was no swelling or congestion of the turbinates. The nasal septum was deflected to the left. An absolute shadow on the right side was observed on transillumination. The left side was clear. The mouth revealed a full set of teeth on a plate in the upper jaw. There was pus on the buccal surface of the plate and in the gingivobuccal angle on the right side. On removal of the plate the gums showed no inflammation or swelling; they presented a healthy appearance except for two small fistulous openings, one in the inferior border in the region of the canine tooth, the other, about half an inch farther back on the buccal surface, was discharging pus. These fistulas communicated with each other. A probe passed into the former came in contact with a loose, hard substance which on being moved permitted the escape of pus. This hard substance proved to be the root apex of the canine tooth, measuring about ⅓ inch in length; its removal was followed by the discharge of about a dram of pus. There was no communication between this fistula and the antrum.

Recovery was prompt, and the swelling disappeared in the course of a few days.

Remarks: The interest in this case centers about the small cause for the severe symptoms, and the ease with which the condition could have been mistaken for a confined maxillary empyema, especially since the previous attack might readily have been considered an acute empyema with spontaneous recovery.

At first it was reasonably certain that there was a confined suppuration of the antrum, the picture presented being almost typical of such a condition, particularly in view of the history of the extraction of the teeth twelve years before, which seemed to eliminate all probability of a dental origin for the extensive swelling.

On account of the great disparity between the amount of pain and the swelling, the superficial character of the edema of the eyelids, and the absence of the pathologic lesions in the nose usually present in disease of the antrum, the obvious course was to search for an extra-antral source of the symptoms. When this unearthed as the offending object the insignificant portion of a tooth which had given no indication of trouble until the attack a year before, the feeling of the physician was not unlike that of the individual, who, on seeing a giraffe for the first time, exclaimed: "G'wan, there ain't no such animal!"

Case 2.—*History.*—Mr. F. N. B., aged 31, salesman, had had most of the diseases of childhood, including scarlet fever and diphtheria. Otherwise, he had been in good health until 1902, while serving in the Philippines, when he had an attack of asiatic cholera. Since then he has had recurring attacks of dysentery. In 1907 the patient had a toothache of throbbing character in the first molar of the left upper jaw. The tooth was filled and gave no further trouble until a year later. At this time he had an alveolar abscess of the same tooth, which was relieved by rupture. Later, half of the tooth broke off and the filling came out. It remained in this condition until July, 1911, when on biting some hard substance the remaining portion crumbled away. A dentist attempted to extract the roots next day, but was unable to do so, except in a number of pieces, a small piece being removed by the patient with a toothpick a week later. The left side of his face became swollen and painful immediately, and by the next day the swelling was very marked and the pain quite severe. The gum was also swollen, hot and tender. The pain lasted about ten days and the swelling three weeks, during which time there was deafness in the left ear. Following the deafness the patient experienced a roaring sound in his ear for a time and finally complete return to normal. About ten days after the swelling started he began to notice a very bad taste in his mouth and foul odor. These gradually increased in severity, the odor becoming noticeable to his family and friends. Some time in September the patient began to have a considerable discharge from the left side of his nose, very much worse on rising in the morning, which he attributed to a cold and, therefore, disregarded.

He had been examined on two occasions by the dentist, but no communication had been found between the tooth-socket and antrum. The first evidence the patient had of such an opening was when blowing forcibly through the stem of his pipe air seemed to come through his nose by way of the tooth-socket, this being confirmed on November 27 by the fact that while using a mouth-wash with some pressure the fluid escaped through his nose. On account of the above condition and an increasing distress due to the odor and taste, the patient sought relief Dec. 1, 1911.

*Examination.*—The second bicuspid and first molar teeth of the left superior maxilla were absent. In the place of the latter there was an elliptical opening in the alveolar process about ¼ inch long by 3-16 inch wide filled with tough granulations, which were bathed in pus. A probe passed into this opening led into the antrum and its withdrawal was followed by a quantity of foul-smelling pus. Pus also flowed freely on separating the granulations. No exposed bone could be discovered on careful probing.

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* Read before the Medical Society of the City and County of Denver, Feb. 20, 1912.

Nasal Examination: Small amount of pus in the middle meatus. Mucous membrane normal except for some swelling around a large accessory ostium maxillare. Nasal septum markedly deflected to the right.

Bacteriologic Report: The predominating organism was an encapsulated diplococcus (morphology not determined) with a few streptococci.

*Treatment and Course.*—On December 4 the granulations from the sinus leading into the antrum were gently curretted, cauterized with fused crystals of nitrate of silver, and the cavity thoroughly irrigated with hot saturated solution of boric acid, dried, and light gauze drain inserted. Irrigations and packing were repeated daily, causing a decrease in the quantity of discharge.

On December 13, when, after irrigation, the sinus leading to the antrum was inspected by the aid of a rhinoscopic mirror, there was revealed what appeared to be a foreign substance lying on the outer edge of its upper or antral opening. This proved to be a portion of the root of a tooth about ¼ inch long, and after its removal the cavity remained perfectly dry and free from odor. There now only remained the question of the closure of the alveolar opening.

Remarks: Disease of the upper teeth, generally the second bicuspid or first molar, is found in a large proportion of all cases of inflammation of the maxillary antrum as the etiologic factor. The proportion is stated to be as high as 70 per cent. By far the greater number of these are caused by abscess of the root, and it is frequently difficult to find this source of infection in the presence of a tooth otherwise healthy in appearance. In the case reported, however, there was no evidence of an abscess except at a period too remote to have any etiologic significance. It is, therefore, fair to presume that this infection followed, or was coincident with, the extraction of the tooth. It is also evident that the portion of the root was forced into the antrum at the same time. The swelling of the face, immediately succeeding the efforts at extraction, was undoubtedly due to injury and infection of the gum, as it followed the operation too quickly to be in any way related to the infection of the antrum. It is probable that the lining mucous membrane of the antrum was pushed up ahead of the part of the root found later, and, acting as a foreign body, caused the formation of a localized abscess, which later penetrated into the general antral cavity. This would account for the length of time elapsing before the appearance of the nasal discharge and the detection of the opening into the antrum.

The treatment presented a choice between the conservative plan of irrigation and drainage, or the radical one of operation through the canine fossa. The guiding factors in the selection of the former method were, first, the short duration of the disease, viz., about five months; second, the absence of all evidence suggesting an involvement of the bone; third, the fact that curretting away the granulation resulted in a free opening for drainage in the most dependent part of the cavity; fourth, the presence of a large accessory ostium by which the fluid could drain into the nose, and through which the cannula could be inserted for irrigation; and as a fifth reason might be mentioned, a leaning toward conservatism in the treatment of these cases. The course pursued was completely justified by the results attained.

310 Mack Building.

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## A SYSTEM OF ELECTRIC WIRING FOR USING DIRECT STREET CURRENT IN LABORATORIES *

D. E. Jackson, Ph.D., St. Louis

Every laboratory in which experimental work in pharmacology or physiology is carried on has to solve the problem of electrical supply. This is a matter which often causes great annoyance and much waste of time. Dry cells, which constitute the commonest source of electricity, at least for student experiments, are very unsatisfactory in many ways. They are expensive, they run down easily and rapidly when in use, they supply only a limited amount of current and are cumbersome and unwieldy to manipulate. The greatest source of trouble with the dry cell is, however, its unreliability. Often one is compelled to spend much time during a laboratory period in trying to get an induction coil or other piece of apparatus to work when one cannot determine whether the difficulty is with the machine or with the dry cells. A thoroughly reliable source of electricity will surely do much toward alleviating such conditions. It was in the hope of obtaining some relief in this direction that the system described below was originally installed.[1] This system is not new by any means; in fact, some phases of it have been in use for a great many years in physical laboratories and perhaps, in some instances, in other experimental laboratories. It seems, however, that in most cases pharmacologic and physiologic laboratories have made but little use of this source of electricity. I have tried this general plan for four years under varying conditions, and I have found that with a little care and attention the system is thoroughly satisfactory and reliable. A direct current of 110 volts is best suited for this scheme.

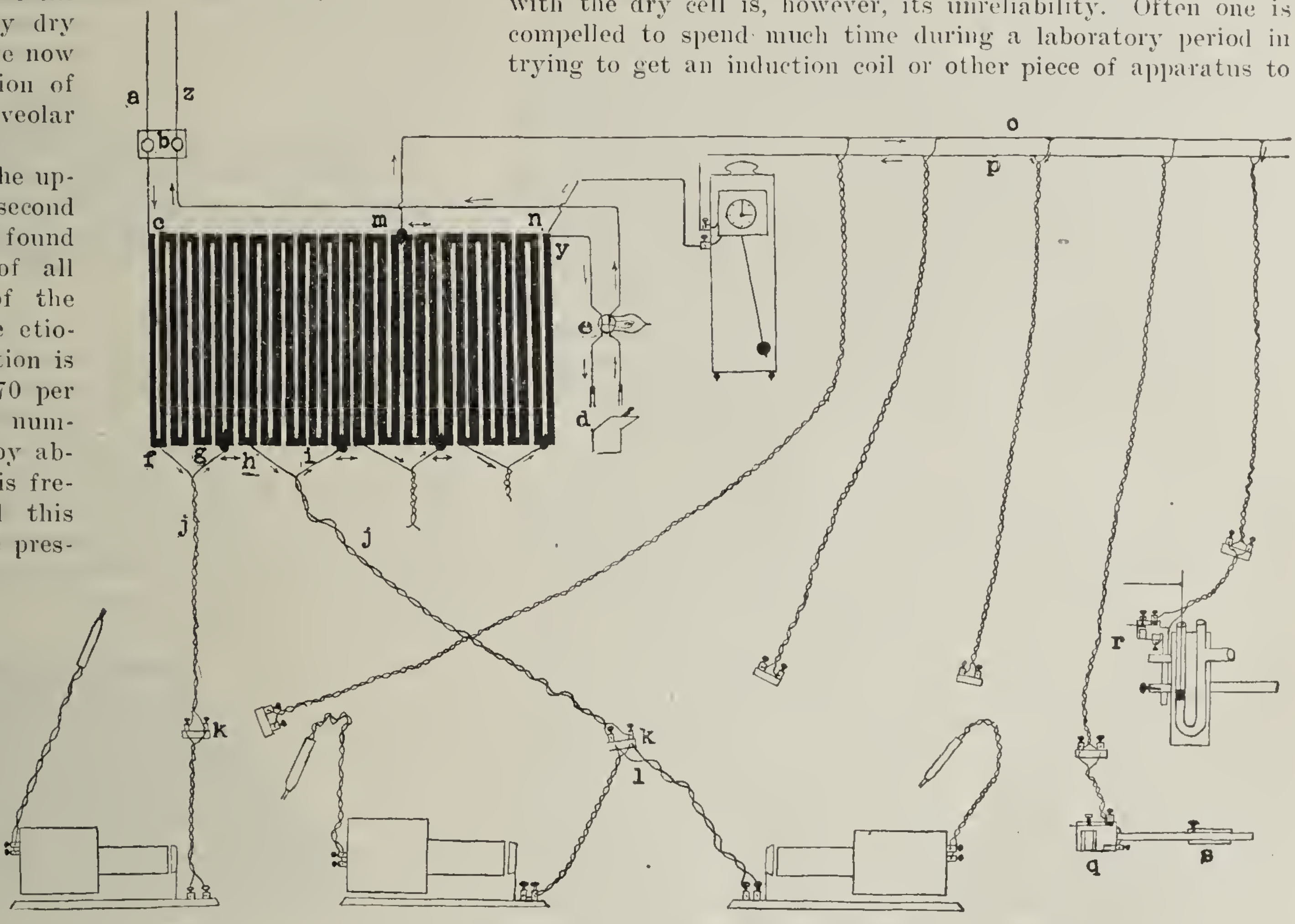

Diagram of an electric wiring system for pharmacologic and physiologic laboratories.

The apparatus consists essentially of an extensive resistance frame made of thin tinned iron strips placed in series with the main current from the street circuit and having an incandescent lamp in parallel with the main wires. Double removal 10-ampere fuse-plugs should also be placed in series with the main wires. From varying points along the resistance frame double wires are attached and led off to the different tables in the laboratory. At the resistance frame one of these wires is soldered tightly to the thin strips, but the other wire is fastened to a small, sliding spring contact-maker, by the adjustment of which the amount of current passing out to each laboratory table can be regulated.

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* From the Department of Pharmacology, Washington University Medical School, St. Louis.

[1] The general plan of this system was worked out some years ago and installed in the Department of Physiology and Pharmacology at Indiana University by Prof. W. J. Moenkhaus and myself. I have since made a number of improvements and alterations, mainly in the direction of increased safety and convenience.

A time circuit may also be taken off from the resistance frame. A contact-clock beating one, two, five or ten seconds or any other desired interval of time is placed in series with this circuit. Double wires connecting in parallel with the time circuit go to each table and serve to operate the ordinary signal magnets or signals marking the base line and attached to the mercury manometers.

The arrangement can best be described by reference to the accompanying diagram. The main street-current (110 volts direct) enters at *a* and leaves at *z*. At *b* double, 10-ampere fuse-plugs are inserted, one in the path of each wire. These plugs are used for safety, for occasionally one finds that the laboratory plumbing, etc., may be grounded. At *c* the current enters the resistance frame and at *y* it passes out of the frame and goes to the knife switch *d*. At *e* a small 4- or 8-candlepower incandescent lamp is placed in parallel with the main wires. The purpose of this lamp is to indicate at once to any one in the laboratory whether or not the current is on. This is a matter of great convenience, for a glance is sufficient to show instantly whether or not all fuse-plugs, connections, wiring, etc., on the main circuit are in good working condition. The resistance frame itself, which is diagrammatically represented between *c* and *y*, is really much greater in extent than the illustration shows. It is made of tinned iron strips about 5/16 inch wide and 1/100 inch thick. Each strip is about from 28 to 30 inches long. At the ends the strips are fastened to each other alternately by means of short pieces of the same metal which are soldered to the long strips. By this arrangement the current passes in a zigzag manner throughout the total length of all the metal strips, which thus serve as an electrical resistance placed in series with the main current. In the frame which I am using at present there are seven rows of these strips and each row contains about fifty strips. (The addition of one or two more rows of strips would have been an advantage to the apparatus.) The rows are connected together at alternate ends so that the main current passes through all of them in series. At the top and at the bottom (i. e., at the ends of the tin strips) of each row is a strip of wood fiber to which the row is fastened by means of small tacks. These strips of fiber are about ½ inch thick by 1½ inches wide, and at each end extend about 2 inches beyond the last strip of tinned iron. These 2-inch extensions are for the purpose of attachment to a simple wooden frame, which serves to hold the different rows of metal strips rigidly in place. At present I have the whole frame incased in a wooden box with hinged double doors which can be locked shut. Large ventilation holes are placed at the bottom and at the top of the box, and the walls inside are lined with asbestos sheeting. The fiber rods and asbestos sheeting are precautions against fire from short-circuiting within the frame, and they also serve to overcome any objections by fire insurance companies. The ventilation holes should be fully ample to always keep the metal strips well cooled down if the frame is placed in a closed box.

At *f* one half of an ordinary double lamp cord is soldered to the metal strips. The other half of the lamp cord wire is soldered to a simple spring contact-maker, *g*, so shaped that it can be moved along the edge of the row of metal strips, as indicated by the double arrow. This sliding back and forth allows the amount of current given off to each table to be easily regulated. With the slider placed on the fourth doublet of the metal strips (counting the place of attachment of the first wire as No. 1), as shown at *f*, *g*, in the diagram, the amount of current led off will be a little more than 1 volt and about 6 amperes. (The proportional amount of this current, however, which will be used by the induction coil will depend on the length and resistance of the wires leading from the resistance frame to the inductorium.) At *h*, *i*, etc., similar sets of wires are led off for other tables as may be desired.

The double wires *j* pass directly to the tables, one double wire for each. Formerly I had these wires placed along in grooves on the floor, but at present I have them attached to the ceiling and the terminal parts hang down to the respective tables. I have found the latter arrangement more convenient and accessible. Short wooden blocks with binding-posts are attached to the ends of the wires *k* leading to the induction coils, etc. Two, or even three or four, induction coils may be operated from one drop wire, *l*.

At *m* a wire with a sliding contact is led off for the clock circuit. This circuit is completed by the wire coming back to the frame at *n*. In the course of this latter wire, the time clock is placed (in series). From the two main clock circuit wires (*o* and *p*) other wires (in parallel) are dropped from the ceiling down to the tables and are connected with the signal magnets (*q*) or with the baseline signals on the manometers (*r*). The attachments of the wires for the clock circuit to the metal frame are usually placed at a considerably greater distance apart than are those for the regular induction circuits. The ordinary Harvard Apparatus Company's signal magnets work very well when placed (in parallel) with the clock circuit. If the clock used is particularly delicate or expensive it may be safer to use a relay operated by a dry cell- or storage-battery in series with the clock, and then the relay can serve as an interrupter for the main time-circuit.

The metal frame as a whole (inclosed in a wooden case if desired) may be placed on a shelf high up on the wall and entirely out of the way.

A few possible sources for accidents should be carefully emphasized. If a student who draws a current from his induction coil from one end of the metal frame should short-circuit this current with the wires coming from the clock, then he may burn out a signal magnet, a fuse plug (at *b*), or the contact points in the clock. In order to avoid this all students should be carefully instructed always to have the drum paper securely placed around the drum before any (metal) writing-points of their recording apparatus are placed against the surface of the drum, for the writing-points (if metal) may short-circuit the two currents. I have had this occur once in four years. As a safeguard against part of this difficulty I have placed short wood-fiber tubes (*s*) on the rods of the signal magnets. This insulates the bases of the metal stands, etc., which otherwise might, in rare instances, cause trouble. The signals on the manometers are usually completely insulated from the metal stands by means of the wooden board of the manometer to which the adjustable signal is attached.

With the system as here described I have been able to furnish current sufficient for a class of thirty-six students. I presume more could have been provided for if it had been necessary. The current which flows through the resistance frame amounts to about 8 amperes or 880 watts (110 volt current). At the present price of current per kilowatt-hour the cost of operating the system amounts to about 5 or 6 cents per hour.

1806 Locust Street.

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**Epinephrin in Treatment of Cholera.**—Dr. Naamé of Tunis reports twenty cases of cholera in which he applied treatment on the assumption that the principal symptoms in the disease are the result of toxic insufficiency of the adrenals. He aimed to supply the patients with the missing secretion of the adrenals, the lack of which was causing the chilliness and collapse, vomiting and diarrhea. He injected epinephrin into a vein or subcutaneously; all his twenty patients recovered. He supplemented this organotherapy with injections of salt or sugar solutions. In presenting Naamé's report to the Societé médicale des hôpitaux de Paris, E. Sergent states that he has been arguing for ten years to prove that the symptoms of weakness, collapse and syncope in the course of infectious diseases and intoxications are due to acute arrested or perverted adrenal functioning, and Naamé's experiences seem to sustain this view.

## A SLIDE-DRYING ATTACHMENT FOR CENTRIFUGES AND AN ALUMINUM STAINING DISH

WILLIAM KRAUSS, M.D., MEMPHIS, TENN.

This attachment was devised about six years ago and has been used with satisfaction ever since. An improvement made later by the manufacturers made introduction and removal of slides rather difficult. Recently, I have suggested a change which has been found so satisfactory that I deem a description of it desirable.

The "head" can be used interchangeably with the ordinary urine tube head. It is made of aluminum, grooved for the slide, the ends being turned back to afford distal lateral support. In the center there is a nickel-plated brass block, notched to receive the other end of the slide. The head holds two slides of standard size. Its utility is obvious. The rotation affords both fanning and centrifugal force, drying smears rapidly. For laboratories where much work is done, a separate hand centrifuge is advised, the head remaining permanently attached. Six to eight turns of the handle will dry any smear, even in damp weather. It can be readily attached to any toy motor.

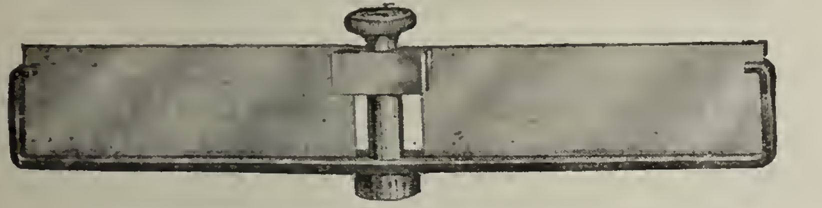

Fig. 1.—Slide-drying attachment for centrifuges, as now made by the Bausch and Lomb Optical Company, Rochester, N. Y.

The dish shown in Figure 2 is of pressed aluminum, 9 cm. square and 1 cm. deep, with parallel ridges pressed up from the bottom to afford support for three slides, so that, with the smear side underneath, 5 c.c. of stain will amply cover the preparation. The deposit of precipitating stains falls away from the slide. It is especially desirable for hot staining (for which purpose it is placed on a "simplex" "3-heat" electric disk), as there is no danger of breakage from the heat, and no crusting of the smear from evaporation of the stain. For staining by the drop method, the slide is placed on the ridges, smear side up. In either case, when the staining is completed, the whole dish can be placed under the tap, thus preventing the stain from getting on the fingers. Its advantages over glass are apparent. It stands heating and chilling, and is practically unbreakable. After washing, the residue of the stain is easily removed by carbonization on a hot plate. When being dried it must be supported on a level surface to preserve its shape.

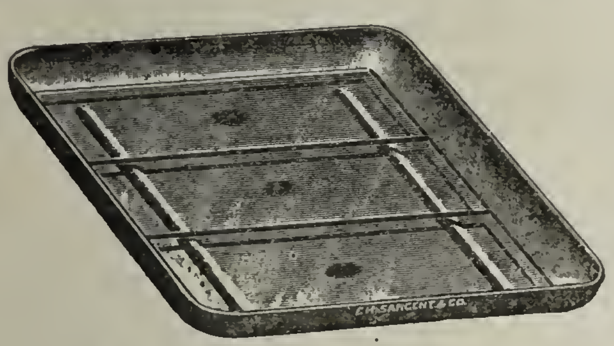

Fig. 2.—An aluminum staining dish.

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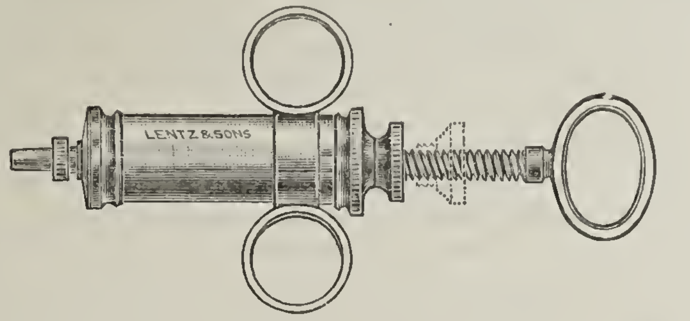
**A Merry Heart Doeth Good Like a Medicine.**—"Many a patient has lost his life for the lack of tact of physician or relatives. A patient ought to be benefited by a visit from a physician, even without medicine. A physician ought to be so cheerful, buoyant, exuberant with life that his very presence would cheer the patient, give hope and encouragement. A gloomy, sad-faced, moody, tactless physician is a poor health restorer. Only those who are happy and cheerful should administer to the unfortunate sick. The personality of the physician has a great deal to do with his success and with the chances of his patients."—O. S. Marden.

## PIPETTE FILLER

LOUIS WEBER, M.D., LOS ANGELES

This instrument for filling the pipette of the Thoma-Zeiss hemocytometer consists of a syringe barrel with threaded piston-rod, with which, by a slight turn, the blood and diluting fluid can be drawn with accuracy to the mark, and, by a turn in opposite direction, the diluted blood can be expelled in a drop of any size.

In the stationary top there is an extra top (in which the threaded piston-rod screws) which can quickly, by a few turns, be unscrewed (from stationary top) so that the instrument can be used as a syringe with which to cleanse the pipette. The rubber tube connecting the pipette with the syringe tip should not be longer than 2 or 3 inches, so that the instrument with attached pipette can be conveniently held in the left hand while the piston-rod is operated with the right. With a little practice this instrument can be operated with ease and the fluid drawn into the pipette with more accuracy than by suction with the mouth, and certainly it is not so repulsive as the latter, which, to say the least, is more or less obnoxious to the patient.



4000 South Figueroa Street.

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## ACUTE ARTICULAR RHEUMATISM TREATED BY THE RECTAL ADMINISTRATION OF SODIUM SALICYLATE *

L. G. HEYN, A.B., M.D., CINCINNATI
Junior Staff Physician to the Cincinnati Hospital

This report aims to call attention to a therapeutic measure, which has perhaps not received the consideration which it apparently deserves. Sodium salicylate may be justly designated as a specific in acute rheumatism. We know that the salicylic acid group of substances is bactericidal, and in rheumatism is probably etiotropic, i. e., acting on the cause of the disease. If we consider these facts, it would seem advisable to administer the largest dose possible early, as in the serum therapy of diphtheria. Heretofore, we have been satisfied in most cases with results obtained by the administration of the drug by mouth. But certain cases are refractory and it is possible that a delay in the cure of the infection increases the liability to the unfortunate cardiac complications. In many cases the stomach does not tolerate this drug, owing perhaps to the quantity of irritating salicylic acid set free; in these cases the neutral esters of salicylic acid—salol, salipyrin and aspirin—have been used, which compounds are not acted on until split up by the intestinal ferments. These drugs have not been found so efficient as sodium salicylate.

The report of cases to be cited, moreover, seems to indicate that we are less apt to fail in our therapy by the administration of sodium salicylate by rectum. Large doses of this drug are tolerated when given by this method, preferably if administered with starch and a few drops of the tincture of opium. The rectal administration is to be preceded by a cleansing enema of plain water, and two to four drams of sodium salicylate are then incorporated in an enema of 6 ounces of starch water and five to ten drops of opium tincture, which is readily retained. In some cases one injection has been sufficient to produce entire cessation of all symptoms.

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* Read before the Clinical Society of the Cincinnati Hospital, Feb. 22, 1912.

Other cases seem to require a continuation of the treatment, which apparently can be carried out daily if necessary. In this procedure, as in all salicylate therapy, daily administration of the drug must be carried out until well into the defervescence of the attack. A too early cessation of the treatment permits a relapse of symptoms. The following typical cases may be reported, in brief, from the East Medical Service in the Cincinnati Hospital.

Case 1.—*Patient.*—H. B., a man aged 40, admitted alcoholic excess, syphilis and gonorrhea and had had frequent attacks of sore throat. Two weeks before admission to the hospital on Jan. 17, 1911, patient suffered pain in both hips and was subsequently affected in both knees. On admission both knees were red and swollen, and there was residual stiffness of both hip-joints. Temperature was 102.4, pulse 108. A soft systolic murmur was heard at the apex, transmitted to the axilla.

*Treatment and Result.*—The patient was given sodium salicylate, 15 grains, by mouth every three hours, continuously, over a period of several weeks. There was, however, only slight effect on the temperature and the joint symptoms persisted for two months, involving also both elbows, shoulders, wrists and small joints of both hands. Sodium salicylate was discontinued and the wine of colchicum and potassium iodid in gram doses administered for several days. There was no improvement, however, and the patient was compelled to remain in bed during the entire time. On March 17, 2 drams of synthetic sodium salicylate were given, by rectum, with the effect that the temperature fell to normal within twenty-four hours. The joint-symptoms also subsided, but there were twinges of pain recurring which required the daily repetition of the enema, from which medication the patient had no untoward symptoms. He was not required to remain in bed after the second enema of sodium salicylate, and considering the refractory character of the case for two months previous to this mode of treatment, the results must be considered excellent.

Case 2.—*Patient.*—H. S., a laborer, aged 58; had had an attack of rheumatism three years previously. The present attack began ten days before examination with pain and swelling in the right knee and right wrist. At the time of examination the left wrist and left knee were involved, the latter very much swollen with much collateral edema in the entire limb. Temperature was 101; pulse 98, with marked arhythmia in the heart's action, but no murmur. The rest of the physical examination showed nothing abnormal. Diagnosis was acute articular rheumatism of severe type, and arhythmia.

*Treatment and Result.*—An enema containing 120 grains sodium salicylate and 10 drops laudanum was given, preceded by a cleansing enema. The following twenty-four hours the temperature showed an average lower range of 1°; the knee was much improved but the pain in the wrist, though relieved, still persisted. The case required three enemas, each containing 120 grains sodium salicylate, on successive days. Complete recovery from the rheumatism resulted, the heart condition remaining unaffected by the medication.

Case 3.—*Patient.*—E. V., aged 34, was admitted March 3, 1911, with a history of rheumatism three years previously. The present attack had persisted more or less continuously for one month. During that time the left shoulder, the left elbow and ankles and the small joints of both hands were successively involved. When seen on admission both ankles and several finger-joints were moderately swollen and red. Temperature was 100.8; pulse 92. The further details of the case had no bearing on the condition, and the physical examination was otherwise normal.

*Treatment and Result.*—The patient was given one enema containing 180 grains sodium salicylate, which relieved all symptoms and the temperature dropped to normal within thirty-six hours. The patient insisted on leaving the hospital within seventy-two hours, having no symptoms at the time of discharge.

Case 4.—*Patient.*—J. T., a man aged 35, was admitted March 31, 1911. Previous history had no bearing on present condition. Two weeks before admission to the hospital, pain began in the right knee; later the left wrist was involved, being swollen and red and very tender when patient was first seen in the ward. The temperature reached 102.1 on the first day of admission. The patient was given one enema of 120 grains sodium salicylate with the result that there was complete subsidence of the swelling and pain in the joint, and of the temperature within twenty-four hours, the condition remaining normal without further medication.

This procedure has been resorted to in twenty-two cases, some five of which were not typical instances of acute rheumatic fever, but the therapeutic test was nevertheless applied. No unfortunate results happened in any instance, though frequently the dosage reached 240 grains daily. One case only was intolerant, owing to a previous irritability of the rectum. All typical cases were more or less satisfactorily benefited, and these results obtained with the rectal administration of sodium salicylate should warrant its use, not only in cases in which the stomach is intolerant, but, where possible, as a routine measure.

22 West Seventh Street.

## New and Nonofficial Remedies

The following additional articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association. Their acceptance has been based largely on evidence supplied by the manufacturer or his agent and in part on investigation made by or under the direction of the Council. Criticisms and corrections are asked for to aid in the revision of the matter before publication in the book "New and Nonofficial Remedies."

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that, so far as known, it complies with the rules adopted by the Council.

W. A. Puckner, Secretary.

**FORMICIN—Formaldehyde-acetamide.**—Formicin is formaldehyde-acetamide, $CH_3.C.O.NH.CH_2.OH = C_3H_7O_2N$, a molecular compound of formaldehyde and acetamide.

Formicin is a slightly yellowish, thick, syrupy liquid, having a faint, formaldehyde-like odor and a slightly acid, bitter state.

The specific gravity of Formicin should be between 1.14 and 1.18 at $\frac{20° C.}{20° C.}$

Formicin is soluble in water, alcohol, chloroform and glycerin; it is nearly insoluble in ether.

An aqueous solution of formicin (1 to 10) has an acid reaction on litmus.

At 115° C. (239° F.) to 120° C. (248° F.) formicin dissociates.

If 1 Cc. of an aqueous solution of formicin (1 to 10) be mixed with 1 Cc. of a mixture composed of equal volumes of stronger ammonia water, potassium hydroxide test solution and silver nitrate test solution, no immediate darkening should take place; but if the mixture be allowed to stand for some time, or be warmed, darkening occurs, due to the separation of metallic silver.

If an aqueous solution of formicin (1 to 10) be mixed with a 2 per cent. aqueous solution of aniline no immediate turbidity should appear.

*Actions and Uses.*—Solutions of formicin liberate formaldehyde gradually at body temperature, and thus exert an antiseptic action. It is said to be non-toxic and 5 per cent. solutions are said to produce but little irritation.

*Dosage.*—1 to 5 per cent. solutions are employed as injections into tuberculous and non-tuberculous joints, tissues and abscesses; for bladder irrigation in chronic cystitis 2 per cent. solutions are used.; 5 per cent. alcoholic solutions have also been suggested for the disinfection of the skin and hands.

Manufactured by Kalle & Co., A. G., Biebrich on the Rhine, Germany (Kalle & Co., New York). German patent No. 164,610. No U. S. patent or trademark.

**IODO-CASEIN.**—Casein-Iodine.—Iodo-casein is a compound of iodine with milk casein, containing about 18 per cent. of iodine in organic combination.

It is prepared by treating a solution of casein in sodium carbonate with a solution of iodine and precipitating with acetic acid.

Iodo-casein is a yellowish-brown powder, almost odorless and tasteless, insoluble in water or acid solutions. It is partially dissolved and decomposed by alkalies.

*Actions and Uses.*—It is said to undergo practically no change in the stomach, but to be quickly digested and absorbed in the form of soluble iodides, in the intestines. It is claimed that it may be used to advantage as a substitute for the inorganic iodides, as it is said to be less disturbing in its effect on the digestive organs. It is claimed to be excreted more slowly in the beginning than potassium iodide, but the last traces of it are said to be excreted more promptly.

*Dosage.*—0.3 to 1.3 gm. (5 to 20 grains) as indicated.

Manufactured by H. K. Mulford Co., Philadelphia. No U. S. patents or trademarks.

*Iodo-Casein Tablets, 2 1/2 grains.*—Each tablet contains iodo-casein 0.15 Gm. (2½ grains).

*Iodo-Casein Tablets, 5 grains.*—Each tablet contains iodo-casein 0.3 Gm. (5 grains).

## *Therapeutics*

### PROPHYLAXIS IN TYPHOID

Prophylactic measures against typhoid may be applied to the individual or to his excreta. The protection of the individual against typhoid infection by treatment of the individual organism is to be secured chiefly by the use of typhoid vaccines. This method has now become a recognized procedure for large classes of the community, such as the army and navy, schools, the inmates of public institutions, etc. It ought to be applied in an increasing degree to persons who wish to travel in infected localities, etc. It will also be likely to be of great value in the treatment of convalescents from typhoid bacilli if it seems evident that they are in danger of relapse. It is a proper treatment to apply to chronic bacillus-carriers who are continually endangering their environment by the excretion of bacilli and who, it has been shown, are liable to reinfect themselves so as to fall victims at last to the parasites which they may have harbored for many years.

The technic of this method has already been described (Phalen, J. M.: THE JOURNAL, Jan. 6, 1912, p. 9).

The protection of the community against typhoid infection is a part of the sanitary functions of the public health authorities. But since the infection in every case starts from an individual case of typhoid fever from which it may be spread in various ways, the primary responsibility for the spread of the disease rests in great measure with the physician in charge of the case. It is incumbent on him to see that no avenue by which the bacilli can escape into the external world is left unguarded. All germs excreted by the patient should be at once thoroughly destroyed. For this purpose no half measures should be tolerated. Disinfectants (true germicides, not antiseptics) should be employed and in strength sufficient to destroy with certainty the germs in the material on which they act. The physician should not rely on articles the disinfectant power of which has not been satisfactorily demonstrated. There is no occasion to use patented or secret articles. Efficient germicides are cheap, non-proprietary, and thoroughly well known. They should be provided in sufficient quantity so that they will be used freely enough to accomplish their purpose. It should be thoroughly understood that in this disease the disinfection should be carried on day by day throughout the course of the disease. Disinfection after the termination of the disease is of minor importance. Disinfection of the air is also relatively unimportant. The germs are borne by the solid and liquid excretions and the hands, clothing and food soiled with them. Direct contagion, although possible, is rare.

From the standpoint of prophylaxis the question naturally narrows down to disinfection of the urine, stools, sputum and of objects which may accidentally be contaminated by these excretions.

To disinfect the urine, the best solutions are, phenol (carbolic acid) 1 to 20, in an amount equal to that of the urine or bichlorid of mercury 1 to 1,000 in an amount one-fifteenth that of the fluid to be sterilized. These mixtures with the urine should stand at least two hours.

In case there is demonstrable bacilluria hexamethylenamin may be given to cause disappearance of the bacilli from the urine, but under no circumstances should its administration permit the disinfection of the urine to be neglected.

To disinfect stools, phenol is the most useful. It is cheap, and efficient if used in strong solutions. The stool should be mixed with about twice its volume of 1-to-20 phenol solution and allowed to stand for several hours.

Inasmuch as the water used in bathing is liable to be soiled by urine or feces, it is advisable to extend the disinfection to this material also. The disinfection of the bath-water after use is best accomplished, according to E. Babucke (Babucke, E.: *Centralbl. f. Bakteriol.*, 1900, xxvii, 800), by the use of chlorid of lime; 250 gm. (one-half pound) of chlorid of lime will render the ordinary bath of 200 liters sterile in one-half hour.

In cases in which sponging is practiced the amount of water used would be small and would require correspondingly a small amount of the disinfectant.

If there be any expectoration, the sputum should receive the same care as in tuberculosis. It is best to collect it in small cloths, which may be burned.

All the linen leaving the patient's bed or person should be soaked for two hours in 1-to-20 phenol solution and then sent to the laundry where it should be boiled. It is recommended to boil the dishes from which the patient has eaten before they are taken from the room. If this precaution is impracticable they should at least be treated in some other way, as by wrapping in paper so that they cannot convey infection. They should afterward be boiled or washed separately from the other dishes.

It is also recommended that the nurse should wear a rubber apron when bathing or handling otherwise a typhoid patient and should also wear rubber gloves or else wash the hands thoroughly in a 1 to 1,000 bichlorid solution after she has finished or as recommended in THE JOURNAL (March 16, 1912, p. 805), she should wash thoroughly in soap and water, followed by 70 per cent. alcohol.

While it may be impracticable sometimes to carry out these precautions in their entirety, they should be regarded as the ideal to which the intelligent nurse or attendant will approach as closely as possible.

Great care should be taken to prevent access of flies to typhoid excreta and to food supplies. The room of the typhoid patient should be kept thoroughly screened in fly season. The nurse or other attendants should be taught to regard every specimen of urine as a pure culture of typhoid bacilli and should carefully avoid the spilling or scattering of drops of urine.

The danger from contamination with the urine should be impressed on the convalescent patient, who should be encouraged to continue the use of hexamethylenamin and to report to the physician for examination of the excreta until it is satisfactorily shown that no more typhoid bacilli are being passed by the patient, either in the urine or feces.

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[*For other information see second page following reading matter*]

SATURDAY, APRIL 6, 1912

## CHEESE—A NEGLECTED NUTRIENT

One of the most common articles of diet is cheese, and yet its value is little appreciated by the general public. One cannot say, in fairness, that cheese has not won favor in this country; for an article that is found in some quantity or other in almost every American home and the yearly output of which is considerably over 300,000,000 pounds in the United States, with a value of nearly $29,000,000, cannot be regarded as entirely unpopular.[1] Despite these enormous figures, there is a prevalent current belief that cheese is prone to produce physiologic disturbances and that, as the expression goes, it is "hard to digest."

Cheese enters into the dietary in two quite different ways. Some of the types are used almost entirely as food adjuvants, rather than for their nutritive value. This applies especially to the highly flavored varieties which are eaten in small quantities at a time and are prized because they tend to make the diet palatable and attractive. They likewise belong among the more expensive kinds, so that here, as so often in dietetic matters, we are disposed to pay for what pleases the palate rather than what nourishes the flesh. In the second place, cheese is also used in larger amounts as a real nutrient, supplying a liberal share of the energy value of the diet. Such applications are especially made of what are known in this country as American cheeses — those mild-flavored sorts which serve as staple articles of diet rather than as appetizers. About three-fourths of the cheese made in the United States is of this type — so-called American cream cheese or English cheddar cheese — the remainder being modifications of foreign brands like the Neufchâtel, Camembert and others.

The nutrition experts of the United States Department of Agriculture have been investigating the case of the American public versus cheese. The facts and findings are essentially as follows: Cheese of various types, eaten raw or carefully cooked, compares favorably with other foods in thoroughness of digestion in healthy man. It does not cause constipation or induce other physiologic upsets, even when eaten in abundance. Of course the occasional alimentary vagaries of a misconstructed Welsh rabbit must not be charged to the harmless satisfaction stowed away in a liberal portion of bland cream cheese; any more than a well-made loaf of bread loses nutritive prestige in view of the faults of half-baked dough, that emblem of American kitchen shortcomings. Let us not attribute the results of poor cooking to assumed indigestibility in food. Cheese is more than readily digestible; it is highly nutritious, comparing in this respect with other rich protein-fat combinations like meat, fish and eggs; and above this, cheese is an economical food, competing easily with the foregoing from the standpoint of cost and nutritive efficiency.

If the causes for the familiar indifference to cheese as a more central feature of the diet are sought, they probably lie in part in the continued popularity of the more expensive meat in this country and in the fact that our housekeepers lack the culinary experience which would bring cheese into a more prominent rôle on the bill of fare. There are, moreover, extremists who assume specific uses of cheese as they do of other dietary articles. The latest *Farmers' Bulletin* offers this sane comment:

"Some persons seem to believe that cheese or fish or other food is the ideal food for some particular circumstance and that there is a special food or diet suited to each kind of work and to every circumstance of our daily life, and that it would be a great advantage if we could regulate our daily fare with the accuracy a chemist uses in making an experiment. Work, recreation, the amount of clothing we wear, and other details of our daily life are not so regulated, and it is the belief of those who have studied the subject that the best interests of persons living under normal conditions are served if the ideal be rather the regulation of the diet along general lines in accordance with good sense, the teachings of experience, economy, and the available knowledge gained from a scientific study of the subject, due care being taken that the different staple foodstuffs are so combined that all the needs of the body are provided for, excessive waste is prevented, and that both undernourishment and excess or overeating are avoided."

## THE ROYAL SOCIETY

The Royal Society of London for Improving Natural Knowledge — usually called simply the Royal Society — which is to celebrate its two hundred and fiftieth anniversary in July next, was founded by Charles II; and all his male successors on the British throne have become members, while Queen Anne and Queen Victoria were its patrons. The present king, indeed, takes a very active interest in its deliberations. And it is a graceful thing that in the coming celebration there will be representatives of the French Academy, which Cardinal Richelieu founded only a few years before the Royal Society. Several great Americans were made fellows of the English institution —Benjamin Franklin, Benjamin

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[1] These and other data referred to are taken from Farmers' Bulletin 487. Langworthy, C. F., and Hunt, Caroline L.: Cheese and Its Economical Uses in the Diet, U. S. Dept. Agric., Washington, 1912.

Thompson (afterward Count Rumford), Alexander Agassiz, Simon Newcomb and Dr. S. Weir Mitchell.

The Royal Society seems to have been originated not by an Englishman, but by a German — Theodore Haak, who, coming from the Rhine Palatinate, began, in 1645, the organization of weekly meetings "of divers worthy persons inquisitive in natural philosophy and other parts of human learning and particularly of what has been called the new philosophy, or experimental philosophy." And it was another German, Henry Oldenberg, who was the first secretary. Three years later a sister organization was founded at Oxford University — the Philosophical Society of Oxford. A close and mutual intercourse was maintained, until finally their activities were joined in the metropolis where, in 1660, under the chairmanship of Dr. Wilkins, a corporation was formed for promoting "physico-mathematical, experimental learning and philosophy." The membership was limited to fifty-five, fellows of the Royal College of Physicians, as also the professors of mathematics, physics and natural philosophy of Oxford and Cambridge being admissible as associate or supernumerary members. Sir Robert Moray was the first president. The initial meetings of the organized Royal Society were held in Gresham College in London; but after the great fire Henry Howard, sixth Duke of Norfolk, invited the society to establish itself under his roof at Arundel House, presenting it at the same time with a superb library of scientific works. Many of these books and manuscripts were sold a century ago to the British Museum, where they are to-day known as the Arundel Collection.

In 1671 the Bishop of Salisbury proposed for membership Mr. Isaac Newton, professor of mathematics of the University of Cambridge; and precisely three decades later Newton became President and continued to hold the office until his death, a quarter-century later. The late Lord Lister was another president. Election to the Royal Society is to-day not easy; and there is no doubt much heart-burning in (or rather outside) the premises. The membership is still limited to fifty-five; and admission would be even more difficult than it is were it not that most of its members are advanced in years, fellowship meaning to them the crowning point of a career devoted to science. There are fifty honorary foreign members who have no power and are selected by the council from among men eminent in science abroad. The annual election of officers is held on the day of the society's spiritual patron, St. Andrew. It receives from the British government an annual grant of $25,000. A report on its considerable trust funds and its other sources of revenue is published annually. And these funds are expended for the public weal; every year many thousands of dollars are devoted to the promotion of scientific research, especially in defraying the cost of experimental work by scientists who personally lack the means. Moreover, through its long and most honorable existence, it has ever been the principal adviser of the state and of the crown in all matters of science. It is officially represented on the governing bodies of every kind of governmental and semi-public scientific and other educational institutions. There is practically no end to the matters concerning which the society's advice is sought, or concerning which the society of its own initiative counsels the state. Not the least noteworthy of its activities is that it keeps ever in touch with learned societies throughout the world.

It has the custody of the standard copies of the imperial standard yard and pound; it controls the national physical laboratory, an institution established by the government on the recommendation of the society; it superintends the work of the Kew and the Greenwich observatories; on its initiative, and by its advice the government inaugurated the geodetic survey in 1791. Other enterprises which have had the society's aid are the expedition of Captain Cook to observe the transit of Venus, and that great commander's circumnavigation of the globe; the various arctic expeditions under Ross, Parry, Franklin and Nares; the Challenger expedition; the international congresses on the question of a prime meridian, and of an international seismological investigation system; tidal observations, protection of buildings from lightning; tropical diseases; color-blindness; and much else impossible of enumeration.

Obviously the coming celebration will be an event of international interest and importance. We have no exact counterpart of this superb institution; would that we had!

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## THE ADRENAL CORTEX IN RELATION TO SEXUAL CHARACTERISTICS

When it was discovered that the adrenals elaborate an internal secretion of vital importance it seemed as if the mystery of the functions of these little organs had been solved. It was found very soon, however, that the adrenal medulla only is concerned in this secretion and that the cortex probably takes no part in the production of epinephrin. That the cortex and the medulla should differ in function is not strange when we consider the great differences in their cells, and especially, of course, the fact that developmentally the adrenals represent two distinct sets of organs which in the higher vertebrates have become fused anatomically.

The medulla of the adrenal is part of the so-called "chromaffin system," which develops in connection with the sympathetic and is of neuro-ectodermal origin. This system consists of widely scattered collections of chromophil cells, like those in the medulla; they are found as strands in the larger nerves of the sympathetic and as oval masses about the ganglia—the so-called paraganglia; especially large collections are found near the division of the aorta (Zuckerkandl's organ), and the uppermost masses constitute the carotid glands, while the lower group is the coccygeal gland. It appears to be generally accepted that all these different parts of the "chromaffin system" take part in the production of epinephrin, the secretion of which at one time was ascribed wholly to the adrenal medulla.

Now, as to the origin of the adrenal cortex, there is difference of opinion. In the sharks it corresponds to a single organ, the interrenal organ, while the medulla here is represented by the suprarenal organs. Higher up in the scale occur, paired and unpaired, smaller and larger interrenal bodies, which are derived from the mesoblast and the cells of which are filled with lipoid material. In mammals and man the principal mass of the interrenal tissue is the adrenal cortex, small, scattered bodies of the same tissue, usually spoken of as misplaced adrenal fragments, being found in the region of the kidneys and adrenals, about the internal genital organs, and also in other parts of the abdomen. The tendency seems to be to regard these bodies as independent formations rather than as fragments split off from the principal organs.

Probably the most widely accepted view assigns to the adrenal cortex essentially the same origin as to the ovary and testicle, and accordingly it is not so surprising to find that there is a growing tendency to regard the adrenal cortex as in some way functionally concerned in sexual development. Evidence of this functional relation is seen in the small size of the adrenal cortex in defective development of the sexual organs; in its enlargement after castration; in the increase that occurs during pregnancy and after menstruation (but this increase appears to involve the medulla also); and especially in the hyperplasia observed in the forms of pseudohermaphroditism, in which the internal organs are female and the external male; but most of all in the peculiar changes in sexual characteristics that develop in connection with certain tumors of the adrenal cortex. The tumor in question is referred to usually as adrenal hypernephroma, and its structure reproduces largely that of the adrenal cortex; it is generally unilateral, often associated with metastasis, and seems to occur most frequently in female children. In children this tumor almost invariably is associated with a precocious growth of the body and of the sexual organs with overgrowth of hair and fat. There is a tendency to an increase of the male characteristics as shown by the occurrence of beard, absence of menstruation and hypertrophy of the clitoris. Usually there is increased pigment in the skin and mental dulness.

In a recent study of this tumor, Glynn[1] discusses seventeen cases in children, fourteen female, three male; in only one case were there no signs of precocious development. It seems that in adult females also the development of this tumor may be associated with the appearance of male characteristics, but when it occurs in women after the menopause and in adult men there are no sexual changes.

It is interesting to note that apparently the so-called hypernephromas of the kidney, the adrenal origin of which is now being denied by some on morphologic grounds, do not seem to influence growth or sexual character, which surely might be regarded as an indication against this development from adrenal remnants. Whether the tumor in the adrenal is the cause of the changes outlined, or *vice versa,* or whether both tumor and changes are the result of a common cause, cannot be answered at present. It would be interesting, indeed, to observe carefully what the effect of the removal of the tumor would be. In one case it seems that the hair fell off after the tumor was removed. At all events, there seems to be some kind of intimate connection between the adrenal cortex and sex characters, the full explanation of which it is left to future investigation and observation to furnish.

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[1] Glynn: Quart. Jour. Med., 1912, v, 157.

## WHAT IS HUNGER?

Two hundred years ago John Mayow offered an answer to this ever-present problem. "If the stomach be quite empty of food," he wrote, "its internal membranes are, as is probable, pinched by the nitro-aërial particles, and hunger seems to arise from this."[1] It is not surprising that a sensation which is so familiar to every individual from personal experience should have been the subject of numerous and diverse theoretic explanations. Associated, as it ordinarily is, with a hidden recess of the body, hunger has inevitably been clothed with the mysterious and uncertain qualities which are attached to the interior of the organism. A careful analysis will at once bring out the fact that appetite and hunger are fundamentally distinct; for no one would describe the "dull ache or gnawing sensation referred to the lower mid-chest region and the epigastrium" as appetite. Hunger is evidently a demand for nutriment; whereas the pleasures of appetite may be enjoyed without the necessity of an attendant hunger.

In a recent lecture before the Harvey Society of New York City,[2] Professor Cannon, of the Harvard Medical School, subjected to a critical review the various theories which undertake to account for hunger and offered an explanation of the well-known phenomena. He discards the widely accepted view that hunger is "a general sensation with local reference." According to this it has been assumed that hunger arises from a general condition of the body, such as the disappearance of food substances from the blood. As a matter of fact the sensation of hunger is commonly said to disappear as time passes — which one would certainly not expect if it were a manifestation of a serious deficiency; furthermore, there is no evidence of marked changes in the blood when hunger appears, and it is difficult to reconcile the abrupt onset of the sensation with any assumed equally sudden alteration in the nutritive state of the body. Again, the well-known intermittent occurrence of hunger is not readily interpreted in terms of metabolic phenomena. As Cannon says: "Such zigzag shifts of the general bodily state may not be impossible, but, from all that is known of the course of metabolism, they are highly improbable. The periodicity of hunger, therefore, is further evidence against the theory that the sensation has a general basis in the body."

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[1] Mayow, John: Medicophysical Works, Alembic Club Reprints, No. 17, Chicago, 1908, p. 267.

[2] Cannon and Washburn: An Explanation of Hunger, Am. Jour. Physiol., 1912, xxix, 441.

Any tenable theory of hunger must account for its most conspicuous feature, viz., the reference of the feeling to the epigastric region. Hunger is not due to emptiness of the stomach, or to hydrochloric acid secreted into the empty organ, or to turgescence of the gastric glands. Cannon attributes it to contractions of stomach musculature. By an ingenious experimental method he was able to register simultaneously the movements of the stomach wall and the subject's impressions of hunger sensation. The contractions and sensation always occurred in unison. Both are abolished when food which satisfies the bodily need is taken into the stomach.

On Cannon's theory the absence of hunger in fever (when bodily material is actually being rapidly used) is explicable from the fact that infections with systemic involvements are accompanied by a total cessation of all movements of the alimentary canal.[3] The inordinate hunger of certain neurotics is likewise in accord with the well-known disturbances of the tonic innervation of the alimentary tract in such individuals. The sequence of events may best be described in the authors' words: "Hunger is normally the signal that the stomach is contracted for action; the unpleasantness of hunger leads to eating; eating starts gastric secretion, distends the contracted organ, initiates the movements of gastric digestion, and abolishes the sensation. Meanwhile pancreatic and intestinal juices, as well as bile, have been prepared in the duodenum to receive the oncoming chyme. The periodic activity of the alimentary canal in fasting, therefore, is not solely the source of the hunger pangs, but is at the same time an exhibition in the digestive organs of readiness for prompt attack on the food swallowed by the hungry individual."

### MERITED HONOR

A week ago in the presence of the provost and trustees of the University of Pennsylvania there was unveiled a bronze medallion in honor of Dr. Crawford Williamson Long, a student of the class of 1839 of the medical school of the university. His alma mater thus worthily honored one of the distinguished medical discoverers of this country, whose name and place in our medical history is perhaps not as familiar as it should be. There seems no doubt now that just two years and eight months before Horace Wells and four years and six months before Morton made use of sulphuric ether in surgery, Dr. Long, then practicing in a small Georgia town, on March 30, 1842, removed painlessly a small glandular tumor from the neck of James W. Venable, his patient during the operation being under the anesthetic influence of ether. A second operation under the anesthetic was done in July of the same year, a third in September, 1843, and a fourth in January, 1845. Dr. Long made no attempt at the time to publish a report of his experiences, and it was not until 1849 that an account of his operations appeared, being called forth by a report of Morton's work.

Many, forgetting the debt which early American medicine owes to other southerners, may feel surprise that the first practical application of this anesthetic should have been made by an obscure surgeon in a remote corner of the south. Yet we owe to a southern surgeon, McDowell, the first ovariotomy; another southern physician invented an ice-making machine, because he wanted to cool his fever patients, while Sims and Emmet, who developed gynecology in America, were southerners. The celebration of this seventieth anniversary of the first operation done under an anesthetic in modern times will serve to remind us also of the part played by southerners in the medical history of the first half of the nineteenth century.

The celebration of such anniversaries and the erection of appropriate memorials will help us to appreciate how much our immediate forefathers in America accomplished for medicine and surgery and how much of genuine progress we owe to them. Younger members of the profession are inclined to forget this and to think of modern medical advance as practically all of foreign origin. If American contributions to the medical sciences, and above all, to medical and surgical practice, were wiped out, however, there would be many larger lacunae in present-day medicine than any but those familiar with the history of American medicine could appreciate.

## Current Comment

### HEALTH AND MARRIAGE

None knows better than the physician the tragedies caused by the marriage of the physically unfit. The necessity that both parties to the marriage contract should be mentally and physically sound has long been admitted, not only by the medical profession, but also by those who have made a study of sociologic problems. That the state should take action such as would prevent the mating of the unfit has long been recommended. Marriage, however, has a religious as well as a civil significance with many people. What more rational, therefore, than that the religious representatives should take official notice of an evil that so closely concerns both the church and the state? Within the last few days a well-known clergyman announced that in future he would wed no couple that failed to bring from a reputable physician clean bills of health. One might imagine that there would be no criticism of this stand from other representatives of religious organizations.

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[3] Cannon and Murphy: Physiologic Observations on Experimentally Produced Ileus, THE JOURNAL A. M. A., Sept. 7, 1907, p. 840.

Nevertheless, newspaper interviews indicate that the advanced stand taken by the pastor in question did not receive anything approaching unanimous approval. One preacher in particular is quoted as waxing eloquent in the denunciation of what he was pleased to call "health certificate marriage." Said he: "If you would rob the holy marriage rite of its sanctity, if you would divest a sacred custom of its beauty and holiness, if you would make the union of two souls a commercial transaction, then establish a custom which will permit the physician and his science to stand between two hearts that are drawn to each other." At the risk of spoiling this perfervid utterance, we fain would take the liberty of paraphrasing it, thus: If you would rob the holy marriage rite of its present capacity of permitting the infection of your sisters and your daughters with loathsome diseases, if you would divest a sacred custom of its potentiality for perpetuating epilepsy and idiocy, if you would make the union of two souls synonymous with the union of two clean bodies, then establish a custom which will permit science to stand as a faithful guardian of health and happiness over the two hearts that are drawn to each other!

## TYPHOID A PREVENTABLE DISEASE

It is rather startling to be told that in 1909 there were more cases of typhoid in the United States, with a population not half so large as that of India, than there were cases of plague in India; and that there were four times as many cases of typhoid in the United States as cases of cholera in Russia during a period including the epidemic of 1910. These figures are taken from an article by McLaughlin[1] of the Marine-Hospital Service, who says that we consider with apprehension the countries in which cholera and plague occur frequently and call them pest-ridden countries, but do not consider the problem of typhoid fever in our own country with sufficient seriousness. He gives tables to show that within the registration area in the United States, in fifty cities having an aggregate population of over 20,000,000, the average typhoid death-rate for 1910 was 25 per hundred thousand inhabitants. In one city in that year it amounted to 86.7 per hundred thousand, and in several cities it amounted to 45 or more. In ten of the largest cities of northern Europe, comprising a population of 15,000,000, the average typhoid death-rate per hundred thousand of population during a period of ten years, from 1901 to 1910, was only 3.4, and in 1910 the rate had gone down to 2.5. It is considered in Europe that a death-rate of 13 to 15 per hundred thousand constitutes a rather serious reflection on the sanitary management or the water-supplies of such cities. And yet the figures are far below the average of the fifty cities in the United States above referred to, in which the death-rate was 25 per hundred thousand of population. Leaving out of account such causes of typhoid as infected food and milk, contact, carriers, etc., McLaughlin believes that this death-rate can be very materially reduced by filtering the water-supplies of our cities, which are too largely contaminated by sewage. Not only is this high death-rate from typhoid fever to be deplored on humanitarian grounds, but the occurrence of such a large number of cases represents an economic loss so great as to be almost incalculable, and our legislators and city authorities should feel the obligation to adopt more vigorous methods of preventing this enormous waste of human energy, earning capacity and human life.

## "THE MILLS OF THE GODS"

The inner workings of the "men's specialists" offices are a closed book to the public and, from the nature of the case, usually must be. Of the mental torture and despair for which these vicious organizations are responsible, the half can never be told. Sordid, heartless, lacking in every element of humanity or common decency, the "men's specialist" sees in his patients nothing but disease-tortured victims to whom he can apply the thumbscrews of blackmail with slight risk of detection. Occasionally, a victim turns, and, for a too brief moment, the white light of publicity is thrown into the noisome pit of quackery and the slimy, crawling things that it harbors become visible. Such a case has recently occurred in Seattle, Wash. In the cities of the Pacific Coast there are a number of "men specialists" offices conducted by a syndicate. The "Dr. Taylor Company," which was exposed in The Journal some time ago,[1] was one of these organizations. After the California law went into effect requiring medical offices to be conducted in the name of the physician in charge, the "Dr. Taylor Company" had its various offices in other coast cities advertise under the names of whatever quacks happened to be employed. The renegade physician in charge of the Dr. Taylor Company's Seattle office was one W. T. Akey. A few days ago, one of Akey's patients, a miner and logger named Anderson, shot and killed both Akey and his assistant and then killed himself. Scores of receipts for money paid to Akey were found in Anderson's room; other receipts showed that Anderson had been passed from one of the syndicate offices to another, beginning in Nevada as long ago as March, 1910. After the commission of the crime, the police seized the books of the Seattle office, together with a card system used to keep track of the victims. Anderson, apparently, was considered a catch. The poor wretch had come to Seattle in October, 1911, at which time he deposited $900 in a bank. He began "treatment" October 31, and the harpies apparently kept after him so long as there was any money to be had. Anderson finally reached his last $10. This he withdrew from the bank, purchased a pistol and brought the long series of wrongs to a close by another, not more serious, but shorter and more sensational. Some day possibly it will be realized that evils such as those of the "men's specialist" type are of vital interest and of far-reaching consequence to the public. At present, the evil is in most instances allowed to flourish unhampered. When decent physicians direct attention to the iniquity, they are accused of acting in their own interests and encounter antagonism from that part of the daily press which, in return for a share in the blood-money of these "specialists," affords them the advertising facilities which enable the evil to exist. Some day, too, the public may awaken to the fact that laws governing the practice of medicine are for the protection of the public and not for the protection of the medical profession. At present, unfortunately, the various state medical practice acts are looked on by the public as a species of class legislation in the interest of the medical profession. It is for this reason that most attempts to strengthen these acts are met with rebuff. For this reason, too, the Dr. Akeys are permitted to ply their villainous trade and the poor deluded, pain-racked Andersons are allowed to be driven into the madness of despair. For every tragedy of this kind that is brought to the attention of the public there are a thousand, enacted in obscurity, of which the public never hears.

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[1] McLaughlin: The Necessity for Safe Water-Supplies in the Control of Typhoid Fever, Pub. Health Rep., March 22, 1912.

[1] The Journal A. M. A., Jan. 29, 1910; reprinted in "Nostrums and Quackery."

## A GOOD EXAMPLE

Some time ago we called attention to the fact that the Los Angeles County Medical Society had presented to each of its members a copy of "Nostrums and Quackery." The same society has just purchased a sufficient number of copies of the 1912 edition of "New and Nonofficial Remedies" for similar distribution. If 10 per cent. of the county societies of the country would do as the Los Angeles society has done there would be a tremendous advance in the enlightenment of the public through "Nostrums and Quackery," and of the profession through "New and Nonofficial Remedies." While nearly ten thousand copies of the former have already been distributed, there ought to be a hundred thousand copies placed in the hands of the public in various ways; the profession could help in this immensely at a very slight expense. The 1912 edition of "New and Nonofficial Remedies," which is just out, ought to be in the hands of every physician who prescribes. Possibly we ought to make an exception as regards those physicians whose confidence in their own good judgment is equaled only by their child-like faith in the statements of proprietary manufacturers.

## A NEW HEALTH BUREAU BILL INTRODUCED IN THE SENATE

Elsewhere[1] appears the text of Senator Smoot's bill "To Establish a Public Health Service and for Other Purposes"; it can be assumed that it is intended as a substitute for the Owen bill. Senator Smoot's bill is short and provides that the title of the bureau now known as the "United States Public Health and Marine-Hospital Service" shall be changed to "the United States Public Health Service"; that to it shall be added two new divisions, that of sanitary engineering and that of child hygiene. The bill would transfer the Division of Vital Statistics of the Bureau of the Census from the Department of Commerce and Labor to the United States Public Health Service. It also provides for an assistant secretary in the Treasury Department, to be known as the Assistant Secretary for Public Health, and to have supervision of the administration of the United States Public Health Service. A competent sanitary engineer is to be in charge of the Division of Sanitary Engineering. The usual provisions for applying all the present laws relating to the Public Health and Marine-Hospital Service to the proposed United States Public Health Service and for the financial administration of the service also appear in the bill. The chief points of difference between this bill and Senator Owen's measure are apparent. The Owen bill, in its present form, provides for an independent Bureau of Health, at the head of which would be a Commissioner of Health, appointed by the president and responsible to him alone. The Owen bill would transfer to the new bureau so much of the Bureau of Chemistry of the Department of Agriculture as is necessary to enforce and administer the Food and Drugs Act. It provides for three assistant commissioners of health who shall be the heads of the three main divisions of the bureau. It would transfer the United States Public Health and Marine-Hospital Service from the Treasury Department to the proposed Bureau of Health. It would also create divisions of child hygiene and sanitary engineering.

## THE AUTOMOBILE NUMBER

This is the sixth Automobile Number of THE JOURNAL. Various contributions on the subject appear on pages 1049 to 1080. Any who wish may omit these pages from their bound volumes, but we presume that few will care to leave them out, for the man who may not have more than a bystander's interest in automobiles to-day may decide a few months later that he needs one, and then he will wish to turn to the Automobile Number. The automobile is more than ever one of the helpful auxiliaries of the physician. The key to the names of the automobiles mentioned is a separate folder, which, as usual, will be sent to anyone on receipt of a stamped addressed envelope of ordinary size. Copies of this key have been sent to all who have contributed to this Automobile Number; they, therefore, will not have to write for them.

## KNOCKS AND BOOSTS

The American Medical Association and its various activities — more especially THE JOURNAL — are the subject of frequent comment and criticism, and we have often wished that we could print some of the remarks — both bouquets and brickbats. It does not seem fitting to put them in the reading pages as they are ephemeral matter and the bound volumes are already large enough. A new department is therefore inaugurated in this issue, entitled "Knocks and Boosts." This and some other matter of merely transient interest will be found on the advertising pages which immediately follow the reading-matter. It is a pleasure to record some of the statements that will be found in "Knocks and Boosts," while concerning others one can only remember that it takes all sorts of people to make a world.

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[1] Department of Medical Economics, p. 1034.

# Medical News

## ILLINOIS

**Smallpox in Kewanee.**—It is reported that a large number of cases of smallpox exist in Kewanee.

**Personal.**—Dr. Russell Broughton, Rockford, who has been seriously ill with pneumonia, is reported to be improving.——Dr. C. U. Collins was unanimously elected president of the Peoria Association of Commerce, March 21.——Dr. E. W. Cauldwell, Lemont, fell on an ice walk recently and sustained a severe sprain of the wrist.

**Hospital for Oak Park.**—The Western Suburban Hospital Association, whose membership is made up of physicians of Oak Park, Austin, River Forest, Elmhurst and other west suburban towns, has perfected plans for a new hospital to be erected this summer at Austin Ave. and Ontario St., Oak Park, to cost from $60,000 to $100,000.

**The Harris Lectures.**—Northwestern University announces the Norman W. Harris lectures for 1912, in the Annie May Swift Hall, April 15-20, by Dr. Milton J. Rosenau, professor of preventive medicine and hygiene in Harvard University. The lectures will be delivered at 8 o'clock in the evening, with the exception of the last day, when the lecture will be given at 10 a. m. The general subject of the lectures is "Milk and Its Relation to Public Health," and the successive lectures deal with various phases of the milk question: "Dirty Milk;" "Diseases Spread by Milk;" "Clean Milk;" "Pasteurization," and "From Cow to Consumer."

### Chicago

**Sanitarian Dies.**—Andrew Young, formerly head of the Sanitary Bureau of the Chicago Health Department and an official of the department from 1892 to 1903, died in Mobile, Ala., March 25, from heart disease.

**Nurses' Home Planned.**—The Presbyterian Hospital, Chicago, will erect a nurses' home and school, to cost about $250,000, on a site in Congress Street between Hermitage Avenue and Wood Street, which has been purchased for $55,000. The building will be six stories in height and will be provided with classrooms, a laboratory, dormitory accommodations for 150 and a roof garden.

**Vaccine in Streptococcus Throat Infection.**—A considerable prevalence of rather severe streptococcus throat infection is reported in Chicago and vicinity. An article on the subject by Drs. Rosenow and Davis appeared in The Journal March 16. Dr. O. F. Scott, Summit, Ill., reports treating three cases successfully with antistreptococcus vaccine. To establish the diagnosis, cultures were taken. This is mentioned as of interest in connection with the prevalence of throat infection.

**Conference on Mental Diseases.**—The West Side Branch of the Chicago Medical Society has arranged, as The Journal has already mentioned, a rather elaborate program on various phases of insanity including such subjects as heredity, paresis, hyperthyroidism, epilepsy, infectious psychoses, criminal insanity, juvenile delinquents, the Binet-Simon tests, nervousness in children, prophylaxis, segregation, hospital treatment, insanity outside of institutions, etc. The essayists include men from Illinois and surrounding states and as far as the Atlantic coast. The first meeting will be a joint one with Chicago Medical Society in the Assembly Hall of the Northwestern University building, Lake and Dearborn Streets, April 17, at 8:15 p. m. The rest of the program will be at the La Salle Hotel, April 18 and 19, probably occupying all of these days. The meeting is open to all physicians and those interested in the subject. Any further information desired may be obtained from Dr. W. T. Mefford, 2159 West Madison Street, Chicago, president of the West Side Branch.

## INDIANA

**Home for Aged and Infirm Deaf.**—Professor Orsen Archibald of the State School for the Deaf, Indianapolis, has given eighty acres of land in White County, near Lafayette, as a site for a home for the aged and infirm deaf of the state. An association has been formed and a maintenance fund of $10,000 is being raised for the home.

**Health Institute.**—The Indiana State Board of Health held a public institute in Bicknell, March 19-21, under the charge of Dr. W. F. King, Columbus City, assistant secretary. The meetings were held in the evening, at which lectures were given, illustrated by moving pictures and specimens. The subjects treated were school hygiene, inspection of pupils, tuberculosis and sanitary inspection.

## KENTUCKY

**Sanatorium Opened.**—The new sanatorium for tuberculosis patients at the Central Hospital for the Insane, Lakeland, erected at a cost of $10,000, was put into service, March 13, when eighteen inmates were transferred to the new building.

**Governor Vetoes Cattle Inspection Bill.**—Governor McCreary has vetoed Senate Bill 56, which is entitled "An act to provide for the inspection of bulls, cows and calves, held and owned in this state, for the testing of same, for the destruction of same having tuberculosis, and prescribing a penalty for using reacting animals for dairy purposes."

**Physicians to Give Fair.**—The physicians of Winchester have decided to give a fair, the proceeds of which will be used for building a hospital in Winchester. The fair will be held August 6 to 10, and following are the officers of the association: president, Dr. D. H. McKinley; vice-presidents, Drs. E. R. Bush and Howard Lyons; secretary, Mr. G. Lee Wainscott, and treasurer, Dr. Ernest Cole.

**Sanitary Milk for Louisville.**—With the purpose of obtaining a more sanitary milk supply in Louisville, a conference of dairymen, wholesale and retail milk dealers and railway and health officials was held in Louisville, March 22. The discussion was opened by Mr. R. M. Allen, head of the Pure Food Department of the State Experiment Station, at whose instance the meeting was held, and before the conference was adjourned it was agreed that a concerted effort would be made to raise the standard of the milk supply of the city. It may be that as a result of the conference refrigerator cars will be used for bringing milk from the various supply points into Louisville. In order that all dairymen supplying milk to the city may attend one or more of these milk conferences, it was decided to hold them at various points, until the entire territory has been covered.

**Personal.**—Dr. Ap Morgan Vance, Louisville, has been ill in St. Joseph's Infirmary, by reason of repeated and severe nasal hemorrhages, but is reported to be improving.——Dr. C. A. Fish, Frankfort, has been appointed a member of the board of trustees of the Kentucky Normal and Industrial Institute for Colored Persons.——Dr. A. D. DeBard, Greenup, who has been a patient at the Keller Hospital, Ironton, Ohio, for several weeks, has returned home improved.——Dr. L. O. Pindar, Tyrone, was assaulted and robbed on Fourth between Market and Main streets, Louisville, his left arm was broken, he was badly beaten about the face and received a severe scalp wound.——The office of Dr. W. E. Risque, Midway, was burned, February 29.——Dr. Charles Kearns, chief medical adviser of St. Elizabeth Hospital for forty years, has retired from active practice, and was tendered a farewell dinner by the medical staff of the hospital, at which Dr. A. D. Kelley acted as toastmaster.

## MARYLAND

**Appropriation for State Sanatorium.**—The legislature has appropriated $100,000 for new buildings of the State Tuberculosis Sanatorium, Sabillasville.

**Personal.**—Dr. Thomas B. Owings, Ellicott City, has retired from practice.——Dr. J. McPherson Scott, secretary of the Maryland State Board of Medical Examiners, has been reelected mayor of Hagerstown.——Dr. Theodore A. Worrall, North East, is reported to be seriously ill at his home.

**County Hospital Opened.**—The Washington County Hospital Association has remodeled the building of Kee Mar College, Hagerstown, and converted it into a modern hospital, at a cost of $15,000. The hospital was opened April 1, and can accommodate forty patients. The association has recently fallen heir to a fortune of $260,000.

### Baltimore

**Lectures on Laboratory Methods.**—A series of lectures has been arranged to be given on Tuesdays and Thursdays at Medical Hall, under the auspices of the Medical and Chirurgical Faculty of Maryland. The course is designed to convey to the medical profession the latest knowledge in laboratory methods.

**Old Book Presented.**—At the last meeting of the Book and Journal Club of the Medical and Chirurgical Faculty of Maryland, Dr. J. Carroll Monmonier, Catonsville, presented to the club the minute book of the Medical and Chirurgical Society of Baltimore for 1832.

**New General Hospital.**—The Homeopathic Hospital on Mount Street has abandoned its sectarian character and will hereafter be a general hospital, known as the Mount Street Hospital. The following appointments have been made to the staff: Dr. R. P. Bay, visiting surgeon; Dr. E. H. Kloman, visiting gynecologist; Dr. H. C. Davis, visiting laryngologist, and Dr. C. W. Mitchell and A. C. Smink, visiting physicians.

**Personal.**—Dr. B. B. Browne has been ill for a few days with septicemia, due to an operation wound.——Dr. O. Edward Janney has been appointed a member of the executive committee of the American Vigilance Association.——Dr. and Mrs. Henry Barton Jacobs and Drs. John H. King and John T. MacCurdy sailed for Europe, March 30.——Dr. John T. O'Mara was operated on recently at St. Joseph's Hospital.——Dr. G. Lane Taneyhill has been elected a member of the executive committee of the Baltimore Conference M. E. Church.

## MASSACHUSETTS

**Personal.**—Dr. Samuel A. Green, formerly mayor of Boston, is in the City Hospital convalescing from injuries received from being knocked down by a horse recently.——Dr. William J. Heffner, Gilbertville, has been appointed associate medical examiner for the Tenth Worcester District.

**Cancer Hospital Opened.**—By invitation of the cancer commission of Harvard University, the new Collis P. Huntington Memorial Hospital was inspected by several hundred guests recently. The institution is to be devoted solely to the care of cancer patients and it is hoped "by methods of diagnosis and prognosis and treatment, and by investigations along general biologic lines, the study of resident cases, and by animal experimentation to find a path that may lead to the removal of cancer from the list of incurable diseases." The institution received $100,000 from Mrs. Collis P. Huntington and from other sources $200,000.

**At the State House.**—Various bills for milk regulation by the State Board of Health or local boards of health have been rejected.——The Trustees for the School for the Feeble-Minded ask for $155,000 for four much-needed buildings at Wrentham, two of them being dormitories to accommodate 105 each.——The drinking-cup law is to be amended so that railroad trains shall provide them in suitable receptacles.——Mayor Fitzgerald's bill providing that the state shall care for Boston's tuberculosis cases, has failed in committee but a bill approving the payment of the subsidy to cities as well as towns whose tuberculous patients are cared for in private institutions is reported favorably.——A bill providing that needy pupils in the public schools shall be provided with food and clothing has been defeated in the senate by a vote of 14 to 12.

**The Graduate School of Medicine.**—Dr. Horace D. Arnold, dean of the Graduate School of Medicine, Harvard Medical School, announces that beginning October 1, graduate instruction at the Harvard Medical School will be organized as a department of the faculty of medicine of Harvard University, with a separate dean and administrative board. The object of this department is, by better organization and the development of both clinical and laboratory teaching facilities, to offer graduates in medicine opportunities to continue their studies in a thorough and scientific manner, and to extend to others who are qualified, opportunities for advanced study and research. Additional courses are being arranged and the dean suggests that any one desiring graduate instruction outside of the present announced schedule, should write to him for further information.

## MINNESOTA

**New Officers.**—Washington County Medical Society: president, Dr. D. D. Kalinoff; secretary-treasurer, Dr. E. E. Wells, both of Stillwater.——Brown and Redwood County Medical Society: president, Dr. J. L. Schoch, New Ulm; secretary-treasurer, Dr. G. F. Reineke, New Ulm.

**Medical Building.**—It is announced in the daily press that the Mayos are about to erect a large medical building in Rochester, exclusively for the use of their staff. The building is to be two and a half stories in height, will provide seventy-five or eighty offices, and is to be erected on property formely owned by the late Dr. W. W. Mayo.

**Campaign for Sanitation.**—Seventy-five physicians and dentists of Minneapolis, who are members of the Civic and Commerce Association, held a conference March 7 to consider health problems now facing Minneapolis, and entered into a cooperative campaign for public health and sanitation. At the conference the matters of disease prevention, hospital facilities, especially for tuberculosis and communicable diseases, infant mortality, child welfare, pure milk supply, extermination of flies and other disease carriers, public and private agencies aside from the Health Department, and the financing of the warfare on disease were taken up and thoroughly discussed.

**Sickness Among Reservation Indians.**—Dr. L. J. Murphy, medical supervisor of the Indian Department, who has been investigating health conditions on the Minnesota Indian reservations for a month and has inspected every Indian settlement on the White Earth reservation, reports that a large proportion of the Indians are afflicted with tuberculosis of the lungs and glands, but that no trachoma was found. At the Pine Point boarding school 74 per cent. of the pupils were found to be afflicted with trachoma; 21 per cent. had corneal scars; 17 per cent. had tuberculous glands; 2 per cent. were suffering with tuberculosis of the spine, and 10 per cent. had suspicious lungs. Of the sixteen families at Twin Lake settlement, numbering sixty-five persons, five were found to have pulmonary tuberculosis; five tuberculous glands and thirteen trachoma. At Elbow Lake settlement, with fifty-four inhabitants, four members had pulmonary tuberculosis; four glandular tuberculosis and thirteen were afflicted with trachoma. At the Wild Rice River settlement seventy-six were inspected. Of these, eight had tuberculosis of the lungs; nine tuberculosis of the glands and twenty-four trachoma. At the White Earth boarding school, with an enrollment of 140 pupils, about twenty-five were found to have active tuberculous processes and about the same number were suffering from trachoma.——At a meeting of the executive committee of the State Board of Health at St. Paul, March 19, the health affairs on the White Earth Indian reservation were discussed, and Dr. H. M. Bracken was delegated to confer with the Commissioner of Indian Affairs, Washington, in the attempt to make some arrangement with the Indian bureau to provide for cooperation between the state and the federal authorities. The state board favors appointing a specialist to work with the specialist of the federal department in dealing with the trachoma situation on the reservation.

## MISSOURI

**New Officers.**—Harrison County Medical Society: president, Dr. J. H. Morroway, Ridgeway; secretary, Dr. O. A. Schmid, Bethany.

**Hospital Soon to be Ready.**—The first and second floors of the Levering Hospital, Hannibal, will, it is promised, be ready for occupancy this month.

**Library Club.**—Incorporation has been asked for the Kansas City Medical Library Club. Dr. R. M. Schauffler is named as president and Dr. Rush E. Castelaw, secretary and treasurer.

**New Medical College Magazine.**—The first issue of the *College Spirit*, a new monthly publication of the students of the University Medical College, appeared February 24. The magazine is edited by Dr. Flavel B. Tiffany, with Drs. O. L. McKillip and O. H. Yereman, associates.

## NEW YORK

**New Officers.**—Medical Society of Newburgh Bay and the Highlands; president, Dr. A. Judson Benedict; secretary, Dr. Talcott O. Vanamee, both of Newburgh.

**Personal.**—The residence and office of Dr. A. J. Butler, Unadilla, was destroyed by fire early March 21.——Dr. Hebard B. Nichols and family, Syracuse, left March 25 with a party to take up cooperative stock farming on a tract of land in Prince Albert, Sask.

**New Society.**—Buffalo Medical and Surgical League, organized March 11: President, Dr. A. W. Hengerer; secretary, Dr. Julius Richter. The objects of the league are set forth as mutual protection and promulgation of the principles of ethics of the American Medical Association.

**Rochester to Have Model Tenements.**—Mr. George Eastman is financing an enterprise which proposes to provide a block of model tenement houses in Rochester similar to the Vanderbilt tenements in New York City. It is estimated that about $1,000,000 will be invested in this undertaking.

**State Laboratory Work.**—During 1911, 3,981 sanitary water analyses were made in the laboratories of the state, an increase of 49 per cent. over the work of the preceding year, which in its turn was an increase of 32 per cent. over the work of the preceding year. The public water supplies of 383 cities, towns and villages were examined during the year. The total number of specimens examined for the detection of contagious diseases and the control of quarantine during 1908 was 2,938; in 1909, 3,695; in 1910, 8,895; and in 1911, 10,482. The special work of cholera control involved the providing of cultural material, the personal examination and taking and the bacteriological handling of cultures from 27,020 immigrants, which figures should be added to the routine work of the laboratory, making a total of 37,502. During the year, 43,709 packages of diphtheria antitoxin of 1,500 units each, making a total of

65,563,500 units of antitoxin, were prepared and distributed, an increase of 17.5 per cent. over the output of the previous year, which was itself an increase of 51 per cent. over the output of 1909. There were supplied during the year, 3,374 sputum outfits, 1,368 blood-serum outfits and 15,579 diphtheria culture outfits. In addition to these 70,000 peptone cultures and material therefor were supplied by the Laboratory Division for the special work of cholera control.

**Themes for Lectures.**—A course of lectures on the care of infants is being given at Mechanics Institute, Rochester, on Friday mornings. Lectures have already been given on: "Vaccination, Immunity Treatment, Serum," etc., by Dr. Charles O. Boswell, and on "Care of the Eyes," by Dr. Albert C. Snell. The following lectures are to be given in the course: April 12, "Hygiene of Infancy and Childhood"; April 19, "Feeding of Infants of 1 Year," and April 26, "Feeding of Children from 1 to 16 Years," by Dr. Norris G. Orchard; May 3, "Prevention of Deformities," by Dr. Ralph R. Fitch; May 10, "Care of the Skin," by Dr. E. W. Ruggles; May 17, "Care of the Ear, Nose and Throat," by Dr. N. D. McDowell, and May 24, "The Infectious Diseases of Infancy and Childhood," and May 31, "Practical Instruction in Taking Temperatures," by Dr. Joseph Roby.

**New Hospitals.**—The new Lestershire Hospital was formally opened, March 18, and patients were received on the following day. The convalescents now at the Avenue A Hospital have been removed to the new building.——Utica is said to stand ready to do its part in the establishment of a tuberculosis hospital on the General Hospital grounds, when the location of a site is finally determined.——Preparations are under way to install an emergency hospital at the New York, Ontario and Western Railway shops at Middletown, to administer first-aid to the wounded. The hospital will be in charge of Drs. J. B. Hulet and T. D. Mills.——Efforts are being made to double the capacity of the Oneida City Hospital, and ex-Mayor Goldstein is said to have agreed to pay one-fourth of the expenses incurred in the enlargement.——The Tonawanda Hospital committee, which is attempting to establish a municipal hospital, is being aided by the New York State Charities Aid Society. The common council has adopted a resolution requesting the assistant secretary of the society to come to Tonawanda to prepare plans for the establishment of a city hospital there. ——The governor is said to have signed the bill appropriating $115,000 for the purchase of the so-called Marcy site for the new Utica State Hospital for the Insane.——The mayor of Buffalo has approved the bill authorizing an additional $50,000 for the J. N. Adam Memorial Hospital, Perrysburg.——The Syracuse Rapid Transit Company has donated $2,500 to the hospital fund of the city.

### New York City

**University Needs Funds.**—Chancellor Elmer Ellsworth Brown, of New York University, has asked the university council for $4,750,000. Of this amount $800,000 is asked for the medical department.

**Personal.**—Dr. Graeme M. Hammond has been appointed official physician to the American Olympic games team.——Dr. John McAllister, whose right thumb was amputated March 20, on account of septicemia, is resting well at Mount Sinai Hospital.

**Needs of Quarantine.**—The new health officer of the port of New York, after consultation with the advisory board, urges the immediate construction and equipment of a commodius fireproof building, to be used as a pathologic and bacteriologic laboratory, with accommodation for a force of thirty bacteriologists.

**Office Buildings for Physicians.**—Following the example of other large cities, two buildings for the exclusive use of doctors and dentists have recently been erected in Brooklyn. One is at Hanson and South Elliott Places—a seven-story structure—and the second, Galen Hall, is a twelve-story structure adjoining Packer Institute in Joralemon Street.

**Exhibition of Medical Books.**—For the first time in the ninety years of its history, the Brooklyn Medical Library gave a public reception, each afternoon and evening, from March 24 to March 31, and the librarians and officers of the society acting as a reception committee pointed out the objects of especial interest and explained the rare books and manuscripts of the collection.

**New Convalescent Hospital.**—The Burke Relief Foundation will open a convalescent hospital at White Plains on a sixty-acre tract of land recently purchased. A new type of institution and work for the care of the sick of New York City will be established under the superintendency of Dr. Fred L. Brush, who resigned as superintendent of the New York Post-Graduate Medical School and Hospital, to take up this work.

**Reporting Infantile Paralysis.**—The Research Laboratory of the Department of Health states that many cases of infantile paralysis come to their notice which have not been regularly reported to the Department of Health. The Department of Health has sent out postal cards calling the attention of physicians to the regulations of the department requiring that every case of infantile paralysis shall be reported. Notices to this effect are also being sent to medical journals published in this city.

**Newspapers Help Tuberculosis Fight.**—The National Association for the Study and Prevention of Tuberculosis shows in a statement just published that one and one-half million inches of space in the columns of the newspapers and magazines of the country are being devoted every year to fighting tuberculosis. It is estimated that if all this space were gathered in one paper it would make a newspaper of 6,250 pages. During the past four years more than ninety miles of space has been devoted to this subject. Dr. Livingston Farrand, secretary of the association, says that when tuberculosis has become a rare disease, the American press may justly lay claim to a big share in this achievement.

**Clinic for Feeble-Minded.**—A clinic for mental and nervous diseases in which special attention is being paid to feeblemindedness has been established by the New York Post Graduate Medical School and Hospital, which will be in charge of Dr. Max G. Schlapp. This clinic is for the worthy poor from any part of the city. Its special purpose is to identify mental and moral defectives and incorrigibles and to give advice to parents concerning their care. When it is thought necessary that such children should be treated in institutions a suitable place will be found without expense to the parents. Taken in time it is believed that many of these children can be greatly improved and possibly cured.

## OHIO

### Cincinnati

**Civic Association Obtains Control of Lancet-Clinic.**—The controlling interest in the *Lancet-Clinic* is said to have been purchased for $6,300 by Dr. Christian R. Holmes on behalf of a number of medical men prominent in the Cincinnati Medical Civic Association, who had subscribed $12,000 and promised as much more to purchase the journal and improve and maintain it. The journal will, from this time on, be the official organ of the Cincinnati Medical Civic Association. Dr. George Strohbach remains as business manager.

## PENNSYLVANIA

**Another Clinical Society Formed.**—The Episcopal Hospital Clinical Society has been organized by the medical staff and Dr. Francis W. Sinkler chosen president and Dr. E. G. Alexander secretary.

**Luncheon to Visiting Pathologists.**—The Philadelphia Pathological Society entertained the American Association of Pathologists and Bacteriologists at an informal luncheon at the Houston Club, University of Pennsylvania, April 5.

**Bensley Speaks at Pittsburgh.**—At the second special meeting of the Society for Biologic Research of the University of Pittsburgh, March 20, Dr. Robert Russell Bensley, director of the Hull Anatomical Laboratory of the University of Chicago, delivered an address on "The Construction of the Pancreas and its Bearing on the Islet Theory of Diabetes."

**Health Advice to Foreigners.**—The State Board of Health has issued a series of pamphlets in German, Slavish, Polish and Italian, setting forth clearly and concisely the precautions which should be observed in the care of scarlet fever, diphtheria, typhoid and tuberculosis, to prevent the infection of others, and to insure most favorable conditions of the patient.

**Personal.**—Dr. Samuel G. Dixon, Harrisburg, city health commissioner, presided at the centennial celebration of the Academy of Natural Sciences, Philadelphia, March 22.——A farewell banquet in honor of Dr. M. J. Freshwater, Jeannette, was given by the local Elks Lodge, March 14, and Dr. Freshwater was presented with a ring bearing the insignia of the order. He leaves for the West this month.

**College Secures Endowment.**—The sum of $200,000 has been received recently by the Hahnemann Medical College and Hospital, Philadelphia. Half of this sum was given by Walter Hering for the endowment of the Constantine Hering professorship of materia medica and therapeutics and the other half by the will of Mrs. William L. Elkins, the income to be used for the general support of the institution.

### Philadelphia

**Nurse Society Needs Funds.**—The annual meeting of the Visiting Nurse Society was held at its new building, March 8. The society still needs $8,800 to pay for the new building, which was opened last October and was erected at a cost of $35,000. The total receipts for the year were $27,900.32 and the expenditures, exclusive of money spent on new building, amounted to $27,381.27.

**Medallion to Anesthetists Unveiled.**—In celebration of the seventieth anniversary of the first use of ether as an anesthetic for surgical purposes, a bronze medallion, in honor of Dr. Crawford Williamson Long, a graduate of the class of 1839 of the University of Pennsylvania, was unveiled in the hall of the Medical Laboratory building, March 30. Addresses were made by Drs. J. William White and J. Chalmers Da Costa.

## SOUTH DAKOTA

**New Officers.**—Hot Springs Medical Association: president, Dr. F. E. Walker; secretary, Dr. R. M. Wheeler.

**New Hospital Opened.**—The new McKenna Hospital, Sioux Falls, has been opened and patients from other hospitals have been transferred thereto. The hospital is of modern construction and thoroughly up to date in its equipment.

## VIRGINIA

**Pavilion Burned.**—The Latane pavilion at the Catawba State Sanatorium for Tuberculosis was destroyed by fire February 24, with a loss of about $4,000. The pavilion furnished accommodation for sixteen patients, all of whom were removed without casualties.

**Municipal Hospital Needed.**—The Norfolk Medical Society, appreciating the need of a municipal hospital for the treatment of emergency cases and for the segregation of infectious diseases, has caused to be introduced in the council a resolution appropriating $15,000 for the utilization of the old High School building as an emergency hospital, and for the erection of a one-story structure, for the segregation of communicable diseases, capable of accommodating twenty-four patients.

**Personal.**—Dr. Christopher F. Newbill, Center Cross, former health commissioner of Norfolk, is reported to be critically ill as a result of cerebral hemorrhage.——Dr. Russell Cecil, Richmond, was run over by an automobile, March 17, fractured his collarbone and suffered painful bruises.——Dr. C. W. P. Brock, police surgeon of Richmond, slipped on the ice March 4 and fell through a plate-glass window, sustaining severe cuts and bruises.——Col. Junius F. Lynch, Norfolk, has resigned as surgeon general of Virgina.——Dr. Vernon A. Brooks, Portsmouth, has been appointed assistant surgeon of the Seaboard Air Line.——Capt. J. Fulmer Bright, surgeon of the Richmond Light Infantry Blues Battalion, has been commissioned major, M. C., N. G., Va., and assigned to the First Infantry, vice Major Truman A. Parker, resigned.

## WISCONSIN

**Vaccinated Against Typhoid.**—At the request of Surgeon-General John B. Edwards, N. G., Wis., the National Guard companies in eighteen towns in the state have been vaccinated against typhoid.

**New Officers.**—Sheboygan County Medical Society: president, Dr. G. H. Stannard; secretary-treasurer, Dr. W. F. Zierath, both of Sheboygan.——Outagamie County Medical Society: president, Dr. J. S. Reeve; secretary-treasurer, Dr. F. P. Doherty, both of Appleton.

**Health Board Created.**—The city council of Kenosha, at its meeting March 18, created a non-partisan board of health, provided for the appointment of a public health commissioner, health officer and a nuisance inspector, all with police authority, and appropriated $4,000 for the department.

**Health Statistics.**—The annual report of the State Board of Health shows that the annual birth-rate of the state is about 22 per 1,000 and the death-rate 12 per 1,000. Based on the mortality rate of each disease, the report indicates that nearly 86,000 cases of preventable diseases occur annually in the state.

**Sanatorium for Eau Claire.**—The mayor of Eau Claire, the supervisors of Eau Claire County and the secretary of the Antituberculosis Association have been appointed by the county board as members of a committee to consider the advisability of establishing a tuberculosis sanatorium for Eau Claire County.

**Personal.**—Dr. Edward S. Hayes, Eau Claire, has been reappointed a member of the State Board of Health and Vital Statistics.——The Milwaukee County Medical Society, at a meeting, March 18, adopted a resolution asking Congress to give Dr. A. I. Comfort, National Home, who has been nearly fifty years in the government service, a permanent pension.

## GENERAL

**Ask Hospital Ship for Banks.**—The Master Mariner Association and Board of Trade of Gloucester, Mass., are circulating petitions requesting Congress to order a hospital ship to be stationed on the banks of Newfoundland for the benefit of the New England fishing fleet.

**Death of Dr. Musser.**—As we go to press, a telegram is received announcing the sudden death, from angina pectoris, of Dr. John Herr Musser of Philadelphia, president of the American Medical Association in 1903-4. An obituary notice will appear in The Journal, April 13.

**Wiley Accepts an Uncensored Position.**—The magazine *Good Housekeeping* announces that Dr. Harvey W. Wiley, formerly Chief Chemist of the United States Department of Agriculture, became contributing editor of that magazine, April 1, and that the magazine will hereafter be the exclusive channel for his writings on pure food, health and like topics. The magazine has established at Washington a "Bureau of Foods, Sanitation and Health," of which Dr. Wiley will be in full charge and control as director.——Dr. Wiley also is, it is announced, under contract to deliver a series of lectures in various cities of the United States.

## CANADA

**Small-Pox in Quebec Province.**—It is estimated by Dr. J. A. Beaudry, Montreal, chief inspector of the Provincial Board of Health of Quebec, that there have been more than 75,000 cases of small-pox in the Province during the year.

**New Hospitals in British Columbia.**—New Westminster, B. C., contemplates the erection of a hospital, to cost $225,000.——Nelson has raised $70,000 for a hospital.——The provincial government has voted $30,000 toward a hospital at Kamloops.——Cumberland is building an isolation hospital.——A "West Coast" hospital is to be built at Alberni.

**Personal.**—Drs. R. B. Hopkins and Caroline Cook have been appointed assistant medical inspectors of the board of education of Toronto.——Fire in the house of Dr. L. M. More, Brandon, March 16, caused considerable damage.——Dr. J. G. Adams, pioneer of dental inspection in the public schools of Toronto, started March 13 on a tour of the various cities of Canada to institute dental inspection for school children.——In a railway accident near Saskatoon, Sask., March 5, Dr. W. R. Sparling, North Battleford, was seriously injured.——Dr. J. W. Coffin has been reelected medical health officer of Rossland, B. C.

**Public Health Act.**—In the Act respecting public health introduced in the Ontario Provincial Legislature, March 14, it is provided that the lieutenant-governor may divide the province into not more than ten districts, and may appoint a legally qualified medical practitioner to be known as the district officer of health for each district, cities of more than 50,000 being excluded from such districts. The district health officer is to be paid by the province a salary of not more than $2,500 and a traveling allowance not to exceed $1,000 a year. The counties included in the district shall contribute to the expenses of the district officer of health in proportion to their respective populations. In unorganized districts, this cost will be borne by the province.

## LONDON LETTER

*(From Our Regular Correspondent)*

London, March 23, 1912.

### The Royal College of Surgeons and the Late Lord Lister

At a meeting of the council of the Royal College of Surgeons, Sir Henry Morris, past-president and senior member, moved a vote of condolence to the family of the late Lord Lister, to whose work he paid the following eloquent tribute: "Surgery has lost her most brilliant student and her greatest master, England one of her most famous sons, the world one of its most illustrious citizens. He raised surgery from a dangerous and precarious practice to a precise, safe and beneficent art. His methods have been adopted in every country and the benefits which flow from them are blessings conferred on every race of mankind. His perspicacity, his natural insight, his fertility of resource, his power of close and discriminating observation, his philosophic reasoning, his inflexible pursuit of truth, his steadfastness of purpose, his capacity for taking pains, his unwearied patience and his undaunted efforts to triumph over difficulties stamped him as a great example of true and scientific genius. The human sympathy which caused him to deplore the great mortality due to infective surgical disease, his solicitude to prevent suffering and premature death, his patient and unceasing labor to overcome them, his gratification at the ultimate success of his efforts to ameliorate pain and prolong life eminently distinguish him as a great philanthropist. His gentle nature, his deep compassion, his courteous and dignified bearing, his imperturbable temper, his resolute will, his indifference to ridicule, his tolerance of hostile criticism combined to make him one of the noblest of men. His work will last for all time; its good results will continue throughout all ages; humanity will bless him forevermore; his fame will be immortal. In the fulness of years, after a glorious and satisfying career, crowned with great and various honors, having witnessed the successful completion of his work, the gentle hand of Death laid hold on him and Lister passed from among us. His body perisheth, but the influence of his mind will continue everlastingly."

It was resolved that this memorial of esteem and admiration be printed surrounded by the symbol of mourning, in the college minutes and that an inscribed tablet should be placed in a suitable and conspicuous position within the walls of the college, to serve as evidence to future generations of the honor, respect, and reverence in which the great founder of aseptic surgery was held.

Under the terms of his will Lord Lister requested his nephews, Mr. R. J. Godlee, president of the Royal College of Surgeons, and Dr. A. H. Lister to arrange his scientific manuscripts and sketches, destroying or otherwise disposing of such as are of no permanent interest. He bequeathed the said manuscripts and sketches, when so arranged, to the Royal College of Surgeons.

### The Workmen's Compensation Act

A curious case has been heard under the Workmen's Compensation Act. The widow of a chef claimed compensation for the death of her husband, who while dressing in his room at the hotel slipped over a mat, complained of great pain, went home and sent for a physician. The latter gave evidence to the effect that death was due to rupture of the right renal artery, which he attributed to a violent twist, but admitted he had never known or read of the renal artery being ruptured in this way. The doctor was not allowed to state what the deceased had told him, as it was not "evidence," that he had slipped while dressing and violently twisted himself. The judge decided against the claim, as he was not satisfied that an accident had taken place or that it arose "out of and in the course of" the deceased man's employment, as required by the act.

### Telephones and Tuberculosis

Statements have frequently been made as to the possibility of the transmission of tuberculosis by the mouthpiece of the telephone. At the instance of the postmaster-general an exhaustive investigation has been carried out with the result that it has been conclusively proved that there is no ground for alarm. The investigation was carried out by Dr. Spitta of St. George's Hospital, bacteriologist to the king. A number of telephones which have been in use at busy call offices in London for various periods of time and had received no special cleansing treatment other than that normally given were examined. Washings were prepared from the mouthpieces and tests were made by the inoculation of guinea-pigs to ascertain the presence of tubercle bacilli. The results in all cases were negative. Further experiments were made with telephones which were known to have been exclusively used by persons suffering from pulmonary tuberculosis. For this purpose telephones were fitted in the wards of a sanatorium and used only by patients in different stages of pulmonary tuberculosis for varying periods of time and not in any way cleansed or disinfected. The results again were entirely negative. Dr. Spitta therefore concludes that the transmission of tuberculosis by the telephone mouthpiece is practically impossible. These results confirm the researches carried out by Dr. Klein at St. Bartholomew's Hospital in 1905.

## PARIS LETTER

*(From Our Regular Correspondent)*

Paris, March 15, 1912.

### Meningism as a Precursor of Mumps

Two army physicians, Drs. Colomb and Mary-Mercier, recently reported before the Société médicale des hôpitaux de Paris the case of a man who was found one morning stretched senseless on the floor of his room, with eyes fixed, pupils dilated, pulse about 120, temperature 104 F. (40 C.), etc. There was, moreover, a stiff neck, nausea and an accentuated Kernig sign. The patient remained in coma for three days, at the end of which all these symptoms disappeared, but twenty-four hours afterward the parotids became swollen and painful and showed the aspect of a typical case of mumps. The disease developed normally and the meningitic symptoms did not reappear. What is particularly interesting in this report is the fact that the meningeal symptoms did not accompany but preceded the appearance of the mumps.

Dr. Hallé of Paris mentioned that he had recently observed a young man who presented a meningeal syndrome with Kernig's sign and stiff neck some days before the occurrence of mumps. As in the previous case, recovery took place rapidly.

### Harvard Club

About fifty students of Harvard University have, on the initiative of Mr. Robert Bacon, ambassador of the United States, founded the Harvard Club, to be composed of former Harvard students residing in France.

### Personal

On March 11, the Académie des Sciences elected a member in the section of medicine and surgery to replace Professor Lannelongue, who recently died. There were six candidates, all members of the Académie de médecine, and the contest narrowed down to Drs. Charles Richet, candidate of the physicians, and Lucas-Championnière, candidate of the surgeons. Dr. Lucas-Championnière was elected on the second vote.

The new academician was born Aug. 15, 1843, at Saint-Léonard, department of l'Oise. He received his doctor's degree in 1870, and was appointed surgeon of the hospitals of Paris in 1874. His best claim to renown is that he introduced into France the antiseptic method of Lister, with whom he became acquainted in 1868, while traveling through Scotland. Dr. Lucas-Championnière has been president of the Société de chirurgie and a member of the Académie de médecine since 1894.

Dr. Lesieur, *agrégé* at the Faculté de médecine de Lyon, has been appointed professor of general pathology and therapeutics in the school in place of Dr. P. Courmont, who was recently appointed to the chair of experimental medicine.

Dr. Soulié, *agrégé* in charge of the course in anatomy at the Faculté de médecine de Toulouse, has been appointed professor of anatomy in that school in place of Dr. Charpy, deceased.

At the last session the Académie de médecine elected M. Mesureur, director of the public charities, an associate member in place of M. Monod, deceased.

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, March 8, 1912.

### Municipalization of the Berlin First-Aid Service

March 7 the negotiations on the transfer of the first-aid service to the city were completed. A commission is to be appointed for the management of the existing first-aid service and for the determination of the principles and conditions of the municipalization or transference of the institutions at present in existence to the city. This commission is to consist of four members of the administration (*Magistrat*), eight aldermen (*Stadtverordneten*) and four representative citizens, one to be chosen by the central committee of the Krankenkassen of Berlin as a representative of the Krankenkassen. It is proposed to retain the officials (*Sanitätswachen*) already employed on April 1 of this year; to leave the regulation of the medical service to the commission; to allow the commission to confer with the official representatives of the organized medical profession, the Aerztekammer, asking to have a committee of physicians appointed for general discussion on the institution and management of the whole first-aid service, this committee to be made up of medical men with sufficient knowledge for the advancement of the first-aid service but who need not themselves belong to the Aerztekammer. This committee should be composed of the heads of public hospitals, of specialists who are not employed in the hospitals, and finally of practitioners who do not have any part in the first-aid service.

### The Question of Contracts Under the New Insurance Legislation

In the session of the business committee of the German Aerztevereinsbund, held Feb. 18, at which Professor Loebker of Bochum was again elected chairman, the following resolutions were unanimously adopted as reported by the Krankenkassen committee:

For the successful carrying out of the resolutions adopted at the Stuttgart meeting (*Aerztetag*) the individual conflicts hitherto in vogue should be avoided; instead, a simultaneous, determined, regular and united action of all local organizations of insurance physicians is indispensable. The local organizations of the insurance physicians or a committee appointed by them should correspond to the organization of the Krankenkassen; as a rule there should be an organization of the kind for every insurance office. The association of insurance physicians should obtain a legal status. They or the economic committee or department of the local organization should admit at once every physician who has an ethical standing who applies, and they should make it their aim to draw up and put through the contracts of the physicians with the insurance companies. Where there is already a local association or an economic department of the local organization, their by-laws should be adapted without delay to the new conditions and the demands of the association (*Aerztetag*). The Krankenkassen commission is charged with the preparation of a model contract for insurance physicians; these model contracts should be punctually furnished to the local organizations of the insurance physicians. The work of perfecting the organization must be taken up without delay, and it should be completed not later than July 1, 1912. By June 1, 1912, the contracts headquarters in Leipsic should be informed what local organizations in the individual districts are charged with the making and putting through of the contracts with the insurance societies.

It was further determined that the executive and advisory board of the Leipsic league should establish a contract headquarters, located in Leipsic, as provided for by the resolution of the Stuttgart session (*Aerztetag*), and should confer due authority on it. The necessity for these preparations on the part of the German physicians for strife with the Krankenkassen when the present contracts expire, is shown by the efforts which are already being made by the executive authorities of the Krankenkassen. By concerted action of the various Krankenkassen, to counteract the measures of the organized profession in reference to the contest to be expected on the introduction of the imperial insurance law, they are endeavoring by agents who are visiting the physicians or by advertisements in the newspapers to induce physicians to accept positions as so-called control or confidential medical officers of the societies. The executive committee of the Leipsic league, therefore, is already warning physicians against accepting such positions.

### Appropriations for the German Universities This Year

According to the official estimate of the expenses of the Prussian universities, including the Lyceum Hosianum at Braunsberg, for the fiscal year 1912, they will amount to $5.016,389 (20,065.556 marks). Of this amount $2,202,058 (8,808.232 marks) is to be spent for institutes, collections and the university religious services. For salaries, remuneration and other personal expenses of the professors, instructors, officers, assistants and employees $2,059,466.50 (8.239,806 marks) are allowed and for lodging allowance $288,687.50 (1,154,750 marks). For the expenses of the academic management $93,266.50 (373,066 marks) are appropriated, for the building expenses $200,375.75 (801.503 marks) and for taxes $9.868 (39,472 marks). For contingent expenses $110,970.75 (443,883 marks) are provided, and $51,195.50 (204.782 marks) are appropriated for relief and stipends. The entire expenses are distributed among the individual universities as follows: Berlin $1,184,515 (4,738,061 marks), Breslau $541,311.50 (2,165,246 marks), Halle $546,982 (2.187,929 marks), Bonn $485.146 (1,940,584 marks), Kiel $482,741 (1,931,964 marks), Göttingen $463,215.50 (1,852,862 marks), Königsberg $411,621 (1,646,485 marks), Greifswald $366,475.50 (1,465,902 marks), Marburg $348,326.50 (1,394,306 marks), Münster $168,158.75 (672,635 marks) and Braunsberg $17,395 (69,581 marks). The expenses are to be met by the following income: from the state fund, $3,636,801.75 (14,547.207 marks); from endowments and other funds, $178.928 (715,712 marks); interest from capital and the income from real estate, $119.619.50 (478,478 marks); and from their own earnings, $1,081.039.50 (4,324,158 marks).

### Official Enumeration of Lupus Patients in Prussia

The Prussian minister of the interior has requested the provincial authorities to provide for an exact census of all lupus cases. This order fulfils a request of the lupus commission of the German central committee for the campaign against tuberculosis. The chief function of this committee consists in finding those lupus cases which are still in the initial stage of the disease and to provide them with the very promising curative treatment. In many places already by cooperation of the state officials with the help of the executive committees of the communes and of the physicians, lists of all the lupus patients have been obtained. In this way in some districts forty to sixty persons have been found who were still without treatment and now are undergoing treatment. In view of the results so far achieved, the lupus commission contemplates the institution of a curative treatment for all patients still curable who are discovered by the application of these methods in all districts of the monarchy. In cases in which there is no one to assume responsibility for the expenses and the patients themselves have not the necessary means, the lupus commission is prepared to assume a part of the cost of treatment.

## VIENNA LETTER

*(From Our Regular Correspondent)*

VIENNA, March 16, 1912.

### A Tribute of Honor to Lord Lister

As soon as Lister's death was known in this city the Gesellschaft der Aerzte resolved to show its special appreciation of the merits of the illustrious deceased by a "Lister Lecture," an exceptional honor. The lecturer, Professor Fränkel, clearly illustrated the enormous advance of modern medicine inaugurated by Lister, but he also laid stress on the fact that Lister's method had been nearly discovered previously, by Semmelweis and von Kern, two physicians of Vienna, who had well established the value of cleanliness (antisepsis) in surgery, but who lacked the energy and the broad view necessary to bring their opinions to a wider application. In the course of the lecture, it was mentioned that it took no less than four years before the antiseptic methods advocated by the eminent deceased were regularly applied in this country.

### The Austrian Cancer Hospital Now Secured

Under the will of a rich old lady, a sum of 1,000,000 kronen ($200,000) was bequeathed for the purpose of erecting and maintaining a special cancer hospital, the only one in this country. Bureaucratic and fiscal reactionism, however, prevented the trustees of the will from handing over the money to the Austrian Cancer Society, which was founded a little over a year ago, and in whose program the building of such a hospital plays a prominent part. After various litigations, the will was probated and the cancer society will receive its grant, together with a sum of another 400,000 kronen, which had been granted by Archduke Ranier (the emperor's uncle) for research of cancer. The government has also granted a yearly subsidy of 10,000 kronen, to be increased up to 40,000 a year if required. Thus the society has all the funds and securities required, and a site has been selected on which the hospital will be erected. Not only incurable patients, rejected by other hospitals, will be received, but also those who will be benefited by operation, for the hospital has to serve principally a scientific purpose: investigation of cancer by all methods and with all means.

# *Association News*

## THE ATLANTIC CITY SESSION

### Announcement of the Atlantic City Number to be Issued with Additional Details About the Next Annual Session

The Atlantic City Number of THE JOURNAL will be issued May 4. It will contain, as usual, an illustrated article on Atlantic City and its attractions. There will be lists of hotels and meeting places, lists of committees, and the preliminary programs of the various sections, together with much other information of value to those who expect to attend the next annual session of the American Medical Association, June 4 to 7.

Dr. J. Rawson Pennington, Chicago, chairman of the Committee on Transportation and Place of Session, is in communication with the various passenger associations, and will announce as soon as possible the exact rates for transportation to and from Atlantic City. The Trunk Line Association has agreed to one and one-half first-class limited fare for the round trip, going and returning by the same route. Summer excursion rates to Atlantic City will extend this or a better rate to the territories covered by the other passenger associations.

In The Journal, March 16, p. 802, we announced the chairmen of the various committees responsible for the arrangements at Atlantic City. The chairman of the Local Committee on Arrangements is Dr. W. P. Conaway, 1723 Pacific Avenue, Atlantic City, and the chairman of the Subcommittee on Hotels is Dr. W. E. Darnall, 1704 Pacific Avenue, Atlantic City. The latter will be glad to aid any who wish assistance in selecting their hotel accommodations. A list of the hotel headquarters was given in The Journal, March 16, p. 802. Those who have special preferences regarding hotel accommodations would do well to secure them early before choice is limited.

A fire in Atlantic City last week destroyed the major portion of Young's Old Pier on which, among other buildings, was the one to house the Bureau of Registration, the Commercial Exhibit, the Scientific Exhibit, etc. A portion of this building, however, was saved. Telegraphic advice gives assurance that the damage done by the fire will not interfere with the coming session of the Association.

## Marriages

Albert John Molzahn, M.D., Hay Springs, Neb., to Miss Sadie Sellers Hardy of Washington, D. C., at Hay Springs, March 4.

James Harold Howard, M.D., York, Pa., to Miss Nettie B. Idlet of Tompkinsville, Staten Island, N. Y., March 21.

John William Ovitz, M.D., Genoa, Ill., to Miss Urania Rogers of Sycamore, Ill., March 28.

James T. Johnson, M.D., to Mrs. Maggie Hooper, both of Nashville, Tenn., March 21.

William S. Bagot, M.D., Denver, to Miss A. K. Wood of San Francisco, March 20.

Ira Richardson, M.D., to Miss Nina Phillips, both of Fremont, Neb., March 20.

Dale C. Ray, M.D., to Miss Mattie Lewis, both of Malad City, Ida., March 21.

## Deaths

**Gustave C. E. Weber, M.D.** St. Louis Medical College, 1851; for fifty-five years a practitioner of Cleveland, O., professor of surgery in Cleveland Medical College from 1856 to 1861; surgeon-general of Ohio until 1863 and later surgeon of the One Hundred and Twenty-Ninth Ohio Volunteer Infantry during the Civil War; one of the organizers of the Charity Hospital Medical College in 1864 and professor of clinical surgery and dean of the faculty; later a member of the faculty of the University of Wooster; dean of the Western Reserve University Medical Department from 1880 to 1897, when he was appointed consul to Nuremberg, Germany; died at his home in Willoughby, O., March 21, from senile debility, aged 81. The active pallbearers at Dr. Weber's funeral were surgeons of Cleveland.

**Mary Lois Jones, M.D.** Woman's Medical College of Baltimore, 1901; a member of the American Medical Association and secretary of the Woman's Medical Association of Pittsburgh, Pa., and of the Woman's Medical Society of Western Pennsylvania; a member of the staff of the Pittsburgh Free Dispensary and the Dispensary and Clinic for Diseases of Women and Children; died in St. Francis Hospital, Pittsburgh, March 17, aged 35. At a special meeting of the Woman's Medical Association of Pittsburgh, March 18, resolutions of sorrow and sympathy regarding the death of Dr. Jones were unanimously adopted.

**Fred L. Morgan, M.D.** Syracuse (N. Y.) University, 1896; formerly city physician and police surgeon of Syracuse and from 1898 to 1904 demonstrator in his alma mater; who was obliged to move to Colorado in 1904 on account of his health; died at his home in Colorado Springs, March 19, from pneumonia, aged 37.

**Thomas Stone Lewis, M.D.** University of Louisville, Ky., 1898; first intern of the Good Samaritan Hospital, Lexington, Ky.; a member of the American Medical Association; in 1905 and 1906 bacteriologist at the Eastern Kentucky Hospital for the Insane, Lexington; physician to the Orphan Asylum and House of Mercy, Lexington, from 1900 to 1903; surgeon Kentucky State Guard from 1902 to 1904; died at his home in Lexington, March 24, from acute atrophic cirrhosis of the liver, aged 48. The Fayette County Medical Society held a special meeting, March 25, to take action on the death of Dr. Lewis.

**Loran Lester Palmer, M.D.** Bellevue Hospital Medical College, 1866; McGill University, Montreal, 1867; aurist to the Western Hospital and aurist and laryngologist to Grace Hospital, Toronto; for fourteen years surgeon-major of the Queen's Own Rifles of Canada; a member of the Ophthalmological Society of Great Britain; who retired from practice in Toronto in 1906; died at his home in Grimsby, Ont., March 14, from cerebral hemorrhage, aged 65.

**Josiah Lockhart Campbell, M.D.** Winchester (Va.) Medical College, 185—; a Confederate veteran and at one time division surgeon in that service; representative in the legislature from Shenandoah County, Va., after the close of the war; for nearly fifty years a practitioner of Woodstock, Va., and later a resident of Nowata, Okla.; died at the home of his daughter in that city, February 12, from disease of the bladder, aged 77.

**George Morton Coon, M.D.** Rush Medical College, 1883; a member of the American Medical Association; clinical instructor in genito-urinary diseases in the University of Minnesota, and surgeon in the National Guard in the state; dermatologist to the City and County Hospital, St. Paul, and once deputy coroner of Ramsey County; died at his home in St. Paul, March 20, from cerebral hemorrhage, aged 51.

**John Henry Neff, M.D.** University of Virginia, Charlottesville, 1870; New York University, New York City, 1871; a member of the Virginia Examining Board from 1884 to 1890 and appointed a member of the Virginia State Board of Health in 1896; for many years a practitioner of Harrisonburg; died at his home in University, Va., March 18, from cerebral hemorrhage, aged 68.

**Joseph C. Gifford, M.D.** Rush Medical College, 1870; a veteran of the Civil War; a member of the Indiana State Medical Association and one of the oldest practitioners of Brazil; secretary of the board of health for two years, and for fourteen years a member of the city council; died at his winter home at Indian Beach, Sarasota, Fla., March 21, from uremia, aged 69.

**Frank Linsley Ives, M.D.** College of Physicians and Surgeons, New York City, 1871; a member of the Medical Society of the State of New York and a specialist on diseases of the throat of New York City; for many years a member of the visiting staff at the New York Eye and Ear Infirmary; died at his home in New York City, March 22, aged 63.

**John Reese Owen, M.D.** University of Louisville, Ky., 1872; for many years a member of the American Medical Association; a member of the Kentucky State Medical Association; a Confederate veteran; local surgeon of the Illinois Central Railroad at Arlington, Ky.; died at the home of his son in that place, March 6, from heart disease, aged 72.

**Leroy G. Boyd, M.D.** Louisville (Ky.) Medical College, 1900; a member of the Indiana State Medical Association; for several years a practitioner of Tunnelton, Ind.; who was operated on for the relief of cholecystitis in February at the Jewish Hospital in Louisville; died at his home in Bedford, March 20, from postoperative dilatation of the stomach, aged 37.

**William J. Bunch, M.D.** University of Tennessee, Nashville, 1884; formerly president of the Lee County (Ark.) Medical Society and a practitioner of La Grange and local surgeon of the St. Louis, Iron Mountain and Southern Railroad; for several years in practice at Hot Springs, Ark.; died at his rooms in that place, March 17, aged 50.

**Robert Penniel Boucher, M.D.** Victoria College, Coburg, Ont., 1869; Bellevue Hospital Medical College, 1870; a member of the Provincial Board of Health of Ontario; a member of the Peterboro Board of Education and past president of the Peterboro Club and of the Peterboro Medical Association; died at his home, March 17, aged 64.

**Walter Henry Vilas, M.D.** Rush Medical College, 1899; city physician and a member of the board of education of El Paso, Texas, for several years and also physician of El Paso County; visiting physician to the Hotel Dieu; who had been living in California for four years past; died at his home in Taft, March 12, aged 34.

**Albert Plummer, M.D.** Medical School of Maine, Brunswick, 1867; formerly of Hamilton and Racine, Minn.; assistant surgeon of the Tenth New Hampshire Infantry during the Civil War; a member of the Minnesota legislature in 1882 and 1883; died at his home in Rochester, Minn., March 20, aged 71.

**John W. Crismond, M.D.** Cincinnati Physio-Medical College, 1873; of Anderson, Ind.; a member of the Indiana State Medical Association and Mississippi Valley Medical Association; a veteran of the Civil War; died in St. John's Hospital, Anderson, February 24, from cerebral hemorrhage, aged 65.

**William T. Graves** (license, Ky., twenty-eight years of practice, 1894); a member of the Kentucky State Medical Association and formerly president of the Carlisle County Medical Society; a practitioner for forty years; died at his home near Bardwell, March 19, from uremia, aged 63.

**Adelbert Wesley Martin, M.D.** University of Michigan, Ann Arbor, 1901; a member of the American Medical Association; of Howard City, Mich.; and proprietor of a hospital in that place; died March 19, from cerebral hemorrhage, while making a professional call near Howard City, aged 38.

**Levin W. Brown, M.D.** New York Homeopathic Medical College, New York City, 1865; Willamette University, Salem, Ore., 1876; a member of the Oregon State Medical Association and a pioneer practitioner of Eugene; died suddenly in that city, March 14, from heart disease, aged 67.

**Caleb Columbus Conway, M.D.** College of Physicians and Surgeons, Baltimore, 1886; formerly a clergyman of the Methodist Episcopal Church, and for about twenty years a resident and school director of Whiteley, Pa.; died at his home in Garard Fort, March 16, aged 64.

**Nelson Edwards Metcalfe, M.D.** Barnes Medical College, St. Louis, 1902; a member of the Missouri State Medical Association; and president of the Maplewood Physicians' Club; died at his home in Maplewood, near St. Louis, March 23, from nephritis, aged 57.

**Jonathan Erskine Lamb, M.D.** Rush Medical College, 1881; for thirty years a resident and for three years secretary of the board of education of Wahoo, Neb.; for three years coroner of Saunders County; died at his home, March 14, from heart disease, aged 69.

**John R. Young, M.D.** Hahnemann Medical College, Chicago, 1872; once president of the Central New York Medico-Chirurgical Society; a veteran of the Civil War; died at his home in Liverpool, N. Y., March 15, from cerebral hemorrhage, aged 70.

**Meredith Walton Henry, M.D.** Eclectic Medical Institute, Cincinnati, 1857; for thirty-six years a practitioner of Waelder, Texas; a veteran of the Civil War; died at the home of his nephew in Waelder, March 12, from senile debility, aged 81.

**William Thomas McNary, M.D.** Hospital College of Medicine, Louisville, 1889; a member of the American Medical Association; formerly a practitioner of Madisonville, Ky.; died at his home in San Jose, Cal., March 25, aged 63.

**James Taylor White, M.D.** University of California, San Francisco, 1888; Jefferson Medical College, 1890; for several years surgeon in the United States Revenue Cutter Service; died at his home in Oakland, Cal., March 19, aged 45.

**Alonzo D. Hill, M.D.** Miami Medical College, Cincinnati, 1866; assistant surgeon in the Confederate service throughout the Civil War, and since that time a practitioner of Dexter, Mo.; died suddenly at his home, March 24, aged 75.

**J. E. Stone, M.D.** Missouri Medical College, St. Louis, 1853; a Confederate veteran; for more than twenty years a member of the city council of Forrest City, Ark., and twice mayor; died at his home in Forrest City, March 15, aged 73.

**John R. Walter, M.D.** University of Louisville, Ky., 1876; of Little Rock, Ark.; formerly coroner of Pulaski County, who was operated on a year ago for appendicitis; died in St. Vincent's Infirmary, Little Rock, March 19; aged 60;

**Charles Clyde Rayburn, M.D.** University of Pennsylvania, Philadelphia, 1901; formerly of Kewanee, Ill.; a veteran of the Spanish-American War; died at his home in Colorado Springs, Colo., March 19, from tuberculosis, aged 39.

**Frank Hall Murdock, M.D.** University of Michigan, Ann Arbor, 1873; a member of the American Medical Association; formerly a practitioner of Bradford, Pa.; died in his apartment in the Hotel Schenley, Pittsburgh, March 24.

**Tabor R. Washburn, M.D.** Keokuk Medical College, College of Physicians and Surgeons, 1901; a member of the American Medical Association; of Donnellson, Iowa; died at his home, March 21, from cerebral hemorrhage, aged 42

**Patrick Henry McMahon, M.D.** University of Vermont, Burlington, 1894; a member of the American Medical Association and Burlington and Chittenden County Clinical Society, died at his home in Burlington, Dec. 14, 1911, from angina pectoris, aged 58.

**Jonathan B. Clark, M.D.** University of Pennsylvania, Philadelphia, 1860; a member of the Indiana State Medical Association, and a pioneer physician of Wayne County, Ind.; died at his home in Economy, March 21, aged 75.

**Frank M. Cummins, M.D.** New York Homeopathic Medical College, New York City, 1888; of Warwick, N. Y.; died recently in Hahnemann Hospital, New York, after an operation for the removal of gall-stones, aged 50.

**James Sylvester Munger, M.D.** Philadelphia University of Medicine and Surgery, 1868; College of Physicians and Surgeons, Toronto, 1869; of Rodney, Ont.; died at his home, March 13, from senile debility, aged 81.

**John Harry Trout, M.D.** University of Pennsylvania, Philadelphia, 1887; a druggist and vice-president of the Sunset Drug Company, Los Angeles, for many years; died at his home in that city, March 20, aged 51.

**John B. Menzies, M.D.** McGill University, Montreal, 1898; of Lachute, Que.; while responding to a professional call at Harmington, March 19, was caught in a heavy blizzard and died from cold and exhaustion.

**Frederic Alexander Campbell, M.D.** College of Physicians and Surgeons, Chicago, 1902; of Grangeville, Ida.; died March 18, in a hospital at Monrovia, Cal., from septicemia, due to an operation wound, aged 33.

**William J. Riggs**, Western Reserve University, Cleveland, 1864; for nearly forty years a practitioner of Pittsburgh; died at his home in East End, Pittsburgh, January 14, from lobar pneumonia, aged 71.

**John Nicolai, M.D.** Northwestern University Medical School, 1861; for many years a clergyman of the Evangelical Church; died at his home in Sebewaing, Mich., March 24, from senile debility, aged 94.

**James Richardson Phelps** (license, Mass., years of practice); for twenty-five years a practitioner of Dorchester, Boston; died at his home, March 16, from pneumonia, aged 74.

**A. English Willis, M.D.** Louisville (Ky.) Medical College, 1894; a practitioner of Apalachicola, Fla., for fifteen years; died at his home in Greenwood, Fla., February 27, aged 43.

**George Blazier Dickson, M.D.** Jefferson Medical College, 1911; intern in the South Side Hospital, Pittsburgh; died at the home of his parents in Edgewood, March 18, aged 22.

**Benjamin Gough, M.D.** Medical College of Virginia, Richmond, 1865; of Baltimore; a Confederate veteran; died at the Confederate Soldiers' Home in that city, March 13.

**Frederick Castalucci, M.D.** University of Colorado, Boulder, 1909; of Denver; died at the home of his parents in Roseto, Pa., March 9, from tuberculosis, aged 26.

**Thomas O'Brien, M.D.** Western Reserve University, Cleveland, 1884; of Cleveland; died in St. Alexis' Hospital in that city, March 15, from uremia, aged 60.

**J. S. Wiley, M.D.** Jefferson Medical College, 1865; formerly of Madisonville, Tex.; died at the home of his daughter in Eldorado, Okla., March 11, aged 63.

**Charles Ethan Allen Hazen** (license, Vermont); a practitioner for thirty-two years; died at his home in Chester Depot, Vt., January 6, aged 61.

**Theodore Frantz, M.D.** Louisville (Ky.) Medical College, 1891; died at his home in Louisville, March 13, from nervous breakdown, aged 47.

**William H. Geddy, M.D.** University of Wooster, Cleveland, 1885; died at his home in Nokomis, Ill., March 18, from senile debility, aged 87.

**Lewis J. Davis, M.D.** Medical College of Ohio, Cincinnati, 1880; died at his home in Chicago, March 23, from heart disease, aged 73.

**Herbert F. Praasch, M.D.** Rush Medical College, 1902; died at his home in Chicago, January 31, from intestinal obstruction, aged 33.

**Elkanah D. Williams, M.D.** Memphis (Tenn.) Medical College, 1894; died at his home in Nacogdoches, Tex., March 15, aged 46.

**Benjamin Drew De Kalb, M.D.** Jefferson Medical College, 1865; died at his home in De Kalb, Ia., March 20, aged 70.

**Finis M. Perkins, M.D.** Jefferson Medical College, 1866; died at his home in Elkton, Ky., March 19, aged 69.

# The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

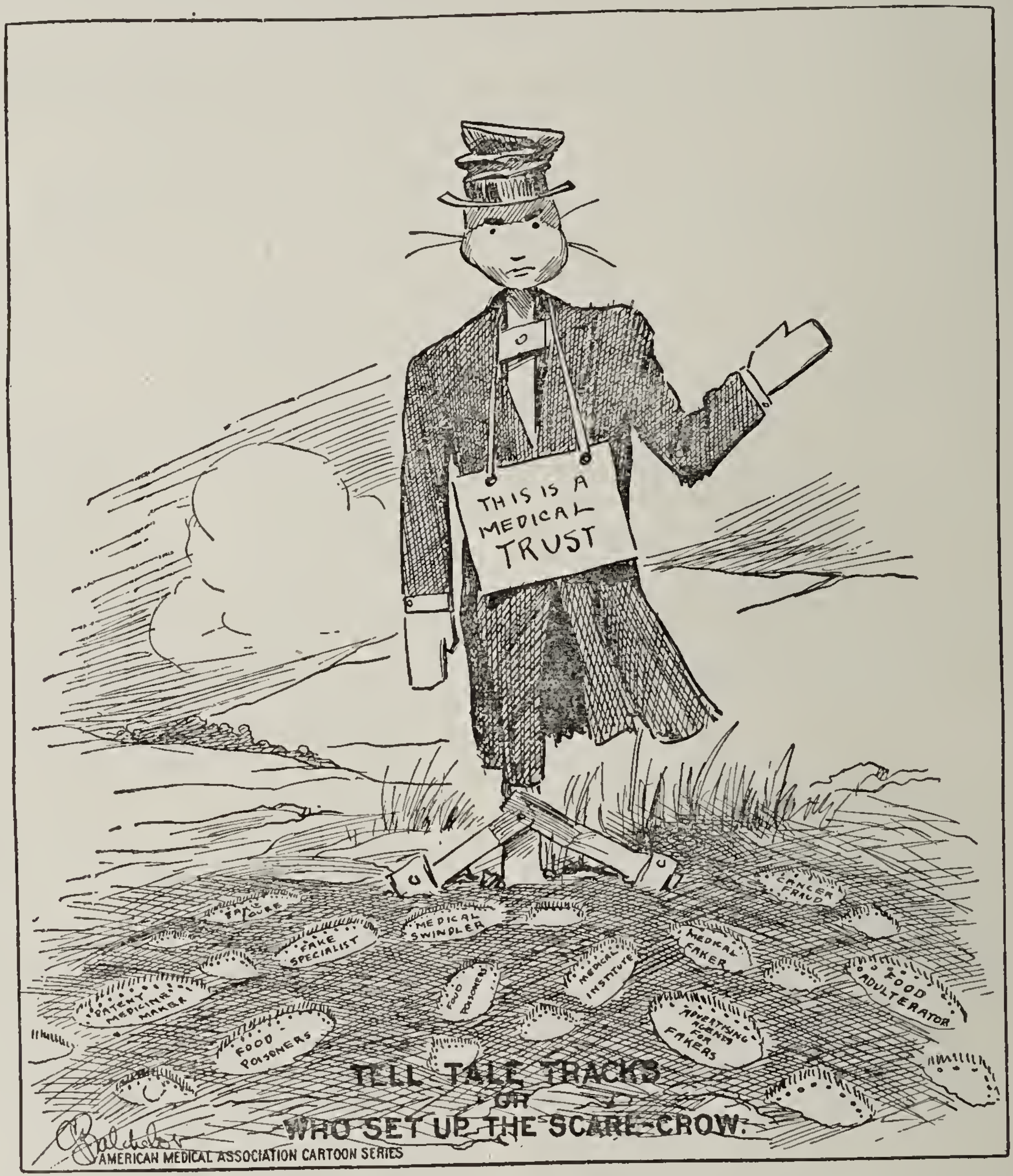
## ZYMOTOID

### A Fraud of the Liquozone-Oxytonic-Septicide Type

Dr. Arnold's Zymotoid, a nostrum manufactured by Arnold's Zymotoid Company, Rockford, Ill., is claimed to be an "antiseptic, germicide and antiphlogistic" which "has absolutely no peer in medicine." According to the statements of the manufacturer, Zymotoid is "successfully employed not only as an external dressing on all wounded and diseased surfaces, but in all zymotic conditions wherein a reliable antiseptic and germicide is needed internally." And in telling physicians of the great value of Zymotoid the company says:

> "We assured them that if they would simply place Zymotoid 'next' to any wounded surface — and nothing else—they would have no inflammation, no suppuration, no infection or blood poison. Its prompt use in all cases where such trouble arises gives immediate and certain relief."

This is a large contract to be undertaken by Zymotoid — or any other preparation — which, as will be shown, consists principally of boric acid and water. The company also appends to its announcement concerning Zymotoid a number of the usual testimonials and a lot of alleged "case reports."



Zymotoid seems to be exploited principally by circulars addressed to physicians and by agents who attempt to sell it to physicians. They also try to work factories and other large employers of labor. In their circular to physicians they claim that "Zymotoid is strictly ethical." And "we publish its composition." The composition given is: "sulphur, niter, cinnamon and boric acid in gaseous solution." It is also claimed to be "a chemical compound—not a mixture—which is wholly non-toxic and can be used as freely as desired internally absolutely without harm to the smallest child." On the label of the Zymotoid package is the following:

> "Zymotoid is a concentrated chemical compound consisting of the solids and gases of sulphur, potassium nitrate, cinnamon and carbon held in a solution of boric acid."

A specimen of Zymotoid was examined by our chemists and their report follows. As will be seen, it is simply another fraud of the Liquozone-Oxytonic-Septicide type.

#### LABORATORY REPORT ON ZYMOTOID

Zymotoid is a pale yellow liquid having a strong odor like sulphur dioxid. No odor suggestive of cinnamon was observed even after the sulphur dioxid had been fixed by the addition of an alkali. Qualitative tests indicated the presence of boric acid, sulphuric acid, sulphur dioxid and traces each, of a nitrate, potassium and some unidentified organic matter. Alkaloids, cinnamic acid, glycerin and soaps were absent. From the results of the quantitative examination it is concluded that the composition of Zymotoid is essentially as follows:[1]

| | |
|---|---|
| Boric acid ($H_3BO_3$) | 0.637 gm. |
| Sulphur dioxid ($SO_2$) | 0.129 gm. |
| Sulphuric acid ($H_2SO_4$) | 0.048 gm. |
| Potassium nitrate | trace |
| Unidentified organic matter | trace |
| Water (by difference) to make | 100 c.c. |

The analysis shows that but for the presence of boric acid the composition of Zymotoid is similar to other fraudulent "microbe killers" which have been exploited in recent years and of which some have been declared misbranded by the federal government. For example, "Radam's Microbe Killer"[2] was found by the federal chemists to be composed of water, containing small quantities of sulphur dioxid and sulphuric acid. "Liquozone," another nostrum which was widely exploited a few years ago, is said to have a similar composition.[3] According to an analysis made at the North Dakota Agricultural Experiment Station,[4] "Oxytonic" has a similar composition. The nostrum, "Septicide," was found by the federal chemists to be composed of water with small quantities of sulphur dioxid, sulphuric acid and a trace of a nitrate.

## THE NATIONAL FORMULARY

### Pharmaceutically Useful But Not a Therapeutic Necessity

"The National Formulary," says the *Journal of the Missouri State Medical Association*, "was conceived when it was not uncommon for a physician to combine a half dozen fluidextracts in one prescription, when the druggist carried twenty-five or more different kinds of quinin, iron and strychnin pills, and when it was considered the proper thing to prescribe salts such as potassium bromid in the form of sickening sweet-salty, hair-oil flavored, brilliantly colored elixirs. There were no standard formulas for these fluidextracts, pills and elixirs; therefore each pharmacist was obliged to use his judgment in their preparation. As it was likely that one pharmacist might flavor his elixir with a combination of cloves and cinnamon and color it yellow, and another flavor it with orange peel and coriander and color it red; and as the same patient might get his prescription filled alternately at these two stores, we may imagine to what annoyances the pharmacist was subjected. In this dilemma the National Formulary was devised. As a result all pharmacists to-day use the same alcoholic menstruum in making their fluidextracts of fleabane, pipsissewa and other indifferent drugs which a few physicians still use occasionally; they make their pills of a certain size and with a certain coating; they impart the same color and flavor to the potassium bromid elixir used by certain physicians who forget their teachers' advice and still prescribe the drug in the form of this nasty mixture. The National Formulary may therefore be designated as pharmaceutically useful.

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[1] The details of the analysis will appear in the annual reports of the Chemical Laboratory.

[2] The Journal A. M. A., July 16, 1910, p. 235.

[3] The Journal A. M. A., March 28, 1908, p. 1065.

[4] The Journal A. M. A., Jan. 1, 1910, p. 63.

"We hold, however, that the book is not a therapeutic necessity. The physician who can get along without it is to be congratulated. The many complex formulas contained in it are a credit neither to the pharmacists who devised them nor to the physicians who prescribe them. In these days of scientific thought, when physicians want to know the effect produced by each drug given and hence abstain from prescribing the old, hopeless confusions formerly in vogue, there is little need for the most of the ready-made things in the book.

"When we learned some time ago that the book was in process of revision, we were anxious to learn whether the new edition promised to be more acceptable to physicians. While a report[1] giving the scope of the next edition indicates that some of the worst combinations have been dropped, we find among the new admissions, preparations of the following drugs whose only value appears to lie in the confusion which they create in the minds of physicians when they are constituents of shot-gun proprietaries: baptisia, chionanthus, condurango, cocilliana, dioscorea, drosera, echinacea, euphorbia pilulifera, helonias, cataria (catnip), senecio (fleabane), trifolium, cactus grandiflorus and passiflora. The list of additions also contains the following complex, unscientific and superfluous preparations: elixir formates; elixir formates compound; elixir glycerophosphates compound; elixir sodium salicylate compound; elixir of three bromids and solution of the bromids of gold, arsenic and mercury.

"Furthermore, there are a number of formulas that are evident imitations of notorious nostrums which the 'National Formulary propaganda pharmacist' will no doubt attempt to persuade physicians to prescribe.

"Finally we note that, although liquid preparations of pepsin and pancreatin are acknowledged to be pharmaceutical impossibilities, and in spite of a specific appeal from the Council on Pharmacy and Chemistry of the American Pharmaceutical Association to omit elixir digestivum compositum, the worthless imitation of a popular humbug, from the next edition, it apparently has been decided to retain this preparation.

"Thus, we are forced to conclude that the National Formulary, though pharmaceutically useful, is not a thereupetic necessity—in fact, therapeutics would be better off without it."

## Enemose for Rectal Feeding

Referring to our editorial of Dec. 9, 1911, on "The Requirements of Rectal Feeding," Messrs. Fairchild Brothers & Foster say in a recent communication: "You say 'Our manufacturers could wisely direct their energies toward the production and investigation of a series of food products which will meet the requirements briefly outlined above'; this we have been doing for some years. Why not give us a chance?"

We are very glad to note the readiness of this firm to meet the needs of the medical profession and especially the assiduity and success with which it has cultivated the field of the digestive ferments. In enemose, which has now been accepted by the Council on Pharmacy and Chemistry (N. N. R., 1912, p. 137) the firm has prepared a mixture of protein derivatives and carbohydrates which essentially corresponds to the need expressed in the editorial quoted. It remains to attack the problem of a supply of fats which may be regarded as essential to the long continuance of colonic alimentation.

# Correspondence

## Error Alleged in Cancer Statistics

*To the Editor:*—It seems most unfortunate, at a time when most improvement in our success in the treatment of cancer must depend on the education and cooperation of both the profession and the laity, for an author to express such opinions as some of those in the article on "Elements of Error in Statistics of Breast Amputation for Cancer," by W. S. Thorne of San Francisco (The Journal, Feb. 17, 1912, p. 459). The whole attitude of the article is objectionable in undermining confidence in well-established statistical facts. The points made by the author seem to have little or no support in his article.

1. "A certain percentage of tumors (clinically) diagnosed as malignant disappear spontaneously." The cases cited in proof of this would merely show that errors in the clinical diagnosis of breast tumors are often made, which needs no argument.

The second point is pure assumption that such tumors when removed are classified as malignant. I know of no statistical study of the results in operation for breast cancer that are not based on microscopic diagnoses.

3. "The accepted percentage of breast tumors classified as malignant is too high." This is a mere assertion, contradicted by the later acceptance of the statement that 85 per cent. of breast tumors are actually malignant and the remaining 15 per cent. are liable to take on malignancy.

How can any operating surgeon publish the statement "that only 10 to 20 per cent. of 40 per cent. recoveries after radical breast operations are free from recurrence after three years"? If only 40 per cent. of our patients survived a radical breast operation and only 4 to 8 per cent. remained well after three years, the cause of the surgery of malignancy would certainly be forlorn. The mortality of the Meyer and other allied operations is practically nil, there being only an occasional accidental death and the non-recurrence rate after three years ranges, according to the microscopic type of cancer, from 25 in scirrhus to 60 per cent. in adenocarcinoma.

The author's quotations from the article of Dr. Gibson contain a rational summary of the accepted opinions of the present, but after adopting this, the article proceeds to dissent diffusely. Just what the author means by the following is not clear:

"I wish to emphasize my position as to the radical operation in carcinoma. It is mandatory without exception, but disfiguring operations are to be avoided unless unequivocally necessary."

All radical breast operations unite in removing the whole breast, its overlying skin, the pectoral muscles and axillary contents best in one mass without section, and it is difficult to see how one can be more disfiguring than another. The most common operative error is in not removing enough tissue in the attempt to obtain better cosmetic results. All surgery against malignancy must first remove the tumor with a large enough surrounding field to insure against local recurrence, and only after this is accomplished can cosmetics be considered.

The author makes some disparaging statement as to microscopic diagnosis, but his only citation as to facts observed is a microscopic diagnosis of giant-celled sarcoma in a tumor which after removal confirmed the diagnosis by non-recurrence.

It seems to me that the only reasonable position to take in this matter is, as quoted from Dr. Gibson, that 85 per cent. of all breast tumors in women of over 35 are or will be malignant, and hence all breast tumors at such ages should be removed at once and radical operation done in all showing microscopic malignancy.

The clinical diagnosis of malignancy is unnecessary and often impossible, the mere presence of a tumor being the indication for operation. The great majority of malignant tumors can be cured by a sufficiently early operation, but when a clinical diagnosis of malignancy can be made, the prognosis becomes greatly worse, so our hope for better things in this line of work depends on the early reference of all breast tumors to the surgeon who is equipped for microscopic diagnosis during the operation. To secure this desired result the laity must be educated and the general profession must accept and act on the dicta that early operation is the first indication, and that such early operation must be radical, as the first operator generally seals the fate of the cancer victim.

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[1] Pharm. Era, October, 1911, p. 437.

J. Clark Stewart, M.D., Minneapolis.

### The Army Canteen

*To the Editor:* The letter of Dr. A. S. Condon in The Journal, March 9, furnishes a striking illustration of a common misapprehension of the act of Congress (1901) abolishing the sale of beer in the army canteen. Dr. Condon describes the "canteen" as the soldiers' club where "the boys" met to play cards or billiards or "took a turn in the gymnasium" or read in the library or wrote letters home.

The "soldiers' club" part of the canteen *has never been abolished by the act of Congress.* Congress has voted appropriations amounting to $2,000,000 or more for increasing the attractions and recreations of the soldiers' clubs. Thousands of dollars of this appropriation have been spent in fitting up gymnasiums and providing outfits for bowling, billiards and other recreations. All that Congress abolished was the sale of beer and wine in the canteen.

According to the previous army regulations permitting the sale of wine and beer, that sale was to be conducted in a separate room, used for no other purpose. That room—the bar room—was the only one closed by the act of Congress.

And yet Dr. Condon says that one day an order came from Washington to suspend the canteen, store the billiard tables and other impedimenta away and vacate the *rooms.*

Any order of that kind was wholly without warrant in the act of Congress abolishing the sale of beer; nor was it necessitated at any well-managed post exchange by lack of funds consequent on stopping the sale of beer, for there were profits from other articles.

Major Reynolds of the Department of Dakota, for instance, said (Report of the War Dept. 1902-3) the year after the sale of beer was abolished: "The exchanges are fulfilling their purpose and making money."

The report of the inspector-general of the Army for 1903—two years after the abolition of the sale of beer—gave the following clear picture of the business side of the post exchange, showing that it was not abolished when the sale of beer was stopped. He says: "The exchange is a growing institution of post life. It is not only the soldier's club, but it is the medium through which all the necessities of family life for the soldiers and their families are obtained. A properly supervised exchange furnishes at low cost all kinds of fabrics for wear as well as notions and in later years it has extended to the furnishing of vegetables, fruits, butter, milk and eggs. There is one exchange on the Pacific coast that furnishes a fine tailoring establishment for the benefit of the officers and men."

The report of the financial condition of the post exchanges for the year ending June 30 1902, gave the receipts of the exchanges for that year as $1,124,542.50, which also shows that they continued to do a large volume of business after the sale of beer was discontinued.

Dr. Condon's account of the way the order to close the canteen was construed is another evidence that the term "canteen" has been used and understood by army officials in two different senses. And there appears to have been a cause for such misunderstanding in the different constructions given the term in the official reports of the War Department.

Thus in the report for 1899, page 275 (House Document, Vol. 2, No. 2) is the following description of the "canteen." "The army canteen, officially known as the post exchange, had its origin in our service at Vancouver Barracks in 1880, but it was not until February, 1889, that the institution was recognized by the War Department and rules and regulations for its establishment and government were published to the Army. The purpose of the canteen as officially announced is to supply troops with goods at a low rate of profit and to afford recreation and amusement to all enlisted men."

This takes the word "canteen' in the broad sense of soldier's club. But the adjutant-general, the same year, uses in his report the wording of the army regulation establishing the post exchange, in which the word "canteen" is applied only to the room in which beer and light wines are sold. Other "features" of the exchange named in this regulation are (a) a well-stocked general store, (b) a well-kept lunch counter, (c) reading and recreation rooms supplied with books, periodicals, billiard and pool tables, bowling alley, etc.

Further evidence of the different senses in which the word was understood appears in the opinions collated by the then adjutant-general from army officers concerning the working of the "canteen" feature of the post exchange, and the probable effect of its abolition. These opinions have been widely quoted as showing that a preponderating number of the officers were in favor of the sale of beer. That many of them understood the adjutant-general's question about the "canteen feature" to mean the whole post exchange is evident from replies like the following:

"The canteen is the enlisted man's club, a pleasant and popular resort."

"The merchants of the neighboring town would have unlimited extortion on sales of many articles now procured through the exchange, if that cooperative store were closed there."

And even the superintendent of the West Point Military Academy at that time took the word canteen in its broad sense, for he says:

"To abolish the post exchange will be to bring back to the Army many of the evils from which for years past it has been free."

It is more than probable therefore, in fact Dr. Condon's letter may be taken as evidence in one case at least, that the order to close the "canteen" has been erroneously taken, no one knows how often, to mean to close the whole exchange, recreation rooms and all. It is no wonder the soldiers resented such a measure and that well intentioned officers opposed it. It is clear also that even to-day Dr. Condon and others are still laboring under this misapprehension. That it may speedily be corrected it is necessary to keep reiterating:

*The soldier's club has never been abolished by act of Congress. All that Congress ordered closed was one feature of the soldier's club—the beer or wine bar.*

Henry O. Marcy, Boston,
Late Surgeon and Medical Director, U.S.A.

### Crutcher Not in League for Medical Frauds

*To the Editor:*—Please state in your columns that I have never had any connection, direct or indirect, with the National League for Medical Frauds, or with any association with an allied name or purpose.

Howard Crutcher, Roswell, N. Mex.

## Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### THYMOL AND HOOKWORM DISEASE IN NURSING MOTHERS

*To the Editor:*—Is there any contra-indication to the administration of thymol to a nursing mother for the treatment of hookworm disease? I have two severe cases, in one of which the mother nurses a child 1 month old, the other patient nursing one 15 months old. The latter child is just recovering from bronchopneumonia.

Thomas J. Tuder, Keokee, Va.

Answer.—We are unable to find any statements with regard to the administration of thymol to nursing women. As the remedy, however, when given for hookworm disease, is not calculated to be absorbed, it is probable that no harm to the infant would result, since few remedies are excreted in the milk. Thymol is regarded as contra-indicated in pregnancy. In the case of a nursing mother it would be prudent to remove the child from the breast during the treatment and until the thymol has been evacuated. In the administration of thymol, oils, such as castor oil and alcoholics in any form, should be scrupulously avoided. Not much water should be drunk and the thymol should be expelled from the intestine by a saline purge in from two or three hours after its administration, because when it has had time to pass the small intestine, it is no longer of service for the destruction of the worms and the danger of poisoning increases with its length of stay in the intestine.

### LIQUID COURT-PLASTER

*To the Editor:*—I wish to know how the advertised preparations "Liquid Court-Plaster" and "New Skin" may be made. They seem much like flexible collodion but are not so contractile C. L. H.

ANSWER.—Martindale and Westcott (*Extra Pharm.* Ed. 14, p. 282) state that a solution of pyroxylin in acetone is called "Filmogen" and that "New Skin" is a somewhat similar preparation, but we are unable to give exact formulas. According to the *Druggists Circular*, if soluble gun cotton is dissolved in acetone in the proportion of about 1 dram by weight of the former to 35 or 40 drams by volume of the latter, and ½ dram each of castor oil and glycerin be added, a colorless, elastic and flexible film will form on the skin when the liquid is applied. Unlike ordinary collodion, this preparation does not readily peel off. If tinted very slightly with alkanet and saffron it can be made to assume the color of the skin, so that when applied it is almost invisible.

The following is given as a working formula:

| | |
|---|---|
| Pyroxylin | 1 ounce |
| Amyl acetate | 5 ounces |
| Acetone | 15 ounces |
| Balsam of fir | 2 drams |
| Castor oil | 2 drams |
| Oil of cloves | 15 minims |

Dissolve the pyroxylin in the amyl acetate and the acetone, and add the other ingredients, avoiding fire or light.

### THE USE OF AUTOGENOUS VACCINES IN SUPPURATION

*To the Editor:*—Please give me the results obtained from autogenous vaccines. The case I have in mind was a case of appendicitis; operation performed seven weeks ago, with drainage. The wound still drains freely, there being little or no odor to the discharge. A smear examined last week showed no tubercle bacilli; there were Gram-positive diplococci that corresponded to pneumococci, a few pus cocci and many pus-cells; no red blood-cells. What can I expect of vaccines in this case?

R. P. GRIMM, M.D., Glasford, Ill.

ANSWER.—The results obtained from the use of autogenous vaccines in many conditions are very good. In the case mentioned, however, it is more than likely that some foreign substance is present which keeps up the suppuration. In cases of prolonged suppuration of this kind it is very common to find a small fecal concretion, which has escaped from the perforated appendix into the abscess cavity, or a particle of fecal matter or a piece of silk, if silk was used to sew or ligate with, or a piece of chromic catgut or a small thread from the gauze packing, etc. In the absence of foreign matter of any kind and of an infection such as tuberculosis, actinomycosis or carcinoma, the discharge will almost certainly cease and the wound heal without the use of vaccines.

### HAMLIN'S WIZARD OIL

*To the Editor:*—Can you give me any information regarding Hamlin's Wizard Oil, its composition and its therapeutic value, if it has any? S. M. LONG, M.D., Fresno, Cal.

ANSWER.—We know of no analysis of Hamlin's Wizard Oil, but several alleged formulas for this nostrum have been published. They agree in all minor details. The following from Hiss' "Thesaurus of Proprietary Preparations" is an example:

| | |
|---|---|
| Spirit of camphor | 1 fluidounce. |
| Spirit of ammonia | 4 fluidrams. |
| Chloroform | 4 fluidrams. |
| Oil of sassafras | 4 fluidrams. |
| Oil of cloves | 2 fluidrams. |
| Oil of turpentine | 4 fluidrams. |
| Alcohol, enough to make | 5 fluidounces. |

The probability is that the formula changes from time to time. A thousand variations in the combination of camphor, ammonia, chloroform, oil of turpentine and alcohol can be made—including addition, subtraction and multiplication—and liniments will result; and liniments belong to the past.

## *The Public Service*

### Medical Department, U. S. Army

Changes during the week ended March 30, 1912.

Brooks, William H., major, granted six months' leave of absence on surgeon's certificate of disability.

Stone, Frank P., dental surgeon, reports arrival at Fort Caswell, N. C., for temporary duty.

Dear, William R., lieut., granted twenty days' leave of absence.

Brown, Ira C., M.R.C., relieved from duty at Fort Lawton, Wash., and ordered to Schofield Barracks, Hawaii, for duty.

Van Poole, G. McD., major, granted two months' leave of absence.

Macy, Frederick S., captain, granted three months' leave.

Slater, Ernest F., M.R.C., ordered to return from this city to his proper station, Fort St. Philip, La.

Johnstone, James F., lieut., is detailed for duty with troop B, 1st cavalry, en route to and at the Soquoia National Park, Ga.

Peterson, James J., M.R.C., resignation accepted, to take effect March 26.

Stephenson, William, lieut. col., in addition to his other duties will report to commanding general, eastern division, for duty as chief surgeon of that division on the retirement from active service of Colonel John Van R. Hoff, medical corps.

Feely, James F., acting dental surgeon, left Fort McHenry, Md., en route to Fort Howard, Md., for temporary duty.

Wilson, Elsworth, M.R.C., ordered to proceed from Fort Huachuca, Ariz., to Nogales, Ariz., for temporary duty with troops, relieving Rozier C. Bayly, lieut., who will return to his proper station.

Kendall, William P., lieut. col., leave extended twenty days.

Bushnell, George E., colonel, granted three months' leave.

### Medical Corps, U. S. Navy

Wheeler, W. M., surgeon, ordered to duty, marine barracks, and marine recruiting duty, Norfolk, Va.

Sheldon, L. L., Ledbetter, P. B., Lanning, R. H., Jones, R. F., and Beeching, C. L., asst. surgeons, detached from naval medical school and ordered to Asiatic station.

Treilby, C. E., A. A. surgeon, ordered to naval recruiting station, Baltimore.

Duhigg, J. T., asst. surgeon, directed to await orders when discharged from treatment at the Naval Hospital, Washington.

Phelps, J. R., P. A. surgeon, detached from the *Solace* and ordered home to await orders.

Sheldon, L. L., asst. surgeon, orders of March 23 revoked; detached from the naval medical school and ordered to the *Solace*.

Elliott, M. S., surgeon, detached from the *Utah* and ordered to the *Florida*.

Dunn, H. A., surgeon, detached from the *Florida* and ordered to the *Utah*.

### U. S. Public Health and Marine-Hospital Service

Changes for the fourteen days ended March 27, 1912.

Gassaway, J. M., surgeon, relieved from duty at the Marine Hospital, San Francisco, and directed to proceed to Cairo, Ill., and assume command of the service.

Woodward, R. M., surgeon, relieved from duty at Detroit and directed to proceed to San Francisco and assume command of the Marine Hospital at that port.

Cobb, J. O., surgeon, detailed to represent the service at the meeting of the Medical Society of the Missouri Valley, to be held at Colfax, Iowa, March 21-22, 1912.

Nydegger, J. A., surgeon, granted one month's leave of absence, on account of sickness, from April 1, 1912.

Wickes, H. W., surgeon, relieved from duty at Cairo, Ill., and directed to proceed to Boston and report to the medical officer in command for duty and assignment to quarters.

Lumsden, L. L., P. A. surgeon, detailed to represent the service at the meeting of the health officers of Tennessee to be held at Nashville, Tenn., April 2-4, 1912.

Corput, G. M., P. A. surgeon, authorized to visit New Orleans on business connected with the station twice each month during the period April 1 to June 30, 1912.

Francis, Edward, P. A. surgeon, detailed to inspect the Slee laboratories at Swiftwater, Pa., with a view to granting licenses for the sale of their products.

Collins, G. L., P. A. surgeon, granted one month's leave of absence from March 15, 1912.

Frost, W. H., P. A. surgeon, directed to proceed to Baltimore for conference with health authorities and investigation of outbreak of so-called sore throat.

Krulish, E., P. A. surgeon, relieved from temporary duty in Washington, D. C., and directed to proceed to Juneau, Alaska, for duty under this service with additional duties to be performed under the direction of the bureau of education, department of the interior.

Grimm, R. M., asst. surgeon, detailed to make epidemiologic studies of pellagra in Georgia and South Carolina.

Porter, J. Y., quarantine inspector, directed to proceed to Mayport, Fla., to inspect the operations of the quarantine service at that port.

Gill, S. G., A. A. surgeon, directed to proceed to Savannah, Ga., and assume temporary charge of the quarantine station during the absence on official business of Assistant Surgeon C. M. Fauntleroy.

Tappen, J. W., A. A. surgeon, directed to proceed to Douglas, Naco, Nogales and Tucson, Ariz., to inspect the conduct of the medical examination of arriving aliens at these ports.

Board of medical officers convened to meet at the bureau Tuesday, March 26, 1912, at 10 o'clock a. m., for the examination of Assistant Surgeons Harry J. Warner and Charles M. Fauntleroy, to determine their fitness for promotion to the grade of passed assistant surgeon. Detail for the board: Assistant Surgeon-General W. J. Pettus, chairman; Assistant Surgeon-General J. W. Trask; Passed Assistant Surgeon A. M. Stimson, recorder.

Board of medical officers convened to meet at the bureau Monday, April 8, 1912, at 10 o'clock a. m., for the examination of candidates for admission to the service. Detail for the board: Surgeon C. P. Wertenbaker, chairman; Surgeon W. G. Stimpson; Passed Assistant Surgeon Joseph Goldberger, recorder.

# *Medical Economics*

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POSTGRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

## THE SMOOT BILL

March 22, 1912, Mr. Smoot introduced the following bill (S. 5972) in the U. S. Senate. It was read twice and referred to the Committee on Public Health and National Quarantine:

### A BILL TO ESTABLISH A PUBLIC HEALTH SERVICE AND FOR OTHER PURPOSES

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the Public Health and Marine-Hospital Service of the United States shall hereafter be known and designated as the United States Public Health Service, and in addition to the administrative divisions now authorized by law there is hereby created a division of sanitary engineering and a division of child hygiene, and the division of vital statistics of the Bureau of the Census is hereby transferred from the Department of Commerce and Labor and made a division of the United States Public Health Service: *Provided,* That nothing in this act contained shall be held or construed to discharge or reduce in rank, grade, or pay any officer or employee of the Public Health and Marine-Hospital Service or the division of vital statistics of the Bureau of the Census.

SEC. 2. That there shall be an Assistant Secretary in the Treasury Department, appointed in the same manner and whose salary shall be the same as fixed by law for the other assistant secretaries, who shall be known and designated as the Assistant Secretary for Public Health, and whose duty it shall be to supervise, under the Secretary of the Treasury, the administration of the general operations and the expenditures of the United States Public Health Service: *Provided,* That the division of sanitary engineering shall be in charge of a competent sanitary engineer who shall be appointed in the same way and receive the same compensation as the chiefs of division of the hygienic laboratory.

SEC. 3. That all laws pertaining to the Public Health and Marine-Hospital Service of the United States or the division of vital statistics of the Bureau of the Census shall hereafter apply to the United States Public Health Service, and all regulations of the former now in force or made hereafter shall apply to and remain in force as regulations of the United States Public Health Service until changed or rescinded: *Provided,* That all properties, records, and rights pertaining to or in the possession of the Public Health and Marine-Hospital Service of the United States or the division of vital statistics of the Bureau of the Census are hereby transferred to and shall be available for use for like purposes and in like manner by the United States Public Health Service.

SEC. 4. That the United States Public Health Service shall, under the Secretary of the Treasury, be under the charge of the Surgeon-General of the aforesaid service, who shall be appointed as now provided by law and regulations, and the several divisions of the said service, with the exception of the division of sanitary engineering, shall each be in charge of an assistant surgeon general as now provided by law for the Public Health and Marine-Hospital Service: *Provided,* That the present chief of the division of vital statistics of the Bureau of the Census shall be appointed by the President, by and with the advice and consent of the Senate, as a surgeon in the United States Public Health Service.

SEC. 5. That all matters relating to personnel and accounts of the United States Public Health Service shall be administered by the division of personnel and accounts of the said service, and all accounts of moneys received and moneys expended on account of the said service shall be examined by the Auditor of the Treasury and so certified by that officer: *Provided,* That there may be employed in the United States Public Health Service such help as may be provided for from time to time by Congress.

## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

### Eighth Month—Third Weekly Meeting

### ACUTE GASTRO-ENTERIC INTOXICATION

ETIOLOGY: Season, age, surroundings, constitution, food. Bacteriology of dairy milk, bacteria found, toxins, possibility of direct contagion. Researches of Booker.

PATHOLOGY. (Macroscopic Changes): Contents of stomach and bowels, change in mucous membrane, lymphoid tissue. Severe cases, cholera infantum, intestinal contents, mucous membrane and Peyer's patches.

(Microscopic Changes): Immediate autopsy important. Changes in epithelium. Bacteria found, lymphoid tissue. Associated pathology of cholera infantum.

### SYMPTOMATOLOGY, CLINICAL FORMS

#### SIMPLE GASTRO-ENTERIC INTOXICATION

MILD CASES: Onset gradual, fever, gastric disturbances, diarrhea, character of stools, general symptoms. Course and duration. Tendency to relapses. Terminations.

MORE SEVERE CASES: Sudden onset, restlessness, pain, fever, vomiting, stupor, prostration, diarrhea, flatus. Character and number of stools. Course and terminations of disease. Effect of age and constitution on prognosis.

TREATMENT: Preventive. Hygienic and dietetic. Medicinal.

#### CHOLERA INFANTUM

Preceding intestinal disorder frequent. Sudden onset, prostration, increasing fever, vomiting and purging. Character of vomited matter, of stools. Loss of fluids, relaxed sphincter, loss of weight, course of temperature and pulse. Condition in fatal cases. Spurious hydrocephalus. In patients who recover.

Treatment. Indications.

# *Medical Education and State Boards of Registration*

## COMING EXAMINATIONS

ILLINOIS: Coliseum Annex, Chicago, April 30. Sec., Dr. James A. Egan, Springfield.

NEW MEXICO: Santa Fé, April 8-9. Sec., Dr. J. A. Massie.

OKLAHOMA: Oklahoma City, April 9-11. Sec., Dr. John W. Duke, Guthrie.

WEST VIRGINIA: Parkersburg, W. Va., April 8-10. Sec., Dr. H. A. Barbee, Point Pleasant.

## New Preliminary Requirements at the University of Minnesota

At a meeting held March 23, the Board of Regents adopted the following recommendations made by the executive faculty of the college of medicine and surgery, in regard to requirements for entrance and graduation of medical students:

1. REQUIREMENTS FOR ENTRANCE TO THE COLLEGE OF MEDICINE AND SURGERY AND FOR GRADUATION WITH THE B.S. AND M.D. DEGREES.

A—That all students in the college of medicine and surgery be required to secure the degree B.S. or B.A. before the degree M.D. is granted.

B—That the completion of two full years of collegiate work in this university or in any approved college, following on a four-year high-school course which includes two years of Latin, and including the subjects enumerated under C, be accepted for entrance to the college of medicine and surgery, and that this be the only statement of entrance requirements.

C—That the specified subjects in the two full years of college work required for entrance to the third year in medicine be made to include the following:

| | | | | |
|---|---|---|---|---|
| English (rhetoric) | 1 | year | 6 | credits |
| General inorganic chem. | 1 | " | 6 | " |
| Qualitative analysis | 1 | " | 6 | " |
| Physics | 1 | " | 8 or 6 | " |
| Biology, preferably zoology | 1 | " | 6 | " |

Modern language—A reading knowledge of German or French. This ordinarily will require one or two years (10-16 credits) of college German or one year (10 credits) of college French, depending on prior high-school training.

D—That the completion further of the third and fourth years in medicine shall entitle the student to the degree of B.S. from this university.

E—That the announcements of the six-year and seven-year combined courses given on pages 34 to 40 of the bulletin of the college of medicine and surgery for 1911-12, and as stated in the bulletin of the college of science, literature and the arts, be omitted.

2. B.S. Degree for Migrants.

On the basis of the above entrance requirements the executive faculty of the college of medicine and surgery recommends that the B.S. degree be granted to students who have completed two years of work in medicine in this university after having done two years of collegiate or university work accepted as equivalent to that given in the college of science, literature and the arts of this university.

### Mississippi Requires Graduation of All Applicants

A letter from Dr. W. S. Leathers, director of public health and sanitation in Mississippi, states that legislation has been secured requiring that hereafter all applicants to practice medicine in that state must be graduates of reputable medical colleges requiring four years of study, each session to be thirty-two weeks in length. This leaves only one state in the south, Tennessee, which still allows undergraduates in medicine to take the examinations for license.

## Book Notices

Dyke's Automobile Encyclopedia. In Forty Parts, Including a Dictionary, Index and 175 Charts. With Manikin of the Automobile, Showing How the Automobile Parts Are Assembled Into a Complete Car with All Parts Named. By A. L. Dyke, E.E. Second Edition. Cloth. Price, $3. Pp. 500. St. Louis: A. L. Dyke, 1912.

This is a practical book which will be a help, and more than worth the cost, to every automobile user. It is of special importance to the man who drives and looks after his own car. The book is divided into forty chapters, called "Instructions." Instruction 1 is the A B C of automobiles. Instruction 2 takes one a little farther into the intricacies of the car; and by the time one has read and studied the remaining chapters, one should have a fair understanding of automobiles in general. The book contains information not only with regard to the automobile itself, but also in respect to repairing, the building of garages, state laws; in fact, as the name implies, it really is an automobile encyclopedia.

Audel's Answers on Automobiles for Owners, Operators, Repairmen. Relating to the parts, operation, care, management, road driving, carbureters, wiring, timing, ignition, motor troubles, lubrication, tires, etc., including chapters on the storage battery, electric vehicles, motorcycles, overhauling the car, etc. By Gideon Harris and Associates. Cloth. Price, $1.50. Pp. 476, with 380 illustrations. New York: Theo. Audel & Co., 1912.

It has been said that the amount of service which can be obtained from an automobile depends more on the man at the wheel than on the car itself. Certainly the cost of up-keep in the way of repair expense depends, to a very great degree, on whether the one in charge understands its mechanism and whether he is continually on the watch for loose nuts and weak spots generally. This book is intended for those who want to know their car. It is for the novice; for the one who knows nothing of motor car machinery but who wants to know something about it. The information is given in the form of questions and answers. Some one has remarked that any fool can ask a question that may take a wise man to answer. Some of the questions in this book may be regarded as "fool questions," because they are so simple. In fact, if there is any criticism to be made it is that too insignificant questions are discussed. In other words, the author goes into the most elementary matters. This, however, is not a fault when it is considered for whom the book is intended, since men knowing absolutely nothing about the mechanism have been known to buy and run cars without making any attempt to learn it. They learn by experience—a rather expensive proposition in this instance. While the greater part of the book is devoted to a discussion of the mechanism of the car itself, at the same time all subjects related to automobiling are considered, including the tire proposition in all its phases, lubrication, electricity, storage batteries, hints on running an automobile, methods of overhauling, etc.

Leitfaden der Akustik für Ohrenärzte. Von Dr. M. Th. Edelmann, Prof. h. c. der Kgl. techn. Hochschule, München. Paper. Price, 4 marks. Pp. 116, with 80 illustrations. Berlin: S. Karger, 1911.

Dr. Bedzold's well-known set of tuning forks and whistles, which includes all of the musical tones within the range of human perception, are made under the direction of Professor Edelmann in Munich. In this well-written book he explains the reason for the construction and the method of use of these testing instruments. Their accurate and scientific manufacture makes them a necessary part of the instrumentarium of otologists wishing to make proper hearing tests.

## Medicolegal

### Rights of Injured Seamen—Importance Attached to a Broken Wrist

*(Wittekoppe vs. New York and Pacific Steamship Co. (U. S.), 189 Fed. R. 920)*

The United States District Court, Southern District of New York, holds that Wittekoppe, who was badly bruised and had his wrist broken by a fall from a ladder, was entitled to recover $1,200 for that portion of the pain and suffering which he had endured which resulted from the unskilful and insufficient treatment which he received, and for the loss which he had suffered from the inability to earn his usual wages which had resulted from such inadequate medical treatment. The ship, at the time this accident occurred, was on a voyage from St. Lucia to Bahia Blanca, South America. She had been about three days out from St. Lucia, and was 13 days in reaching Bahia Blanca. It was evident that the bones of the wrist were broken. The captain did up the arm in splints, gave the injured man a separate room, and afforded such medical attention as was within his knowledge and power. The bones of the wrist did not properly unite, but formed a callous union, the result of which was that the hand and arm became atrophied, and the hand had for a long time afterward lost its grasping power. On the voyage the steamer passed near Para and within sight of Pernambuco, in both of which places there were adequate hospital accommodations. The court holds that it was the duty of the master to have put the injured man ashore at Para or Pernambuco, and to have had him sent to a hospital there. The general principle is well settled that a seaman is entitled to receive at the expense of the vessel proper medical or surgical attention if ill or injured while in service of the ship. The vessel is not bound to deviate from her voyage for slight injuries, and each case must be determined by its own circumstances. In this case the bones of the wrist were broken. That is a serious injury; if the bones are not properly set, a permanent disability and a restricted circulation are apt to result. The proper setting of such a fracture requires a larger degree of surgical skill than an ordinary shipmaster possesses. The master knew that the bones were broken, and, instead of putting the injured man ashore at Para or Pernambuco, or endeavoring to obtain the aid of a surgeon from a passing vessel, proceeded on the voyage to his destination, occupying thirteen days. It was claimed that the man agreed to this course, although he said that he asked, and expected, to be put ashore at Pernambuco, which the officers denied. However, the court does not think that in such a case the shipowner is exonerated even if the seaman acquiesces in not obtaining proper surgical treatment. It is the duty of the master in such a case to use his own judgment and to do what is necessary under the circumstances, and the court thinks that in this case the master was bound to know that he, with the best intentions, was not competent to so treat the broken wrist as to prevent the result which occurred.

# *Society Proceedings*

## COMING MEETINGS

American Medical Association, Atlantic City, N. J., June 4-7.

Alabama State Medical Association, Birmingham, April 16.
American Laryngological Association, Atlantic City, May 9-11.
Arizona Medical Association, Bisbee, May 7.
Association of American Physicians, Atlantic City, May 7-8.
California State Medical Society, Del Monte, April 16-18.
Florida Medical Association, Tampa, May 8-10.
Georgia Medical Association, Augusta, April 17-19.
Iowa State Medical Society, Burlington, May 8-10.
Louisiana State Medical Society, New Orleans, April 23-25.
Maryland Medical and Chirurgical Faculty, Baltimore, April 23-25.
Mississippi State Medical Association, Jackson, April 9-11.
Montana State Medical Association, Helena, May 8.
Nebraska State Medical Association, Lincoln, May 7-9.
New Hampshire Medical Society, Concord, May 8-9.
New York State Medical Society, Albany, April 16-18.
North Dakota State Medical Association, Valley City, May 8-9.
Ohio State Medical Association, Dayton, May 7-9.
Oklahoma State Medical Association, Shawnee, May 7-9.
South Carolina Medical Association, Columbia, April 16-18.
State Medical Association of Texas, Waco, May 7-9.
Tennessee State Medical Association, Chattanooga, April 9-11.

## PHILADELPHIA COUNTY MEDICAL SOCIETY

*Meeting held Feb. 14, 1912*

The President, Dr. L. Jay Hammond, in the Chair

### The Diagnosis of Pain in the Upper Abdomen

Dr. Judson Daland's paper on this subject is published in this issue of The Journal.

### Surgical Indications of Trouble in the Right Upper Quadrant of the Abdomen

Dr. George G. Ross: To appreciate fully the value of pain of the abdominal organs, we must be familiar with the nerve-supply to the organs themselves, as well as to the overlying abdominal wall, and the relationship which exists between them and the consequent reflexes which result. The treatment of acute gastric ulcer is distinctly medical. Hemorrhage must be controlled. Anatomic and physiologic rest is to be secured by rest in bed and opium. Hemostatics do little or no good. Epinephrin may control bleeding for a while if brought into contact with the bleeding point. The consequent relaxation of the vessels, however, will encourage fresh bleeding. Fluid can best be supplied to the circulation by proctoclysis or hypodermoclysis. The intravenous transfusion of salt solution should not be employed until the bleeding point has been controlled because the consequent rise of blood-pressure will encourage bleeding. Surgical intervention in acute ulcer is indicated in recurrence of bleeding or perforation of the ulcer. In chronic gastric ulcer radical operation is rapidly becoming recognized as the proper treatment.

In the vast majority of cases of chronic dyspepsia there is an organic lesion which will explain the trouble. Dyspepsia is a symptom and not a disease. The pain of ulcer presents several typical characteristics. It is present in the epigastrium, either to the left or right of the mid-line, depending on the location of the ulcer; to the right in ulcer of the pylorus, either gastric or duodenal; to the left when nearer the body of the stomach. It is burning and aching in character and has a relationship to eating. The operative treatment of peptic ulcer of the stomach and duodenum depends on its location. It is a question whether the pain of biliary colic is due to the actual passing of the stone through the cystic or common duct or to the distention of the gall-bladder and duct due to blocking of the lumen. In cholelithiasis we have two methods of procedure: (1) cholecystostomy, with removal of the stones; (2) cholecystectomy. The latter procedure is attended with high mortality and should, in my opinion, be confined to the cases in which the gall-bladder is functionless from cicatricial contraction, gangrenous or carcinomatous change.

### The Causes of Pain in the Upper Right Quadrant of the Abdomen as Determined by Means of the Roentgen Rays

Dr. G. E. Pfahler: Practically all pathologic conditions in the chest which may cause pain in the right upper quadrant of the abdomen can be demonstrated by Roentgen rays. Subdiaphragmatic abscess can usually be demonstrated. Biliary calculi can be shown in some cases. Duodenal, gastric and colonic adhesions can practically always be demonstrated by their effects on the position and movements of these organs. Gastric ulcer can only be shown when it has perforated, and can be suspected by spasmodic contractions which may be present in the stomach. Duodenal ulcer may be suspected if spasmodic constrictions are present in the duodenum. Gastric carcinoma, I believe, can almost always be demonstrated. Renal calculus can be demonstrated in at least 98 per cent. of the cases with good technic. Renal abscess can often be demonstrated by combined cystoscopic and roentgenoscopic examinations. Perinephric abscess can be demonstrated when it is large enough to produce a palpable tumor, or when it will displace neighboring organs. Colonic kinks and constrictions can be demonstrated. Each of the above conditions requires careful technic and careful study in the sequence of the various steps during the examination, and usually requires not only a fluoroscopic examination but a number of plates.

# *Current Medical Literature*

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### New York State Journal of Medicine, New York

*March, XII, No. 3, pp. 105-156*

1 Public and Medical Profession. A. T. Bristow, New York.
2 Hormonal, Peristaltic Hormone (Zuelzer), and Its Uses. H. W. Lincoln, Brooklyn.
3 *Advantages of National Quarantine. L. E. Cofer, Washington, D. C.
4 Roentgen Rays in Gastro-Intestinal Examinations. A. F. Holding, Albany.
5 Gastric Ulcer. W. W. Skinner, Geneva.
6 Neurasthenia. H. G. Webster, Brooklyn.
7 Ocular Hyperemias. H. E. Smith, Norwich.
8 Diagnosis of Syphilis. W. W. Quinton, Buffalo.
9 Combined Vaccines in Treatment of Gynecologic Infections. W. Stone and T. L. Hein, New York.

**3. Advantages of National Quarantine.**—The reasons given by Cofer why it is advantageous for maritime quarantine to be under national supervision are the following: 1. Uniformity of quarantine regulations and quarantine procedure. 2. The Treasury Department by correlating the work of its Customs Division and Revenue Cutter Service Division with the quarantine function is able to furnish the latter with the maximum amount of assistance and dispatch. 3. The national quarantine establishment is in direct touch with all parts of the world, through the courtesy of the state department and its consular bureau, and publishes a weekly bulletin devoted to sanitary reports and statistics. 4. The quarantine officers in the national service are appointed for life, consider themselves residents of no place in particular and are nonpartisan in the performance of their official duties. Their time and their mental activities are devoted to their work and they are not disconcerted by fear of removal from office. Their acquired knowledge of marine architecture, nautical usage and maritime conditions enables them to adjust in perhaps a judicial way, the many differences of opinion and difficulties which arise in the enforcement of quarantine laws on maritime commerce. A quarantine officer, if he has not the knowledge of the manners and customs of seafaring men, of the difficulties under which vessels are run, of the necessity for saving time to vessels, of the necessity of not being arbitrary in the face of adverse winds, weather, lack of coal and water supply and other conditions which must be faced in connection with this work, the usefulness of such an officer in the long run would be extremely doubtful. 5. The public at large, the maritime interests and the quarantine function at a given port must receive in the long run great benefit from having both the quarantine and immigration examination conducted by the same set of officers in a uniform manner. 6. In the matter of expense, it would appear that if a state would ask the nation to conduct its quarantine service simply to save money, the only benefit to accrue would be to the maritime interests and to the individual state. On the other hand, if a state would elect to transfer the quarantine function to national control, in order that the money previously spent for maritime quarantine purposes could be diverted for the betterment of intrastate sanitary conditions, then this reason alone would seem sufficient for every state turning its maritime quarantine over to the nation as a whole. 7. An important feature in connection with the national control of quarantine is the fact that the subject is being closely studied from many viewpoints, and the Hygienic Laboratory at Washington is being called into constant use for the purpose, not only of giving technical instruction to officers as above mentioned, but in simplifying the regulations and restrictions in accordance with the growth of knowledge as to quarantinable diseases and their methods of transmission.

### Interstate Medical Journal, St. Louis

*March, XIX, No. 3, pp. 171-304*

10 Diagnosis and Non-Surgical Treatment of Duodenal Ulcer. G. Herchell, London.
11 Use of Proctosigmoidoscope in Diagnosis and Treatment. H. Strauss, Berlin.
12 Diagnosis of Cancer of Stomach. J. W. Weinstein, New York.
13 Duodenal Alimentation. W. G. Morgan, Washington, D. C.
14 Human Intestinal Parasites Common in United States. C. C. Bass, New Orleans.
15 Treatment of Gastric Diseases. J. Kaufman, New York.
16 Splanchnoptosis, or Constitutional Neurocardio-Vascular Asthenia with Osseus Dystrophies and Disproportions—Enteroptosis. J. C. Hemmeter, Baltimore.
17 Diagnostic Value of Test for Occult Blood in Stomach Contents and Feces. H. W. Soper, St. Louis.

### Military Surgeon, Washington, D. C.

*March, XXX, No. 3, pp. 251-367*

18 Venereal Problem in Army and Navy. J. R. Kean, U. S. Army.
19 *New Diet for Typhoid. W. M. Garton, U. S. Navy.
20 *Treatment of Typhoid. C. P. Wertcubaker, U. S. P. H. and M.-H. S.
21 Mounted Hospital Corps Men. G. F. Campbell, U. S. Army.
22 Report of U. S. Army Board for Study of Tropical Diseases as They Exist in Philippine Islands. W. P. Chamberlain, E. B. Vedder and J. R. Barber, U. S. Army.

19. **Diet in Typhoid.**—A minimum nitrogenous diet has given Garton splendid results in the treatment of typhoid. It consists of principally carbohydrates and fats that meet the requirements of a minimum nitrogen equilibrium. The following table is the complete diet given in twenty-four hours: 6:30 a. m.—One cup hot coffee with two drams sugar. No cream. Two slices of zwieback or buttered toast. 8:30 a. m.—One portion of cereal oats or barley, according to bowel indications, with six buttered crackers, saltines. 10:30 a. m.—Six ounces soup. Change recipe occasionally. 12:30 p. m.—One medium baked potato, mashed and prepared with butter. Add large pinch of salt. Two thin slices of buttered toast, hot, and one cup hot weak tea with two drams of sugar. 2:30 p. m.—Two teaspoonfuls of pudding, bread or tapioca, preferably the latter, and six saltine crackers. 4:30 p. m.—Two ounces of rice, farina or wheat cereal thoroughly mixed with one ounce of butter and four drams of sugar. Change from day to day to alter diet. 6:30 p. m.—Three slices of buttered toast. 8:30 p. m.—Six ounces of soup. At the height of the fever if these foods are distasteful or if the patient cannot eat the full quantity, reduce amount and add milk sugar in considerable quantity. Give the patient three grains of sugar of iron, t. i. d., or four drops of tincture ferrous chlorid in fresh lemonade, t. i. d. Water should be given almost *ad libitum* (internal hydrotherapy). Orange and lemon ices can be given when ordered.

20. **Treatment of Typhoid.**—On commencing the treatment of typhoid Wertenbaker usually gives a dose of castor oil, combined with some of the aromatics, for the purpose of clearing out the bowels. Nothing in the way of food is given excepting orange juice, of which the patient is allowed as much as is desired. Usually a pint or more of the juice is consumed in twenty-four hours. The juice is squeezed from the oranges, strained and given cold. Patients generally like it, and do not tire of it as they did of a milk diet. The patient is encouraged to drink water freely, and is given tea freshly made, when desired. Little or no medicine is given; an occasional dose of turpentine emulsion, or assafetida is given if tympanites is present. Lately Wertenbaker has been giving 10 drops of dilute hydrochloric acid three or four times a day. He usually uses strychnin as a heart stimulant. The lower bowel is washed out by an enema once or twice daily. A sponge bath is given whenever the temperature reaches 103 F., but this is seldom necessary. He has never used the tub bath to reduce the temperature in typhoid, as he has never found it necessary. The patient and his discharges are carefully screened against flies. Under this treatment the disease runs a regular course, the temperature seldom rising above 103 F., and but few complications have developed. When the temperature has remained normal for forty-eight hours, the tongue clean, and the red edge at the tip has disappeared, Wertenbaker allows the patient one soft boiled egg, with a cup of tea or coffee.

### Denver Medical Times and Utah Medical Journal, Denver

*March, XXXI, No. 9, pp. 349-396*

23 Dermatitis Exfoliativa; Report of Case. G. P. Lingenfelter, Denver.
24 Abdominal Pain in Typhoid. C. B. Dyde, Greeley, Colo.
25 Traumatism and Rupture of Urethra and Traumatic Stricture; Report of Case. J. Lindahl, Denver.
26 Chemical Shorthand. H. S. Denison, Denver.
27 Antipyretics; Their Use and Abuse. G. C. Emery, Preston, Ida.
28 The Social Evil. G. F. Lydston, Chicago.

### Journal of Nervous and Mental Disease, Lancaster, Pa.

*March, XXXIX, No. 3, pp. 145-216*

29 *Causes of Death in Tabes. C. W. Burr, Philadelphia.
30 Amyotrophy of Lead-Poisoning with Increased Reflexes. W. B. Cadwallader, Philadelphia.
31 Mental Symptoms of Acute Chorea. A. R. Diefendorf, New Haven, Conn.
32 Clinical Classification of General Paralyses of Insane. S. N. Clark, Kankakee, Ill.

29. **Causes of Death in Tabes.**—Chronic myocarditis, valvular heart disease and chronic nephritis are noted more frequently in the autopsy records of the thirty-four cases analyzed by Burr than any other pathologic processes. Atheroma of the aorta is specifically mentioned nine times. Aneurism of the aorta was present in three cases but was not the cause of death in any. It caused some erosion of the lumbar vertebræ in one case in which the aneurism was abdominal. Pulmonary tuberculosis caused death in six cases and acute croupous pneumonia in five. Three of the patients suffered from cerebral thrombosis causing hemiplegia, but all lived for some time after the stroke and none died from it. Two died from septicemia from bedsores. One had carcinoma of the pylorus, which during life gave no symptoms, and another carcinoma of the cervix. One died from a suppurative prostatitis. In eight the immediate cause of death seemed to be pulmonary edema. Burr regards general arterial fibrosis as part of the morbid anatomy of tabes. The other lesions found are accidental or consequential. Pathologic changes in some of the organs were directly due to the tabes; for example, cystitis is given an opportunity to develop by the difficulty in micturition, and changes in the muscles of the bladder are surely sometimes trophic.

### Journal of Oklahoma State Medical Association, Muskogee

*March, IV, No. 10, pp. 397-442*

33 Diagnosis of Carcinoma of Breast. J. H. White, Muskogee.
34 Bronchopneumonia. P. P. Nesbitt, Muskogee.
35 Diagnosis and Treatment of Diphtheria. A. B. Montgomery, Muskogee.
36 Relative Frequency of Mixed Type of Venereal Ulcer (Chancroid and Chancre). J. H. Sanford, Muskogee.
37 Cerebrospinal Meningitis in Infant. C. W. Heitzmau, Muskogee.
38 Present Status of Cancer Problem. F. J. Wilkiemeyer, Muskogee.
39 Treatment of Tuberculous Disease of Hip. R. L. Hull, Oklahoma City.
40 Arteriosclerosis. E. M. Boardman, Parsons, Kan.

### Surgery, Gynecology and Obstetrics, Chicago

*March, XIV, No. 3, pp. 215-314*

41 *Blood-Supply of Uterine Myomata. J. A. Sampson, New York.
42 Non-Suppurative Subphrenic Peritonitis Complicating Appendicitis. H. Neuhof, New York.

43 Technic and Remote Results of Vascular Anastomoses. A. Carrel, New York.
44 Ultimate Results of Conservative Surgery of Ovaries. E. Reynolds, Boston, Mass.
45 Cancer of Prostate. R. C. Bryan, Richmond, Va.
46 Treatment of Ectopic Gestation. E. B. Cragin, New York.
47 Fürstenau's Roentgenstereometry. M. Reichmann, Chicago.
48 Persistent Cloaca; Technic of Cure. C. S. Hosmer, Portland, Ore.
49 Cardiospasm. J. F. Erdmann, New York.

41. **Blood Supply of Uterine Myomata.**—One hundred uteri were removed by Sampson for the following pathologic conditions: Myomata, sixty-two; pelvic inflammatory conditions, including one instance of tuberculosis and another of puerperal infection, twelve; ovarian cysts, including two instances of ovarian carcinoma, eight; uterine bleeding of obscure origin where very small intramural myomata were found, and which may or may not have been the cause of the bleeding, nine; ectopic pregnancy (one tubal and the other interstital), two; carcinoma of the body of the uterus, three; carcinoma of the cervix, two; complete prolapsus of the uterus, two. Nearly 40 per cent. of the material was obtained at operations in which the uterus was removed for other conditions than myomata. In seventy-four uteri, removed under the last-mentioned conditions and injected as a matter of routine, myomata were encountered in thirty-eight; that is, in over one-half. Sampson says that small myomata are more readily seen in the injected than in the non-injected specimens. His studies have led him to believe that these tumors are of even more frequent occurrence than previous reports have indicated, and, also, that the presence of only one tumor in a uterus is unusual. One thousand one hundred and eight tumors were encountered in these one hundred uteri, and in four uteri, only, was a single tumor found.

By means of stereoscopic radiographs, it was determined that arterial blood is carried to these tumors through nutrient arteries, which are either radial or peripheral branches of an arcuate artery. Because of this, myomata may be grouped into *radial* and *peripheral*. In many, only one nutrient artery was found; in others, two or three, with one predominating. Sampson has not determined the origin of the secondary nutrient arteries, but thinks they arise from vessels originally communicating with branches of the nutrient artery. Often the only communication found between the intrinsic arteries of the tumor and those of the myometrium was by the nutrient arteries. In some of the medium size and large tumors an anastomosis was found between the arterioles of the myometrium about the tumor and similar vessels in the periphery of the myoma. When these tumors change their position the nutrient artery accompanies them. In many myomata there is very extensive development of the intrinsic blood-vessels filled with the arterial injection mass, so that the injected specimen appears as an arterial angioma rather than a myoma. Sampson has not yet determined how the arterial blood gains access to the veins.

### Buffalo Medical Journal

*March, LXVII, No. 8, pp. 421-476*

50 Meningitis. F. S. Cregg, Buffalo.
51 Vincent's Angina. V. M. Griswold, Fredonia, N. Y.
52 Three Years with Army of Potomac. W. W. Potter, Buffalo.
53 Athenian Epidemic of Meningitis of 1911. C. M. Mercurius.

### Archives of Internal Medicine, Chicago

*March, IX, No. 3, pp. 273-399*

54 *Bone Metabolism; Etiology of Non-Puerperal Osteomalacia. F. H. McCrudden and H. Fales, New York.
55 *Phthalein Test; Experimental and Clinical Study of Phenolsulphonephthalein in Relation to Kidney Function in Health and Disease. L. G. Rowntree and J. T. Geraghty, Baltimore.
56 Case of Pancreatic Diabetes Mellitus. H. O. Mosenthal, New York.
57 Orthodiascopic Observations Concerning Certain Type of Small Heart and Its Relations to Some General Systemic Affections. I. Adler and O. F. Krehbiel, New York.
58 *Influence of Kidney Extracts on Blood-Pressure. R. M. Pearce, New York.
59 Hemorrhagic Disease: Septicemia, Melena Neonatorum and Hepatic Cirrhosis. G. H. Whipple, Baltimore.

54. **Bone Metabolism.**—The findings in the authors' case of osteomalacia are in accord with the views of others. The loss of calcium and retention of magnesium and sulphur are in accord with the conception of the process in osteomalacia as one in which the bone is undergoing metabolism but in which the new bone laid down is an osteoid tissue poor in lime salts but richer than normally in magnesium. The presence of bony tumors preceding the osteomalacia is in accord with the conception that the starting point in osteomalacia can usually, if not always, be traced to a demand for calcium salts. And the continued excretion of an excess of calcium when the bones really need this element is in accord with the conception regarding the importance of overproduction in bringing about the softening of the bone.

55. **Phthalein Test.**—Briefly, Rowntree and Geraghty found that the absorption of phenolsulphonephthalein following injection into the lumbar muscles is better than the absorption from the gluteal injection, while the latter is superior to subcutaneous injection. Experimentally those diuretics that stimulate the renal cells to increased activity cause some increased secretion of phenolsulphonephthalein, while those that act mechanically produce no increased secretion. Clinically diuretics do not influence the phthalein output. Experimental evidence seems to indicate that phenolsulphonephthalein is excreted mostly by the tubules but probably also to a slight extent by the glomeruli. Phenolsulphonephthalein is better adapted for use as a functional test than any other drug previously employed for the same purpose, on account of its early appearance in the urine and the rapidity and completeness of its elimination by the kidney and the reliance to be placed on its findings. It is of immense value from a diagnostic and prognostic standpoint in nephritis inasmuch as it reveals the degree of functional derangement in nephritis whether of the acute or chronic variety. In the cardiorenal cases so far studied the test has proved of value in determining to what degree renal insufficiency was responsible for the clinical picture presented. The test has proved of value not only in diagnosing uremia from conditions simulating it, but has also successfully indicated that uremia was impending when no clinical evidence of its existence at the time was present. The test has proved of great value in revealing the true renal condition in cases of urinary obstruction. It is here of more value than the urinary output, total solids, urea or total nitrogen, and enables the surgeon to select a time for operation when the kidneys are in their most favorable functional condition. The improvement in the renal condition in cases of urinary obstruction following the institution of preliminary treatment is strikingly indicated by this test. In unilateral and bilateral kidney diseases the absolute amount of work done by each kidney as well as the relative proportion can be determined when the urines are obtained separately.

58. **Influence of Kidney Extracts on Blood-Pressure.**—The method used by Bingel and his associates to demonstrate a pressor substance in kidney extracts fails to reveal such a substance in extracts of the dog's kidney in Pearce's experiments. Extracts of the kidneys of dogs with experimental uranium and chromium nephritis, prepared at a time when the urine is free of the normally present depressor substance, have no pressor effect. These observations would appear to demonstrate conclusively that the dog's kidney does not contain a pressor substance which is masked by the more powerful depressor substance. They also fail to support that phase of the theory of internal secretion which assumes that the kidney furnishes a pressor substance of importance in the pathology of cardiovascular disease.

### American Journal of Surgery, New York

*March, XXVI, No. 3, pp. 97-128*

60 Personal Reminiscences of Lord Lister; Introduction and Development of Antiseptic Surgery in America. H. O. Marcy, Boston.
61 Micrococcus Catarrhalis as Cause of Inflammation in Genito-Urinary Tract. W. Ayers, New York.
62 Misleading Abdominal Symptoms. A. M. Crispin, New York.
63 Surgical Essentials. F. E. Neef, New York.
64 Four Deaths in Latent Sinusitis. G. F. Cott, Buffalo.

### American Journal of Orthopedic Surgery, Philadelphia

*February, IX, No. 3, pp. 313-526*

65 *Adolescent Tibial Tubercle. J. Dunlop, Washington, D. C.
66 Treatment of Tuberculous Joint Disease with Carl Spengler's "I. K." Serum, with Report of Seven Cases. J. L. Porter and L. C. Quinn, Chicago.

67 *Treatment of Hip-Joint Disease. E. H. Bradford, Boston.
68 *Conservative Treatment of Hip-Joint Disease. J. K. Young, Philadelphia.
69 Operative Plan for Correction of Relapsed and Untreated Talipes Equinovarus. M. Hoke, Atlanta, Ga.
70 *Pathologic and Symptomatic Weight-Bearing. Consideration of Prevention and Cure of Foot-Strain. R. B. Osgood, Boston.
71 *Orthopedic Treatment of Fractures of Humerus. F. E. Peckham, Providence, R. I.
72 *Operation for Severe Grades of Contracted or Clawed Toes. P. Hoffmann, St. Louis.
73 *Unusual Pathologic Condition of Sacroiliac Joint Causing Sciatica. S. M. Cone, Baltimore.
74 Pathogenesis of Spur Formation on Os Calcis. R. O. Meisenbach, Buffalo.
75 *Operative Treatment of Knee Derangement. N. Allison, St. Louis.

65. **Adolescent Tibial Tubercle.**—Dunlop's series of cases deals only with the so-called "strains." or a looseness of the tibial tubercle. whereas the lesions of this area, which are evidently of frequent occurrence, include the separations or fractures of the tubercle. He has studied the development of the tibial tubercle from a series of normal radiographs. He believes that the affection is one peculiarly associated with adolescence and that it is most apt to occur at the time in the individual case when the cartilaginous space is least between the tibial tubercle and the diaphysis, at a time just before union takes place. It is liable to occur at any time after ossification of the tongue-like process. It may occur on both sides, but that one side seems to be the usual occurrence, one side evidently developing somewhat earlier than the other, the right side probably developing before the left. The right knee seems to be affected more frequently than the left, as Schlatter concludes. This Dunlop ascribes to the fact that the right leg is stronger than the left and is used more. That is to say, the muscular action is greater. It is also more advanced in ossification and the cartilaginous plate becomes thinner and thereby weaker at an age when the "give" to the cartilage of the left side is still present. Girls may be affected as well as boys, a point in which Dunlop differs from all other observers; and girls are affected at a considerably earlier period than boys, the onset in two of his girls being at the tenth year. Boys seem more liable to the affection between the thirteenth and fifteenth year. The etiologic factor is muscular action of the anterior thigh muscles and it almost always occurs in especially well-developed children. In this class of cases should be included only mechanical irritations and not infections. The condition has been recognized for a great many years, but since the use of the Roentgen-rays diagnosis and prognosis may be much more certain and that treatment may be more rationally carried out, as the full extent of the injury can be positively ascertained. Recovery may be expected promptly when the diagnosis has been established.

67. 68. 70. 73 and 75. Abstracted in The Journal, June 17, pp. 1845, 1846 and 1847.

71. **Treatment of Fractures of Humerus.**—Peckham maintains that almost any fracture of the surgical neck, the shaft, or the lower end of the humerus. either operative or nonoperative. could be reduced and the fragments kept in perfect apposition without the introduction of metal.

72. **Operation for Contracted or Clawed Toes.**—This operation consists of excision of the heads and, if necessary, of parts of the necks of the metatarsal bones of all the affected toes through a single transverse curved plantar incision just behind the web of the toes.

### Journal of Missouri State Medical Association, St. Louis

*March, VIII, No. 9, pp. 337-370*

76 Tonsillectomy. with Presentation of Specimens Removed by Author's Method. G. Sluder, St. Louis.
77 Present-Day Craniocerebral Surgery. N. W. Sharpe, St. Louis.
78 Importance of Bacteriologic Examination of Water and Inspection of Water-Supplies. O. W. H. Mitchell. Columbia. Mo.
79 Surgical Indications in Mechanical Urinary Disturbances. F. W. Bailey, St. Louis.
80 Doederlein Pubiotomy. P. H. Swahlen, St. Louis.
81 Limits of Catheter in Treatment of Chronic Enlargement of Prostatic Gland. C. H. Wallace, St. Joseph, Mo.
82 Empyema. F. E. Bullock, Forest City, Mo.
83 Case of Pulmonary Tuberculosis with Cavity Formation in Infant Aged 3 Months. E. P. Buddy. St. Louis.
84 Lime-Crusted Silk Sutures in Bladder; Radiographic Diagnostic Report. E. H. Skinner, Kansas City.

### Virginia Medical Semi-Monthly, Richmond

*March 8, XVI, No. 23, pp. 573-600*

85 Two Cases of Tuberculous Meningitis in Infants. C. A. Pfender, Washington, D. C.
86 Leg Amputations from Standpoint of Utility. L. A. Thompson, U. S. Army.
87 Fashions in Typhoid: 239 Cases of Typhoid in University of Virginia Hospital. J. S. Davis, University.
88 *Hydrophobia: 400 Patients Treated at Pasteur Institute of Virginia. S. B. Moon, Richmond.
89 Etiology and Pathology of Acute Rheumatism. C. B. Conklin, Washington, D. C.
90 Indications for Herniotomy in Inguinal Hernias. S. B. Moore, Alexandria, Va.
91 Albuminuric Retinitis. L. O. Mauldin, Greenville, S. C.
92 Anatomy of Gall-Bladder and Ducts. J. W. Winston, Norfolk.

88. **Hydrophobia.**—Of the 400 patients treated at the Pasteur Institute of Virginia three have died of hydrophobia. Two of these were among the thirty-nine bitten about the face, head or neck, and they had multiple severe wounds on the face. On this account the disease came on before it was possible to render them immune. The third was bitten on the hand, and died about four months afterward, although another man bitten by the same dog, and also treated, remained well. Thus was recorded one failure to immunize among the 400 treated. The usual mortality in face bites is 8 to 15 per cent. of those treated, and in other cases about one in 300 treated. Two persons, who were advised to take treatment after being bitten, declined it, and afterward presented themselves with typical signs of hydrophobia, dying a few days afterward.

### Western Medical Review, Omaha, Neb.

*March, XVII, No. 3, pp. 107-158*

93 Empyema. F. A. Long, Madison, Neb.
94 Purpura Hemorrhagica During Convalescence from Scarlet Fever. E. C. Stevenson, Gothenburg, Neb.
95 Lymphangioplasty. G. Haslam, Fremont, Neb.
96 Appendicitis in Children; Report of Cases. A. L. Ker, Cambridge, Neb.
97 Acute Inflammation of Nasal Accessory Sinuses. W. D. Shields, Holdrege, Neb.

### Boston Medical and Surgical Journal

*March 21, CLXVI, No. 12, pp. 439-474*

98 Significance of the General Practitioner. A. Jacobi, New York.
99 *Acute Suppurative Pericarditis in Infancy. H. Barkan and W. P. Lucas, Boston.
100 *Blood Platelets in Normal Women, in Obstetric Patients and in New-Born. M. E. Morse, Boston.
101 *Demineralized Food and Cancer. H. Packard, Boston.

99. **Acute Suppurative Pericarditis in Infancy.**—That pericarditis may occur, first, without any symptoms attributable to the heart beyond the collapse which is a common enough symptom in all cases of marked infantile atrophy is shown in the authors' case. Second, the occurrence without any physical signs that could be made out, at least not the textbook signs; no bulging of the precordia, no increase in cardiac area, no loss of cardiac impulse or sounds, no dyspnea, no cyanosis beyond that found in all cases of collapse just at the end. And this case, from autopsy findings, must have existed at least four days, during which period the temperature remained approximately normal. Third, the occurrence of suppurative pericarditis without any involvement or infection of the lungs or pleura, no pneumonia, pleurisy or empyema, which, as has been shown, is the case in over 90 per cent. of cases occurring in infants. Fourth, no profuse cardiac involvement, as endocarditis or myocarditis. Fifth, in fact, none of the acute infectious processes found in a review of the literature as having been the cause, even rarely, of suppurative pericarditis in infants. Sixth, the only processes which this could have been secondary to were, first, the eczema, which, as is shown by the history, was gradually improving, or to some subacute intestinal infection which gave no definite symptoms. Neither of these could be ruled out, so that the authors were forced to conclude that this case of suppurative pericarditis was either due to a primary infection of the pericardium or to the almost as rare and, as far as known, unreported cause of pericarditis, subacute intestinal indigestion. The infecting organism, the streptococcus in this case, probably gained its entrance through the skin or the intestinal tract, due to the lowered resistance in these two fields; therefore this case must probably be considered a secondary infection rather than a primary.

100. **Blood Platelets.**—The object of Morse's work has been to determine, first, the usual number of platelets in the normal woman, and whether there are variations corresponding to the menstrual cycle; second, the behavior of the platelets in pregnancy, labor and the puerperium; also in abnormal obstetrical conditions (hemorrhage, eclampsia and operative procedures); and lastly, the numbers of platelets in the new-born and in some of the complications of early infancy (icterus, hemorrhagic disease and skin lesions). The conclusions arrived at may be summarized as follows: In some normal women, but not in all, there is an increase in the platelets accompanying menstruation. During the latter half of pregnancy most primiparæ have a high normal or an increased platelet count, while multiparæ usually show no rise. There are no special changes in the platelets during labor or the early days of the puerperium. At the end of the first week there is an increase which does not seem to be dependent on lactation. In eclampsia and pre-eclamptic toxemia the platelets may be high, low or normal, and they may be greatly increased during recovery. After post-partum hemorrhages of considerable size, the platelets show a moderate rise, with a maximum occurring late in the puerperium. The platelets may be low after prolonged labors terminated by operation. In case of short uncomplicated obstetrical operations done when the patient is in good condition, the platelets follow the same curve as in a normal labor and puerperium. In uncomplicated abdominal and vaginal operations there is in some cases a transitory rise of the platelets following operation. Scopolamin-morphin, used during labor, causes no changes in the platelets. The number of platelets at birth varies greatly, being sometimes high and sometimes low. After the end of the first week, however, these differences disappear and in early infancy the platelets are numerous (350,000 to 450,000). The platelets show a marked increase in icterus neonatorum. In hemorrhagic disease of the new-born there is no diminution of the platelets at the onset, but a post-hemorrhagic rise with a late maximum. In skin lesions of early infancy the platelets may be high or rather low, depending on the condition of the child.

101. **Demineralized Food and Cancer.**—The query "How important a part do the mineral ingredients of foodstuffs play in the maintenance of life, health, strength, endurance and resistance to disease in the human family?" is the basis of Packard's study. He holds that if the theory of demineralization of the staple foodstuffs of the world as a negative factor in the causation of cancer be a tenable one, it fits in with the actual conditions in all the civilized nations of the earth. No other article of food is in such universal and daily use among civilized nations as white flour bread and all the flour mills of the world send out to the public a material for breadmaking consisting of but little more than wheat starch, while the salts of phosphorus, calcium, sodium, potassium, iron, magnesium and silica, in which wheat is particularly rich, are cast away. There are still communities of people so isolated from the civilized world that the material for making bread which is white does not reach them, or, if at all, in such small quantity that it constitutes but a trifling proportion of their dietary. The interesting and impressive thing about these people is that they do not have cancer, or if at all, to so slight a degree that it is a negligible quantity.

Some patients with inoperable recurrent cancer whom Packard placed on a diet and treatment in conformity with this theory in the spring of last year show an apparent arrest of the disease and a general condition of good health quite at variance with former experience in similar cases. The dietary for cancer patients in conformity with the food salts theory, Packard says should be something as follows: 1. Exclude all white flour bread, and all articles into which white flour enters, from the diet, and substitute for it bread made from whole wheat flour as above outlined. 2. Potatoes next to bread form the most important and widely used article of diet, and properly conserved in cooking they are rich in the food salts, which are located in the peripheral portion immediately beneath the skin. Therefore, one or two baked potatoes daily are advised prepared as follows: Discard the heart or central starchy portion and eat the peripheral portions rich in mineral ingredients, conserving to the very outer skin. The common way of cooking potatoes, by paring raw, soaking in cold water for an hour or two, then boiling, dissolves out and boils out about 50 per cent. of the food salts. 3. Encourage the eating freely of well-cooked fresh vegetables, apples raw or cooked in any way, and fresh ripe fruits. 4. Meats and fish may be used moderately according to inclination, bearing in mind that these probably make no difference one way or the other in the development or growth of cancer. A certain amount of protein must be included in the dietary, and if not taken as flesh food it must be made up in eggs, cheese, milk and leguminous vegetables. Packard begs for an unprejudiced application of these theories and principles not only in cancer cases, but as far as possible in healthy persons, as a prophylactic against cancer. It is his conviction that by this expedient alone the cancer rate may be reduced from its present appallingly high rate.

### Mississippi Medical Monthly, Vicksburg

*March, XVI, No. 11, pp. 209-230*

102 Case of Malarial Hemoglobinuria. F. M. Brougher, Belen.
103 Eclampsia. E. L. Robertson, Sunflower.
104 Plea for Protection of Innocent. H. C. Buck, Friars Point.
105 Use of Flexner's Antimeningitis Serum; Report of Cases. S. T. Wells, Alligator.

### Medical Record, New York

*March 23, LXXXI, No. 2159, pp. 551-600*

106 Pathogeny of Mental Disease, with Special Reference to Minor Psychoses. A. M. Hamilton, New York.
107 *Prominent Ears. R. T. Morris, New York.
108 *Malformation of Tænia Saginata. G. A. MacCallum, New York.
109 Atypical Incipient Poliomyelitis and Its Diagnostic Difficulties. H. B. Sheffield, New York.
110 Pellagra in Canal Zone. W. E. Deeks, Ancon, Canal Zone.
111 Case of Acroparesthesia. A. Maverick, San Antonio, Tex.
112 Berberine. W. F. Waugh, Chicago.

107. **Prominent Ears.**—The method employed by Morris consists of excising practically all the fibrocartilage of the concha, antihelix and antitragus. As a preliminary step an ellipse of skin is removed from the posterior part of the ear and from the mastoid region of the scalp. The ellipse is of such shape that about one-half relates to the ear and the other half to the mastoid region of the scalp. Then gradually trim the cartilage away from the skin of the anterior aspect of the ear by alternately pressing and snipping. The skin from which cartilage is removed is thin, but well supplied with blood, and does not slough subsequently. The very thin skin over concha and antihelix may be buttonholed at one or more points while cartilage is being removed, but this is desirable. The reason is this: When the ear, shorn of cartilage, is sutured back over the mastoid region, the space from which cartilage was removed has a tendency to fill with blood clot. Blood clot collecting beneath this thin skin may lead to failure of union or to sepsis. If, on the other hand, the skin is buttonholed, purposely or accidentally, blood promptly escapes on the dressings, and there is no damming or pocketing of clot. The external auditory meatus should be plugged with absorbent cotton in advance of operation; otherwise blood may enter the meatus and form a troublesome clot on the drum membrane. After suturing skin margins of ear to skin margins of scalp two thicknesses of iodoform gauze cut to the shape of the wound line are nicely fitted between skin of helix and skin of scalp. Iodoform gauze is packed on the skin of the anterior part of the ear with attention to depressions, and to the fossa of the helix, compressing the skin evenly and nicely, so that blood cannot collect beneath it.

108. **Malformation of Tænia Saginata.**—In this particular malformation the individual worm suggested the partial fusion of two worms. The body presented itself in the form of three leaves or folds, a cross-section of which showed the bifurcated appearance. Each proglottis showed plainly the genital aperture at the center of the edge of the undivided portion, and from it the reproductive organs were easily traced and located chiefly in the thicker portion of the segment, although some folds of the uterus and some of the testes occupied the middle of the whole length of the bifurcating leaves or folds. Again, the water vascular canal was quite large in the thicker fold

but exceedingly small in each of the others. Although the worm may represent the fusion of two individuals, there was no trace of two sets of organs.

### Colorado Medicine, Denver

*March, IX, No. 2, pp. 65-100*

113 Hormonic Equilibrium of Glands of Internal Secretion. H. S. Denison, Denver.
114 *Principles Underlying Technic of Hollow Visceral Anastomosis, with Recent Methods. C. E. Tennant, Denver.
115 Report of Royal Commission on Tuberculosis. A. S. Taussig, Denver.
116 Immunity in Tuberculosis by Inoculation of Living Tubercle Bacilli. G. B. Webb and G. B. Gilbert, Colorado Springs.
117 Pasteurization. J. W. Amesse, New York.
118 Association Test. G. E. Neuhaus, Denver.
119 Sciatica. L. W. Ely, New York.

114. Also published in *Annals of Surgery*, October, 1911.

### Illinois Medical Journal, Springfield

*March, XXI, No. 3, pp. 261-398*

120 *Chronic Focal Infections and Their Etiologic Relations to Arthritis and Nephritis. F. Billings, Chicago.
121 *Chronic Oral Infections. T. L. Gilmer, Chicago.
122 Tuberculosis of Urinary Organs. A. D. Bevan, Chicago.
123 Tuberculosis of Alimentary Canal and Peritoneum. J. B. Murphy, Chicago.
124 Tuberculosis of Female Genitalia. H. F. Lewis, Chicago.
125 Joint Tuberculosis. J. Ridlon, Chicago.
126 Mortality of Appendicitis. I. H. Eddy, Chicago.
127 Medical Education. A. M. Corwin, Chicago.
128 Medical Legislation Concerning Medical Education in Illinois. G. W. Webster, Chicago.
129 Value of Laboratory Analysis in Diagnosis of Disease. F. Bondurant, Cairo.

120 and 121. Abstracted in THE JOURNAL, Dec. 30, p. 2169.

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## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### Glasgow Medical Journal

*March, LXXVII, No. 3, pp. 161-239*

1 Splenic Metastasis in Case of Carcinoma of Tongue, Due Probably to Vascular Dissemination. Sir G. T. Beatson.
2 Use of Tuberculin in Phthisis. J. Guy.
3 Plague as Factor in History. J. P. Granger.
4 Auriculo-Ventricular Node and Bundle in Case of Adams-Stokes Syndrome. A. M. Kennedy.

### Lancet, London

*March 9, I, No. 4619, pp. 629-704*

5 *Glycosuria. A. E. Garrod.
6 *Malignant Disease of Testicle and Operation for Removal of Ilio-Lumbar Lymph-Nodes When Secondarily Affected. Sir H. Morris.
7 Causation and Prevention of Certain Toxic Symptoms Following Administration of Salvarsan. J. McIntosh, P. Fildes and H. Dearden.
8 Operative Treatment of Exophthalmic Goiter. W. Trotter.
9 *"Aching Throat." W. H. Kelson
10 *Experiments on Treatment of Inoculated Rat Sarcoma and Certain Accompanying Blood Changes. H. G. Grünbaum and A. S. Grünbaum.
11 Treatment of Talipes Equinovarus. E. M. Corner.
12 Value of Pneumococcus Vaccine in Treatment of Pneumonia. N. Raw.
13 Problem of After-Care of Sanatorium Patients. T. D. Lister.
14 Crawford Williamson Long, Pioneer of Anesthesia. D. W. Buston.

5. **Glycosuria.**—Attention is directed by Garrod to many different morbid conditions which bring about disturbances of the metabolism of carbohydrates and to the fact that such disturbances manifest themselves in several different ways: by a lowering of glucose tolerance without actual excretion of sugar in the urine; by a spontaneous excretion of sugar in smaller or larger amount during limited periods of days, weeks or months; and by a persistent glycosuria, accompanied in its higher grades by the associated symptoms which go to make up the clinical picture of diabetes. Moreover, disturbances of these several grades may be induced in different cases by one and the same cause, or in the same case at different times. The effect of this, says Garrod, is to obliterate in one's mind the conception of diabetes as a sharply defined disease, and to present the malady as merely the maximal phase of a series, rising by gradual steps from the normal of metabolism, just as myxedema is the culminating point of the almost insensible grades of hypothyroidism. Between the sufferer from grave diabetes and the potential glycosuric there is a striking contrast, but the gulf which separates them is bridged over by intermediate cases of all degrees of severity. If so, it follows that, with the possible exception of the so-called renal glycosuria, there is no such thing as non-diabetic glycosuria, although there are many varieties which lack the sinister import which we connect with the name of diabetes. The differences are, Garrod believes, rather of degree than of kind. Diabetes is not of necessity a fatal malady. The efficacy of restriction of diet, which has ameliorated the lot and prolonged the lives of hosts of sufferers from diabetes, although it is essentially a symptomatic therapy, is due to the fact that it is the metabolic derangement which proves fatal to most such patients.

6. **Malignant Disease of Testicle.**—Two cases are related by McIntosh to show that columnar carcinoma of the testicle may remain quiescent, or the patient may be absolutely free of recurrence for many years; but the expectation is always that the disease will ultimately recur, though it may be only after a long time. When, therefore, this fact is taken into account, together with two others, namely, (1) that it is impossible to detect the early secondary infection of the ilio-lumbar lymph-nodes; and (2) that the extirpation of these glands, when obviously of magnitude and severity, and has been very discouraging hitherto in its results, when, McIntosh says, these facts are taken into consideration, we may well be led to hope that the practice of the "radical" or "improved" method of excision of the testis may prove to be successful. So far, however, in the seventeen cases reported of this improved operation, there is little, if any, foundation for such hope. In some of the operations the affected glands could not be removed, or, in other words, the improved method was found to be impracticable; in other cases in which the glands were successfully removed at the time, the disease soon returned; while in the rest insufficient time has elapsed since the operation to permit of any conclusion being drawn as to the ultimate result. Still, hope need not necessarily perish because as yet little, if any, encouragement can be derived from the very limited existing experience. Meanwhile the low malignancy of carcinoma testis, and the long histories of such cases will often afford a prospect to any given patient of prolonged or entire immunity after the testis and cord have been excised by the old method.

9. **Aching Throat.**—Experience has shown Kelson that aching throat is more commonly associated with flatulent dyspepsia than anything else, and this seems to act either by the formation of toxins, or possibly the aching may be referred pain, such as that which occurs in the ear so commonly in disease of the larynx and upper part of the esophagus. There may also, however, be local conditions which, if they do not actually cause, certainly accentuate, aching throat; these must be sought out and dealt with in obstinate cases, not forgetting that the condition of the nose and accessory sinuses has a very distinct bearing on the state of the pharynx, as also have the teeth. In order to relieve the dyspepsia, first of all the teeth must be examined, and the patient referred to a good dentist if necessary. The diet must be inquired into and corrected. As regards the vexed question of alcohol, it certainly seems in some cases to bring on and in others to aggravate the aching, and on the whole, these patients are better without it. Kelson knows of several cases in which washing out the stomach has completely relieved the aching, and considers it a most valuable form of treatment if not carried to excess. Among the drugs which have proved most useful, gentian, calumba, strychnin, bicarbonate of soda, bismuth, magnesia and charcoal are the principal ones. Constipation is very common and very troublesome, and if not relieved by careful dieting Kelson has found the best drugs to use to be cascara, podophyllum and sulphur; also small doses of mercury followed by a saline aperient are valuable. As a means of giving temporary relief massage is useful, and so is the galvanic current, but as permanent curative agents both are disappointing. Smoking, if in excess, must be forbidden, but Kelson has not been able to convince himself that moderate smoking was in itself a cause of aching throat, and certainly many women suffer from

it who do not smoke at all, and one finds a good many patients who are anxious to get well and willingly abstain entirely from both tobacco and alcohol, and yet the pain continues.

10. **Treatment of Inoculated Rat Sarcoma.**—In a previous communication the authors showed that by the injection of antivenom (horse) serum it was possible to effect regression of inoculated tumors in rats provided they did not exceed 1.5 cm. in diameter. They have found since that by the simultaneous administration of adrenalin with the antivenom serum yet larger growths can be made to disappear in these animals. In this second series of seventy-seven tumors there have been many which reached or exceeded 2 x 1 cm. in size. The average weight of the animals used has been 40 grams, and of the tumors 8 grams; that is, a tumor equal to one-fifth of the body-weight may be cured. Of these seventy-seven tumors, thirty-four of the largest at the time of starting the experiment have been treated, while forty-three were kept as controls. Of the thirty-four treated, twenty-four were cured, three became larger, while in seven the animals died before the conclusion of the experiment. Of the forty-three control tumors, only eight regressed, the remaining thirty-five increased in size, while twelve animals died before the conclusion of the experiment. In other words, while 70 per cent. of the treated tumors regressed, only 18.6 per cent. of the untreated tumors did so. Moreover, in the untreated animals metastatic deposits were common, but in none of the animals which died while still under treatment were any metastatic deposits found.

### Journal of Tropical Medicine and Hygiene, London

*March 1, XV, No. 5, pp. 65-80*

15 *Experimental Treatments for Leprosy. T. L. Sandes.
16 Leprosy in Sokoto Province. J. M. Dalziel.
17 Transmission of Leprosy. E. C. Long.

15. **Treatments for Leprosy.**—The chaulmoogra oil treatment, undoubtedly slow, and not very satisfactory, has in Sandes' experience shown itself to be superior to any other known remedy or reputed cure for leprosy. He emphasizes that the use of the oil must be prolonged, five years or more; it must be as far as possible continuous, and the imbibition of the oil should be pushed gradually to the extreme of receptivity. Relapses will undoubtedly occur, particularly in the earlier stages, but such should not be permitted to foster discouragement. To expect sudden amelioration is to look for disappointment. Surgical assistance should always be ready to intervene where natural processes or medical applications have failed in discarding devitalized tissues or opposing inflammation.

### Dublin Journal of Medical Science

*March, I, No. 483, pp. 161-239*

18 Four Successful Cases of Cesarean Section. C. Y. Pearson.
19 Proposed Sterilization of Mentally Unfit. M. J. Nolan.
20 Causation of Insanity in Ireland. R. R. Leeper.
21 *Fractures and Dislocations at Elbow-Joint. J. M'Ardle.

21. **Fractures and Dislocations at Elbow-Joint.**—The points on which M'Ardle lays stress are: In fractures of the head of the radius plastic operations are useless and often harmful. The repair of fractures of the upper end of the ulna by operation is not only feasible, but imperative. In fracture of the olecranon by indirect violence extra articular operation yields the most perfect results. In old-standing dislocations of both arm bones backward, reduction without a cutting operation is very rarely successful, and is often attended by very serious injury to the bones, especially in young subjects. Section of the olecranon allows easy reduction, and the fixation of the detached piece by a screw gives an ideal result. Operation from the posterior aspect of the joint is anatomically sound, as all the important structures, except the ulnar nerve, lie in front separated from the area of work by the brachialis anticus. No lateral incisions can give the power to deal with a shortened triceps, which will prevent reduction no matter how freely the lateral ligaments are divided. Fixation by a screw instead of by wiring saves much delay and avoids undue exposure of the periarticular tissues, allowing more rapid repair and obviating subsequent adhesions.

### British Medical Journal, London

*March 9, I, No. 2671, pp. 529-588*

22 Practice of Medicine as Fine Art. E. S. Reynolds.
23 Common Form of Heart Disease (Auricular Fibrillation). J. G. Emanuel.
24 *Management of Cardiac Failure in Diphtheria. E. F. Coghlan.
25 Epinephrin in Cardiac Dyspnea and Cardiac Dropsy. J. C. Voigt.
26 *Case of Anginal Spasm of Exceptional Duration. E. H. Coleman.
27 Reliability of Results Obtained by Wassermann Test on Serums and Cerebrospinal Fluids Obtained Post Mortem. J. P. Candler and S. A. Mann.
28 Accurate Method of Estimating Vibratory Sense. J. L. M. Symns.
29 *Curative Value of Leishmania Culture Vaccine in Oriental Sore. R. Row.
30 Method of Enucleation of Tonsils. C. W. M. Hope.
31 Blind and Census of 1911. W. C. Rockliffe.
32 Casualties in Tibet. R. F. D. MacGregor.

24. **Cardiac Failure in Diphtheria.**—According to Coghlan treatment of patients suffering from cardiac failure accompanied by persistent vomiting should be conducted on the following lines: Position of the patient in bed—The head should be low to prevent cerebral anemia, while the foot of the bed should be elevated. This may help retention of the rectal foods. Clothing—Patients during the stage of cardiac depression become restless and throw off the bedclothes. They should therefore be warmly clad, and for the same reason hot-water bottles should be placed in the bed. Nourishment—All food by the mouth should be stopped and nutrient enemata administered. The rectum should be irrigated twice daily with warm boracic solution, otherwise irritation may be set up, and retention of nutrients become impossible. Cardiac Depression—This must be combated by the administration of medicines. Various drugs have been used for this purpose, chief among them being strychnin, belladonna and adrenalin. The formula used by Coghlan is as follows:

| | | Gm. or c.c. | |
|---|---|---|---|
| ℞ | Atropinæ sulphatis .......... | \|006 | 1/100 gr. |
| | Strychninæ hydrochloridi .... | \|006 | 1/100 gr. |
| | Sol. epinephrinæ (adrenalin) | | or |
| | chloridi (1 in 1,000) ....... | \|33 | 5 ♏ |
| | Aq. ........................ | \|66 | ad 10 ♏ |

To be administered hypodermically every four hours.

26. **Anginal Spasm of Exceptional Duration.**—The last attack in this case lasted from 9:20 p. m. to 6:25 a. m. Several of the earlier ones were fairly severe but in each case the spasm soon yielded (less than half an hour).

29. **Leishmania Culture Vaccine.**—With the object of hastening the process of healing, Row made a curative "vaccine," much on the same principle as Wright's staphylococcic vaccine in furunculosis. For this purpose massive cultures were obtained in Nicolle-Novy-McNeal medium from the *Leishmania tropica* from an experimental lesion in a *Macacus sinicus*, the original source of the virus being that from a Cambay case obtained early in 1910. When the cultures were at their best, namely, on the seventh day, the fluid, rich in flagellates, was collected and suitably sterilized with glycerin. This is the "vaccine" which has been tried by subcutaneous injection in three typical cases of Cambay sores of different ages with a tentative dose corresponding to 0.125 c. cm. of the original culture. As this dose produced no constitutional or local reaction, a second injection of a double dose was given in two of the three cases. The lesions, both ulcerating and non-ulcerating, healed in about fifteen days.

### Journal de Médecine de Bordeaux

*February 18, XXIV, No. 7, pp. 96-112*

33 Seashore Sanatoriums for Surgical Tuberculosis. (De quelques objections ou critiques formulés contre les hôpitaux marins à propos de leur importance dans la cure de la tuberculose chirurgicale.) F. Lalesque.

### Lyon Médical, Lyons

*February 18, CXVIII, No. 7, pp. 352-400*

34 Cancer of Throat Removed Without Recurrence. (Cancer étendu du pharynx et de la partie supérieure du larynx. Laryngectomie totale. Pharyngectomie partielle avec ablation du tiers postérieur de la langue. Guérison sans recidive après 2½ ans.) M. Villard.

*February 25, No. 8, pp. 401-464*

35 Indications for and Personal Experiences with Salvarsan. (L'arsénobenzol. Essai de mise au point.) Carle.

## Revue de Médecine, Paris

*February, XXXII, No. 2, pp. 81-160*

36 *Renal Diabetes. (L'élément rénal de la glycosurie et sa complexité.) R. Lépine.
37 *The Dynamic Element in Motor Aphasia. S. Bernheim.
38 Atypical Herpes Zoster. (Les zonas atypiques.) J. Minet and J. Leclercq.
39 The Different Forms of Arhythmia. (Sur les différentes formes d'arythmie au point de vue actuel.) W. Janowski.

36. **Renal Diabetes.**—Lépine's experimental research and clinical experience sustain the assumption that the elimination of sugar is in reality a secretion. Glycosuria may occur without an excess of sugar in the blood; the proportion of sugar in the blood may even be below normal, confirming the assumption of the possibility of an actual renal diabetes in man.

37. **Motor Aphasia.**—Bernheim gives here the necropsy findings in one of the three cases of aphasia he has previously reported. Notwithstanding the total destruction of the region supposed to contain the centers for speech, the patient regained the faculty of spontaneous speech, lost for a time. The patient was a woman of 54 with right hemiplegia and contracture, and the mental faculties became more and more clouded to complete dementia, but the speech gradually approached normal in inverse ratio.

## Presse Médicale, Paris

*February 24, XX, No. 16, pp. 161-172*

40 *Paralysis of the Suprascapular Nerve. (Paralysie du nerf sus-scapulaire.) M. Guibé.
41 *Deranged Metabolism Should Be Studied from Physiologic Standpoint. (Les grandes troubles de la nutrition.) M. Labbé.
42 *Improved Paraffin Prothesis. (Prothèse paraffinique et radiographie.) M. Lagarde.

*February 28, No. 17, pp. 173-180*

43 *The Antigen Complement-Fixation Test for Tuberculosis of Urinary Apparatus. (Valeur de la réaction de l'antigène de MM. Debré et Paraf pour la diagnostic rapide de la tuberculose urinaire.) M. Chevassu.
44 Digitalis and the Blood-Pressure. (Digitale et tensions artérielles.) A. Martinet.

40. **Paralysis of Suprascapular Nerve.**—Guibé describes the symptoms of this affection and states that complete recovery is rare. He has had only three improved and none cured in eleven neuritic cases while in his fifteen traumatic cases, two patients have entirely and one nearly recovered and four are very much improved. There is no case on record yet, he says, in which an operation was done to cure suprascapular paralysis, but a grafting muscle operation seems theoretically promising.

41. **Deranged Metabolism.**—In the older text-books diseases are listed according to organs, but Labbé insists that progress in treating deranged metabolism is realized only when the physician forgets his anatomy and thinks as a physiologist. It is in the field of pathologic physiology that the solutions for the problems of diabetes, gout, obesity, etc., are to be found.

42. **Improved Paraffin Prothesis.**—Lagarde says that the addition of a little bismuth to the paraffin does no harm in any way, while it permits examination with the Roentgen rays of the injected deposit at the time or years later. He gives illustrations of three patients to show the advantages of this roentgenoscopic control.

43. **Antigen Test for Rapid Diagnosis of Tuberculosis of Urinary Apparatus.**—Chevassu waxes enthusiastic over the rapidity and reliability of the application of the complement-fixation test to this purpose, supplying not the antibody, but the antigen, according to the technic published by Debré and Paraf last July. As the antibody is composed of the specific sensitizing element and the non-specific complement or alexin, it is possible to remove the latter and supply the complement or alexin from another source. Heating destroys the complement so that the antibody then contains merely the specific sensitizer. If then to the suspected urine is added some known tuberculous serum which has been heated to destroy its complement or alexin, and then some complement or alexin from another source is added to the mixture, one of two phenomena will follow: either the suspected urine contains antigen; in this case the antigen, the sensitizing element and the complement combine, and the complement is deviated or fixed; or else the suspected fluid does not contain antigen; in this case there is no combination; there is no fixation or deviation of complement, and the complement is left free. The fixation or non-fixation of the complement is determined by the usual technic for the hemolytic test, the fluid not affecting the blood vessels (sheep) in the presence of antigen, while when there is no antigen present the complement remains free and proceeds to dissolve the blood-corpuscles without delay. This antigen test has been systematically applied at the Necker hospital at Paris during the last eight months, and the findings in eighty applications of the test are reported here. In forty-four cases the findings were controlled by necropsy, an operation or inoculation of animals, and in thirty-seven instances all harmonized; in four cases it was impossible to control the findings, and in three they seemed to be inaccurate, but certainty in this respect was not available. Even accepting these as failures, the test proved entirely reliable in 90 per cent. of all the cases in which it was applied. Most of the causes inducing error in the findings act in the positive sense; that is, in fixing the complement, so that negative findings thus acquire unusual weight. This antigen reaction may throw light on the condition of the other kidney when one is known to be tuberculous; negative findings in the urine of the second kidney will thus permit nephrectomy with a quiet mind.

## Archiv für Gynaekologie, Berlin

*XCVI, No. 1, pp. 1-216. Last indexed March 2, p. 668*

45 *Nervous Reflex Influencing of Uterus from Other Organs. (Klinische und experimentelle Beobachtungen über nervöse Reflexe von verschiedenen Organen auf den Uterus.) E. Engelhorn.
46 Etiology of Rupture of the Uterus. (Fall von spontaner Uterusruptur, zugleich ein Beitrag zur Aetiologie der Uterusruptur.) A. Bauereisen.
47 *Connection Between Reproductive Processes and Local Tumors. (Beziehungen der Fortpflanzungsvorgänge zu den Geschwülsten der weiblichen Geschlechtsorgane.) A. Theilhaber and H. Edelberg.
48 *Fibrin Ferment and Fibrinogen as Factors in Pregnancy Kidney and Eclampsia. (Experimentelle Studien über die ätiologische Bedeutung des Fibrinferments und Fibrinogens für die Schwangerschaftsniere und die Eklampsie.) A. Dienst.
49 Vasoconstricting Substances in Serum During Pregnancy. (Nachweis und Gehalt von gefässverengernden Substanzen im Serum von Schwangeren, Kreissenden, Wöchnerinnen und vom Nabelschnurblute.) O. Schneider.
50 Influence of Ovaries on Respiratory Metabolism. (Weitere Untersuchungen über den Einfluss der Ovarien auf den respiratorischen Stoffwechsel.) L. Zuntz.
51 Influence of Placenta, Fetus and Ovary on Lactation. (Placenta, Fötus und Ovarium in ihrer Beziehung zur experimentellen Milchauslösung.) K. Basch.
52 Origin of Amniotic Fluid. (Herkunft des Fruchtwassers.) B. Wolff.

45. **Reflex Influence on Uterus from Other Organs.**—Engelhorn reports research on 775 women which failed to sustain the assumption that the filling or emptying of the stomach or bladder or digestive processes had anything to do with the contractions of the uterus. In parturients, however, the infant's sucking at the nipple started a contraction of the uterus. This was observed also in pregnant women from mere rubbing or tickling of the nipples.

47. **Relations Between Child-Bearing and Uterine Cancer.**—The records of 307 cases of uterine cancer show that cancer of the cervix occurred in only 2.9 per cent. of the nulliparæ, in 8 per cent. of the women with one child, and in 13 per cent. of those with several children. This suggests that the traumatic injury of the cervix during childbirth creates a predisposition. The particulars of the cancer cases are tabulated and compared from several standpoints. They teach among other things the necessity for prompt repair of the cervix after laceration, striving to keep scar production down to the minimum. The crushing of the middle part of the cervix seems to be peculiarly dangerous as the blood-supply here is poor. When repair is required, it seems wiser to remove the entire intravaginal parenchyma of the cervix, suturing the vaginal mucosa to the cervical mucosa high up, similar to Schroder's technic for ectropium. A comparatively harmless linear scar will then be substituted for the more or less devitalized crushed tissue, and the scar will be in a better irrigated region in the upper half of the cervix.

48. **Fibrin Ferment in Origin of Eclampsia.**—Dienst believes that as more leukocytes are used up during a pregnancy, the thrombokinase resulting therefrom floods the blood in such amounts that the syndrome of eclampsia results. He devotes 128 pages to description of experimental research and clinical experience which seem to sustain this view. It throws light also on pregnancy kidney as well as on the changes in the liver, etc., characteristic of eclampsia.

### Archiv für klinische Chirurgie, Berlin

*XCVII, No. 2, pp. 249-514. Last indexed March 2, p. 668*

53 To Incise the Common Bile Duct or Not After Cholecystectomy? (Wann soll man nach einer Palpationsbefund von Steinen im Choledochus diesen Gang incidiren und drainiren und wann nicht?) H. Kehr.
54 Internal Derangement of Knee-Joint. (Verletzungen der Zwischenknorpelscheiben des Kniegelenks und ihre Behandlung.) F. Brüning.
55 Fifty-Six Cases of Osteomyelitis of Joints. (Gelenkosteomyelitis, speciell osteomyelitische Coxitis.) P. Klemm.
56 Fascia Graft for Defect in Dura. (Ersatz von Duradefecten durch frei transplantierte Fascie.) W. Denk.
57 *Development of Hypertrophy of the Prostate, and Suprapubic Prostatectomy. (Was geschieht bei der suprapubischen Prostatektomie. Woraus entwickelt sich die sogen. Prostatahypertrophie.) A. Lendorf.
58 Teratoma in Bladder of Woman of 35. (Teratoider Tumor der weiblichen Harnblase.) D. Teleky.
59 Third Case of Successful Operative Treatment of Extensive Defects in the Urethra. (Zur operativen Behandlung grosser Harnröhrendefecte.) G. Ekehorn.
60 Access to the Kidneys. (Zur Operationstechnik bei Operationen an der Nieren.) G. Ekehorn.

57. Abstracted in The Journal, Feb. 17, 1912, p. 526.

### Archiv für Verdauungs-Krankheiten, Berlin

*February, XVIII, No. 1, pp. 1-120*

61 Roentgenoscopy of the Stomach. (Zur Frage des radiologischen Magens.) B. Stiller. (Tierexperimentelle Untersuchungen über den Einfluss der Röntgenmahlzeit auf die Magenform.) F. M. Groedel and L. Seyberth.
62 *Differential Diagnosis of Gastric Cancer and Chronic Gastritis. (Differentialdiagnose zwischen Cancer ventriculi und der chronischen Gastritis mit Achylie.) S. Kemp.
63 Pathology of Duodenal Ulcer. O. Rosenbach.
64 Carlsbad Waters Have Dissolving Action on Urates. (Haben die Karlsbader Wasser urikolytische Wirkung?) A. Pollatschek and M. Adler.
65 *Mistakes in Diagnosing Appendicitis. (Die Blinddarmentzündung.) G. Leven.
66 *Functional Gastric Disturbances. (Funktionsstörung des Magens.) E. Gaither and F. Best.
67 *Parenchymatous Gastro-Intestinal Hemorrhage. (Parenchymatöse Magen- und Darmblutungen.) E. v. Czyhlarz.

62. **Differential Diagnosis Between Gastric Cancer and Chronic Gastritis With Achylia.**—Kemp reports that among twenty-six patients with gastric cancer only two presented normal conditions in regard to the emptying of the stomach. With chronic gastritis and associated achylia the evacuation of the stomach was normal in forty-six of eighty patients in this class. The motor disturbances were much more pronounced in the cancer than in the gastritis cases and they persisted unmodified by treatment, while the motor functioning of the stomach was generally easily restored to normal in the gastritis cases. His experience confirms the value of the "little retention," that is, the finding of a small amount of relics of food in the fasting stomach twelve hours after eating, as a sign of cancer; fifteen of his patients with simple gastritis had this sign but it was constant in the cancer cases and in a more pronounced form; in some of the cancer cases the relics of the preceding meal amounted to a total of from 1 to 6 c.c. Occult blood was found in the stools in 88 per cent. of forty-one cancer patients examined, not modified by treatment. Although occult bleeding may occur with gastritis, yet its continuous occurrence is so rare as to be practically negligible. Cancer of the fundus escapes discovery in its early stages, but cancer nearer the pylorus causes early such disturbances in the motor function that its presence may be suspected from this when the motor functioning is systematically tested on the first symptoms of gastric trouble.

65. **Errors in Diagnosis of Appendicitis.**—Leven gives ten case-histories in which the diagnosis of appendicitis proved to be erroneous. One patient was a boy of 10 whose attacks occurred on Mondays; Leven learned that on that day he took a lesson from a much-dreaded teacher, while his attention had been attracted to the ileocecal fossa by some of his mates having had appendicitis. Leven told him that at the age of 10 the painful point was on the left side, at a point he marked with an indelible pencil. The next attack of pain was localized under the pencil mark. In two other cases the pseudo-appendicitis was traced to arrest of the menses from a powerful purgative or cold, the abrupt cessation of menstruation being accompanied by nervous hyperthermia from the irritated condition of the nerves in the uterus—Leven calls this condition "peritonism." In the other five cases a stomach trouble induced symptoms suggesting appendicitis. Leven warns that before diagnosing appendicitis, the sensitiveness of the skin should be tested, taking up a fold at a time; it will frequently be found that the pain is as intense with this as at McBurney's point. In the menstrual cases the symptoms and pains can be usually abolished by keeping the patient in bed during the period and for two days after, having her take daily an enema containing ten to twelve drops of laudanum and 1.5 gm. sodium bromid in 60 gm. water. Moist heat should be applied to the lumbar region for an hour morning and evening. This will generally prevent or cure the tendency to dysmenorrhea, and thus the independence of the symptoms from the appendix will be plainly manifest. When the true seat of trouble is in the elongated and enlarged stomach, this can be determined by locating the lower margin of the stomach as the patient stands. Then with the hand worked underneath, the stomach is lifted up; as this is done the symptoms in the appendix region subside. They are evidently the results of the pulling and stretching of the nerve plexus in the region.

66. **Functional Gastric Disturbances.**—Gaither and Best report some experiments on dogs which demonstrated among other things that when a stomach has been very much distended, even when the distention has only occurred once, it is liable to lose its elasticity to a certain degree and become unable to pass fluids along while solid food is readily evacuated. When fluid and solid food were given together, the fluid was normally evacuated while the solid food was retained. It was found, however, that dilute hydrochloric acid given with the fluid promoted the emptying of the fluid, and that physiologic salt solution was evacuated more promptly than water alone.

67. **Parenchymatous Hemorrhage from Stomach or Bowels.**—Czyhlarz reports the cases of a young man and woman, previously healthy, who suddenly developed parenchymatous hemorrhage which proved fatal in three days; nothing was found at necropsy to explain the hemorrhage. He has been able to find three similar cases on record. In two other cases a drinking man with arteriosclerosis and chronic gastric catarrh had similar parenchymatous hemorrhages from the stomach, rapidly fatal; no special source for the bleeding could be detected. In two other cases about two weeks after an apoplectic stroke there was extensive hemorrhage in the gastro-intestinal tract, although nothing to explain it was found at necropsy. In two other cases, one previously published by Schultze, profuse gastric hemorrhage had occurred from time to time, finally proving fatal; the gastro-intestinal tract was found apparently normal but a cancer was discovered in the uterus or sigmoid flexure. In conclusion Czyhlarz reports the case of a previously healthy housemaid, who had a febrile sickness of several days' duration in the course of which severe parenchymatous intestinal hemorrhage developed and proved fatal. The most careful search at necropsy failed to reveal any explanation for the febrile affection or for the hemorrhages. He says that he has not been able to find any case like this on record.

### Beiträge zur klinischen Chirurgie, Tübingen

*February, LXXVII, No. 2, pp. 335-600*

68 Stab Wounds of Larynx. (Perforierenden Verletzungen des Kehlkopfes.) N. Boljarski.
69 *Postoperative Parotitis. J. Oehler.
70 *Necrosis of the Pancreas with Recovery. J. Oehler.
71 Echinococcus Disease of the Pancreas. (Ueber Echinokokken des Pankreas.) R. Hanser.
72 Action of Thermopenetration on Normal and Cancerous Tissues. (Histologische Untersuchungen über die Wirkung der Thermopenetration auf normale Gewebe und Carcinom.) E. Stephan.

73 Tincture of Iodin for Operations on Stomach and Intestines. (Verwendung der Jodtinktur bei Magen- und Darmoperationen.) E. Fritzsche.
74 Traumatic Separation of Lower Epiphysis of the Tibia. (Typische Form der traumatischen Lösung der unteren Tibiaepiphyse.) S. G. Leuenberg.
75 *Callous Gastric Ulcer. (Zur Behandlung des kallösen Magengeschwüres.) K. Borszeky and A. Baron.
76 Hernia of the Foramen of Winslow. (Pathogenese der Hernien der Bursa omentalis mit normaler Bruchpforte.) K. Borszeky.
77 *Pathology of Cholelithiasis. A. Baron.
78 Thoracal Esophagostomy. J. H. Zaaijer.
79 Tardy Hemorrhage with Traumatic Laceration of the Spleen. (Spätblutungen bei traumatischer Zerreissung der normalen Milz.) A. Nast-Kolb.
80 *Hematoma After Injury of the Skull. (Zur Kenntnis der intracraniellen, speziell der subduralen Hämatome bei Schädelverletzungen.) F. Strauss.
81 Fat for Filling Bone Cavities. (Experimentelle und klinische Beiträge zur freien Fetttransplantation. Plombierung von Knochenhöhlen mit Fett.) M. Makkas.
82 Differential Atmospheric Pressure Technics. (Weitere Beiträge zur Uebereinstimmung zwischen Ueber- und Unterdruckverfahren.) L. Dreyer and K. Spannaus.
83 Cholangiocystenteroanastomosis. F. Scheidler.
84 *Oxygen Roentgenoscopy of Large Intestine. (Sauerstoffradiogramme des Dickdarms.) R. Krauss.
85 Fibromas and Fibrosarcomas of the Ovaries. Keil.
86 Torticollis. (Behandlung des muskulären Schiefhalses.) W. Willemer.

69. **Postoperative Parotitis.**—Oehler states that five cases of parotitis following a laparotomy have been encountered at the Freiburg surgical clinic in the last eighteen months, while only one case is known in the previous history of the clinic. Little if any fever accompanied the parotitis and in only one of the cases was sepsis responsible for it. All the patients were extremely debilitated from cancer, etc. The conditions observed suggest that the inflammation was of blood-borne origin and that the extreme debility provided a predisposition; two of the patients succumbed. He advises an early ample incision as the best means to keep the process under control; a malignant course is liable although rare.

70. **Necrosis of the Pancreas With Recovery.**—In Oehler's case the patient was a man of 39 who developed acute pancreatitis secondary to cholelithiasis. There was no fat necrosis and, after expulsion of the necrotic section, complete recovery followed. The urine contained a large proportion of sugar for a time, but after the pancreatic secretion found its way anew into the intestine all trouble from this source was at an end. The diabetes came on when the pancreatic secretion was diverted outward and ceased as it resumed its normal course. During the pancreatitis there was intestinal hemorrhage, possibly from changes in the mesenteric vessels.

75. **Callous Gastric Ulcer.**—Borszeky and Baron report exclusion of the pylorus in seven cases of indurated gastric ulcer; the pains, vomiting and eructations ceased at once; the patients were able to eat and took on flesh. Instead of gastro-enterostomy plus section of the stomach and suture of the stomach stump (Eiselsberg), they simplified the procedure materially by simply throwing a ligature around the stomach in the region of the antrum of the pylorus. They used stout silk for the purpose, drawing it up tight. Ulcers induced experimentally on animals and then treated in this way, by exclusion of the region, healed perfectly.

77. **Pathology of Cholelithiasis.**—Baron has been studying whether bacteria were to be found in the normal gall-bladder, whence come those found in the diseased gall-bladder, and what are the factors cooperating in disease and which are the most important bacteria concerned. The literature on the subject is compared with his clinical and experimental research. In a series of six cases in 1910 the conditions indicated in all that a cancer had developed first and had been followed by gall-stone production. The symptoms from the gall-stones were the first sign of trouble in some. In a previous series of seven cases conditions indicated infection from the intestines or from the blood and liver or both as an important factor; secondary muscular insufficiency is another frequent factor. The combination of typhoid and colon bacilli or tubercle bacilli, and of typhoid and cancer is not an infrequent finding in the diseased gall-bladder.

80. **Hematoma from Injury of the Skull.**—Strauss discusses in particular subdural hematomas. From 1908 to 1911 about 48 per cent. died of his fifty-four patients with fracture of the skull. An operation was done in nine cases and six of these patients recovered. In one case an extradural hematoma gradually developed in the four days after the accident; in the second case by the fourth day there were merely motor aphasia and slight right paresis, no signs of pressure on the brain or of injury of the skull, but roentgenoscopy revealed a crack in the left parietal bone and the symptoms soon grew worse, first right and then general convulsions and unconsciousness. The pupils were unequal but the pulse did not indicate pressure on the brain, but when it was exposed a small epidural accumulation of blood and a large subdural hematoma in the temporal region were found, with a small focus in the brain at the foot of the central fissure showing effects of contusion. The symptoms improved at once and soon entirely disappeared. The epidural hematoma had evidently developed first; the torn vessels in the pia gradually bled enough to induce the aphasia the second day, and, continuing to bleed, the large subdural hematoma formed by the fifth day, manifested by the convulsions and stupor. The symptoms from the subdural hematoma first compelled operative treatment; the small epidural hematoma causing the first stage of symptoms might have been absorbed spontaneously in time. The patient was a man of 33 who had slipped on the street and hit the left side of his head against the curb in falling. He felt no disturbance from it at the time, but his head ached the next morning and he felt a little dizzy when he tried to get up, so he stayed in bed. The third day he noticed that it was hard for him to find the proper words to use, and this aphasia became pronounced so he was admitted to the hospital the fourth day, the only other symptom then being the slight paresis of the right side.

84. **Roentgenoscopy of the Large Intestine With Oxygen Instead of Bismuth.**—Krauss gives a number of instructive pictures taken with the Roentgen rays after the large intestine had been cautiously filled with oxygen. Air, he says, is not so well adapted for the purpose and does not give such good contrast shadows. The method is too inconvenient for the stomach, but it has many advantages for roentgenoscopy of the large intestine. The catheter with which the oxygen is introduced should be left in place as some of the gas is liable to escape if it is removed.

### Berliner klinische Wochenschrift

*February 26, XLIX, No. 9, pp. 385-432*

87 Origin of Pigmentary Layer of Retina. (Zur Entstehung des Retinapigmentes.) K. Kreibich.
88 Radium Emanations in Blood. (Emanationsgehalt des arteriellen Blutes bei Einatmung von Radiumemanation und bei Einführung derselben in den Darm.) J. Strasburger.
89 *Relations Between Hypophysis and Diabetes Insipidus. E. Frank.
90 *Peptic Ulcerations. (Statistische Bemerkungen über peptische Ulcerationen.) N. Paus.
91 Bacillus Fecalis Alkaligenes. (Vibrionenähnliche Formen des B. faecalis alcaligenes.) R. Pollak.
92 Appendicitis in Women and Its Factors. (Appendicitis beim Weibe, ihre Beziehungen zu den Adnexen und zur Tubenschwangerschaft.) H. Wohlgemuth.
93 Ozena and Diphtheroid Disease of the Throat. (Ozaena, chronische Diphtherie und Rachendiphtheroid.) L. Neufeld.
94 Tuberculosis Statistics. (Bemerkungen zur Tuberkulosestatistik.) J. Katz.
95 *To Separate Saccharose from Other Sugars in Body Fluids. (Eine neue Methode, um Saccharose von Dextrose, Pentose, Lävulose, Laktose, Maltose und Invertzucker in Urin, Speichel oder anderen Sekreten zu trennen.) L. K. Hirshberg (Baltimore).

89. **Relation of Hypophysis to Diabetes Insipidus.**—Frank reports a case which is like an experiment in the clinic, the peculiar circumstances causing disturbances similar to those induced in experimental research on the hypophysis. The patient, a man of 39, had epileptic seizures develop several years after he had tried to commit suicide by firing two bullets into his right temple. The balls could be seen in the head, one close to the cortex and the other close to the sella turcica. The latter bullet evidently kept up a constant mechanical irritation of the hypophysis, and the result was the same as in Schäfer's similar experiments on dogs, a permanent diabetes insipidus and tendency to adipose-genital dystrophia. Other data indicating a connection between the hypophysis and development of diabetes insipidus are cited,

including Hagenbach's case in which polyuria and polydipsia in a little girl were explained by a cheesy tubercle found in the infundibulum. Rosenhaupt has described a similar case, fever, thirst and polyuria coming on abruptly, and necropsy two weeks later revealing a sarcoma in the anterior lobe of the hypophysis. The conclusion seems inevitable that the intermediate part of the hypophysis is a gland with an internal secretion which controls the activity of the kidneys, and that essential diabetes insipidus in man is the result of excessive functioning of this gland. The brain affections which are usually accompanied by diabetes insipidus are those in which there has been traumatic concussion of the brain, and the region of the hypophysis is exceptionally liable to suffer in trauma of the skull. Resulting cicatricial changes may exert a permanent irritating influence on the gland, which is also liable with brain tumors, by direct pressure or by pressure from excessive amounts of cerebrospinal fluid.

90. **Peptic Ulcers.**—Paus examined the necropsy records at the Christiania pathologic anatomic institute and found records of peptic ulcer in the stomach in 2.77 per cent. of the 3,000 cadavers examined, 1898-1911, duodenal ulcer in 0.73 and esophageal ulcer in 0.03 per cent., a total of 3.3 per cent. of the total material.

95. Abstracted in The Journal, Feb. 17, p. 516, abstract 64.

### Deutsches Archiv für klinische Medizin, Leipsic

*CV, Nos. 3-4, pp. 179-448. Last indexed February 10, p. 447*

96 Infantilism. (Klinischer Begriff und Pathogenese der Infantilismen.) N. Pende.
97 Electrocardiography in Arythmia. (Elektrocardiogramme von Arhythmieen.) F. Herzog.
98 Pulse Tracing as Index of Condition of Vessel Walls. (Bedeutung der Pulsform. Untersuchungen mit dem O. Frank'schen Spiegelsphygmographen an gesunden und kranken Menschen.) E. Veiel.
99 Interpretation of Pulse Tracing. (Topographie, Entstehung und Bedeutung des menschlichen Sphygmogrammes.) O. Müller and E. Weiss.
100 Orthodiagraphy for Diagnosis of Incipient Enlargement of Heart. (Bedeutung der Orthographie für die Erkennung der beginnenden Herzerweiterung.) M. Otten.
101 Chemical Regulation of Respiration. (Chemische Atmungsregulation und Mittelkapazität der Lungen.) K. A. Hasselbalch.

### Deutsche medizinische Wochenschrift, Berlin

*February 29, XXXVIII, No. 9, pp. 393-440*

102 Roentgenoscopy of Swallowing Act. (Bewegungen der Speiseröhre unter normalen und pathologischen Verhältnissen—auf Grund röntgenkinematographischer Untersuchungen.) F. Kraus.
103 *Surgery of the Pancreas. (Zur Pankreaschirurgie.) Hinz.
104 *Sterilizing Power of Alcohol. (Keimtötende Kraft des Alkohols.) Schumburg.
105 *Acquired Syphilitic Joint Disease. (Gelenkerkrankungen bei erworbener Syphilis.) F. Bering.
106 Congenital General Hydrops. (Die angeborene allgemeine Wassersucht.) W. Fischer.
107 *Etiologic Relations Between the Nose and Articular Rheumatism. (Aetiologische Beziehungen zwischen Nase und Gelenkrheumatismus.) M. Senator.
108 Sprue Plus Syphilis. (Zum Verlauf der Sprue.) E. Zabel.
109 Sterilization of the Unfit. (Zur Frage der Kastration und Sterilisation von Verbrechern und Geisteskranken.) O. Juliusburger.

103. **Surgery of the Pancreas.**—Hinz states that three of his six patients with acute pancreatitis were operated on and two recovered; the third died as the necrotic process was too extensive when the patient was first seen to permit of recovery. The other three patients under merely expectant measures all died. One of the patients had a pulse of 96 and yet the operation revealed such extensive necrosis that recovery without the operation would have been almost impossible. This shows the folly of waiting for a pulse rate of 100 before attempting an operation. All these six patients were unusually corpulent; all but one were women, the age ranging from 22 to 67. In three cases there had been vague pains and discomfort in the stomach region at times, evidently premonitory symptoms of the pancreas affection. One of these patients had had gall-stone colics. In the three other cases the pancreatitis came on suddenly in an acute and severe form, the pains localized in the stomach region in one case and diffuse throughout the abdomen in the others, leading to the diagnosis of appendicitis. The pain was described as a sharp burning sensation, continuous, with incessant distressing eructations and a rancid taste in the mouth. The abdomen was distended and no stool or flatus was passed, although there was not complete retention. No resistance in the pancreas region could be palpated except in two cases during the later stages. In two cases the appendix region was most tender; in the others, the area over the pancreas. Another tender point was found in two cases in the back below the left twelfth rib; this served to differentiate the pancreatitis from a gall-bladder trouble in one case. In a seventh case fatal necrosis of the pancreas developed in a man of 51 after an operation for ileus. He was obese but had previously been healthy. The manipulation of the transverse colon and its mesentery had probably injured the pancreas. In an eighth patient, a girl of 17, an abdominal contusion had caused laceration of the parietal peritoneum and some contusion of the pancreas, but the patient recovered after the omentum had been sutured and the lesser omentum drained. In two other cases pseudocysts following acute inflammation were successfully drained, the resulting fistulas healing in a month or three months. In two cases of malignant disease of the pancreas the diagnosis was based on the local resistance, its position in respect to the stomach and transverse colon and the absence of lactic acid in the stomach content, with the hydrochloric acid normal or above normal.

104. **Sterilizing Power of Alcohol.**—Schumburg calls attention to the fact that the sterilizing action of alcohol has generally been tested on bacteria in specimens on threads, beads or cover-glasses. Under these conditions the alcohol can gain access to only one side of the specimen and it is unable to display its full powers. The bacteria are all almost instantly killed when, in a suspension, they are dropped into alcohol which is thus able to attack them on all sides. The bactericidal action of absolute alcohol and denatured spirits under these conditions, he says, is fully equal to that of a 1 per thousand solution of mercuric chlorid.

105. **Syphilitic Joint Disease.**—In seven of the eleven cases reported there were no manifestations of the syphilis at the time except the joint trouble. In four cases there were manifestations corresponding to a late phase of the disease. In nine cases the joint trouble developed insidiously, with only slight subjective symptoms; the effusion in the joint kept increasing the longer specific treatment had been delayed. There was occasionally a remission, but the process was progressive on the whole. In two patients the onset of the joint trouble was sudden and intensely painful, the effusion developed in a few days. One patient had had acute articular rheumatism three months before; his syphilis had been contracted eight years before. In the other acute case the syphilis was of only a few months' standing. The ankle, knee or sternoclavicular joint alone was affected in three or four cases each and the elbow alone in two; several joints were involved in two cases. The Wassermann reaction was positive in ten of the eleven patients. The absence of fever and of heart symptoms, the slight pains and lack of hindrance of movements of the joint, and the insidious onset are the most characteristic features, also the comparative harmlessness of the arthritis. Under specific treatment the affection promptly subsides without leaving a trace unless irreparable lesions have already been installed. Salicylic medication does not seem to have the slightest effect on the process.

107. **Connection Between Lesions in the Nose and Articula Rheumatism.**—In the case reported by Senator and in tw others he cites from the literature, a minor operation on th nose was followed in four or five days by a typical attack of acute articular rheumatism. He cites other data to confirm the etiologic connection between lesions in the nose an this disease, emphasizing the necessity for cautious treatmen after operations on the nose, and also the necessity for examination of the nose as well as the throat in all cases of articular rheumatism. The protecting powers of the nose ar reduced by the operation, and infection results—not virulen pyemia but only the attenuated pyemic form, the so-calle acute articular rheumatism. The assumption that acute articular rheumatism is an acute infection with attenuated pyemi is sustained by the data presented.

### Deutsche Zeitschrift für Chirurgie, Leipsic

*February, CXIII, Nos. 5-6, pp. 427-608*

110 *Ureterostomy. K. Frank.
111 Predisposition to Hernia and Traumatic Hernia. (Zur Frage der Bruchanlage und der traumatischen Hernie.) F. Zollinger.
112 *Transplantation of Bone. (Zur freien Knochenüberpflanzung.) N. J. Baschkirzew and N. N. Petrow.
113 *General Anesthesia, Especially with Oxygen and Compressed Air. (Studien zur Narkosenfrage, insbes. über die Anwendung von Sauerstoff und komprimierter Luft.) A. Brüning.
114 Injury of Duodenum. (2 Fälle von Duodenalverletzung.) F. v. Winiwarter.
115 Regeneration of Gall-Bladder with Recurrence of Gall-Stone After Cholecystectomy. H. Flörcken.

110. **Abdominal Ureterostomy.**—Frank's review of the experiences on record with implantation of the ureters in the intestine, shows that the conditions afterward are far from satisfactory either in regard to continence or prevention of ascending infection. He reports a personal case of exstrophy of the bladder treated with what might be called ureterotrigonosigmoidostomy. The boy still had a fistula when last heard from. Other methods of implantation in the urethra, etc., have not given good results on the whole; Rovsing has been more successful with lumbar ureterostomy and Zuckerkandl's method of implanting the ureters in the abdominal wall seems to be still better. Frank reports the details of four cases in which the latter technic was applied. He does not hesitate to affirm that the ultimate outcome and safety of this technic render it far superior to all other means to date to divert the urine from a hopelessly diseased bladder or after removal of the entire bladder. The ureterostomy does not require general anesthesia and the whole procedure is outside the peritoneum. The mouth of the ureter was sutured in the first two cases just above the crest of the ileum, over the anterior margin of the quadratus lumborum. In the third case the ureters were brought out through the skin on a level with the umbilicus, on a line with their natural course. The kidneys were much below par in this case but soon recuperated and the patient is now in the best of health, seven months later, and is able to keep herself dry and the portable urinal aseptic. In two of his four cases the patients had been driven to morphin by their painful bladder trouble, but the morphin was dropped after the operation.

112. **Transplantation of Bone.**—In this communication from the St. Petersburg Medico-Military Academy extensive animal experimentation is described and illustrations given of cases in which a long bone graft was implanted. The results confirm the possibility of successful transplantation provided the implanted bone is living and is taken from the subject or from another of the same species. Illustrations of one patient four years after the graft showed that an autoplastic shaft of bone, from the fibula on the left leg, 9 cm. long, taken out of its periosteum, healed in place and functionates perfectly, taking the place of the right ulna which had been removed for supposed sarcoma, although the lesion proved to be tuberculous. The illustrations show further the regeneration of the fibula from the periosteum which had been left in place, a stout although rather uneven new fibula resulting. A scrap of the grafted bone showed under the microscope many dead but also numbers of living bone cells. Grafts and consecutive regeneration proceed far more satisfactorily when autoplastic material is used.

113. **Oxygen as Vehicle for Anesthetic.**—Brüning's arguments apparently disprove the assumption that oxygen is an aid to the anesthesia either by its chemical or physical action. Both oxygen and compressed air induce changes in the mouse lung, but they are more severe with the compressed air. His experiments indicated that lack of moisture in the compressed air is responsible for this injury, and that it can be avoided by saturating the air to 50 or 80 per cent. with steam, but too much moisture is as injurious as too little.

### Medizinische Klinik, Berlin

*March 3, VIII, No. 9, pp. 343-384*

116 Disease and Dropping Out of the Hair. (Alopecie und Defluvium.) F. Luithlen.
117 *Indications for Operative Treatment of the Enlarged Prostate. (Indikationsstellung zur operativen Behandlung der Prostatahypertrophie.) P. Janssen.
118 Paratyphoid Bacilli in an Ovarian Cancer. (Paratyphus-B-Bacillen in einer carcinomatösen Ovarialcyste.) G. Seiffert.
119 Three Primary Cancers in Woman of 74. (Zur Multiplizität primärer Carcinome.) W. Ahschul.
120 Lack of Thirst. (Zur Frage der Oligodipsie.) Jungklaus.
121 Treatment of Bladder Tumors. (Zur Therapie der Blasengeschwülste.) R. Kutner and L. Casper.
122 Plants Sought by Ants. (Ameisenpflanzen.) W. Wangerin.

117. **Hypertrophy of the Prostate.**—Janssen is convinced that it is often possible and advisable to relieve the disturbances from the enlarged prostate by diverting the urine. This leaves the natural outlet in peace and congestion subsides. In some cases this is sufficient to restore permanently the permeability of the natural passage; in other cases the palliative operation may be required again, but it is comparatively insignificant and can easily be repeated at need. The enlargement may be the result merely of local congestion from a sedentary occupation, and he said it would be like shooting at sparrows with a cannon to advise prostatectomy in such a case. Treatment should aim merely to restore normal conditions in the local circulation; when this is done the hypertrophy subsides of itself. Dietetic and hydrotherapeutic measures and suitable exercise may be all that is needed, especially cool daily sitz baths, massage of the legs or daily, non-fatiguing walks. "Catching cold" must be scrupulously avoided, and the patient should not drink anything later than 6 p. m. Defecation should be rendered easy. If these measures are persevered in, the patient with mild trouble from beginning enlargement of the prostate may be permanently freed from all disturbance. In a more advanced stage, endovesical and instrumental measures are required, and with the above measures may tide the patient over an exacerbation. Janssen insists that as long as the urine is clear and aseptic, the physician should keep the catheterization in his own hands; only the most intelligent elderly men of leisure can be safely entrusted with the catheter for them to use themselves or have their attendants use it on them. Janssen warns further that extreme distention of the bladder, even once, may injure the muscles and nerve terminals in the elderly beyond recuperation. When a radical prostatectomy is not possible, a slanting fistula into the bladder, according to the Witzel technic, is a procedure which he thinks deserves wider adoption. It is so simple that it can be done by any surgeon. Under infiltration anesthesia sufficient for a 1 cm. incision of the skin, the skin is incised three fingerbreadths from the median line, below the umbilicus. Through this small incision a stout curved Fleurant trocar is introduced, slanting, till it reaches the center of the symphysis. The point of the trocar is then pushed inward above the middle of the symphysis until it pierces the wall of the bladder previously distended to its maximum. After pulling out the guide, a narrow tube (No. 13) is introduced through it. The tube is measured so that a part two and one-half times as long as the trocar is introduced through it: then by drawing it out to the length of the trocar the latter can be removed. The patient can then empty his bladder at will by removing the stopper from the tube. Janssen has found that conditions were often so improved by this simple slanting fistula, cystostomosis he calls it, that no further procedures were necessary in some cases; in others it permitted the needed prostatectomy later, while some patients found it so satisfactory that they cling to it permanently.

### Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

*February, XXXV, No. 2, pp. 125-264*

123 *Delivery After Antefixation of Uterus. (Behandlung der Geburt nach operativer Antefixation.) F. Schauta.
124 Biochemical Factors in Menstruation. (Zur Pathologie der menstruellen Blutung.) G. Klein.
125 Pirquet Streptococcus Skin Reaction in Puerperal Fever. (Kutanreaktion bei Sepsis puerperalis.) R. Köhler.
126 Cervical Cesarean Section with Double Uterus. (Sectio caesarea cervicalis bei einem Fall von Verdoppelung der Genitalorgane.) W. Benthin.
127 *Vaginal Cesarean Section in Eclampsia. (Vaginaler Kaiserschnitt bei Eklampsie.) W. Beckmann.
128 *Pain in Sacral Region. (Entstehung und Behandlung des Kreuzschmerzes.) A. Theilhaber.
129 Retro-Uterine Hematocele from Fecal Stasis. A. Wolff.
130 Ascending Urogenital Tuberculosis in Women. (Zur Frage der aszendierenden Urogenitaltuberkulose beim Weibe.) E. Engelhorn and P. Jung.

123. **Labor After Ventrofixation.**—Schauta deplores the increasing tendency to deliver women by cesarean section when the cervix is drawn upward and backward as the result

of antefixation. He is convinced that much more might be done in the way of natural delivery instead of overhasty proceeding to operative measures. In four cases in his experience the exaggerated anteflexion seemed to forbid natural delivery, but by traction on the cervix, version when necessary, drawing down a foot and suspending a weight from it, it proved possible to turn the expelling forces into the proper direction and labor then proceeded naturally. His latest patient was an viii-para with pendulous abdomen reaching half way down the thighs. The vaginal portion of the cervix was very high up and far back, reachable only with the entire hand. Under complete anesthesia he introduced his hand, grasped the right foot and suspended a weight from it; an hour later the child could be delivered naturally. It weighed 4,850 gm. and measured 58 cm. The great obstacle to natural delivery is the buckling of the uterus on itself, forming a protruding spur which the fetus has to override. The looser the ventrofixation the better the outlook for subsequent pregnancies. In case operative measures are unavoidable, Schauta advocates sagittal slitting of the anterior lip of the os and cervix; this is indicated especially after vaginofixation, watching carefully to see that the bladder is not imperiled. The metreurynter answers the same purpose as weighting the foot, pulling the os down into line with the expelling forces, and straightening out the projecting spur. The traction should be moderate and continuous.

127. **Vaginal Cesarean Section for Eclampsia.**—Beckmann reports from St. Petersburg that during the last two years he has made a point of delivering at once by vaginal cesarean section all women brought to the clinic with eclampsia, without wasting any time on other measures. The mortality among 210 women given conservative treatment in 1904-9 was 32.9 per cent., while it was only 18 per cent. among the forty-three women treated by immediate vaginal cesarean section. None of the children of the multiparæ died and only four of the primiparæ—three during extraction and one before the operation. One woman has passed through a normal pregnancy since, two through abortions at the fourth month; scarcely a trace of the operation could be found. After the vaginal cesarean section only seven patients had from one to five more convulsions, four had from five to ten and one eighteen, while in the other 72 per cent. there were no further convulsions. This material is tabulated under various headings and compared with others on record. Beckmann is convinced that it speaks strongly in favor of this method of treating eclampsia.

128. **Sacral Pain.**—Theilhaber discusses the various causes that may induce pain in the sacral region, and says that in treatment, besides hydrotherapy, climatic measures, spa treatment, superheated air and arsenic, he has sometimes applied venesection with good results, which sustained his assumption that venous stasis in the spinal canal might have something to do with the pains.

### Münchener medizinische Wochenschrift

*February 27, LIX, No. 9, pp. 457-512*

131 *"Transplantation Immunity." (Ueber Transplantationsimmunität.) G. Schöne.
132 *Neuritic Brachial Diplegia. J. Hoffmann.
133 Toxicity of Urine and Serum in Eclampsia. (Harn- und Serumtoxizität. bei Eklampsie.) P. Esch.
134 The Cortex and the Mind from Biologic Standpoint. (Ueber die Ubiquität der senso-motorischen Doppelfunktion der Hirnrinde als Grundlage einer neuen biologischen Auffassung des kortikalen Seelenorgans.) C. Jakob.
135 Lumbar Puncture and Examination of the Fluid. (Zur Technik der Untersuchung des Liquor cerebrospinalis.) Reichmann.
136 Unfavorable Action of Salvarsan on Blood Diseases. (Einwirkung des Salvarsan auf die zelligen Elemente des Blutes.) G. Schwaer.
137 *Collapse After Intravenous Injection of Hormonal. (Zur Kenntnis der Hormonalwirkung.) J. Kretschmer.
138 Therapeutically Active Constituents of Mineral Muds. (Die therapeutisch wertvollen Inhaltsbestandteile der Moore.) M. Winckel.
139 Art of Medicine in Japan. (Die Entwicklung der japanischen Medizin.) J. Schuster.

131. **Transplantation Immunity.**—Schöne's work on rats and mice indicates that animals previously treated with scraps of tissue respond in a different manner to implantation of tissue than the controls, the findings suggesting a kind of immunity process. The facts observed may have some bearing on the fate of transplanted flaps in the clinic.

132. **Neuritic Brachial Diplegia.**—In Hoffmann's three cases the patients retired apparently in perfect health and when they woke each presented the typical syndrome of brachial diplegia, both arms being completely paralyzed alike, with intense pain. The further course of the affection, the atrophy, reaction of degeneration, tenderness of the nerve trunk, paresthesias, the peripheral type of the sensory disturbances, and the gradual complete recovery by the end of two years—all confirm the assumption of brachial neuritis as the cause of the trouble. The patients were 9, 25 and 60 years of age. The lack of fever and of general symptoms testified against acute poliomyelitis. The symmetry of the paralysis was not quite absolute, and Hoffmann is inclined to believe that among the cases of acute poliomyelitis on record, in some of the patients the trouble was of this neuritic type instead.

137. **Collapse Under Hormonal.**—Kretschmer made an intravenous injection of hormonal in the 32-year-old wife of a physician, a few weeks after an attack of catarrhal jaundice, but the injection was followed by immediate collapse so severe that it required three hours of the most vigorous stimulants to ward off a fatal termination. The patient was given, among other measures, 25 c.c. of a 30 per cent. solution of caffein in the three hours; the best effects were attained with epinephrin saline infusion. The temperature by the second hour was 37.5 and by evening was only 37.9. She recovered in the course of a week; the circumstances excluded air embolism, which the symptoms suggested. Dittler and Mohr have also reported a severe collapse after an intravenous injection of hormonal, the blood-pressure dropping, and this effect has also been observed in animals under administration of the extract. In both the above cases the patients were in late convalescence from a febrile affection.

### Virchows Archiv, Berlin

*February, CCVII, No. 2, pp. 161-320*

140 Compensating Hypertrophy of the Lungs. C. Da Fano. Commenced in No. 1.
141 Cancerous Degeneration of Teratoma. (Karzinomatöse Entartung eines zystischen Mediastinalteratoms.) W. Ceelen.
142 *Atrophy of Testicle Following Mumps. (Hodenatrophie nach Parotitis epidemica.) H. C. Hall.
143 Origin of Giant Cells in Tuberculous Testicle. (Herkunft der intrakanalikulären Riesenzellen bei der Hoden-Tuberkulose.) F. Lotsch.
144 Fibromyoma of Seminal Vesicle. (Fibromyom der Samenblase.) W. Ceelen.
145 Changes in Epithelium Under Influence of Diuretics. (Die Mitochondria in den Epithelzellen der gewundenen Nierenkanälchen bei der Einwirkung einiger Diuretika—Koffein und Theocin.) K. J. Hjelt.
146 The Vessels in Congenitally Displaced Kidney. (Nierengefässe bei angeborener Nierendystopie.) N. N. Anitschkow.
147 No Retrograde Transport in Portal or Mesenteric Veins. (Zur Frage des retrograden Transportes im Pfortadergebiete.) T. Yatsushiro.
148 Development and Adaptation of the Joints. (Anpassungslehre, Histomechanik und Histochemie.) R. Thoma.
149 Experimental Research on Pancreas and Fat Tissue Necrosis. (Untersuchungen über Pankreashämorrhagie, Pankreas- und Fettgewebsnekrose.) W. Knape.

142. **Atrophy of the Testicle From Mumps.**—Hall found fibrous atrophy of the parenchyma of the right testicle at the necropsy of a young man who had died from gangrene of the bowel following an operation for movable cecum. The young man a year before, during an epidemic of mumps, had been treated for orchitis, the right testicle being swollen. The salivary glands were not swollen and under moist heat and bed rest the orchitis had apparently entirely subsided by the end of the second week. The young man had no signs of tuberculosis, gonorrhea or syphilis. The testicle during life had been of normal size and this is the rule in atrophy from mumps. Only one testicle is affected as a rule; Ringberg found bilateral orchitis in only thirty-three of 279 cases of orchitis in epidemic parotitis.

## Books Received

Acknowledgments of books received, being ephemeral matter not necessary to be included in the bound volumes, appear on one of the advertising pages immediately following the reading pages.

# Satisfaction in Automobiling

## A Symposium by Physicians on Their Experiences with Motor-Cars—How to Secure the Most in Comfort and Help at the Least Expense

### A COMPREHENSIVE SUMMARY FROM ONE YEAR'S EXPERIENCE WITH RUNABOUT

ABOUT a year ago I bought a small runabout (103), after having spent several thousand dollars on horses, buggies and drivers during the past thirteen years. During the last twelve months I have practiced medicine in more comfort, with more dispatch and with such satisfaction that I should almost prefer walking my rounds to using my phaeton again.

Of course, I have had punctures and trouble with the engine, but I can take a tire off and patch it and replace it in half an hour while a horse requires almost two hours to be shod. After my rounds are finished, the automobile is ready to take me any distance without a moment's delay, and situated as I am with my office a mile from home, the convenience of paying calls at a distance is incalculable.

#### COMPARISON OF COST

During the past year I have spent $282.62 for repairs and maintenance, which includes a set of new tires and several parts. I have driven approximately 6,000 miles. Therefore, it is very evident that for a physician, whether in town or country, if there be good roads, it is one of the most economical means of transportation yet devised.

Year after year I have spent $480, $500, and even $600, for a horse, phaeton and driver.

Fig. 1.—Dr. William L. Mosby, of Bardwell, Ky., with his 30 horse-power car (124*) in front of his "Old Kentucky Home." Dr. Mosby's article is on the next page.

#### A VALUABLE LIST OF CAUTIONS

Some of the practical things I have learned during a year's experience with the automobile are:

1. Not to crank the engine until one is black in the face.
2. To pour some gasoline through a petcock on the spark-plug or to pour it in the cylinder. This is useful to know on a cold morning; and the garage men might have forgotten to tell you.
3. Not to attempt to drive the machine if a knock is perceptible in the engine. Something is most likely loose, and to do so is risky.
4. To be sure that the oil gets to the bearings. I found a pipe stopped one morning and, although it was bitter cold, I took the sight-feed apart and cleaned it.
5. To go over my engine myself. Nobody is as much concerned about my neck as I am, and a cotter pin out of the steering-mechanism might cause the machine to fail at a turn and woefully endanger life.

I do not care to risk being stopped on the road by having dirt in the carbureter and so I strain all the gasoline through chamois skin.

I made a strainer by taking a large tin funnel and flaring out the spout with a round piece of iron and then tied a bag of chamois leather securely over it. This allows the gasoline to flow freely and it does not slip off.

The rear wheels are kept on by a pin going through the hub and axle and as it is a great strain on this pin, I have often found them broken. Serious consequences might ensue in case the wheel came off because of this. I frequently examine them to make sure. I broke a ball race in the front wheel once and came very near chafing through the axle but, luckily, I discovered it in time.

Another time I found that I could not change from low to high speed. I took off the top of the transmission case but found everything intact. Then I remembered having put some extra batteries loose under the seat. On investigation, I found that one of these had become jammed by the clutch lever and so I could not change it. I do not carry loose batteries there now.

#### CAREFUL DRIVING PAYS

I had observed that many drivers when changing to high speed throw the clutch in so suddenly that the machine jumps forward. I did likewise for some time until I came to a realization of the great strain on the engine and gears and wear on tires, so that now I slightly lift my foot from the throttle, push the high speed until it is about to engage, then wait for the engine to begin to take up the load, and then I push it to engage, thus making the change without the unpleasant jerk. After breaking a spring, I learned how to drop into a deep hole and get out again by taking my foot off the throttle, which takes one over without the bouncing that motorists know so well.

#### TIRE REPAIR AND PROTECTION

I have tried several devices to use up old blown-out tires and have found them of questionable service. One inner liner, made of heavy canvas, and to be laced around the inner tube before putting in the casings, is calculated to provoke wrath. I consumed two mortal hours in putting one in one day. They do not prevent blow-outs, they chafe the tube and cut themselves through in a single month, although they are guaranteed for ten months if put in a new casing, but I have used a new casing nearly a year without even a puncture. Then, too, $3.25 is pretty dear to pay for a yard or two of canvas and a few eyelets. The soft canvas blow-out patches are practically useless as they are not stout enough to withstand the air-pressure, and push through a comparatively small opening. The stouter ones (101*) I think are best. The outside patches are of little value except to get home with, because the metal lugs break and chafe the casing and cause an irregular bump on the tire that makes a tiresome thumping. I always carry tube patches, cement, an extra inner tube, a blow-out patch or two; and so far I have not yet been towed home.

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* "Automobile Key," giving names of cars, etc., will be sent to any address on receipt of a stamped addressed envelope.

I have never used chains but instead I put tread tires (102*) on the hind wheels at the beginning of winter, and I have not been stuck in mud but once or twice and then I doubt if chains would have availed me. Chains are hard on tires; and I have driven my machine when pedestrians could scarcely keep their feet on ice-covered streets.

I find the various cements and plastic rubber of little value in patching cuts in tires. I simply use the tire until there is a blow-out; then I put in an inside patch, and when the hole becomes too large I sell the tire as junk and buy a new one.

### AVOID COMPLICATED DEVICES

I have continued to use dry batteries connected in multiple series of five each, as a source of current, and as they are reliable and not likely to get out of order I shall continue to use them. Magnetos are delicate pieces of machinery and I have not the time or inclination to tinker with too many pieces of machinery to keep them going.

I have not yet used any self-starting device, nor do I attempt any repairs which would require too much expenditure of time, as my time is worth more than a machinist's; and besides I do not attempt to tinker with as expensive a piece of machinery as an automobile. Such work as valve-grinding, replacing worn parts difficult of access and requiring special tools, I leave to the machinist.

I regularly see that the water-cooler and oiler-reservoir are filled daily, and that all movable parts are well lubricated and if I stop on the road I am well assured it is no fault of mine.

I have been using my machine all the year except about a week of intensely cold weather; when the temperature fell below zero I found it more comfortable to walk. The machine would have worked, however, had I desired to use it. The water in the radiator was prevented from freezing by the addition of ½ gallon of wood alcohol. I have used about 2 gallons this winter, costing $1.60.

### THE CHOICE OF A CAR

As to the car most suitable for a physician: For the country a moderately high-wheeled one with solid tires is best, since the wear and tear on the mechanism of a low-wheeled car is very great if it has to plow through mud. I never quite saw the need for a four-passenger touring-car to practice medicine with, unless the owner desires to be separated from his money, as the maintenance is very much greater. It reminds me of using the family carriage to do one's rounds, when a buggy would do.

The owners assert that they want power and speed to convey a 150-pound load! My machine weighs 1,300 pounds, carries a 450-pound load, and is comparatively low horse-power, 10 or 12. Yet I can go faster than the law approves, and at the minimum cost.

George E. Barksdale, M.D., Richmond, Va.

## THE HORSE PREFERABLE IN HILLY COUNTRY

My automobile career began with a high-wheel, cable-driven car (122*) some years ago, and as road conditions were not the best and many hills presented more than 45 degrees elevation, this machine proved a failure and I soon disposed of this "hoped-for" luxury but real "trouble-maker" and returned to my horse and buggy, which I was forced to keep during these automobile days.

Later I purchased a real automobile (123*), with ample power and speed but with planetary transmission, which proved to be a mistake for our hills with such a heavy machine, requiring too frequent adjustment and making maintenance and gasoline bills run up into high figures. Last fall I purchased a roadster of "sliding-gear" type with seating capacity for two only (124). This car has four cylinders and is a 30 horse-power (ample for our roads and hills), and so far it has given splendid satisfaction, being always ready, positive in action, combining speed, beauty and power. [An illustration is on the preceding page.]

The sale of my first car brought me out even on the purchase. My second car cost me about $1,400, besides other expenses in connection with its use, over $100 being spent for tires during the time I was using it; and since purchasing the third car I sold the second for $200; all of this, however, should not be charged to this car, as it would have made a good machine for a level city with good paved streets. I used it one and one-half years.

In my opinion there is not much economy in the use of an automobile in country practice. I am compelled to keep one horse in the summer for rainy days, nights, off roads, etc., and two horses in winter, as I cannot use the car on our roads then. A good car under favorable circumstances is a "joy forever," and combines pleasure with business, but one should figure the cost carefully before investing and not take the manufacturers' dictum without a grain of salt on this line. One should also consider well conditions as to roads, ability to use personally and keep car in "normal health."

William L. Mosby, M.D., Bardwell, Ky.

## A SLICK STICK STUNT

When an automobile is stuck in a mud hole, several miles from a pair of mules, it is calculated to inspire ideas as to how to get out of the difficulty. Last month I experienced just such a predicament, and the position of the car in the mud hole was so peculiar that an unusual method was resorted to to relieve the situation.

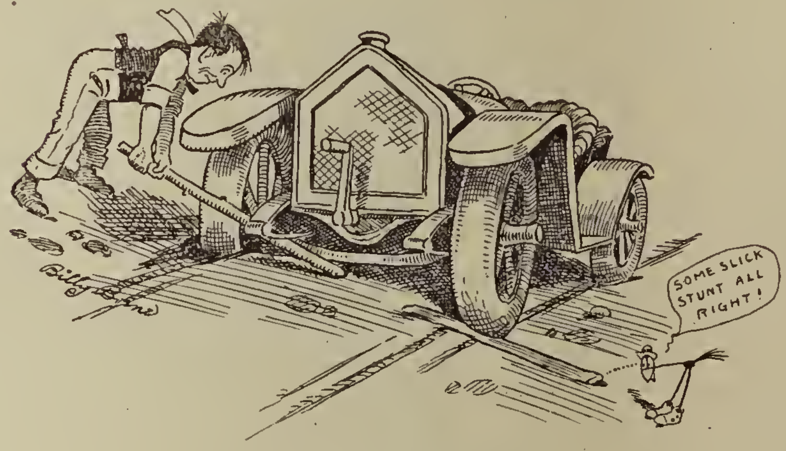
SOME SLICK STUNT ALL RIGHT!

Fig. 2.—A slick stick stunt.

The right front wheel was in mud above the axle, the left front wheel, however, was higher and on more solid ground, causing a tilt of about twelve degrees to the machine. The two back wheels, with chains on, were in mud of several inches depth. If the right front wheel could be gotten out of the hole by shifting the front of the car over to the left, where the mud was shallow, then the car could be run through.

A stick, about 3 feet long and 2 inches in diameter, was found in the mud and water and, in consequence of having been there some time, was very slick. After jacking up the left front wheel and placing the stick under it, cross-wise with the road, the wheel was let down on this stick. Then with a hatchet a stout pole was cut and placed under the right front spring, lifting the machine and allowing it to gradually slide over the slick stick. It was surprising how easily the front of the car could be shifted over by this method.

Jere E. Cocke, M.D., Asheville, N. C.

**Heat in Winter from Engine.**—I have been keeping my auto very comfortable in the coldest weather by putting on all curtains and raising the floor-board, leaving a space open the length of the board and about two inches in width. Enough heat comes through this space from the engine to keep the occupant very comfortable.—L. Reppert, M.D., Muscatine, Ia.

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* "Automobile Key," giving names of cars, etc., will be sent to any address on receipt of a stamped addressed envelope.

# SOME OPINIONS ON THE TIRE PROBLEM

## CUTTING DOWN TIRE EXPENSES

SO long as we have to depend on a cushion of air in an envelope of rubber the problem of tire expense and the annoyance of delays on the road will be a live issue. The general quality of tires has steadily improved, and it seems that the limit of strength and endurance with present materials had about been reached by the best manufacturers. To us who often have to drive fast and to whom delay may be calamitous, freedom from tire worries is of the greatest importance. Cars as now made are about as dependable as any piece of mechanism can be, and delays from failure of motive power are comparatively rare.

### TIRE ACCESSORIES ARE EXPENSIVE

To the man who must get there on time the demountable rim has been a godsend. He can feel secure that in case of failure of a tire he has another ready inflated which can be very quickly applied. But the expense of carrying two extra rims with casings and tubes complete—for less than two will give no great security—is considerable. Even when carried in a tire-trunk or protector the spare tires, after once having been applied to a wheel and later removed, deteriorate rapidly. Tire-protectors of various sorts, both inside and outside, are on the market in number almost legion. A good outside tire-protector costs nearly as much as a new casing, and even if it does double the life of the casing, as is frequently claimed, it is like wearing eight tires instead of four.

Figs. 3 and 4.—Minnequa Hospital of the Colorado Fuel and Iron Company, Pueblo, Colo. The left-hand view shows the west wing, the other, the front of the hospital. The hospital is built in Spanish mission style, the several wings being connected by open corridors. All rooms are outside rooms, each facing drives or open grass courts. The hospital is situated in a twenty-acre wooded park. There are no stairways or elevators; inclines are used instead. The statue over the center of the building is of "Luke, the Beloved Physician." The portraits on the wing are of Hippocrates, Pasteur, Jenner and N. S. Davis (in the center, third from left). These portraits are done in glazed tile and fired just as chinaware is painted and fired. The work was done by a local Pueblo artist. The employees of the company number about 12,000, in the steel works at Pueblo and the mines, which are scattered through Colorado, Wyoming and New Mexico. The hospital has 200 beds and employs eleven physicians. With the physicians at the mining camps, this makes a force of over thirty physicians who give their whole time. In the picture on the left are shown some of the attending staff with the automobiles (197) which they use. Photographs were sent by Dr. R. W. Corwin, Chief Surgeon.

### FOR TIRE ECONOMY GET A LIGHT CAR

The importance of tire care, such as avoiding oil, repairing small cuts in the tread, keeping up full inflation and the like, is generally recognized and a little time thus spent is well paid for by the longer tire life. But after making somewhat of a study of this tire problem I am forced to the conclusion that the nearest approach to a solution lies more among the fundamentals. It is not the selection of any particular make of tire or any protective device. My experience has been—and my observation of others coincides with it—that the generally accepted standard tires are much alike in the long run, it is more in the selection of the car. Other things being equal, the heavier the car the greater tire wear, but there is more to the problem than a simple matter of relative weights. Of course the man with the big heavy car expects to buy more rubber than the man with a light runabout. Freedom from tire troubles of all kinds, barring certain accidents and apparent runs of ill luck, with which any man who has driven much is familiar, will decrease on cars of the same weight as the size of wheels and tires increases.

### FOR TIRE ECONOMY USE LARGE TIRES

To illustrate, my car is of the five-passenger touring type (131) and weighs about 2,400 pounds. My tires are 36 by 4 inches. I see another car made to carry seven and weighing 4,200 pounds with tires 36 by 4½ inches. Either my car is overtired or the other is undertired. Overtiring is the first point in the scheme of tire freedom.

The fact seems to be that comparatively few makers of cars have fully appreciated the importance of this so-called oversize tire equipment, equipment with tires not only large enough to sustain the weight expected but larger, and the bigger the margin of safety the greater the freedom from tire trouble.

### FOR TIRE ECONOMY USE AMPLE SPRINGS

The second point in my scheme is in the matter of springs. The more perfectly the road jars are taken by the springs the easier the car rides and the less the strain on tires. My car has four full elliptic springs. Persons riding with me for the first time rarely fail to speak of the ease with which I take crossings and other road irregularities, and the mileage I get from my casings is proof that the springs take their full share of the strain. I now have one tire with the same air, on which the car has traveled about 6,000 miles. Another casing has gone 5,000 miles without a puncture and appears to be good for another 5,000 at least. I often carry five persons for considerable distances over all kinds of roads and in all kinds of weather, and as fast as anyone should drive. I carry no unnecessary weight, however, for the frame of my car is laminated wood instead of steel and I have not the weight of a water-cooling system. The car has been driven nearly 30,000 miles and is three years old but will now give me 40 miles an hour if I want it, and last fall I drove from Hartford, Conn., to Boston, 125 miles, in four hours and three-quarters without a stop. From such experience there can be no doubt that a water-cooling system to this car is merely excess baggage.

### FOR TIRE ECONOMY USE A WELL BALANCED CAR

There is one minor point in the scheme which, however, deserves mention. It is that of balance. A car which is so constructed that it tends easily to skid and swerve at speed will of necessity be hard on tires. I do not know how a prospective purchaser of a car can determine this point except by the experience of others with the same car. I have driven all winter; the car has been out every day but one, through the congested traffic and the suburbs, and a little into the beaten tracks on the country roads. My tires are all smooth treads and I have not had a chain on yet. In this connection, I believe the large wheels in proportion to the weight hold the secret.

I have used tires of three standard makes (130); there are but two of one make on the car now, and I can see little essential difference in quality. A casing which costs 20 per cent. more than one which may be generally supplied for given weight of car will give nearer 75 per cent. more service and will all the time give a remarkable freedom from all tire annoyances.

R. H. Gilpatrick, M.D., Boston.

## TIRE PROTECTORS

In a recent issue of The Journal it was suggested that correspondents discuss the efficiency of various accessories that make for better service, increased comfort and greater economy. A matter of vital interest to every motorist, especially to the physician, is tire up-keep.

I have driven a car during the past three seasons and find it indispensable both in practice and as a means of recreation. My touring-car (106*) weighs about 2,600 pounds and, naturally, is hard on tires. Being desirous of obtaining the longest mileage and to reduce blow-outs and punctures to the minimum, I investigated various protectors and reinforcements advertised and decided that the best method of reinforcing a casing was from the inside, and in the fall of 1910 I purchased a set of inside tire reinforcements (105*), made of four and five plies of frictioned fabric, formed and shaped to fit the inside of the casing and the plies vulcanized together in one body. One of my tires had an inside break in the fabric and was about to blow-out, but the reinforcement strengthened this point, enabling me to use the tire until the tread was honestly worn down, thus affording the maximum mileage that could be expected.

My experience is in every way satisfactory and I have not found that these reinforcements cause overheating or injury to the tube. I attribute this to the facts that I took pains to place them in the casing properly and that I keep my pressure up to the point recommended by the tire makers.

F. M. Hines, M.D., Auburn, Ind.

## SMALL REPAIR CHARGES WITH AIRLESS TIRES

As there are no signs yet of my 1910 single-cylinder runabout (108*) giving out, I shall continue to use it; it appears to run even better than ever. During the two years this machine has only twice failed to go and come and one of these failures was on account of the universal joint coming apart, which was put back by a machinist in a very few minutes, but I had to be pulled in. The other time was when the wire leading to the spark-plug burned off; then I was delayed one hour. Including the cost of one set of low-speed gears and other slight repairs my whole bill for repairs has only been about $29 since April 5, 1910. I have used this car almost every day and frequently at night, excepting three weeks during the year of 1911 and two weeks this winter. I have my garage heated with the city gas and can go in through a door from my residence; this is by all means the ideal location for the garage for a doctor's car. I used pneumatic tires on a car I bought in 1907 for one year and solid tires (109*) for two years on the same car. I never expect to buy punctures again. I have these tires on my rear wheels and airless tires (110*) on the front wheels. These tires are as near perfection as possible and are most economical.

J. E. Asay, M.D., Rock Island, Ill.

## PREVENT PUNCTURES FROM NAILS

The following suggestion in regard to tire care and efficiency may be of practical value to automobile users. For some years, I have experimented on my own roadster (111) in the endeavor to find a means of preventing punctures caused by the picking up of nails. From various sources I have determined that in the majority of cases punctures are due to this cause alone. The appliance consists of a loop of ordinary bath-tub chain attached underneath each fender so as to lie constantly across the wearing surface of each tire. The chain does not wear the tire. It will be found that a nail, when first picked up, does not enter the fabric and cause the puncture, but only after several revolutions does the nail reach the inner tube and cause the damage. This device will remove the nail or tack before a complete revolution is made. After the great fire of 1906 in San Francisco, the streets were infested with nails, and punctures were numerous. The suspended chains were used by many autoists and punctures from this cause reduced to a minimum.

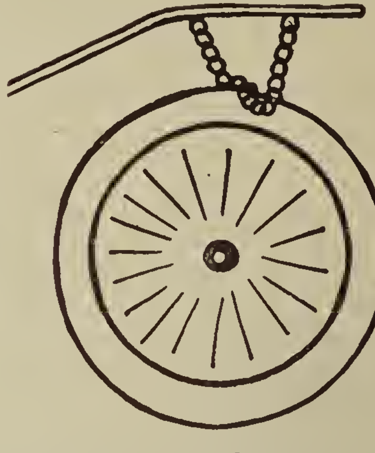

Fig. 5.—A method of preventing punctures from nails picked up by the tires.

Frederic Long, M.D., Bakersfield, Cal.

## KEEP TIRES PUMPED UP

Although my car (172) weighs 3,500 pounds, I get from 15 to 18 miles on a gallon of gasoline, due to the fine carbureter (173). I drove a smaller car (175) 37,000 miles during 1906 and 1907. During the next three years I drove another of the same make 43,000 miles. The first car, I understand, is still running every day in Sterling, Ill.

I do not think self-starting devices are reliable. One would hate to turn on the self-starter and strip the gears because the pump was frozen. The best plan so far is to get out and crank, then if the engine does not want to turn over easily one knows that something is wrong.

My tires (176) have run 5,540 miles with only two punctures, and are in good shape yet. Take no one's word as to how much air is in your tires, but purchase a gauge and see for yourself, keep them up to 75 or 80 pounds all the time.

Another wise thing to do is to clean out the old rusty water every week, and every other day give all the grease cups a turn or two. As for oil, by using a good quality (177), I never yet have been troubled with carbon.

Another good investment is to subscribe for the *Motor Age*, read it and ask any and all fool questions and the publishers seem more than willing to answer them. Make a study of your car out of the shop, for all cars are good and, with a auto magazine you will save a lot and will be able to keep your car out of the shop. As to using a horse—never again!

J. M. Nicholson, M.D., Chicago.

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* "Automobile Key," giving names of cars, etc., will be sent to any address on receipt of a stamped addressed envelope.

# THE FRACTURE OF THE WRIST BY BACK FIRING

## AUTOMOBILE FRACTURES

THE advent of the automobile about a decade ago brought with it a new fracture which has been christened "chauffeur's fracture." It would really be more proper to say that the coming of the automobile brought a new source of producing a very old and well-known fracture—namely, a fracture of the end of the radius commonly called "Colles' fracture." It is my intent to deal strictly with this particular fracture and not mention the many others that may be accidentally produced from automobile injuries.

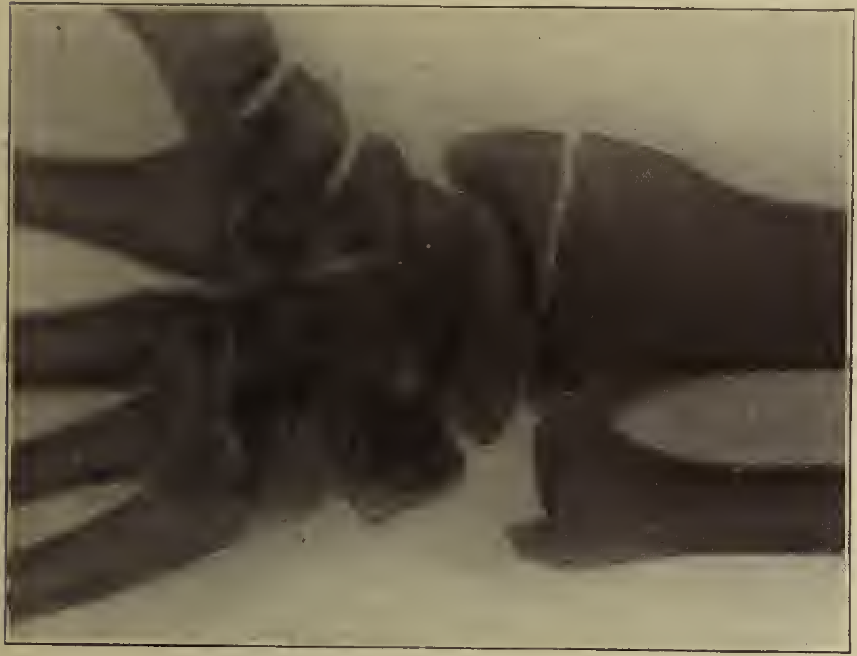
Fig. 6.—Skiagram showing typical "chauffeur's fracture."

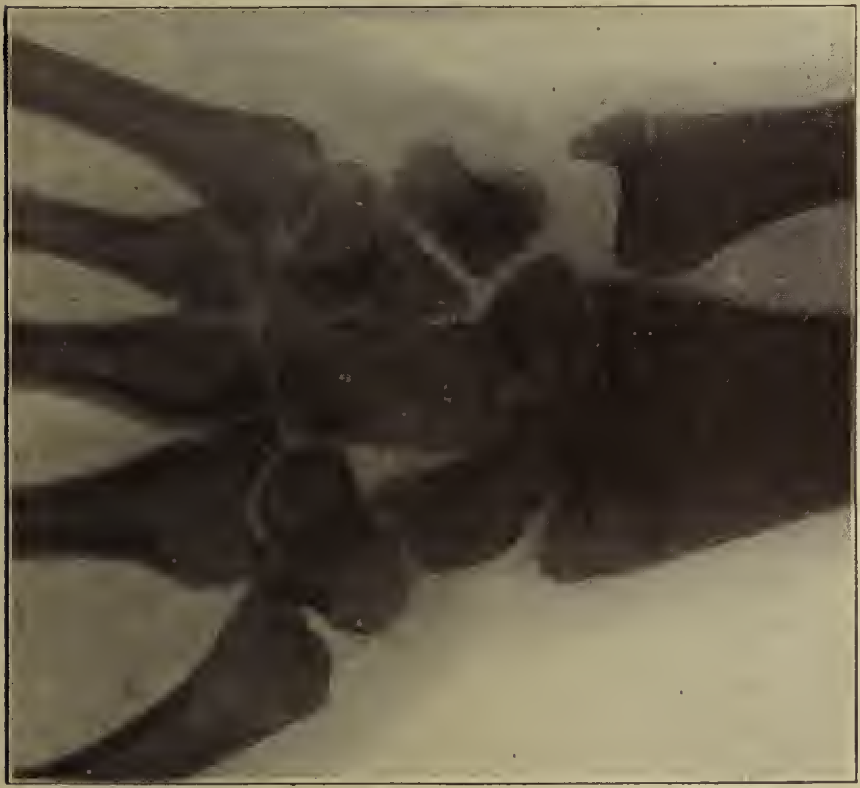
Fig. 7.—Normal wrist of boy aged 17.

This fracture is always produced from a "back fire" of the motor which suddenly throws the crank handle back in the opposite direction from which it is being turned. This is caused by a premature explosion in the cylinder, usually the result of the "spark lever" being too far "advanced," although it may be caused from a short circuit in the electric wiring or slipping of the commutator. This fracture is always produced by the back fire occurring when the handle is being pushed down, the resulting back-kick producing a blow on the palm of the hand, exactly equivalent to falling on the ground and striking on the palm, the resulting shock being transferred to the radius and this fractures at its weakest point, the epiphyseal line. Usually though the line of fracture does not follow this epiphyseal line entirely through the radius from side to side, but separates the triangular piece on the outer or thumb side as shown in Figure 6. This is due to two main factors; first, the fact that the epiphyseal line takes this direction (see Fig. 7) and, second, most of the force of the blow is on this side, due to the way the handle is grasped with the thumb around it, the pressure being exerted at this point. This style of fracture (Fig. 6) we designate as the "typical chauffeur's fracture," although in truth, there is no "typical" fracture. The majority of them, however, are of this kind and that is the excuse for this designation. This is fortunate, too, for the victim, for in this class there is little or no displacement of the fragment, reduction is unnecessary and the permanent results are good in these "Automobile Fractures," though the injury does not always assume this

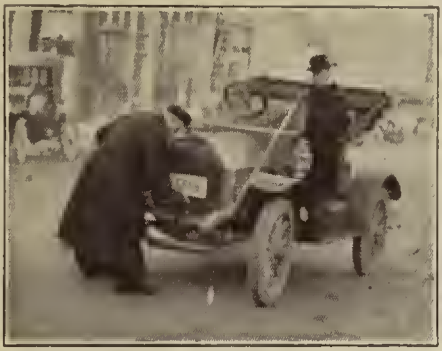
Fig. 8.—Incorrect way of cranking motor.

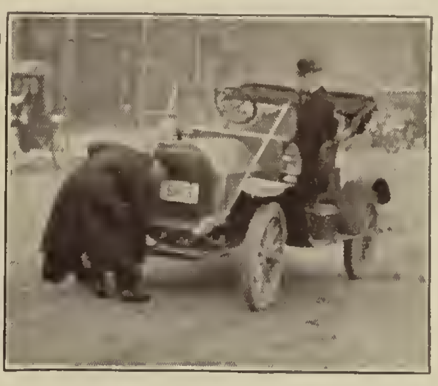
Fig. 9.—Correct way of cranking motor.

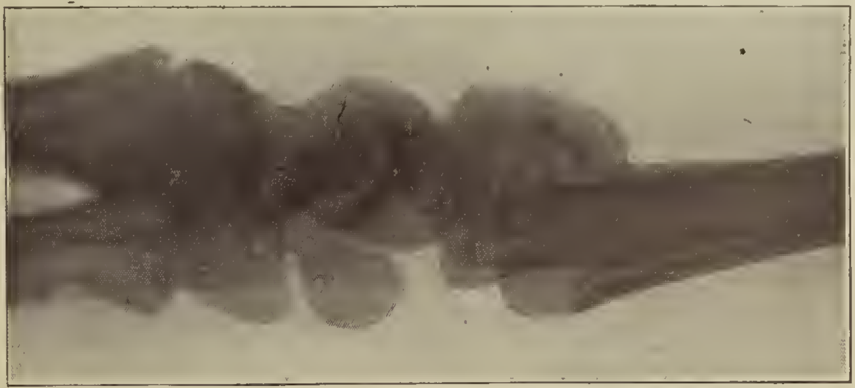
Fig. 10.—Backward displacement of fragment.

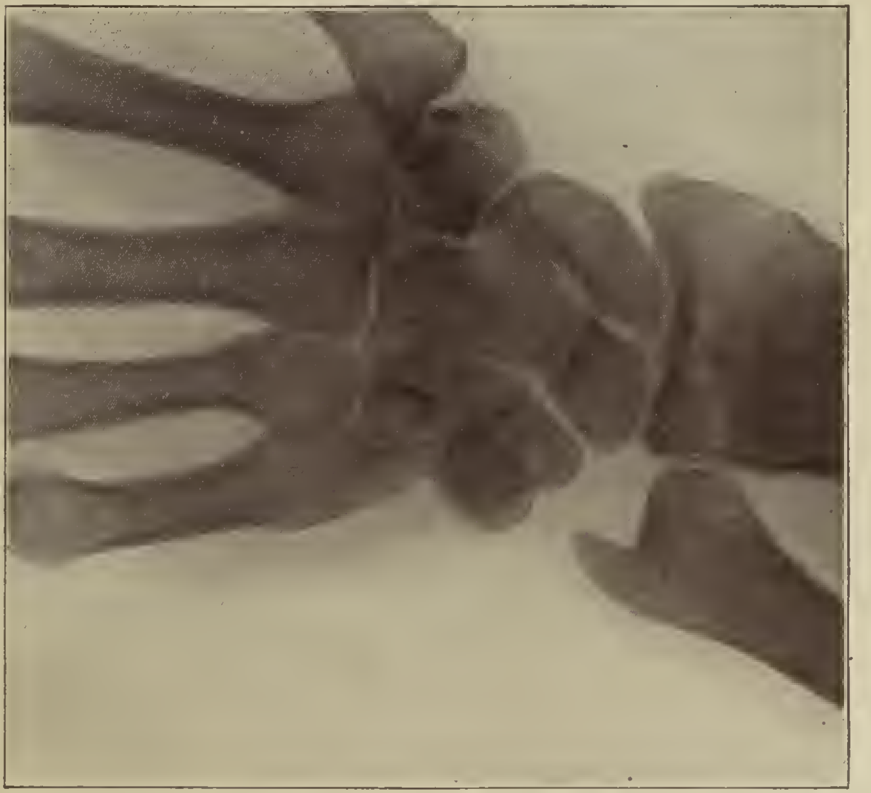
Fig. 11.—"Chauffeur's fracture"; anterior-posterior view.

type just described. In fact the line of fracture, the number of fragments, the amount of impaction, the backward displacement, the involvement of the styloid process of the ulna, the swelling, tenderness and pain may be just as varied as the Colles' fracture produced in the usual way.

If the injured person is 18 years old or younger, then a comparative radiograph of the normal wrist should always be made, as union of the epiphysis will not take place until that age. Figure 7 shows a normal wrist at 17 years of age; here the epiphyseal line of the radius can still be faintly seen and also the epiphyseal line of the styloid process of the ulna, and when this is fractured it is through this line. Figure 8 shows the incorrect way to crank the motor, which may result in these fractures and Figure 9 shows the correct way. Here the handle is grasped by the fingers only and quickly pulled up; then, should a kick result, the operator has a chance to get away before the crank gets around to hit him—although this may happen and a fracture result. Recently a crank-handle has been patented to prevent this accident (*Scientific American*, Jan. 6, 1912). This consists of a handle, the crank-lever of which is composed of two parts held together by a spring clutch. This will withstand any steady pull, but a sudden shock will break the handle in two, fracturing the handle rather than the wrist. At present many cars are being equipped with "self-starters"—certainly the ideal way—so that eventually the "chauffeur's fracture" will be of historical interest only, although we will have a greater or less number for many years to come.

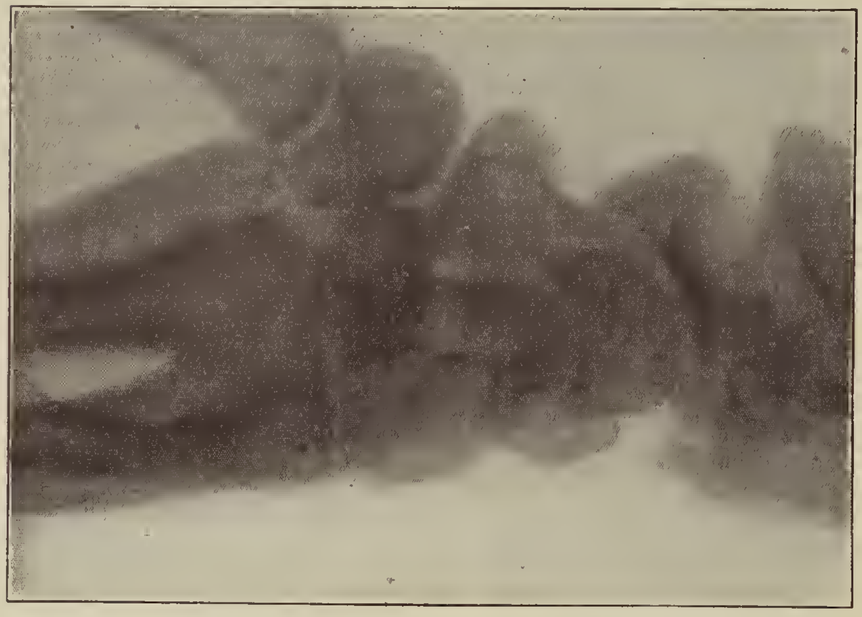

Fig. 12.—"Chauffeur's fracture"; lateral view of Figure 11.

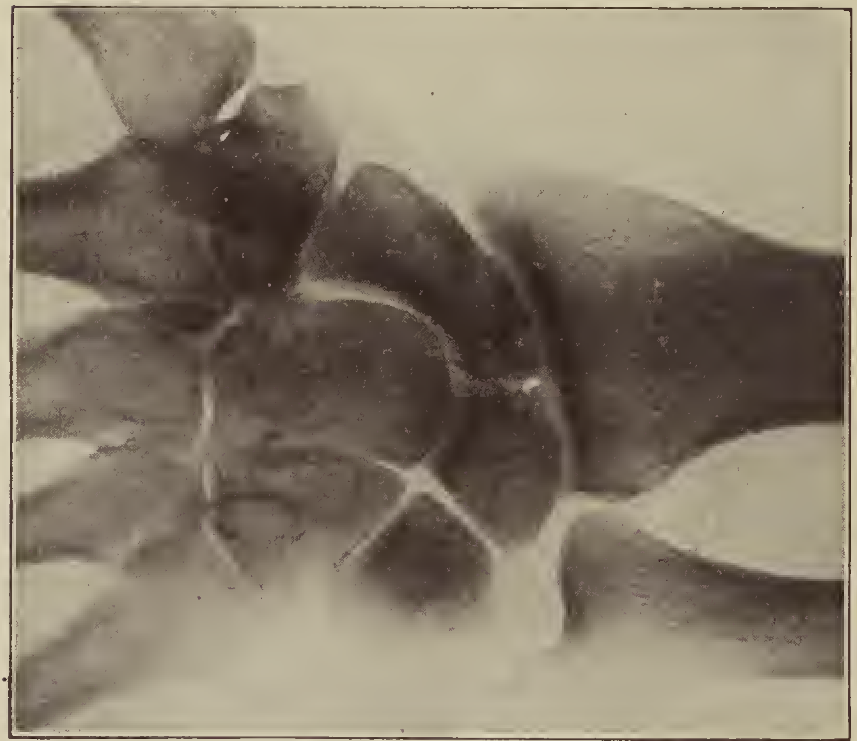

Fig. 13.—Normal adult wrist.

The radiograph has been of great value in the diagnosis and treatment of these fractures. When possible it should always be used as it is quick, painless and sure. Two views should always be made, one anterior-posterior with the palm on the plate and one lateral with the thumb up, the tube centered directly over the end of the radius. This lateral view is very important as it will show the amount of the deformity, if any is present. Frequently the anterior-posterior view will disclose no deformity when in reality there is great displacement* (Fig. 5).

If any deformity is shown by the radiographs the fracture should be reduced, placed in an anterior-posterior splint in the usual way and then radiographed in the lateral direction only, to see if the position is good. This is better than working with the fluoroscope, as the pictures can be made quickly, there is no danger to the patient and a permanent record of the case is obtained.

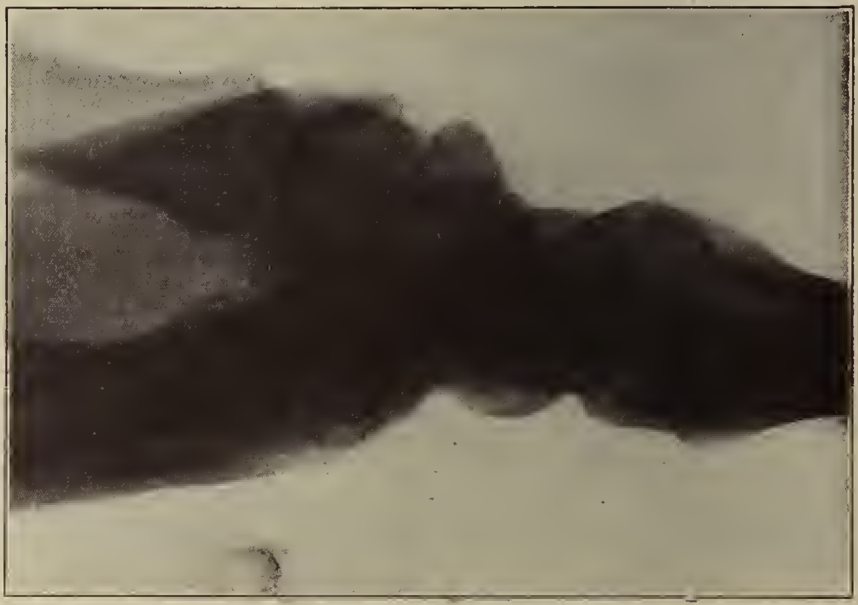

Fig. 14.—Normal adult wrist, lateral view.

The "typical chauffeur's fracture" can be taken out of the splint within a week, massage and passive motion begun, and recovery should be complete in about three weeks. More severe types will require longer time.

Walter Irwin LeFevre, M.D., Cleveland.

## THE BEST THINGS FOR THE AUTOMOBILE

After five years' use of automobiles in the general practice of medicine I offer the following advice: Don't buy a second-hand automobile. Buy a new car and hold the company responsible for defects. The small runabout types are the most serviceable, most simply manipulated, most easily handled in a crowded street, most easily adjusted when out of order, and have the cheapest tire expense, both new and repairs.

The best brand of tires is always the cheapest; the best and always reliable starter is my strong right arm; the best antifreezing mixture is one pound of raw glycerin in one gallon of denatured alcohol; the best storm protector, as well as dust protector, is a coupé; the best carbon remover is "kerosene" coal oil; a good medium auto oil (156) can be bought for 35 cents a gallon; the best light is the perfected ready-to-use acetylene system (157); the best garage can be made of cement blocks for less than two hundred dollars; the best time I have made or care to make is ten miles in twenty-five minutes; the best load I have hauled was five sacks of cucumbers across a hay-field.

The accompanying picture (page 1071) shows a scene "down on the farm," the enjoyment of which is made possible with an automobile service. My first purchase was a second-hand runabout (158), which led me to make as my second purchase a new one of the same make. My next purchase, if any, will also be of this make.

William D. Weis, M.D., Hammond, Ind.

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* "Automobile Key," giving names of cars, etc., will be sent to any address on receipt of a stamped addressed envelope.

# ARCHITECTURAL DEPARTMENT: PLANS OF HOUSE, COMBINED WITH OFFICE* OR WITH GARAGE

## GARAGE BUILT INTO REAR OF HOUSE

IN order to obtain good service from an automobile during winter it is necessary to have the garage heated. I have my garage (22 by 24 feet) built against the rear of my house (see illustrations), and, the house being heated with a hot-water system, it was but a small expense to extend the heat into the garage, and the cost and trouble of carrying the additional radiation is very slight. My office being in the part of the house adjoining the garage, the odor from gasoline and smoke does not annoy the rest of the household, although I was advised before I built that this would prove a serious objection.

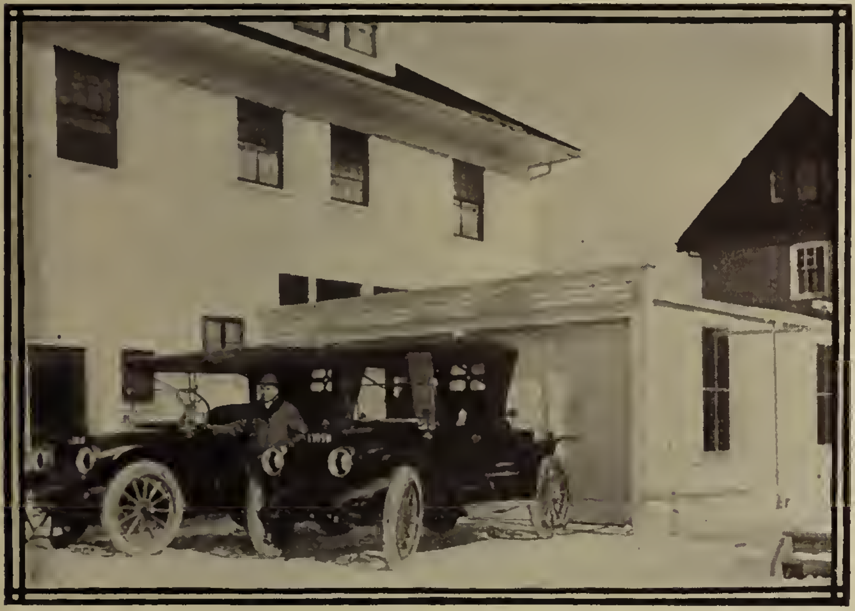

Fig. 15.—Dr. P. P. M. Jorgensen, Kenosha, Wis., with his roadster (159) for business and four-passenger car (159) for pleasure-riding.

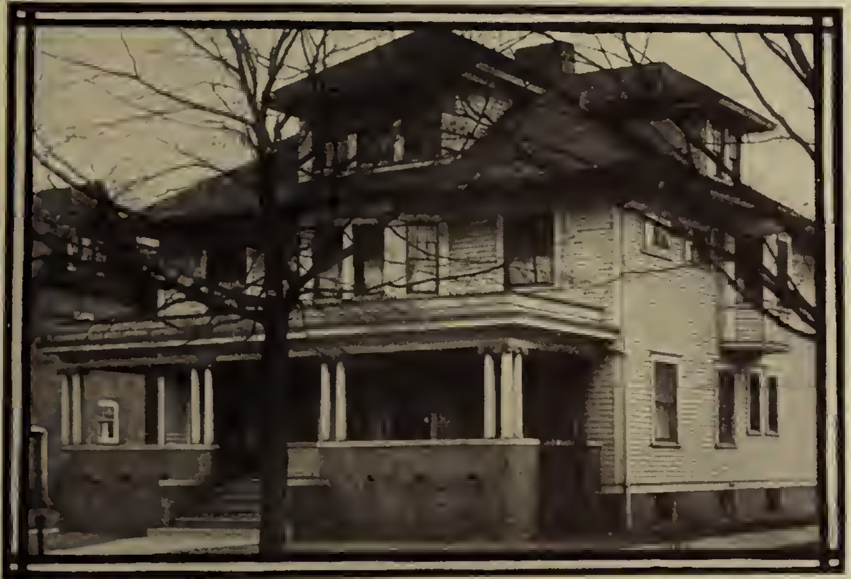

Fig. 16.—Front view of same house as shown in Figure 15.

Besides the office and garage arrangements, the idea of having kitchen and dining-room on the second floor has been found very satisfactory. After ten years' experience of renting an office "down town" and four years spent in this house, Mrs. Jorgensen and I still find things so near what we want that if we were to build to-morrow there would be very few things we should wish to change. My two cars (159) are shown in the illustration. They have both given me excellent service. After a previous experience of two years with another make, I am satisfied that there is a great deal to learn before a man can decide intelligently what car to buy.

P. P. M. Jorgensen, Kenosha, Wis.

## COMMON SENSE AUTOMOBILE RULES

THE question is not whether a physician should keep a car, for a car is now an absolute necessity, but what kind of car. I do not mean what make, because there are any number of dependable cars, but what size and power. That must necessarily depend on the kind of work one expects it to do, and on the prevailing condition of the roads where one lives. In the north-western part of Illinois one needs a fairly heavy car of not less than 30 horse-power.

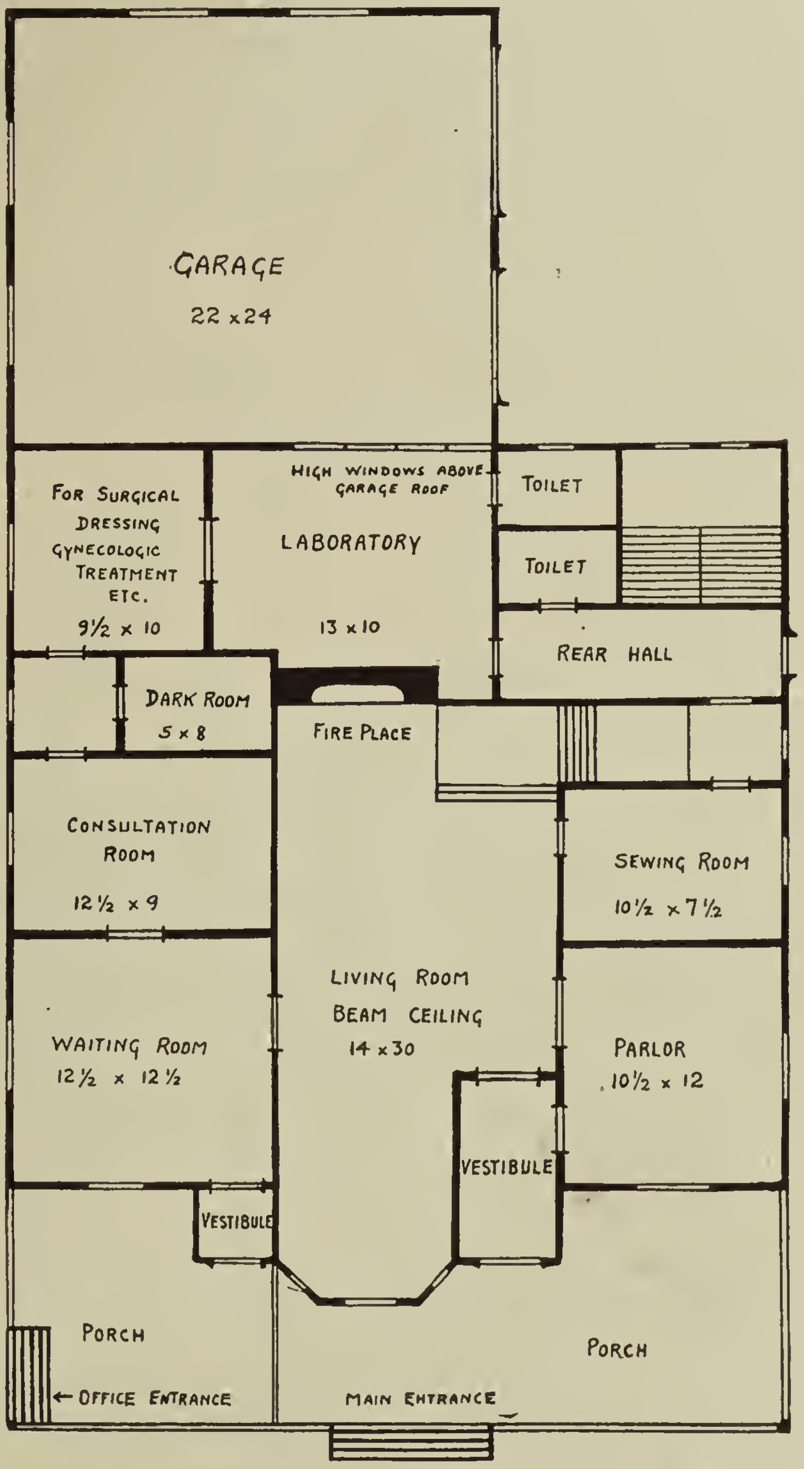

Fig. 17.—Plan of ground floor of house of Dr. P. P. M. Jorgensen, Kenosha, Wis., showing garage built into the rear of the house, the heating being done with one plant.

If I were to use a car for business only, I should buy a roadster, strong, speedy and reliable, of not less than 30 horse-power, and wheels not less than 32 inches, using a 4-inch tire. But with my plan of using it for both business and pleasure, my five-passenger car (125) has been very satisfactory. It has plenty of power and speed, and is noted in this community for its hill-climbing ability and for never being out of fix. I have run this car two summers, and during the winter of 1910-11, nearly all winter, on ice and snow, and in temperatures as low as 10 below zero. This winter it is impossible to run a car here, the snow being too deep. During the above-mentioned time I have run not less than 15,000 miles, and have never been stalled on the road but once, when

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* A number of articles have been published in THE JOURNAL recently, giving photographs and plans of houses in which physicians have offices. See February 10, March 9 and March 30, Department of Medical Economics.

I slid into a washout and had to be pulled out with a team. I take care of my own car and do my own driving, and have had practically no trouble or expense, except tires and cleaning of cylinders once last summer. Except for paint and varnish, my car seems as good as it ever was, and I expect it to do service for many years to come. My first set of 4-inch tires (126) ran about 10,000 miles.

### IT IS ECONOMY TO DRIVE CAREFULLY

I have learned by experience a few little things that help to prolong the life of the car and to save tires: First of all, do not drive fast unless absolutely necessary; 15 to 20 miles an hour;—that applies to roads in the country where they are hilly and none too good. Slow up for bridges, culverts, and any rough place. Do not strain a point to make a hill on high gear; use intermediate or low. Keep the tires inflated properly; do not run on 40 pounds of air if in need of 70 or 80. There is only one way to know this: keep a pressure-gage and test the tires every morning; it will pay. I have shock-absorbers on my car, and I believe they pay; they certainly make easier riding. Of course, one must keep everything lubricated that should be, and everything tight that should be tight. If one follows these common-sense rules, having a car of the right size, made by a reliable concern, one will be delighted with the service one gets, and will never want to drive horses again.

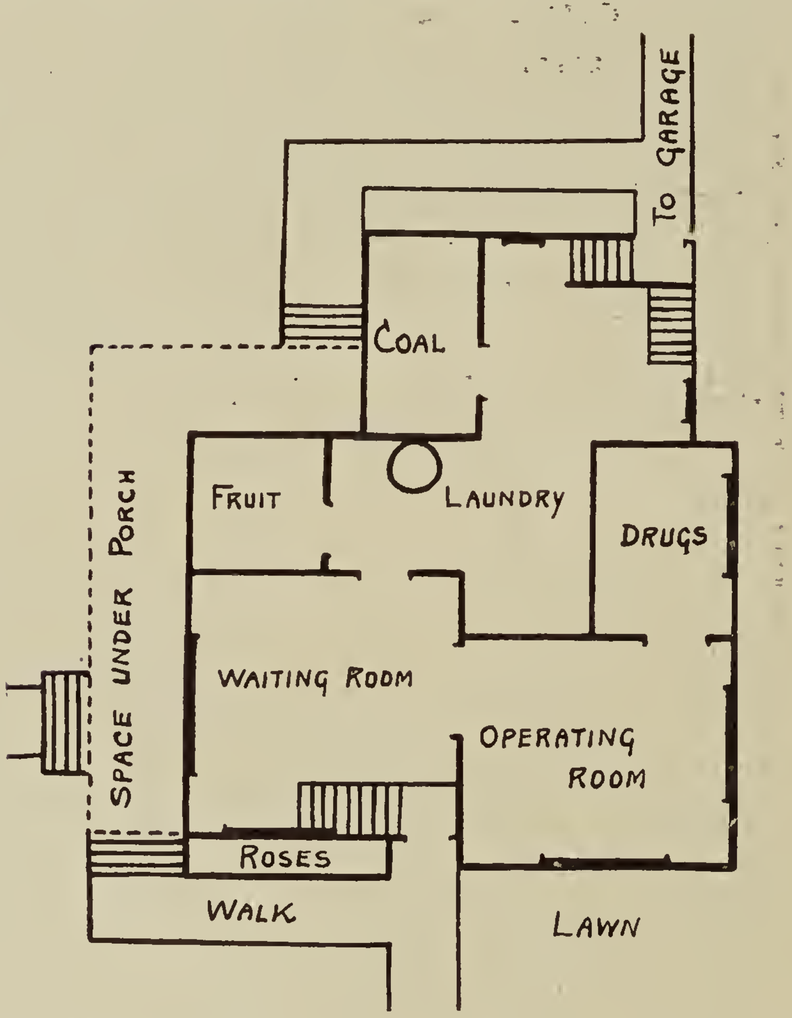

Fig. 18.—Basement plan of combined house and office of Dr. N. A. Kaa, Stockton, Ill. The view of the house is shown in Figure 22, on page 1058.

### COMBINED HOUSE AND OFFICE

The plan of my combined house and office is perhaps unique in one respect; the office is in the basement (see illustration). This was done to economize; it would otherwise have been necessary to build a much larger house, to accommodate both office and family. I have tried it out for a number of years and find it very satisfactory. My place is about three-fourths of a block from the business center of the town. The basement is not very deep; one enters the door on a level with the street, and a few steps take one down. I have very large windows with opaque glass and concrete areas built around the outside to admit more light. My office, especially the operating-room, is very light. The concrete floor has several coats of paint, making it easy to keep clean.

The office can be entered from the inside by going through the laundry. There is an automatic bell on the door, announcing when any one enters. In that way I can be anywhere around the house and still know when I am wanted. Otherwise a man is tied to his office all the time, because, for some unknown reason, we cannot have any regular office hours in this town. I have hot and cold water in the drug room, a telephone on each of the three floors of the house. There is plenty of space around the house for a large lawn and a tennis court, where I, with other business and professional men, take much recreation in season.

N. A. KAA, M.D., Stockton, Ill.

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### GARAGE AND STABLE

THIS combined stable and garage I built in 1910 at a cost of $1,500. It is constructed of concrete blocks with slate roof which is thoroughly trussed; the lower floor is concrete except in the horse-stalls, which are planked, over 18 inches of cinders. The upper floors are of matched hard pine and the ceilings are beaded hard pine, in fact the entire interior is finished in hard pine, filled and varnished. The doors roll on Lane ball-bearings, which are adjustable to height and are grooved on the bottom to follow a track of ¼ by 3 inches iron imbedded edgewise in concrete with exposure of ½ inch. All windows are arranged to tilt in at the top at any angle for ventilation. Over the harness room is constructed a grain-bin to hold 100 bushels, which is lined with thin iron; a chute conveys grain to the lower floor. Under the stairs is located a case of deep drawers for blankets and horse apparel, while at the end is a cupboard for brushes, boots, harness and wagon greases. A chimney rises from the harness room and receives on the ground floor the pipe from a stove in one corner, which makes the building comfortable in cold weather and is convenient when blankets and robes are wet or harnesses are to be cleaned. In the garage, which is separated from the stable by a large rolling door, is an enamel iron corner lavatory supplied with soft water from a 40-barrel tank situated in the rear of stable. This tank receives water from nearly the entire roof of the building, affording ample supply for watering the horses and washing the car and wagons. The tank is emptied during the winter months.

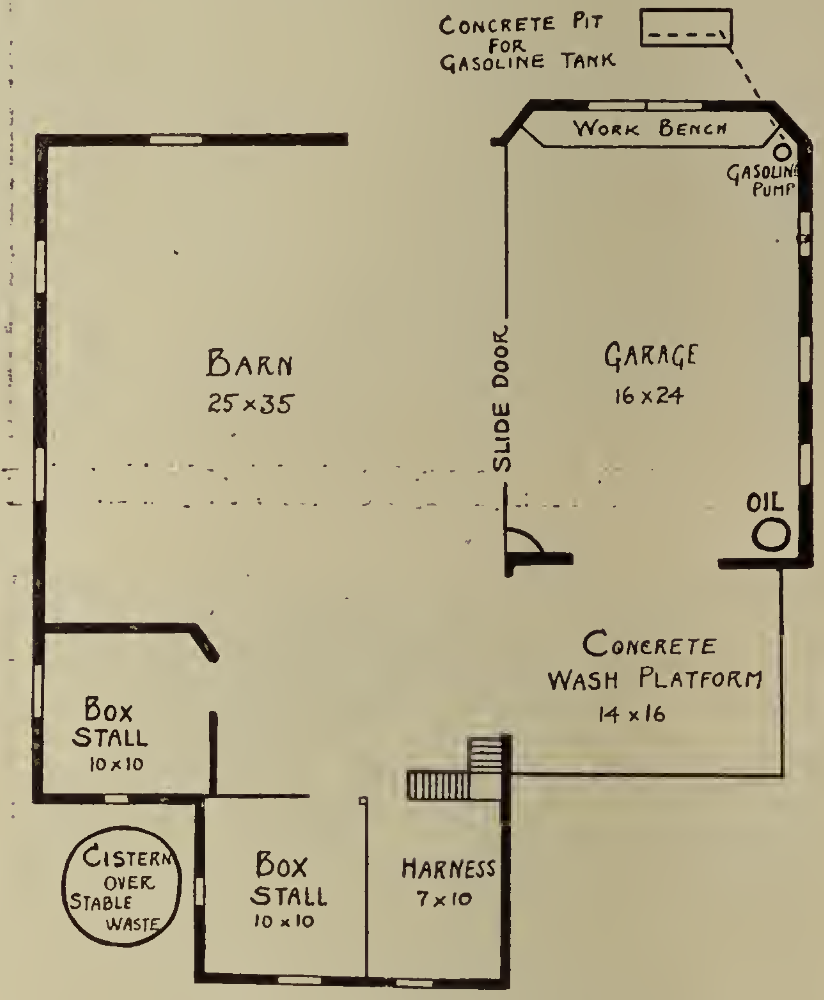

Fig. 19.—Plan of Dr. Lewis' stable and garage.

A tap near the lavatory for hose is convenient to concrete wash-platform just outside. The corner opposite the lavatory is convenient for location of the oil tank.

Extending across the bow window end of the garage is a capacious work bench with vise, underneath which are two banks of roomy drawers and a cupboard, while at the right is the gasoline pump leading from a steel tank placed in a properly drained concrete pit situated 10 feet outside the building.

The building is lighted by electricity with concealed wiring and has a telephone. The accompanying view of the building is the rear, entered by drive from the residence. Enjoyment of this building, which was entirely designed by the owner, suggests nothing to be desired in the way of change or improvement.

G. M. Lewis, M.D., Vernon, N. Y.

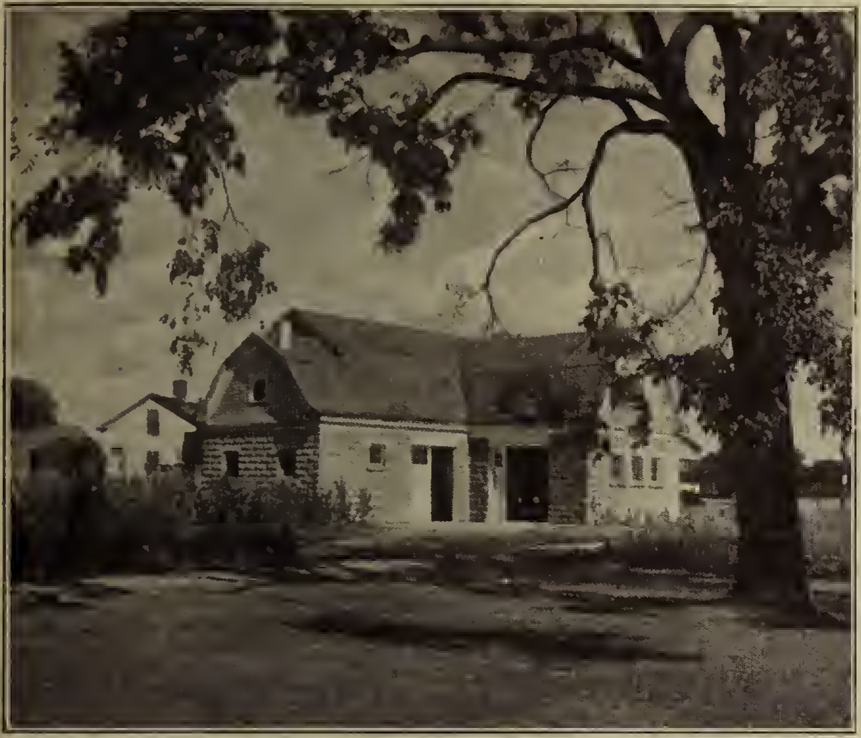

Fig. 20.—The stable and garage of Dr. G. M. Lewis, of Vernon, N. Y., built at a cost of $1,500. A plan is on page 1056.

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### THE JOY OF AUTO RIDING

My single-chain drive five-passenger car (135), the salesman told me, would weigh 2,100 pounds. With radiator and gasoline tank full, with tool equipment, it weighed 2,400 pounds. It cost $775. It was too large and heavy for a physician. The tires, 32 by 3½, were too small for the weight and went to pieces long before the guaranteed mileage was attained. I sold it and in June, 1911, I bought a light runabout (136); actual weight equipped, 1,170 pounds. It is light, hence easy on the tires. I can go with it everywhere I could with the heavier car and more. It does not sink so deeply in the mud. I have been stuck but once, in a low, marshy place between two hills and at night. The car sank to the axles, the wheels spun; I jacked up and put on chains, but the wheels still spun. The power was there but the mud was so thin that there was nothing for wheels to pull on.

The speed limit in Missouri is regulated by law in the following language: "A rate of speed in excess of 25 miles an hour for a distance of ½ mile shall be presumptive evidence of driving at a rate of speed which is not careful—prudent." Our roads are very crooked, there being many sharp turns, the view being obstructed by trees and fences; the risk of running over 20 miles per hour is thus very great. My car is not so speedy as others but I can exceed the speed limit; I average 16 miles up hill and down hill over all kinds of roads. The machine is simple and easy to operate; it pulls up any hill; I can go anywhere there is a footing for wheels. My experience with both machines has been to keep out of the mud; it is unpleasant to go along on low speed through mud and slush. I now take the automobile only when the roads are dry. I see my confrères out in the mud with their machines but they don't make any better time than I do with my team. I average 18 miles on a gallon of gasoline. The first set of tires (137) lasted for 1,800 miles; they were guaranteed for 3,000 miles. The company allowed me for the 1,200 miles on a new set.

As for caring for one's own car, a physician who is fairly busy will have no time for this. I tried to look after my machine but found, when I needed it most, that something needed adjusting, and by the time I had it in shape I could have made the trip by team. An automobile is not so cheap as a team and buggy for the simple reason that one will ride for pleasure two or three times as much as for business. When the roads are good there is no riding comparable to an auto; I can make my calls in one-half the time and the trip is a pleasure in hot weather, instead of work as it is when one is driving a team over a hot, dry and dusty road. If one can possibly afford it, one ought to have an acetylene tank (151) or else electricity. The carbid generators are choking up and the lights are going out; the carbid generators have given me more trouble than the rest of the machinery combined. Also if one wants to avoid real labor one should have the car equipped with quick detachable rims.

F. M. Vessells, M.D., Perryville, Mo.

[Illustration near the end of the automobile section.]

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**Winter's Snows Need Not Stop the Auto.**—I average 40 or 50 miles a day and have never hesitated, because of weather or roads, to go out day or night. During three years of car driving I have never been stuck on the road except by tire trouble. During two hard blizzards I have driven through drifts and around cars of six to eight times the cost and have never had to walk home. My two-cylinder car (169) used to cost me, everything included, an average of $15 a month, my four-cylinder (169) $30 to $35 a month, and I am not a careful driver. I believe this car will stand more hard use than any other for the money.—Paul B. Magnuson, M.D., Chicago.

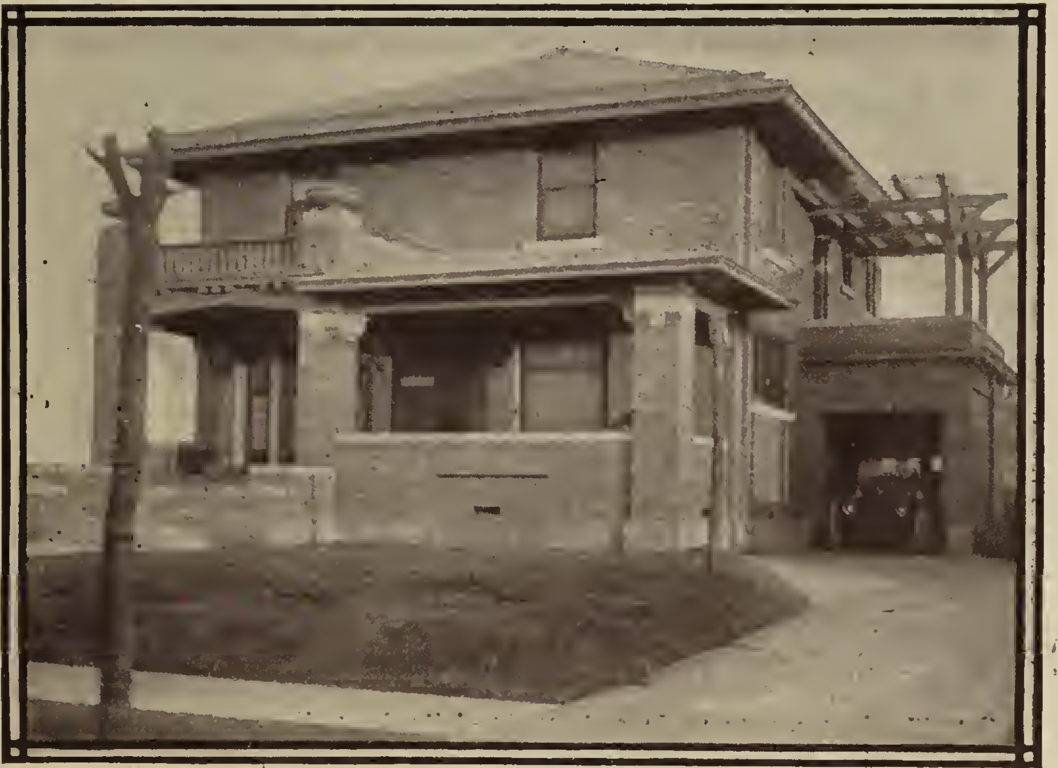


Fig. 21.—House, automobile (202) and garage of Dr. H. Leslie Moore, Dallas, Tex. The position of the garage is an original idea of Dr. Moore. The garage is located near the inner boundary of the lot and is built as a part of the house. Thus he can step from his automobile into the house and vice versa without going out doors. When starting he is in his automobile, ready to go, before being exposed to the weather. The garage can be heated from the furnace just as can the rest of the house. Dr. Moore reports that he is very much pleased with his garage and with his choice of an automobile.

# AUTOMOBILE ACCESSORIES AND AIDS TO COMFORT

## A SIX-CYLINDER ENTHUSIAST

MY automobile experience has been particularly fortunate, perhaps owing to the fact that my cars have been big and strong, equal to all emergencies and all the difficulties of bad roads and hills. When I put my 40-horse-power, four-cylinder car (163) into the shop last summer for overhauling, I was permitted to use a 48-horse-power, six-cylinder car of the same make until my car should be ready for delivery, but I never drove the "four" again.

The "six" showed such surprising advantages, in its ease of handling, its ability to slow down and pick up again quickly in traffic without change of gear, its splendid reserve of power for hills and bad roads, and its all-round masterful conduct, that I could never again have been content with the "four." I am a six-cylinder enthusiast, because I know the difference between the two types and it is my judgment that if one wants to get all the satisfaction and security that a motor car affords, if one wants always to be able to get there and back (without any doubt about it) and with minimum effort on his part, one needs a "six" to accomplish that result. In the period that I have had my "six," I have been at no expense for repairs and the air that is in my tires to-day is the same that has been there for at least five months.

### ADVANTAGES OF A WARM GARAGE

I keep my car in a warm garage and find the expense, about $1.50 per month for heat, well paid for in the ever-readiness of my car. I never have to lose time waiting for the motor to warm up, because it is always warm. This is very important to a physician. Perhaps this warming-feature is one reason why I escape repair bills. A warm motor is not subject to the accidents that often occur to a chilled one.

Fig. 22.—House, auto (125) and family of Dr. N. A. Kaa, Stockton, Ill. Dr. Kaa's office is in the basement, as shown in the floor plan (Fig. 18) on page 1056. The tennis court is shown at the right.

I do not, however, risk the item of repairs. Every three months or so (oftener if I have any misgivings) I send my car to the shop for a looking over. This examination has thus far failed to reveal any defects except the need for tightening a nut here and there. I drive every day and nearly every night the year around. I make from five to fifteen calls per trip, and all during the coldest weather I have not had to crank my motor more than a dozen times. The self-starter on my car is of the compressed-air type and it appeals to me because the air puts the pistons in motion before the spark takes place. The motor therefore escapes the shocks that are consequent on starting on the spark, a matter of importance, especially so when a car has been standing out in the cold for any considerable period.

When I purchased my old four-cylinder car, I had some ignition trouble but shortly afterward I equipped my car with a new set of spark plugs (164); and when I purchased my new "six" I used the four old plugs (with the addition of two new ones) and have not had to remove them since. I have had no more trouble from that source.

There is one thing more I am going to add to my car that I saw on a physician's car the other day, and that is a curtain that acts as a door in front. It is on a spring roller fastened perpendicularly and when one wishes the front closed tightly one pulls it back and hooks it to the bow of the top; when one wants it open, one merely unhooks it and it opens itself. This curtain is on the principle of a common window-shade roller, only a stronger spring is needed.

Fig. 24. Dr. Perry Woolery, Heltonville, Ind., crossing a creek foot-bridge for pedestrians. "In a country practice like this," writes Dr. Woolery, "the auto has to be pressed into some pretty hard service, but mine (198) has never failed me yet. We also have a great many hills in this section, but most of the roads are macadamized."

Fig. 23.—House and automobile (163) of Dr. S. E. Carlton, Cleveland.

My car carries a four-bucket seat-body and cannot be classed as a light weight by any means. I drive with reasonable care, especially when rounding corners and yet, in spite of weight, bad roads, and the like, I have had no tire trouble worth mentioning.

When a manufacturer equips a big car with big tires the proportion of tires to weight is fully as great a factor of safety as is to be found on little light-weight cars equipped with small tires. It seems to me as broad as it is long, and that no physician need deprive himself of the pleasure and comfort of a big car through fear of the tire bugaboo. If the wheel base is long, it adds to the comfort and pleasure as well as safety of the car.

S. E. Carlton, M.D., Cleveland.

## THE MAINTENANCE OF THE PHYSICIAN'S CAR

TO THE physician who is not a natural born mechanical engineer the selection of a car to meet his requirements is a problem that is becoming more difficult every year. A score or so of years ago, when there was but one make, a choice was easy. When the inexperienced falls into the clutches of a voluble salesman, or a dozen of them, which way is the disciple of Esculapius going to turn? It goes without saying that one situated as I am, with the bulk of practice among farmers, the strains to which a car will be subjected are very different from one that is to be used on asphalt or macadam pavements. This article is written from the standpoint of the country doctor, and on the supposition that the auto is a financial investment, one expected to bring in some returns, and not a mere luxury to be used for pleasure and recreation.

I have a splendid horse; I feel that it is essential that a country doctor should have at least one good horse, as at certain seasons of the year the snow and mud render an ordinary auto, with moderate power, worse than useless. I bought a car (149) last September and have run it over 800 miles. A brother physician in a neighboring town has used a runabout of this make (but different model) for two years with practically no outlay for repairs, except tires, and that looked like a very good recommendation. My car is so light that I can lift any wheel by the hub. The springs are excellent, and, therefore, the wear on the tires is reduced to a minimum. This last point is a very important one when rough and stony roads are a factor. I have but one criticism to make against this little runabout and that is, it has but two forward gears. For best results a car should have at least three forward gears, high, intermediate and low. Heavy mud and long low hills are too much for high gear and the low (which will climb anything that can be climbed) is too slow.

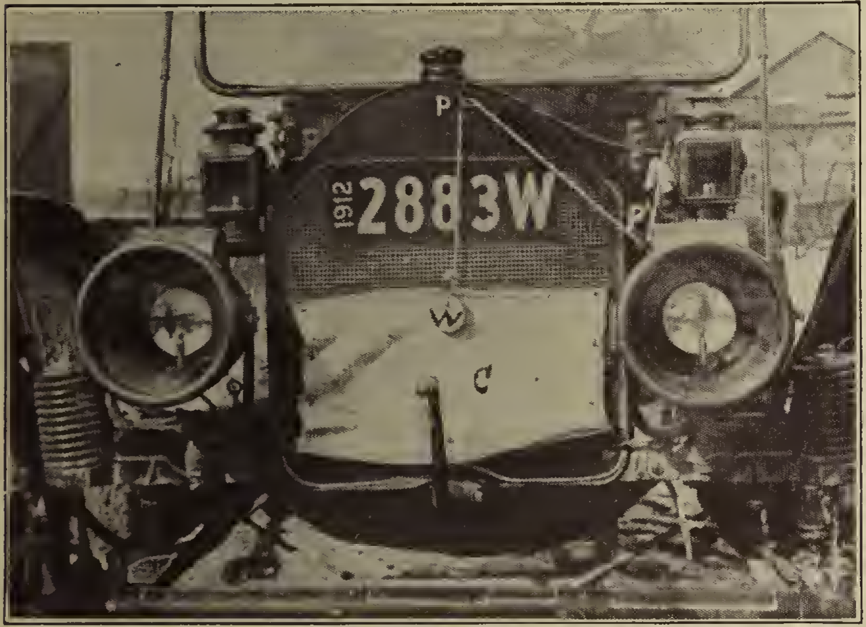


Fig. 25.—Adjustable radiator curtain devised by Dr. A. E. Midgley, Lima Center, Wis., for his automobile (149) in cold weather. C, Curtain drawn half way. W, Weight to lower the curtain when the cord is released. P, Pulleys over which runs the cord A to the dashboard. E, Below the radiator, exhaust tube from the radiator.

### DO YOUR OWN REPAIRS

The engine, although a single cylinder, runs smoothly and with almost no perceptible vibration, and when the roads are in good condition takes me along at a speed up to 25 miles an hour, which is fast enough for country driving. The piston and valves are easily removed for cleaning or grinding. I have made a small tool so I can do my own grinding. The nearest repair shop is 6 miles distant, but as I have a good set of tools, I have been able to do the little adjusting and alteration that has been desirable, if not altogether necessary.

### ADJUSTABLE RADIATOR CURTAIN

I do not use an anti-freeze mixture. When the engine is cold and the temperature around zero, filling the radiator with hot water and warming the carbureter enables one to start the engine easily. Covering the radiator with a robe while making a call keeps the water warm. The engine yields the most power when the water is boiling. To prevent undue cooling in cold weather I have arranged an adjustable curtain that is operated by a cord from the driving seat. A tube extending from the radiator vent to the side of the car in front enables one to see when the water is hot by the escaping steam, and to adjust the curtain accordingly without stopping and getting out. By slacking the cord, the curtain is pulled down by a weight consisting of a 1-ounce ointment box filled with melted lead. The curtain slides on two vertical wires, held thereto by small rings made from bell wire.

### HOME-MADE HEATER FOR GENERATOR

I tried a mixture of wood alcohol and water as an anti-freeze mixture in my generator (being still antiquated enough to use a generator), and the light was miserable, and frequently when a bump was encountered would go out. I cut up two tomato cans and made a small box with one concave surface to fit the convexity of the generator water compartment. The pieces were riveted, not soldered. The box is attached to the tank by wire hoops, after both box and tank are enclosed in asbestos. A small piece of carriage heater coal will keep the water warm on the coldest night, the colder the weather, the larger the piece of coal. The temperature can also be regulated by inserting a strip of asbestos between the coal and the inside surface of the box. Empty the tank when through for the night and blow out condensed moisture from gas tubing and burners, to avoid any water that might have collected from obstructing the tubing by freezing. Some makes of this coal can be ignited over a small alcohol lamp carried in the tool box. I have made a large roomy locker and bolted it to rear of auto. Water can be carried in a vacuum bottle or obtained at a farm house if one is overtaken by darkness on the road, or even drawn from the radiator.

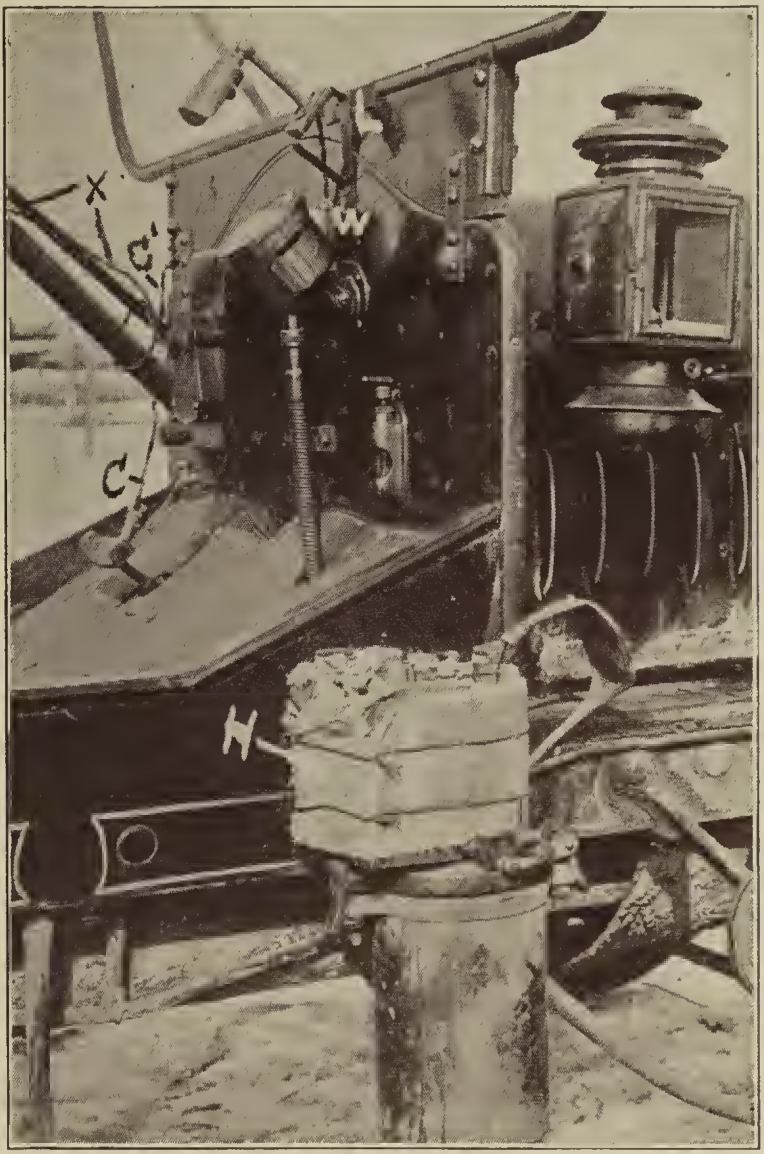


Fig. 26.—View of the dashboard as arranged on his car by Dr. A. E. Midgley, Lima Center, Wis. C, Cord for adjusting the radiator curtain. H, Generator heater. L, Shock-absorbing lamp bracket. W, Watch and speedometer. X, Silk lamp cord from push button on steering wheel to battery and lamp.

### HOME-MADE DASH LAMP

At the side of the speedometer I have a small box containing cotton waste and holding a dollar watch. Over these is hung a dash lamp bracket with a 2 c.p. tungsten lamp operated from the dry cells. A push button with an extra long plunger (so it can be operated by the gloved hand) is mounted on the steering wheel within convenient reach of the thumb. When one desires to make a reading, the button is pressed.

all. No need of striking matches. The current consumption is extremely small. If your ignition is operated by dry cells, use two sets and connect the extra set to the magneto post of the coil. Alternate sides daily. Connect lamp to one of the sets, but use the other set for ignition at night. This arrangement will not interfere with ignition, and your motor will never "go dead" on the road from the batteries giving out. When one set shows signs of weakness, replace it.

### THE TOOLS ONE NEEDS

The extent of the repairs one is able to make will depend on one's ability as a mechanic, his outfit of tools and his inclination to work. To the inexperienced I would suggest the following tools, same to be acquired as you progress in the useful art of using the hands. A good automatic tire vulcanizer. When the casing is gashed, mend it. Don't wait for a blow-out. Blow-outs are expensive and sometimes disastrous. Avoid them. A breast drill with two chucks, and set of drills. Screw plates, 1/8 inch to 1/4 inch machine thread, and 1/4 inch to 1/2 inch A. L. A. M. thread. Gasoline torch with hook to hold soldering iron. Soldering outfit. A full set of wrenches including an 18-inch monkey wrench and a 10 or 12-inch Stillson wrench. A strong bench vise. Tinner's shears, hack saw, voltammeter, cold chisel, hammers, screw drivers, files, pliers, etc.

### WARM THE AIR FOR CARBURETER

For cold weather it is desirable to have an air tube from the exhaust pipe to the carbureter intake, else the gasoline will not vaporize properly. The cylinder oil and the transmission and differential grease should be selected carefully. Some of these products now on the market become so hard at temperatures around 15 degrees above, that cranking the engine becomes almost an impossibility, owing to the binding of the transmission. If you are so unfortunate as to have that kind of grease, try softening it with kerosene, or better, get the "zero" kind.

### GRAVEL FLOORED GARAGE

The floor of my garage is gravel, except the runways, which are made of cement and about 30 inches wide. Drippings from the transmission fall on the gravel, which can be shoveled out from time to time and replaced. A greasy, oil-soaked floor is detrimental to the tires.

My car will run from 20 to 25 miles on one gallon of gasoline, when the roads are in good condition. The running expense is very low. The depreciation on a car costing $1,000 or more will almost pay for a car like mine the first year.

As to the practicability of the auto in very cold weather, zero or lower, it will depend a good deal on the car. With some the carbureter will not work satisfactorily unless heated. When one is called on to make a hurry call within a couple of miles he will often save time by hitching up the old reliable horse, for a gasoline engine will sometimes positively refuse to run when cold. The starting can be expedited by filling the radiator with hot water, by warming the carbureter, and by using the hot air intake as already mentioned.

For country work when there is considerable snow, the low-priced auto is impracticable. The furrows made by cutters and bob-sleds are several inches narrower than the auto tread, thus bringing one side out into the deep snow.

Dry batteries that show signs of giving out may still be used by employing the following arrangement: Arrange two, three or more cells in "parallel" until the desired amperage is obtained, and connect a sufficient number of such units in "series" to give the desired voltage. They will work well for weeks. If you have never tried it there is a pleasant surprise in store for you.

During dry weather the eddies around the wind shield draw in a fine impalpable dust that I should think would be highly detrimental to one afflicted with pulmonary disease. I have never seen this mentioned.

A. E. Midgley, M.D., Lima Center, Wis.

It's a poor engine that won't work both ways.

## SELF-STARTERS

NEVER before in the history of the motor car has so much attention been given to the refinements for safety and convenience, both by the manufacturer and purchaser. The self-starter is probably the greatest of these refinements. Most of us know, by experience, how exasperating it is to be compelled to wade in the mud and rain, and crank a cold car, until "patience ceases to be a virtue," and patients have sought other medical assistance. The self-starter eliminates this, and also prevents the stalling of the engine, in the congested traffic-ways of our cities. Too, the self-starter is effectual preventive treatment for fractures of the forearm, which have become frequent. It has done more than any other device to make the gas car practical for ladies' use. [Illustration near the end of the automobile section.]

There are three classes of self-starters: the compressed air type, the gas type, and the electric. In the air type, the air is compressed by the engine of the car; and when the car is to be cranked, the compressed air is turned into the cylinders, causing the engine to assume the natural motion. Two great disadvantages of this variety are that the compressed air tank, pump and pipes are very liable to leakage; and that when the highly compressed air is liberated, with the gas vapor, in the combustion chambers, the mixture is greatly thinned, making starting difficult and uncertain.

In the gas type, a small charge of the acetylene gas used for the lamps is turned into the combustion chambers of the cylinders, and ignited by a spark from the ignition system, thus starting the engine. The greatest disadvantages of this type are that it is expensive and uncertain, owing to the use of so much gas, and the lack of constant supply; and that it is dangerous, for a thin mixture of air and acetylene gas is highly explosive.

The electric self-starter is by far the most practical, because it combines a good imitation of continuous hand-cranking, with a constant source of current for lighting, and highly efficient ignition. There are several kinds of electric self-starters, but they all have for their foundation the use of combined motor-generator, storage cells, and necessary devices of control. The current is turned from the storage battery into the motor, causing it to turn the engine of the car over; and after the engine is started, the same motor is driven as a generator, which affords a constant and efficient source of electric current. After years of automobile experience, the electric self-starter impresses me as the most efficient, reliable and inexpensive of all; I am using one which was invented by my son.

Dora Greene-Wilson, M.D., Kansas City, Mo.

## THE ACCESSORIES THE THINGS THAT COUNT

THE accessories are what make for comfort and ease of operation. First is the gasoline strainer, located in some accessible place on the pipe line, preferably near the carbureter. This, if occasionally drained, will prevent clogging of the carbureter with consequent delay on the road.

### POWER TIRE PUMP AND JACK

The second most important item is a power tire pump. Air bottles, carbonic gas, ready inflated demountable tires, and such are very well in their place, but a tire pump operated by the engine is always ready when you need it. These tire pumps are of many varieties, some of them are very complicated. A simple and durable one (189) can be connected with a pressure gauge located on the dash and always in view. If one has a power air pump then the next useful accessory is the pneumatic-jack, which will raise the car in case of necessity without the back breaking work of the hand-operated jack.

I have found tires that are blown out on the side valuable when used in the following manner: Carefully cut the bead off from both sides; take a new tire of the same size and place it in the old casing; then put it on the wheel in the usual manner. The tire put on with care in this way will easily run from 10,000 to 15,000 miles unless punctured by some very sharp and long nail. If, however, the old casing is put on with the new casing already on the wheel, no such mileage can be attained, because the fabric of the new casing is invariably broken in the putting-on process.

### ELECTRIC LIGHTS THE BEST

Lights are of vast importance and nothing can compare with electric lights. Those who have means of applying the dynamo system can secure abundant satisfaction from a cheap and substantial product (190). Those who cannot connect with the dynamo system can get current for their lamps from a storage battery, 100 ampere-hour being an abundance. Battery can be charged once or twice a week with an alternating current rectifier (191).

The same socket in the back of the car (which is connected to the storage battery and through which it is charged by a plug from a rectifier) will serve as a connection for a trouble lamp. This trouble lamp with about twenty feet of cord is a mighty handy thing when in trouble on the road at night. Switches for the various lamps are not yet made perfect. They are too easily broken and too difficult to repair.

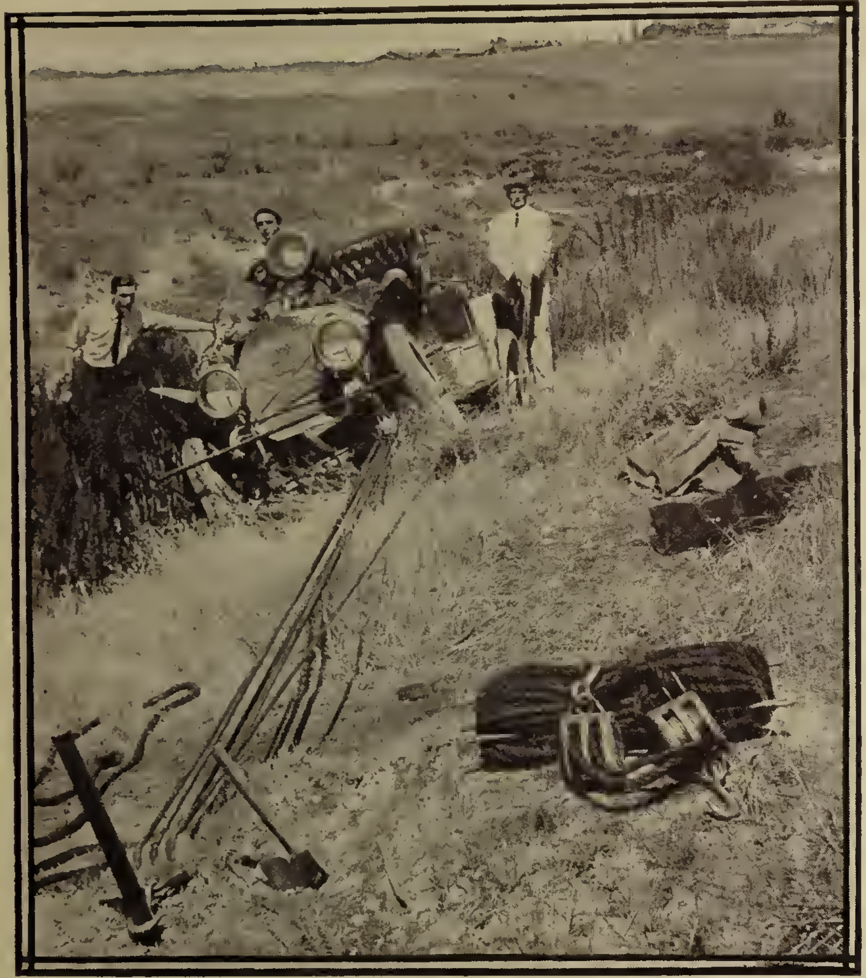


Fig. 27.—Pulling an automobile up the steep bank of a washout by block and tackle According to *Popular Mechanics*, through whose courtesy we use the picture, a Californian, whose business keeps him traveling by motor car over all kinds of roads and in every kind of weather, has equipped his car with a block-and-tackle outfit for emergency service. The accessories of the block and tackle are an iron stake, the necessary rope cable and two capstan drums, the latter being fitted to the hubs of the rear wheels. In case the car becomes bogged in a mud hole or sticks in the heavy sand of a washout, he is not at the mercy of a chance farmer with a team of mules, but simply drives the iron stake some distance ahead of the car, adjusts the block and tackle, takes a turn of his cable around one of the capstan drums, starts the engine and pulls himself out with ease. An interesting feature of the outfit is the removal of the rear seat and the substitution of a box for the storage of the block and tackle, containing 500 feet of rope, tools and a camp outfit for use through unsettled districts.

### SELF-STARTERS

A matter of great importance to a doctor who drives his own car is a self-starter. Getting out in the mud from ten to twenty times in the morning, even when the weather is nice, is a rather strenuous proposition; besides there is the danger of broken wrists and shins. The trouble with compressed air or gas starters is that occasionally the engine stops on the dead-center, when no amount of pressure will turn her over; and it seems that this is apt to happen with the car stalled in a mud hole or on a railway crossing. An additional drawback to this style of starter is the difficulty of keeping the tanks and pipe lines tight, and the necessity for perfect compression in the cylinders, with frequent regrinding of valves. Some compressed gas starters (192) are not open to this last objection, but they frequently fail through improper mixture.

The best electric starter (193) is almost perfection; for it will start the motor from any position of the pistons, and will repeat the operation many times in case the motor fails to go at once. Besides, this outfit obviates the necessity of oil or gas lamps and the owner is independent of any charging station. Of the spring starters I have only had experience with one (194). This company will, perhaps, some day, put out a good starter; but I do not think much of its present product. Breakages are common and the company charges for repairs, even when the starter is at fault.

### RADIATOR FOR WINTER

A very nice accessory for any car is a radiator made like a water back of three or four lengths of ½-inch pipe and connected through a globe valve directly with the exhaust manifold. This radiator being of iron is not easily damaged, and can lie on the floor under the legs of the passengers. If the globe valve is on the inside of the car, the heat can be regulated to a nicety or shut off at a moment's notice.

### WINDLASS HANDY WHEN STUCK

Country doctors who go over the bad roads need an additional contrivance which will some day be built in all cars. I refer to a windlass on which is coiled about 100 feet of small wire cable. The windlass should be built into the frame and thrown into gear with the transmission by a special shift. The cable should be threaded through the front part of the frame and be terminated by a stout hook; in case of being hopelessly stalled in mud, snow, or sand or down an embankment a car having one of these outfits need ask help of no one.

H. N. Cross, M.D., Stockton, Cal.

## REPAIRING DONE AT HOME

SINCE 1902, beginning with a little curb-dash car (112), I have owned nineteen different makes, some good and some not much good. The car (113) shown on page 1071, D, ran 28,000 miles and at last burned up on the road. My present runabout (114) I like very well as far as the car itself is concerned, my complaint being on the prices charged for parts and for repair work. I wish to emphasize the necessity of the owners being repairmen as well as physicians; the trouble with us is that we go to the repairmen with all little defects.

The following may serve as an illustration of my experiences leading to this view of the situation. I had a defective steering-gear which I took to Indianapolis for repair. The parts cost $17 and labor $24.62. After paying these amounts I drove the car for five blocks, when I had to return it to another garage to have all the work done over again, costing $11.05 more before I could get the car home. I demanded from the first-mentioned people the return of this amount, which was not done. Being tired of this skin game, I put on an old suit, got out the tools I had and went to work. I took the motor and steering-gear down, and repaired in one day a defect on which I had foolishly spent $52.62! A professional friend, who has a car of the same make, asked me one day to examine his car, which he could not start; he had been told by the repairmen that the motor had to be taken down, being full of carbon. I found that there was a little water on the connecting wire on the spark plug, and I took a small piece of waste, wiped off the points and started the motor. Of course, the repairmen did not quite like this simple solution of the problem. Let us get the old suits down and get to repairing our own cars! I could not do without my motor car, but I realize that I must do my own repairing. As to tires, the pneumatic is surely not the tire for the medical profession; I have used a substitute (115) and like it very much.

Charles W. Pagel, M.D., Greensburg, Ind.

### EXACT CALCULATIONS

BEING no longer an experiment with the physician, the automobile offers a problem to be studied from an economic standpoint. Few undertake to study the actual cost of a machine which is necessary to an economic conclusion. The moderate-priced car is perhaps more economical and the economical machine is one that will give greater satisfaction. When the repair bill goes up harrowing experiences have happened. Any one who cares to investigate the cost of a car will find that the following calculations are approximately correct, with good luck. The calculated cost of the manufacturers is a snare and a delusion.

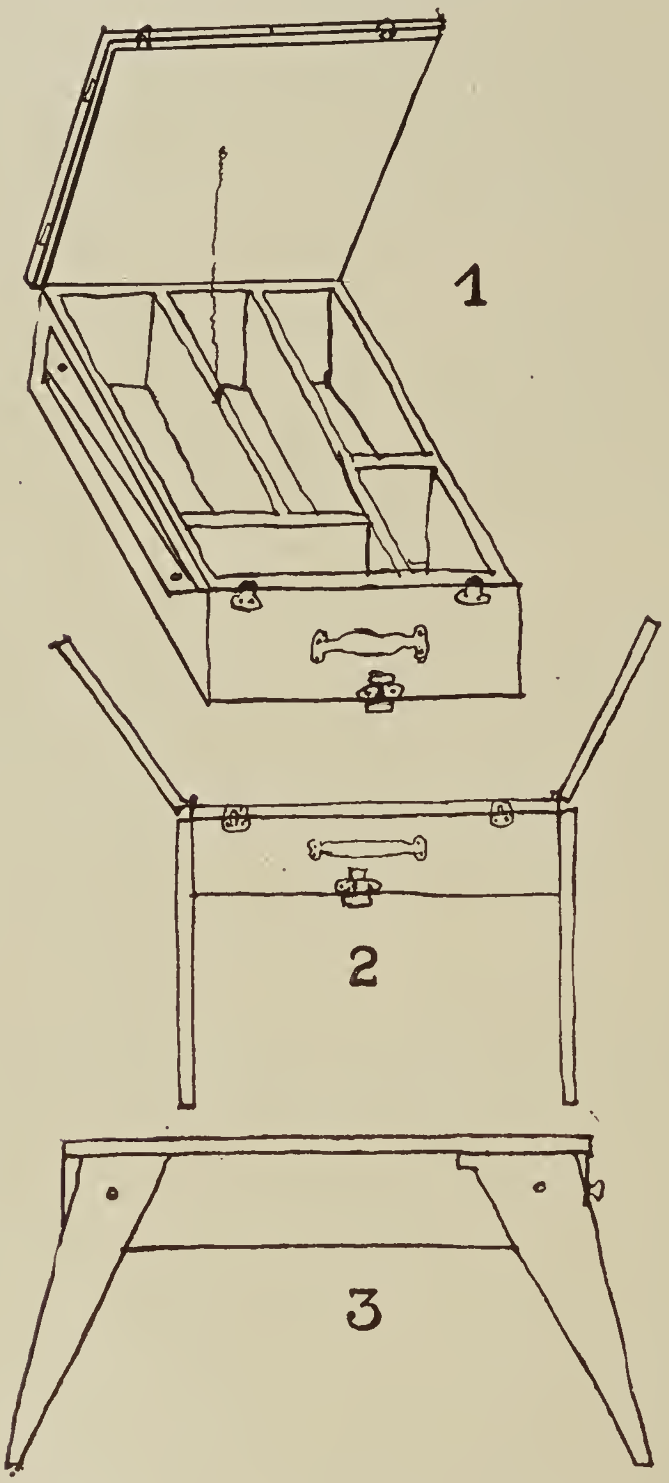


Fig. 28.—1. Lunch box and vacuum bottle case with a folding attachment to the lid which can be transformed into a table, devised by Dr. R. M. Harbin, Rome, Ga. All of this has the appearance of one box and can be fastened to the running-board with spring catches that are used for fastening windows. 2. End view, showing the table unfolded from the lid. 3. Side view, showing legs in position.

| | $3,000 Car Lasting 6 Yrs., 40,000 Mileage. | $1,200 Car Lasting 4 Yrs., 30,000 Mileage. |
|---|---|---|
| Depreciation per year........ | $500 | $300 |
| Interest 6 per cent. per year... | 180 | 72 |
| Two sets 4-inch tires per year. | 320 | 184 |
| Gasoline, oil, repairs, etc..... | 200 | 200 |
| | $1.200 | $756 |
| Cost per month.......... | $100 | $63 |

When the cost of a chauffeur is added, an additional expense of maintenance should be added. It is not necessary for the physician to do any repairs, but it is economically necessary for him to go to the garage with the diagnosis made of repairs needed, and if he fails to understand his machine he will have the bill to pay. I have run a roadster (152) 20,000 miles and it is still giving satisfaction, but I have a new three-passenger car (153) as a reserve car. I have found it satisfactory never to house a car at home for the night unless it is good for 100 miles. I have a clean, comfortable garage with good lights and spend an hour twice a week in the late evenings for miscellaneous inspection. The one who has not time for this will spend more time than that on the highways. To those who have to make cross country trips for consultations I would suggest a box for vacuum bottles, fastened to the running-board with window fasteners (see illustration). That will give the physician an opportunity to enjoy outings with his family.

R. M. Harbin, M.D., Rome, Ga.

### THE AUTOMOBILE AN INVESTMENT

FROM the time I bought my car (140) in the fall of 1910 until I exchanged it for another one a year later, covering 7,000 miles in this interval, I did not lose a day's service. When I turned in my 1911 model in Boston, I stepped into a 1912 car and this has, so far, given me as good service. No road has been too bad or snow storm too deep to interfere with my work. Aside from depreciation of car, it has cost me 8 cents a mile to run it. This includes every expense, even automobile clothing and various experiments I tried in the shape of bumpers, treads, etc., in fact everything that I could possibly charge to the car. This is about one-half of what my horse equipment used to cost me. In addition to this saving in expense, the automobile has given me quicker service, a larger range, and a saving of 50 per cent. in time.

#### STUNG

I have experimented with various devices, many of which were unsatisfactory; for instance, I bought a set of treads and the only advantage they have is that they prevent punctures. They are more expensive to run than the ordinary shoes and only prevent skidding when new. I also bought two signaling devices; one of these was an electric horn which could not be heard across the street and was labeled by my friends as the "big horn with the little noise." Another was a whistling device which I found out, after I had paid for and received it, would cost about three times its price to install on the car; so I have settled down to the regular automobile bulb horn as being the best signaling device.

Last winter I kept my car in a garage where there was no heat of any kind and it generally started on the third turnover of the crank, which speaks well for the engine and its fuel and oiling system. Of course there have been minor troubles which are common to any automobile but none of these was serious enough to delay me more than a short time and most of them I could overcome myself. For these 7,000 miles I have used up exactly 14 gallons of cylinder oil; for this distance I had five tires and with some patching they would have been good for some 2,000 miles more. On my 1912 car I am using non-skid tires (141), which I think are superior to any I have run across. The car has just the right horse-power to give economy of wear; more than this horse-power (32) means more vibration. It is a very easy riding car and needs no shock absorbers. Aside from washing, tightening up nuts occasionally and the like, all I have to do to it is to put in gasoline and oil. I find it better to add a pint or so of cylinder oil at a time rather than to put in a large quantity. The carbureter (142) is certainly not a cold weather carbureter; however, it gives good service by the use of an adjustable curtain in front of the radiator.

I use a runabout type which gives ample carrying space in the rear. I would prefer a left-hand drive, to which about all the cars will come in time. With fore-door body and the wind-shield one can be very comfortable even in the most extreme weather; and by adjusting the planes of the wind-shield in the summer, the car can be kept cool. The fore-door also keeps out a lot of dust. In these days of traffic regulations a reliable speedometer (143) is necessary. The braking system of the car is particularly good and good brakes are an absolute requirement, especially for a physician. The demountable rims are also a very necessary luxury. On the whole, an automobile should be looked on as an investment giving the best return for the money.

### ATTENTION TO LITTLE POINTS ADDS COMFORT

Foot-warmers have not been needed at all; and owing to the fore-doors and wind-shield I use less covering for my hands than when I drove a horse. The wear on tires is less with a moderate speed; and filling every little cut in the tires saves a lot. I look over my tires every night and fill all cuts, letting them stand over night to harden. My garage has a cement floor with cement blocks for sills; the upper part is made in parts so it can be taken down and easily transported. Under the shingles I have tarred paper.

### TOO LITTLE EXERCISE

There is one serious objection to the use of the automobile. It makes one lazy, and much less walking is done. A physician has little enough exercise anyway, and I find that I am inclined to take less since I have run an auto. My garage is back of my residence, and I have a switch in the house so as to light the garage before leaving the house. An electric lamp or an electric flat-iron placed under the hood keeps the water from freezing and the engine warm. Denatured alcohol should of course be used in the radiator. To show how little trouble my car is, I wore a white flannel suit almost all last summer. There are not many cars with which this would be possible.

A. F. WHEAT, M.D., Manchester, N. H.

## EMPLOY CHAUFFEUR AND ECONOMIZE ENERGY

A LONG while ago, when I used horses, I found it profitable to have some one to drive for me as soon as I could afford to pay the necessary wages; and yet I had driven horses from the time I was a little boy and could drive them "automatically" if I could do anything automatically. But, automatic effort is still effort, and uses strength, even though it does not call on the same brain functions that are used in the sick room and the consulting room. With this idea I have often urged some men to stop driving their own cars and employ chauffeurs, because the economy in effort would be profitable—more strength could be put into more remunerative work, and a larger volume of remunerative work could be done.

### DRIVE AUTO?—STOP WRITING PAPERS

I well remember one man saying that when he began to drive an automobile he stopped writing papers, and I understood that to mean that he stopped productive thinking and did only the absolutely necessary thinking to enable him to prescribe or operate. I think President Jordan is credited with saying that one should never do any of these things that one can hire someone else to do, and I am sure that is sound advice.

I know that we cannot all have chauffeurs, for I have walked many miles to save car fares, but those of us who are industrious and earnest are sure to come to the time when the chauffeur question will come up, and to such a man I would say "get a chauffeur," for, if an "automatically" driven automobile can save more time, by doing more, than the horse, the chauffeur-driven automobile will save more yet —and will leave a good margin of strength for efforts of a higher type than any form of automatism.

### A CHAUFFEUR'S PRACTICAL ADVICE

And now my chauffeur, W. W. Earle, who has driven my cars for me for nearly four years, gives me these practical points from the standpoint of the physician's chauffeur—that is, from the standpoint of an automobile man who knows from experience about a physician's needs in driving.

"For a business car, do not have any more weight than is necessary, for it will have to be paid for in gasoline and tires. For a light car, a 25 horse-power, long-stroke motor is sufficient, but be sure to have more power than is really needed.

"A self-starter, demountable rims, anti-skid rear tires, electric headlights operated by dynamo or magneto and battery, electric and oil side- and tail-lights should be included.

"Be sure that the steering knuckles are not below the front axle. See that the seats are comfortable, with plenty of leg room. After demonstration on hills see that the engine is not overheated and that there is no oil leakage from the end of the crank shaft or transmission.

"The carbureter, transmission, clutch, valves and pump should be easy of access, in fact all parts should be accessible, but these in particular. An air adjustment for the carbureter should be located on the dash. The clutch should be easily removed without disturbing the transmission.

"The car should be shaft-driven with full floating rear axles and torsion rod. The brakes should be double, on rear wheels, with good surface and lined with material which will not burn; they should also be easily adjusted. The valves in the motor should be of generous diameter with good lift and pitch. All wires should be well protected. The tires should be oversize. The motor should be able to pull slowly on high gear, and pick up readily; this is very important in city work."

My car (104) has climbed the Sierra Nevadas a couple of times, has done some hard and rough work up about Lake Tahoe, has been up Mount Hamilton, at the Lick Observatory, has made the Guerneville grade on the trip to the Bohemian Grove, and done all the things that we asked of it readily.

HARRY M. SHERMAN, M.D., San Francisco.

## SOMETHING FOR THE DOCTOR'S WIFE—AN AUTOMOBILE GAME

A correspondent sends the following outline for a game such as might be enjoyed at an afternoon tea or to amuse friends in the evening. Our correspondent used it at a St. Patrick's day luncheon, March 18, introducing it with the following original explanation:

> Were Saint Patrick here to-day,
> He'd need an auto right away.
> Fill out the list with Makes you find,
> And he can choose his favorite kind.

It is usable, of course, at any time with merely an oral introduction or with some other verse appropriate to the occasion. Each item represents the name of an automobile, which the participants are invited to guess and write down.

1. A river in New York.
2. One of Scott's novels.
3. The discoverer of electricity.
4. A planet.
5. A famous pitcher of the New York Giants.
6. A pioneer western trail.
7. Discovered a continent.
8. One of our presidents.
9. One of the tri-cities on the Mississippi.
10. A sleeping-car corporation.
11. Theater in which Lincoln was shot.
12. First battle of the revolutionary war.
13. An occupation.
14. One addicted to strolling.
15. An instrument for removing dust.
16. A cabinet officer.
17. An African explorer.
18. One of the Apostles.
19. A president and an Indian implement of war.
20. Something we burn.
21. Where Nature looks her best in fall.
22. A well-known sewing machine.
23. Business between states.
24. An old Chicago hotel and a vocalist.
25. What the people of the United States call themselves.
26. Pertaining to the government.
27. Head office in British cabinet.
28. Incomparable.
29. A fort in Florida.
30. Fast and thorough.

# THE VALUE OF GOOD ROADS

## GOOD ROADS A PANACEA FOR AUTOMOBILE TROUBLES

THE late Zebulon Baird Vance was the war governor of North Carolina in the Confederate States of America. In consequence of this he incurred certain political disabilities, precluding him from subsequently holding office under the United States Government, pending the removal of his said disabilities. Being elected to the United States Senate from his native state, North Carolina, he proceeded to Washington to claim his seat. This was denied him, on account of his unremoved political disabilities. Returning home by rail from his unsuccessful effort to gain his seat in the Senate, there were in the seat behind him two ministers engaged in a heated argument on the, then and now, much debated question of "calling and election." The ministers appealed to Vance for **a** decision on their respective arguments. Vance replied, "Gentlemen, you may be called and you may be elected, but it ain't worth a —— to you, if you don't get your disabilities removed."

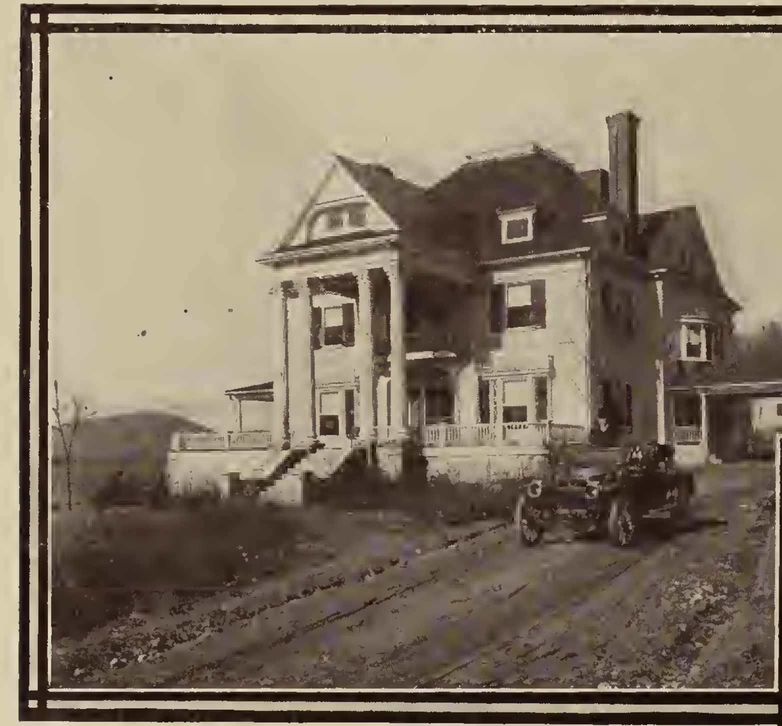


Fig. 29.—View of the residence and automobile (200) of Dr. Carl V. Reynolds, Asheville, N. C.

So it is with automobiles. You may have a good machine; you may properly care for it; you, or your chauffeur, may be a good driver, but "it ain't worth a —— to you" beyond the limits of good roads. Therefore every physician is not so much concerned with machines. or machine devices, in all of which a marked degree of efficiency has been attained, as he is in the promotion of good roads. A bad road is the only thing really limiting the usefulness of a good modern machine. Who is not paying an excessive "mud tax"? All should be interested in a movement which discloses the false economy of bad roads. If civic pride does not appeal, it behooves the physician, from a monetary standpoint, to get out of the rut by using his undisputed influence for better roads—hard surfaced roads—well maintained roads. Remember, "he who lets his country die, lets all things die, and all things dying, curse him."

C. V. Reynolds, M.D., Asheville, N. C.

## THE HILL PROBLEM

THE accompanying illustration of our home shows the garage cut into the hill on which the house stands, an attractive possibility for high building-lots. Both face the street and the lawn and garden between are level with the roof of the garage. The material is cement and plaster, which are very generally used here. In front are the roadster (119) and my wife's electric (120). The steep grades in this locality makes the automobile problem to a large extent one of climbing power and it has taken us a little time and some adverse experience to find out just what is needed for such a situation. There may be a suggestion in this for some one else in the same kind of country. Our first experiment was a two-cycle five-passenger touring car (121) which I had seen demonstrated to my satisfaction in the East as a dependable, easy running, powerful car for general use.

But my work here makes a different demand on an engine and I soon found myself in difficulties that it took a little time to solve. My usual program takes me each morning about three blocks down hill to the hospital where I am occupied until nearly noon, leaving the car standing outside. Then I coast down town a few blocks more to my office for a consultation hour; then back up hill to lunch. Then the afternoon, occupied partly in driving and partly by a longer period in the office, gives the machine its real day's work. The first two runs, being down hill, can be made almost without starting the engine and it is only when turning back up hill that pulling power is demanded to any great extent. In these short down-hill runs the two-eycle car gave trouble and we at last learned that this type is best adapted for long and heavy runs in the country or on level roads in the city. Short runs and frequent stops do not give the engine a chance to warm up and get into smooth action.

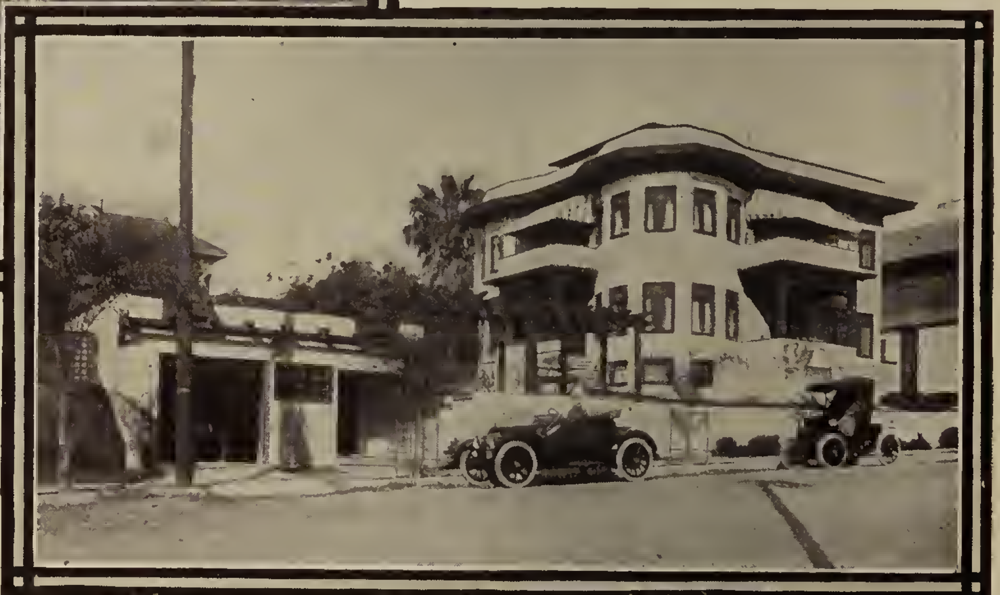
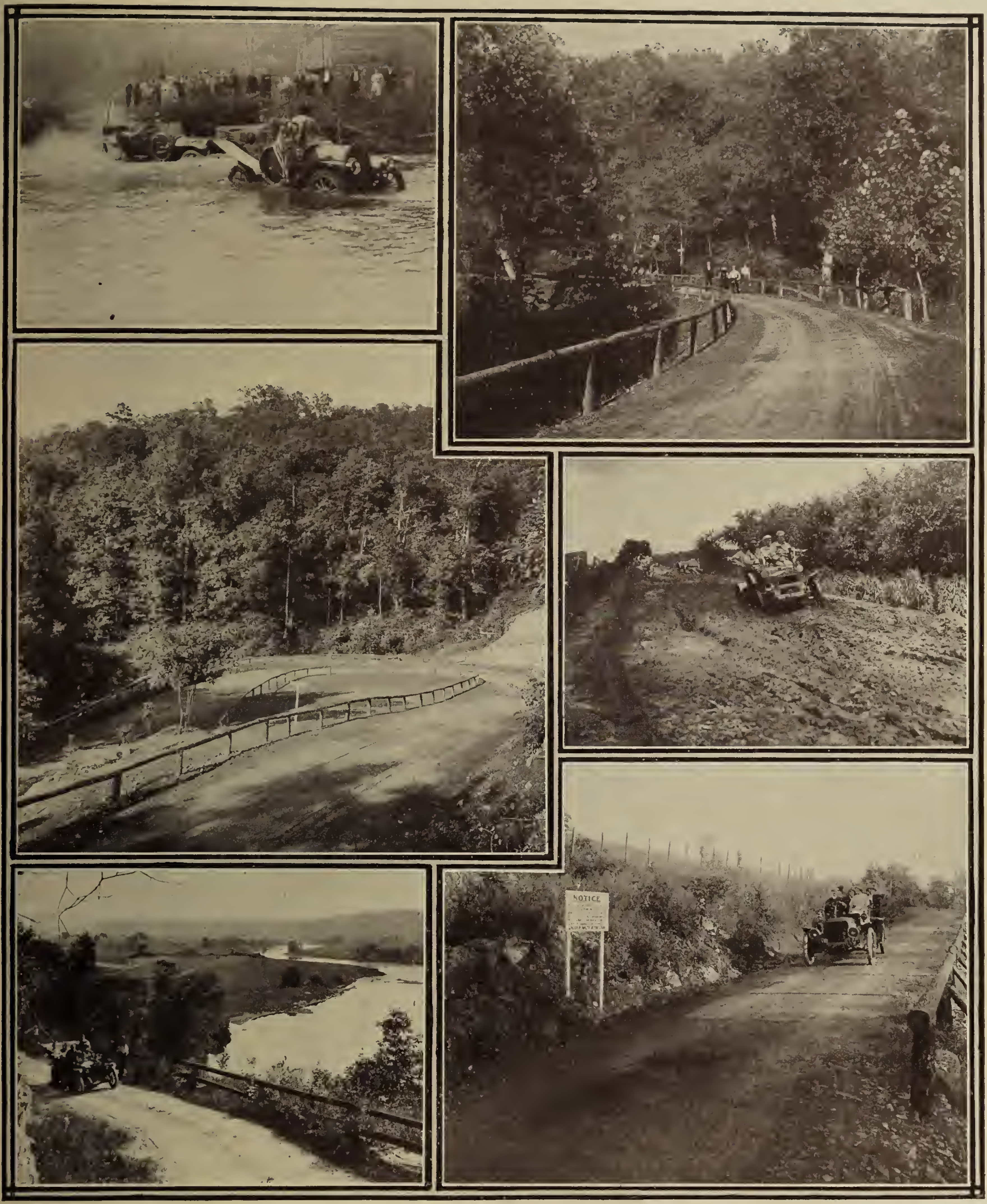


Fig. 30.—House, garage and automobiles (119, 120, 121) of Dr. and Mrs. H. P. Newman, San Diego, Cal.

Now we reserve the touring car for work to which it is adapted and it gives perfect satisfaction with the exception of taking more gasoline than some other makes. I use the roadster for town work and it runs on an amazingly small amount of gas. The electric is of a type which is coming into general use; it is light and strong and takes the hills without trouble, the principal objections to electrics in any country of great distances are the impossibility of recharging in remoter districts and, with the lighter of the vehicles, the impossibility of heavy pulling or loading. They are the thing for town and level roads, however, for ladies' driving and lighter use.

H. P. Newman, M.D., San Diego, Cal.

**Oil up an engine in the way it should be done and in its old age it will not go back on you.**



Figs. 31-36.—Some views of interest in connection with the question of good roads. The three small pictures represent respectively: Crossing the ford, Illinois mud, and a beautiful view in the Berkshires. The ford picture is a scene from the Glidden tour, the annual tour of the American Automobile Association, October, 1911. This stream was swollen following a tremendous rainfall in the Virginia mountains. This spot is on the national highway referred to in Dr. Yost's article on a later page. No cars except the very light ones went through on their own power. These three pictures were furnished by Dr. David E. Hoag, New York City, surgeon of the American Automobile Association.

The three larger views, sent by Dr. C. V. Reynolds, Asheville, N. C., are of the Grove Park auto highway at Asheville, an exclusive road for motor cars which curves from the foothills to the summit of Sunset Mountain, an altitude of 3,119 feet, a distance of three miles, on an easy grade of 3 per cent. The road was opened to the public in the summer of 1911 and is proving to be a feature of considerable attraction to the motorists touring this Switzerland of America, as well as to the resident owners. Asheville boasts that it has the only two mountain roads exclusively for automobiles in the United States. The driveway traverses forest-covered lands that have been cleared as a park; the trees in the drive zone have been removed sufficiently for the wholesome action of sunlight and air on the roadway, and also afford the motorist full enjoyment of the vistas of magnificent scenery that are encompassed within the broad reaches of the Asheville plateau.

## GOOD ROADS—THE KEYNOTE

BAD roads are not a new thing. Like the poor, they are always with us, and so far as history indicates, they have always been with us. Good roads also we have with us, miles and miles of them, and constantly that mileage is being increased at a rapidity never before dreamed of, thanks to that greatest of modern industries and achievements—the motor car. But we can still look back of the motor car, away back as it now seems, to the 80's and 90's, when the first real impetus to better roads blossomed forth—the bicycle.

In history, we have many a tale of noble highways built by the people of Carthage, and at a little later date, the 50,000 miles or more of Appian Ways, leading out in every direction from ancient Rome. On this side of the water, we have to go to South America to find the earliest and best roads. The roads of Peru stand to-day as among the wonders of the world. They lead over mountain tops and in many cases through the land of snows. One of these roads is 1,500 miles in length (similar to the distance from Boston to New Orleans) and 40 feet in width. Our Colonial ancestors had no adequate idea of the future development and demand of the highway. A strip of land without grass was a road, and in many instances, its course was cut out by the cattle. In 1876, the United States celebrated its hundredth birthday and also the birth of the wheel. It was not until men mounted on wheels, which they had to push, that the real condition of the roads was discovered. Out of the sorrows of the wheelmen came the birth of good roads. To that sturdy band of united workers, the League of American Wheelmen, we owe the initial steps that set the people thinking about roads. It gave the cause a start that nothing could restrain. Others have taken up the burden, all profiting by the start given to it by the wheelmen of the 80's.

Nowadays, thanks to the untiring energies of the various state and local automobile clubs, stimulated by that aggressive parent body, the American Automobile Association, the work is going bravely on. In many parts of the country the roads are built by counties, and in others the state itself finances the road building. The several annual organized automobile tours in many of the states have proved a great incentive to road building. That father of tours, the annual tour of the American Automobile Association, in competition for the Charles J. Glidden Trophy, sometimes known as the "American Automobile Derby," deserves the greatest credit of all. The laying out of the "Trail to Sunset" route from New York to San Francisco is one of the recent marvelous achievements. Our patriotism is touched and inspired by the establishment of the "National Highway" from New York to Jacksonville. Greatest of all the patriotic projects, however, is the Lincoln Memorial Highway, for which Congress has appropriated $2,000,000 to build. This national highway will extend from Washington to historic Gettysburg, over the very route traveled by the martyred president when he went to make his famous dedication speech.

We have good cars to-day aplenty. We even have the car-de-luxe, with its cut glass flower holder, its sewing bag, its vanity bag, its tea basket, with battery of vacuum bottles, its combination bridge and writing tables, clocks, thermometers, barometers, and what not. But the great question before the automobile user of to-day is not so much, "Is it safe and practical for me to buy and operate a car," nor is it a question how to build good roads, as it is to maintain what good roads we have already built, and where to get the financial aid for this purpose. The great crying demand to-day is for federal aid in the building and maintaining of roads.

The good roads movement has reached a stage where it cannot longer be ignored by the government. State and county roads are all very well in their way, but as any motorist of experience will state, there are so many instances where one state or county road ends, and there will follow a long stretch of bad road before the good ones commence again. It may not be a long stretch but it will be enough to divert travel from where it wants to and originally intended to go. I have noticed hundreds of instances of this in my trips over the country, as well as the absence of bridges over the small streams in many parts of the country, making it necessary to ford them, bad alike for car and occupants. Federal aid should come in, at least, to fill up the gaps. Congress can never resist united pressure for good roads appropriation. The commanding and influential position held by medical men in this country should be of great value. No special class uses the automobile more, both for daily use and touring. Members of the profession are found prominent in nearly all the important clubs. Their united efforts should be of value. Philadelphia has its Doctors Automobile Club, and the Doctors Automobile Association of America, first suggested by the author, has already assumed definite proportions.

David Edward Hoag, M.D., New York City.

## A SATISFACTORY EXPERIENCE

ON April 1, 1910, I purchased a 30 horse-power, five-passenger car (186) at $1,650. After two or three lessons, I was able to drive on a broad country road where few obstacles were encountered without very grossly endangering the lives of the friends accompanying me, and after a week or two was able to drive through the busy streets without killing my engine more than one or twice in each block. Soon more practice and skill allowed me to induce some of my friends to drive to Pariaso Hot Springs, which trip includes the San Juan hill, one of the hardest mountains to cross in the whole valley. Return was made by way of Del Monte, around the bay of Monterey to Santa Cruz and over the Santa Cruz mountains back to San José. This trip includes some of the most trying roads, and yet some of the most beautiful scenery in California. It was all made without the slightest hitch or break of any sort. Much home driving and many trips of varying lengths were made during the entire summer and always was the car ready to go or stop without hesitation.

I had a puncture in September and a blow-out in December. In the latter case I put in a new inner tube that I had carried all the time and speedily learned a valuable lesson, for it promptly blew up and I found that it was not wise to have allowed it to rattle around unprotected under the back seat for five and a half months, as it was chafed and worn. I have since learned to wrap and protect well my extra inner tubes.

The two original front outer casings with their inner linings have run successfully without puncture or blow-out until they covered over 10,000 miles and were replaced by new outer casings. Thus, the outer casings, ordered discarded many months ago, were made to live again a natural life by the aid of the inner linings. They are great tire-savers.

At the present writing, Feb. 29, 1912, the speedometer stands at 11,265 miles; two tires are almost new, having run a little over 1,000 miles, and the other two with their inner linings will run about 5,000 miles more.

For twenty-three months of use, I consider one puncture and two blow-outs, one broken spring and a new cog for the low gear, a good record. Including purchase of new tires, up-keep of all sorts, gasoline and oil, and all other expenses it has averaged $23 a month, or 4½ cents a mile, and is in excellent condition for another 10,000 mile jaunt.

P. A. Jordan, M.D., San José, Cal.

**Use a Horse When Roads are Bad.**—I keep a horse and buggy, but my touring car (180) takes the place of a second horse, and, so far, at less expense. I keep it at home and operate it myself. I use it in trips to the country; and for pleasure. With my family and friends we tour the surrounding country and visit neighboring towns; finding places of beauty and interest. Our roads and streets are such that a car cannot be used successfully after heavy rains and thaws, so I shall continue to keep a horse, especially during the winter season. But as a pleasure proposition, when roads and weather are good, it is the thing *par excellence*.—J. C. Matthews, M.D., Springfield, Mo.

# THE PHYSICIAN IN CROSS COUNTRY TRIPS

## FROM INDIANA TO CAPE COD

"For my part, I travel not to go anywhere, but to go. I travel for travel's sake. The great affair is to move; to feel the needs and hitches of our life more nearly; to come down off this feather-bed of civilization and find the globe granite under foot and strewn with cutting flints. Alas, as we get up in life, and are more preoccupied with our affairs, even a holiday is a thing that must be worked for."—Robert Louis Stevenson.

AT sunrise July 10, 1911, our family of four left Muncie, Ind., on a motor trip eastward, my son at the wheel, I in charge of the route book, and my wife and daughter in the rear seat with log-book and supplies.

Our route took us through Lima, O., to Findlay, arriving at that place at 5 p. m. the first day, having covered 141 miles.

The second day we passed through Fostoria, Tiffin, Norwalk, Oberlin, Elyria, arriving in Cleveland 6 p. m.—129 miles.

The third day we passed through Mentor, Painesville, Ashtabula, Conneaut, O., Girard and Erie, Pa., arriving at Westfield, N. Y., 6:15 p. m.—132 miles.

The fourth day we passed through Fredonia, Buffalo, Batavia, Leroy, Avon, Lima, arriving at Canandaigua at 6:15 p. m.—150 miles.

The fifth day we traveled through Geneva, Seneca Falls, Cayuga, Auburn, Syracuse, Oneida, Utica, arriving at Herkimer 7:30 p. m.—145 miles.

The sixth day we traveled along the scenic and historic Mohawk Valley, passing through Little Falls, New York, St. Johnsville, Tribe's Hill and Albany, crossing into Massachusetts, 6 p. m., to Pittsfield—126 miles.

Fig. 39.—Dr. C. B. Longenecker, Philadelphia, on a trip through eastern Pennsylvania in his touring car (171). This view is at Gulph Mills, Montgomery County, Pa. At the left is shown a commemorative tablet to indicate the spot where the Continental Army encamped on its way to Valley Forge, a few miles beyond. Dr. Longenecker's article is on page 1069.

Fig. 38.—A full car. Dr. W. C. Brittain, Cochranton, Pa., with his wife and two daughters and their children. Dr. Brittain drives the car (199) himself, usually taking some of the family along, and never fails to get there and back. He declares that this use of the automobile is better than any vacation he has had. He admits no cost for repairing and finds the running expense small.

Fig. 37.—Automobiles and party of Dr. H. A. Cowing, Muncie, Ind., on his trip from Indiana to Cape Cod, as described in accompanying article; view taken at Cleveland.

The seventh day we passed through the Berkshires, and through Lenox, Lee, Chester, Westfield, Palmer and Warren, arriving at Worcester, Mass., at 5:45 p. m.—112 miles.

The eighth and last day of the trip we turned south and passed through Rhode Island, through Woonsocket, Pawtucket, Providence, then eastward again into Massachusetts, through Middleboro, Wareham out on Cape Cod, past Buzzard's Bay, arriving at the extreme elbow of the Cape at Chatham, our destination, 4:40 p. m.—136 miles.

The whole trip of 1,100 miles was made with practically no trouble with the car. The poorest roads we found in northwestern Ohio and Indiana. The best roads were in Massachusetts and New York. In these states the state highway commissions take charge of certain main roads, and these state roads are constructed and repaired according to modern road engineering plans. Drainage of the road is provided; large stone is put in the foundation, and on this crushed stone, and lastly a layer of sand and road tar. This is made solid and level with a road roller. There is no dust, and the surface is smooth, but usually not slippery. Even during heavy rains, water leaves the road immediately after it falls, and there is practically no mud.

The fertile grape country in the region of Westfield, N. Y., is full of interest. We drove for nearly a day with vineyards on either hand. From Syracuse to Herkimer, through Utica, we found almost perfect roads, through a beautiful country with green hills and fertile valleys. The last forty miles we made in two hours in company with an auto party from Fort Wayne, Ind., all stopping at Herkimer.

The following day we rode through the beautiful Berkshire Hills, and along the shore of Lake Quecchy. Many times before we had seen the Berkshires from the train, but here was a new and better viewpoint. Roads were fine but at times steep with sharp turns. The next morning we passed Laurel Lake just out of Lenox, a beautiful suburb of Pittsfield. We rode through magnificent forests, and on the mountain at the top of Jacob's Ladder, 1,800 feet high, we stopped to rest, and add a stone to the cairn at the roadside. The spot was lonely and still, but some patriot who had preceded us had erected a lofty flag-pole and flung "Old Glory" to the breeze. At Chester, in the heart of the Berkshires, we stopped for breakfast. The weather was pleasant after the rain of the night before, and the mountain roads, following the mountain-streams, were ideal in construction; and at every turn we found the scenery very attractive.

On the last day of our trip, after leaving Worcester, our route lay along the Blackstone river. The landscape was typical of New England, rolling and hilly country; short crops enclosed in stone fences; woods of evergreens and deciduous trees. Leaving Providence, we soon caught sight of Buzzard's Bay, and the Cape Cod Canal now under construction, and the rest of our trip was easy. For forty miles eastward, we glided over Cape Cod's magnificent highway, the sea on either hand, the salt air in our faces, and our long journey ended, as we stopped at Chatham, at the Atlantic's edge, 1,100 miles from home. During our stay at Chatham, we visited Provincetown, 45 miles away, at the tip of the Cape, and saw the Atlantic Squadron, and the first landing-place of the Pilgrims. We also visited Plymouth, and made frequent trips to Hyannis.

At 7:35 a. m., August 14, we were off for the West. In the Berkshires, we had a real taste of a thunder storm in the mountains, but we escaped without serious discomfort. Leaving Pittsfield, we made a detour on account of construction work on the state road. The mountain road we followed was narrow and full of many sharp angles, but it opened up to our eyes many vistas of indescribable beauties. For twenty miles we saw no towns and only an occasional farm-house, but now and then a field of buckwheat, white in bloom, made sharp contrast to the dark background of the pine forest. Near Fredonia, N. Y., we saw Atwood flying eastward, on his trip from St. Louis to New York.

I had never been a motor enthusiast, and before starting I looked forward to the trip with only moderate interest, but made preparations for difficulties and dangers which never arose. After the first day or two out we all began to feel an exhilaration and an enjoyment that continued with us through the entire trip. It was a game full of wholesome excitement for all. We met with no accident, but avoided running at night. The entire trip of 2,200 miles consumed 153 gallons of gasoline. The total expense of the trip, so far as the automobile (179) was concerned, was $46.26, which included gasoline, garage and repairs, the latter item amounting to $2.90. The back tires used on the trip are still in use.

H. A. Cowing, M.D., Muncie, Ind.

## THE RUNABOUT IN CROSS-COUNTRY TRIPS

Feeling the need of a vacation, I decided on an auto trip from St. Louis to the Allegheny Mountains at the point where they cradle the delightful summer resorts of Deer Park, Mount Lake Park, and Oakland, Md., at an altitude of almost 3,000 feet, with a temperature seldom exceeding 78 F. I therefore equipped my car (162) for a few weeks of outdoor life. I bolted a mess-box with supply of "grub" and all conveniences for cooking to the rear of the gas-tank, the tool-box on the right running-board, a three-gallon oil-can alongside of the generator on the left running-board, with shelter tent, canvas, sailors' hammock, blankets, mud-hooks, chains—in short, a complete camping-equipment distributed around and between the fenders and body of the car. In this way, independent of towns and hotels, I could stop wherever a likely-looking camping-place met my eye or took my fancy, and never had to make forced drives to reach certain places before night.

With my faithful bull terrier Royal, I left St. Louis, Aug. 10, 1911, returning September 27, and in all that time I slept inside a house only three nights. My appetite increased directly as the square of my distance from the sick-room and the city; I foraged at wayside farmhouses for milk, butter, eggs and roasting ears, and occasionally I cooked a bird or squirrel "acquired" with my six-shooter.

### THE GLORY OF THE OUT-DOOR LIFE

If the night was fine I did not put up the tent but slung the hammock between convenient trees with only the starry sky for a roof and was lulled to sleep by the whisper of the wind and chirp of myriad insects. It was an unmixed joy to be awakened with the song of birds to taste the tang of the fresh morning air and to see the glorious dawn "budding like a rose in the East."

### HEALTH RECUPERATION

With my faithful dog ever watchful beside me, I had no fear of tramps or thieves. In a day or two I developed the appetite of an ostrich and returned home with a gain in weight of 19 pounds and a gain in health of 40 per cent. The scenery is beautiful all the way and in places magnificent. In cutting adrift in this way from the old routine, one feels as if reincarnated or at least rejuvenated when one's rest is undisturbed by the jangle of the office bell, the ring of the telephone and the smells and sounds of the sick-room.

### A NATIONAL HIGHWAY

The route I took was the old Cumberland Road, now called the "National Road," from Cumberland, Md., to St. Louis. It is an ideal route, at least as to directness and scenery. In parts or on the whole, the road is excellent, but there are places almost impassable and one should not attempt to cross Illinois if it has rained within a week. In a few years I hope to see the Cumberland Road rebuilt, for it will make an ideal east-and-west cross-country highway and can be put in fine condition at comparatively little expense. It was the great artery of travel a half century ago. Over it traveled Benton, Clay, Calhoun and all the notables of sixty or more years ago between Washington and the West. The construction of the road was begun in 1825 by the government, and the masonry of the bridges and culverts is solid and substantial to-day. Some of the old stone taverns are still inhabited and look good for another hundred years; I saw one with the date 1835 on the "keystone" over the door. Maryland is building a splendid link of twenty miles of cement road, connecting the summer resort region to the famous old highway, to be completed in 1912.

### THE COST OF RUNNING AN AUTO

I wish to express my admiration for the little car that carried me over 3,000 miles—some of it the toughest roads I have ever seen—without a miss or a mishap, excepting, of course, tire trouble. This latter was due to almost constant rains and the slippery roads, allowing the wheels to "spin" on the clay hills of West Virginia, cutting the treads of the rear wheels so badly that I was forced to replace them. Since my return, however, I have had them retreaded and they are good for from 2,000 to 3,000 miles about town. I am still using one of the original front cases and it looks good for at least 1,500 miles, while my total to date is 5,187 miles.

### TWENTY-FOUR DOLLARS A MONTH

I purchased my present car (162) May 1, 1911, and in the ten months to date, March 1, 1912, total cost of up-keep, including all expenses of my summer trip that applied to the car, has been $240.13, or $24 a month, less than the keep of one horse and buggy, and I have saved at least one-half in time—besides the pleasure the family has had on country trips and drives in the parks on summer evenings. I would not go back to horses if they were furnished free, as I know that this car cannot be beaten for dependability or reliability. I have never been delayed except by punctures and I have had only one since last October, never being "towed in"; I use the car all winter in all kinds of weather, and with curtains all on I am as snug as in a coupé. During the ten months, the cost for gasoline (297½ gallons) has been $40.05, for oil (23 gallons at 35 cents), $8.05. In the total of $240 is included three new outer casings and three new inner tubes—in fact, the total represents every cent spent on the car in any manner. An auxiliary air-feed which I installed in the intake manifold has undoubtedly increased the efficiency of the engine remarkably, and allows frequent cleaning of the engine with coal oil in the most desirable manner.

There is no doubt of my car's greater efficiency and economy as against the horse as a motive power for business and for pleasure. If one wants to forget troubles one should get a car and spend the vacation on a cross-country trip.

Walter B. Yost, M.D., St. Louis.

**Effect on Health.**—I have used a machine for six years and cannot imagine how I ever got along without one. I consider an automobile—not merely from the business point of view, but more especially from that of health—the very best investment a physician can make. The effect on my health has been notably beneficial, and I doubt not many other physicians have found the same thing.—Charles L. Minor, M.D., Asheville, N. C.

# WHAT KIND OF A CAR SHALL THE PHYSICIAN CHOOSE?

## BACK TO THE SMALL CAR!

WITHIN the last few years the tendency among physicians has been toward larger cars; the time was when the small machine of the runabout type was considered ample for work and for some pleasure in addition. Whether our country brothers have been inoculated with the same virus I am unable to say, but the condition is pretty prevalent in this city. It is now rare to see a physician using a small car. I contracted the fever and added to my runabout (170) a touring-car (171, Fig. 39, page 1067), thinking I would shortly dispose of the smaller machine and do my work with the larger. This was about a year and a half ago. Since then I have deferred disposing of the small car, with the result that with the experience of two winters and one summer with two cars. certain definite comparisons can be made.

### COMPARISON OF SMALL AND LARGE CAR

*Cost.*—Kept in a garage on my premises, the storage of the two cars costs no more than one. Probably the deterioration of tires is rather in excess, especially the inner tubes. Paint will deteriorate to an extent whether the car is used or not. To offset this, the knockabout car is ready in all weather and will more than save a coat of paint for the large car each season; as rain, mud, etc., are enemies to paint, the big car suffers less by being left under cover on stormy days; it does not matter about the knockabout car.

*Maintenance.* — The running expense, comparatively, is about as follows: oil, gasoline, tires, about 1½ to 2 cents a mile for the small car as against about 6 cents for the big car.

*Looks.*—The appearance of the large car is rather better than the small one, and is certainly preferred by the patient, as it lends an air of prosperity to the physician arriving in it. But as appearance does not always pay for the maintenance, it is economy to use the small car liberally; the mere fact that a physician has two cars is quite sufficient, even though the small car is used most of the time on the score of convenience.

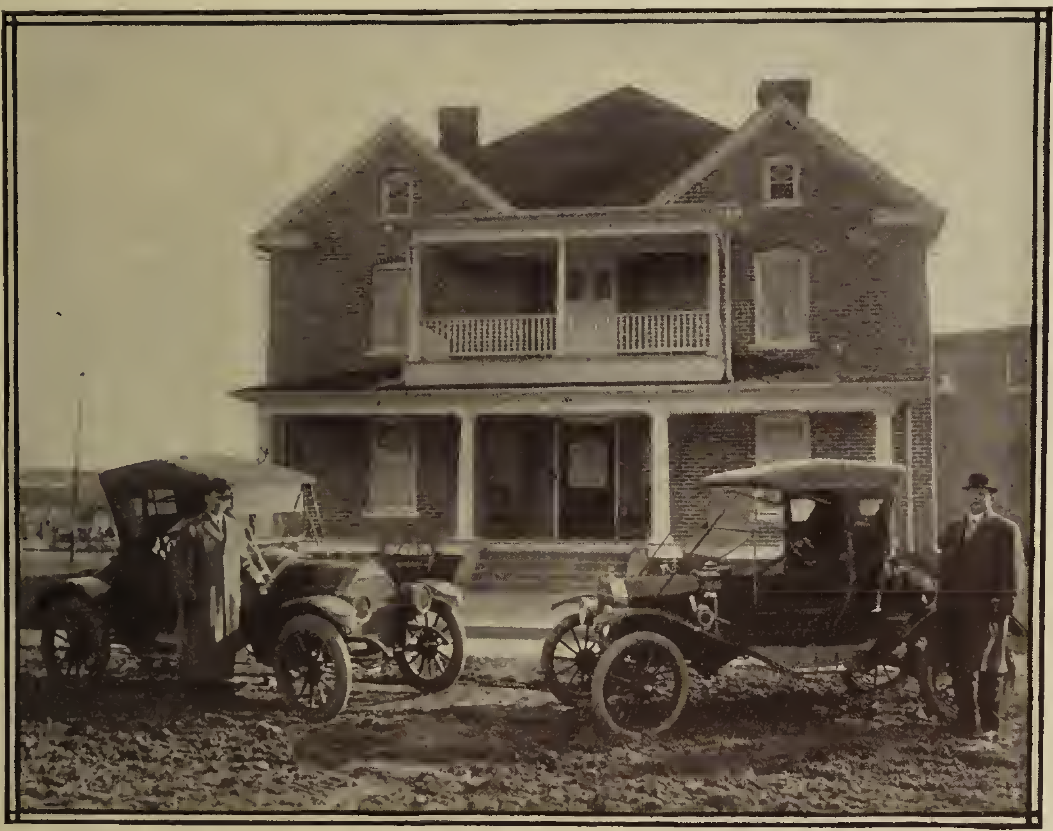


Fig. 40.—Drs. Burrus and Duncan in front of High Point Hospital, High Point, N. C. Dr. J. T. Burrus on right by his car (224) and Dr. G. F. Duncan on left by his car (195).

*Service.*—The small car can be made ready in one-fourth the time necessary for the large one, and is more likely to be ready to respond to emergency service. During the colder months I seldom take out the large car; and indeed, it is a question whether the large car had not better be put out of commission entirely during the cold months, and used during pleasant weather and when a certain amount of touring is permissible; there is no doubt that a cheap, old, small car will save more than its selling value for the big car and decrease running expenses during the winter months.

*Repairs.*—Presumably, the small car was worth $150 two years ago and at present possibly $100, on a trade. During this time it has saved much more than this value to the large car, possibly $125 in running expenses and tires each winter, making in all, for the summer and two winters, probably (deducting depreciation and repairs) $225. During this time, the large car has avoided an indefinite repair bill, which at a minimum, would be no small sum.

### CONCLUSIONS FAVOR THE SMALL CAR

On the whole, it seems to be a saving proposition to retain the old, small car. True, it is getting rather noisy and weather-beaten, and is always the recipient of my friends' jokes, but it seldom fails to get me back home!

When it is necessary to keep two cars in a public garage there would probably not be sufficient saving to justify the two cars, as the cost of storage would more than offset any saving in running expenses.

To make a comparison then, for the physician who can have but one car: if he has an income to justify the large car, he would probably receive an increased amount of enjoyment in the way of tours. But he must be prepared to assume the responsibility of a much larger sum for running expenses, up-keep and repairs. The small car is more likely to be ready, is cheaper as to first cost, running and other charges, and renders as much actual service for professional work as the large car and at a rate so much less that it is hardly necessary to make comparison. In my opinion, the physician has swung too far toward the large car.

C. B. Longenecker, M.D.
Philadelphia.

## SMALL CAR VERSUS LARGE CAR

THIS experience began in 1906 with second-hand cars of the runabout type. The upkeep of these machines was very high, owing to the excessive repair bills. They served a useful purpose in our practice, but the greatest advantage was in teaching us the game. After two years of this experience we discarded the machines in favor of our trusted friend, the horse.

In 1911 we went back to the automobile, buying new modern roadsters of 25 and 30 horse-power, weighing 1,200 and 2,000 pounds. Our experience is as follows:

*Light Car.*—The upkeep is not so much, tires, gasoline accessories and all fixtures being much cheaper. On this car (224) a magneto generates its own electric light, making a net saving of about $5 a month. This car has two forward speeds. On high gear, we can go any hill in our section.

*Heavy Car.*—This is a handsome, strong and durable car (195). On long trips with heavy roads it is preferable. It has three forward speeds. In intermediate gear, this car will climb any hill satisfactorily, no matter how rough it may be. The engine does not have so much vibration, consequently not so much noise. The lighting system (196) is satisfactory. The cost is $300 more than that of the light car.

When the roads are dry we can do twice as much work and do it very much easier than with the horse. We find it very much cheaper than keeping four horses.

Many a wiggle breaks a knuckle.

The total expense of the light car is about $10 a month and that of the heavier is about $15 a month. That the automobile is here to stay we have no doubt, and in the future we shall not try to do our practice without the aid of good machines. We have our own garage, which makes it less expensive and much more convenient.

Our advice is, do not under any circumstances buy a second-hand car unless you want to learn at a very dear price. The light, new, modern roadsters are cheap, dependable and will do the work in a satisfactory manner.

Drs. Burrus and Duncan, High Point, N. C.

## THE ELECTRIC THE DAINTY CAR

THE electric vehicle will be the physician's car for city use in the future. The electric is the de luxe car in every respect, with no grease or clamoring noise to irritate one's temper. It always works, in rain or shine, cold or warm, and 30 degrees below zero this winter has not hindered the running of the machine. We have had unusually deep snow (18 inches) in Minneapolis and vicinity and I am convinced, from my experience in bucking snow in the suburbs, that I can hold my own with any 30-horse-power gas machine.

Some electrics are now furnished with the solid rubber tires which are guaranteed by the manufacturer for 10,000 miles, and it is certainly a satisfaction to know that one can always return to the garage without a punctured tire. The hardness of the tires is offset by proper spring adjustment, making riding as easy as with pneumatic tires. All one has to do when starting an electric machine is to manipulate the handle of the current controller, thereby saving priming, cranking and an occasional automobile fracture of the forearm.

Certain manufacturers of storage batteries (134) are now in a position to furnish batteries which they guarantee for 30,000 miles with the minimum charge of 50 miles. Ordinarily, a new battery for the first year will give a mileage of from 75 to 90 miles per charge, but of course the life of a battery depends on the care and attention given it. All first-class electric cars have a speed of 20 miles per hour, which is certainly faster than the city ordinances permit.

My electric brougham (133), costing $3,100, is operated through a non-reversible steering-gear, which is an admirable feature when running, at all seasons, over very rough streets, and the shaft drive in an electric has the same advantage as it has in a gas car.

John H. Rishmiller, M.D., Minneapolis.

## THE ELECTRIC CAR FOR THE CITY PHYSICIAN

THE electric vehicle is practically an unknown proposition to nine-tenths of physicians. Experimented with in the early days, when carriage builders knew nothing of batteries, and when batteries themselves were cranky things, the average physician found the electric carriage an unsatisfactory and costly toy, entirely inadequate for his requirements, and he therefore very properly turned to the gas-car field for transportation. So often was this disaster demonstrated in every community, and so badly does a little decayed fruit contaminate the whole basket, that to-day it is almost impossible to get a physician even to look over the electric line at the annual exhibit. Yet, in the face of this almost unanimous opinion of the profession, I venture to assert that for the average city physician the modern electric vehicle is the ideal method of transportation. This assertion is based on six years' continuous service with one electric carriage, covering over 35,000 miles, and running to-day almost as well as the day it came out of the factory.

### ELECTRIC CHARGED AT HOME

I bought my electric carriage runabout type (146, page 1071, F), in April, 1906, for $1,200. I was persuaded to do this, not through any especial knowledge of electrics, but because the gas cars at that time were running badly. So long as I was dependent on a public garage, my service was not good and the expense was high. As soon as possible, I put in my own charging apparatus, and at once experienced a change for the better. My carriage is at hand for instant service day and night. It is quiet, clean and with sufficient speed and mileage for almost any requirement. The mileage of this old carriage does not compare with the newer and improved (and more expensive) models, but I still have a range of about 30 miles on a charge and by charging during the noon and the evening office hours, if desired, this mileage can be more than doubled for a day's work. I find this ample for my requirements.

### ELECTRIC NOT STOPPED BY SNOW

The electric is not a car for the joy-rider or for long cross-country runs, though we get our best mileage on well-packed dirt roads. My carriage is seldom laid up for more than a day or two for slight repairs, and has been in commission constantly, every year, except when in the paint-shop. It takes snow and ice with very little trouble, though this uses more electricity and reduces the mileage accordingly. Winter cold and bad weather have no terrors for me, for with a storm-sheet, the driver is entirely protected.

### CAREFUL ATTENTION PAYS

The electric has its limitations, but it also has its advantages. My maximum speed is 15 to 18 miles an hour, but this slow speed is one secret of the long life of the car, as it does not jolt itself to pieces over rough roads. Neither can it freeze up in the coldest weather. It is simple to operate, noiseless and dignified. The battery—that hoodoo of the uninitiated—gives no trouble if some regular attention is paid to it. My annual mileage has averaged about 6,000, and after 35,000 miles of service, under average city street conditions, I see no reason why it should not repeat the performance. It may be well to state that this service is not the result of luck. An electric vehicle requires intelligent care. The battery must be watched and charged with some knowledge of its structure and capacity, while the motor and running gear must be under inspection frequently. I have always made it a practice to replace any weakened or broken parts, immediately. Only by anticipating trouble is it avoided.

### COSTS MORE PER MILE BUT LASTS LONGER

Mile for mile, the electric is probably more expensive than the gas car, but when the life of the car is taken into consideration, to say nothing of freedom from trouble, the cost is much less. My expense for the past four years has been about $1 a day, all the year round. This includes repairs, tires and a new battery about every two years. Without his own garage or its equivalent, I would advise no physician to purchase an electric, but controlling it in this manner, and with a proper recognition of its limitations, my opinion is that the electric carriage is the finest vehicle for the city physician's work.

Walter S. Grant, M.D., Brooklyn.

## STICK TO ONE GOOD MAKE OF CAR

UP to four years ago, I was an ardent admirer of the horse and I would not listen to anybody's views on the automobile question. Now it is just the opposite. I have been using the same make of automobile during the last four years, and am now driving the fourth car. I believe in sticking to one car, provided one gets satisfaction, and not in jumping from one make to another. After having used an automobile for a year, driving it about 18,000 miles over cobblestone streets, one comes pretty near finding out how that particular car will hold up, besides learning all about the mechanism and the adjustment. When another make is selected, the same trouble will be experienced with this as with the original car, until the mechanism is mastered. On the other hand, if the buyer selects a second car of the same make as the first, the troubles decrease; by the time the second car is purchased the owner knows exactly what it requires to make it run best and how the best service may be had at the lowest expense; besides, he always has a good-looking car, and need not lose time for painting and overhauling.

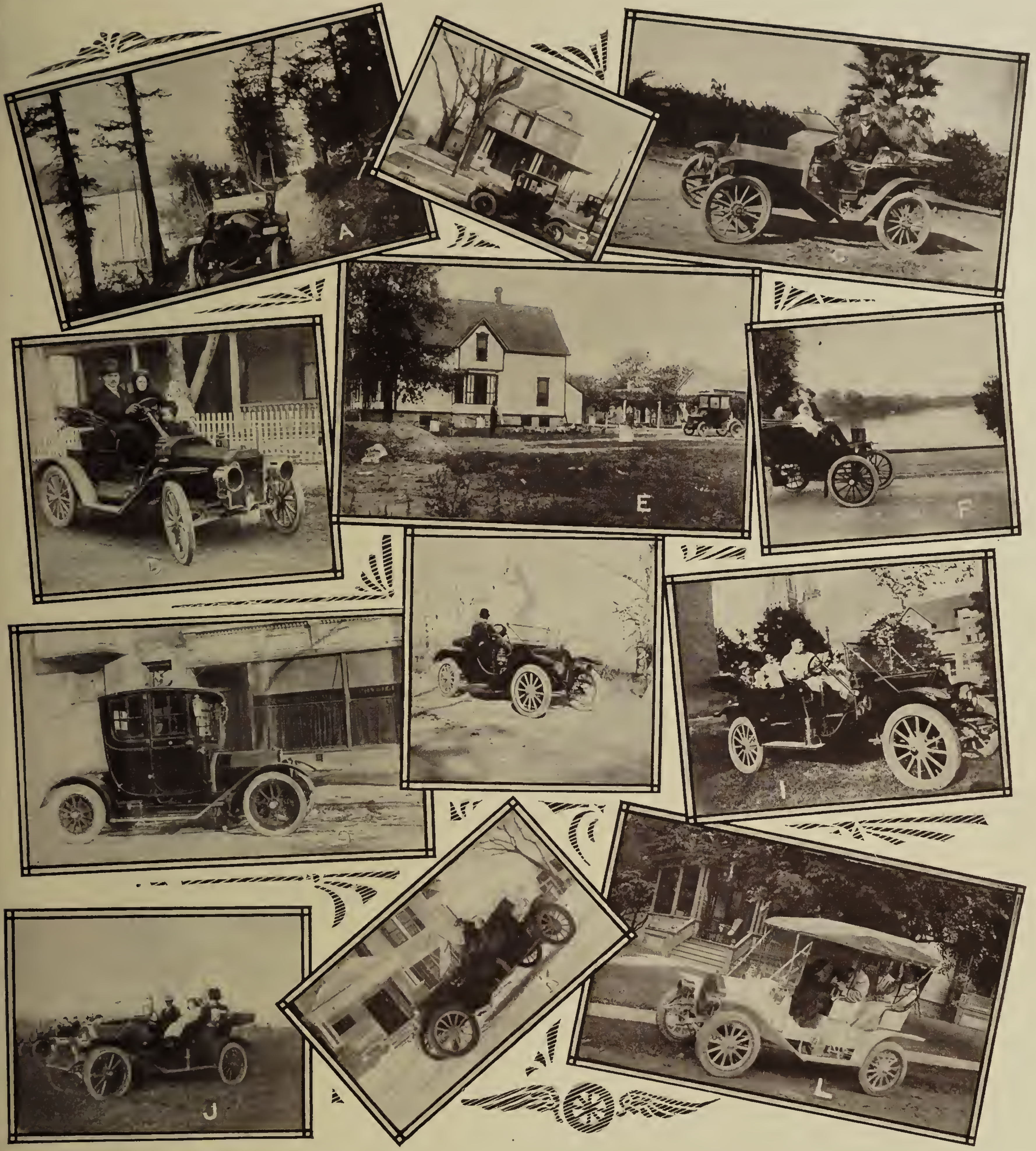


Fig. 41.—A group of automobiles from many parts of the country:

A, Dr. F. B. Bogardus, Eureka, Mont., with a bit of pretty scenery. The country is hilly but the roads are good. A few words from Dr. Bogardus are on page 1080.

B, Dr. C. M. Bowcock, Springfield, Ill., with his automobile (203), residence and garage. Dr. Bowcock has an underground gasoline tank, which enables him to buy gasoline in large quantities at quite a saving and lessens the cost of insurance considerably. He enjoys the coupé very much for city practice.

C, Dr. W. W. Roblee, Riverside, Cal., in one of the orange groves. "Here," he says, "every street in the city is paved and practically all the country drives are either macadamized or oiled. Under such ideal conditions the small, moderate-priced runabout can be used every day in the year and the cost of upkeep is very small. If every community will boost 'good roads' as we have done, the automobile will be a success in every way. Hardly any physician in this community uses a horse."

D, House, auto (113) and family of Dr. Charles W. Pagel, Greensburg, Ind. Dr. Pagel's article is on page 1061.

E, Dr. William D. Weis, Hammond, Ind., and his house and automobile (158). Dr. Weis' article is on page 1054.

F, Dr. W. S. Grant, Brooklyn, in his electric (146) at an attractive spot in one of the parks.

G, The car (175) of Dr. J. M. Nicholson, Chicago, in front of his office. Dr. Nicholson's article is on page 1052.

H, Dr. E. W. Knowles, Greeley, Colo., in his automobile (187) among the Platte River cottonwoods.

I, Dr. A. J. Caffrey and family, of Milwaukee, ready to start on a pleasure jaunt to Oconomowoc in his touring car (204).

J, Dr. T. R. Ayars and family, of St. Louis, watching for Roosevelt on the aviation field. Dr. Ayars' article is on page 1073.

K, Residence and automobile (107) of Dr. Roy V. Baketel, Methuen, Mass. Dr. Baketel's article is on the next page.

L, Dr. E. B. Huyck, Oak Harbor, Ohio, with his automobile (174) in front of his residence. Dr. Huyck tells about his automobile on page 1080.

I attribute my success with automobiles to this plan. I have used two touring cars, one roadster and one torpedo and I find that the touring cars are too heavy and clumsy for a physician's work. In towns where most of the streets are paved with cobblestones, a heavy car will wear out too easily. The light car holds up much longer under these conditions.

I have been using a car (150) which I think is the ideal "doctor's car," either for city or country work. The four cars cost me $1,600 total purchase price and I know of no car on the market to-day which would have lasted as long and with less expense than these four. I have had about 55,000 miles' use, with less expense and less trouble than horses would have cost me for the same time and distance.

I have a garage back of my house; if one has an automobile under personal observation, he is much better off than if he keeps it in some garage, far away from home.

A. H. A. Mayer, M.D., Baltimore.

### AN OUTLINE OF THE IDEAL CAR

THERE can be no question of the utility of the automobile in the practice of the physician. Any means of transportation that will take him to his patients quickly and safely and will increase his sphere of action without increasing materially the expense of transportation is practical, and that is what the auto has come to be to the busy doctor. The horse has been displaced as the doctor's right-hand man.

The ideal equipment for the physician would be two cars, a runabout for business only and a larger machine for pleasure. This the average physician cannot afford, but practically the same result may be attained in one machine of the demitonneau type. This, with the rear seats removed and deck in its place gives the roadster with ample baggage space which is ideal for business purposes; or by a few minutes' work the tonneau can be put into place and the car made ready for family and pleasure use.

My idea of such a car is as follows: Four-cylinder, 25 to 30 horse-power, sliding gear transmission, three speeds forward and reverse, wheel-base 112 inches. Tires 33 by 4 inches, giving long wear with ample size for weight carried, and with the following equipment: top and cover-slip, wind-shield, speedometers, shock-absorbers, tire irons, clock, horn, quick detachable demountable rims, three oil lights and two electric headlights. These latter can conveniently be run from a storage battery and I have found it a good plan to have two twenty-hour batteries in use, using them alternately. This arrangement is extremely simple with absolutely nothing to get out of order. Such a car can be sold for profit at $1,250, and the expense of maintaining it is not greater than that of one horse. [Dr. Baketel's house and car (107) are shown on page 1071.]

Roy V. Baketel, M.D., Methuen, Mass.

### WHILE YOU'RE GETTING, GET A GOOD ONE

THE choice between a runabout and a larger car should depend, to a great extent, on the size of the purchaser's family. If it consists of more than two, he should buy a larger car so that all may share in its pleasures. The original cost and the up-keep of a runabout is much less, however, and this is the machine for the single man or the one who desires it for business purposes only.

#### AN AUTO COSTS MONEY

Do not be too deeply impressed by examples of low cost of maintenance, as most of these are exceptional cases. The upkeep of a two-passenger car amounts to that of a horse and buggy, of a five-passenger machine to that of a two-horse team. This estimate includes everything except an allowance for deterioration. The average expense connected with my $2,000 five-passenger car (139) is $65 a month, and this corresponds with that of most of my friends who have similar cars. It receives somewhat rough usage over hills and cobblestones, country roads as well as paved city streets. It is used every day of the year.

#### BUY OF A PERMANENT AGENCY

Do not buy an automobile except from a well-established agency. The one I obtained my car from discontinued business and it is necessary to send 3,000 miles for parts. Do not buy a cheap car. Pay more for a medium-priced one: its expectation of life, the saving on repairs and the satisfaction of knowing that you will get there amount to a great deal more than the extra first cost.

William E. Stevens, M.D., San Francisco.

## HOW TO LIGHT THE AUTOMOBILE

### ELECTRIC LIGHTS MAKE NIGHT DRIVING A PLEASURE

MY machine (128) has gone over 3,500 miles of all kind of roads and never had to be "pulled in or pulled out," and I have never been out a dollar for repairs except to have a puncture vulcanized. I found early in the game that the most annoying and unsatisfactory feature about the automobile was the gas lights, but fortunately I have been able to overcome that feature entirely. The magneto of this machine is built in the fly-wheel and generates more than enough current for the ignition, so that the excess can be used for the headlights. The outfit for the electric lighting can be bought for a small sum and comes made up, so that the owner can install it himself in a few minutes.

I never knew what real pleasure "night driving" was until I installed the electric lights. All there is to do now is to crank the engine and press the button and as long as the engine runs I have a light that is better than any gas light, whether from tank or generator, and one that is furnished at no expense.

After running 3,500 miles, my tires (129) show practically no wear. This I attribute to the fact that at all times they carry the maximum pressure recommended by the makers.

The practical car for a physician must be one that will do its work easily and quickly on the hilly country roads as well as on the city streets. My car is light and has enough power, so that I very seldom have to go into low speed to take any hills in this country so long as the roads are hard and dry.

I have no garage expense as I keep the machine at home in a shed, 15 by 10 feet, which I had built for the purpose. I look after the machine myself and have it cleaned at home. The actual running expenses are small as I get on an average of 20 miles to a gallon of gasoline and 250 miles to one gallon of oil.

Harry X. Cline, M.D., Marion, Ill.

### INCANDESCENT ELECTRIC HEADLIGHTS

IN these days of multifarious schemes called automobile accessories, most cunningly devised, most of them for the main purpose of promoting poverty among motor owners, he who advises investment in one of these luxuries must be blessed with rare temerity. That impeachment I confess. Nevertheless, imbued with the laudable ambition to share with my professional brothers the advantages of my own experience, I must needs rush into print to let them know of my career with incandescent lights in the search-lights of my machine.

Since the year 1907, when I began as a motor owner, one of the most pesky of the many pesky things which in those days made automobile ownership far from an unmixed pleasure was the unreliability of the lighting system. The old primitive acetylene generator was impish in its perversity. No sooner was it put in repair than the rubber tubing which conducted the gas to the lights would rot, and the copper tubing which was substituted therefor would become cut by the frame in those places where the tube had to be bent. Burners so lacked durability as to seem to bear no more than an evanescent existence, and when by some chance they should be working well, the normal flame would crack the reflecting and magnifying mirror. Expense *ad infinitum!*

I tried an electric system which, at that time (about two and one-half years ago), was new. The headlights were converted into shape for the use of incandescent globes, and connected with a storage battery carried for that purpose only. The result could be likened to that obtained on a patient with the use of amyl nitrite. The effects were merely temporary. Good lighting would be obtained when the battery was freshly charged, but would last satisfactorily for only a few nights. Expense item as great as before.

Eight months ago I purchased a new car (132) and I was determined this time to solve the infernal lighting problem. The system of running lights from a separate magneto seemed the most feasible one available. The idea at that time had not been thoroughly tried, and in California the apparatus had not been on the market very long. The initial expense amounted to about $55, which would have been greater had special lamps been required, but as most new cars come in these times with lamps equipped for incandescent bulbs, that item was eliminated. The magneto is mounted next to the fly-wheel of the motor, and is set in motion by a wheel of its own which is made to impinge on the fly-wheel by the release of a spring controlled by a lever conveniently placed on the dash.

The success obtained by this arrangement has exceeded all hopes. The only expense, apart from that of installation, has been 80 cents for two new bulbs which were bought to replace burned-out ones, and considering the length of time elapsed and the large amount of night running done, that is inconsiderable. The magneto itself has not even been inspected since its installation. The convenience, especially on a rainy night, of obtaining light by merely releasing a lever, is enormous. The connections are simple and have never failed. The amount of light with this arrangement of course varies with the speed of the motor, and theoretically that is some considerable objection. Practically I have not found it to be so, and if ever I wanted a stronger light, by releasing the clutch and speeding the motor I could obtain illumination which would serve for almost two city blocks. In fact, this very plasticity, which theoretically is undesirable, works practically to advantage.

I have had only the headlights connected to this system, leaving the other lights oil, so that the car is lighted when standing. The system which combines dynamo and storage battery, with all the lights run from a battery constantly charged by the magneto or dynamo, has attained what seems to be the ideal in lighting, but of course is vastly more expensive. There is no doubt in my mind that electric lighting by means of a dynamo or magneto is far superior in every way, including financial, to the old system of acetylene gas. [An illustration of Dr. Wiel's car is on page 1079.]

Harry I. Wiel, M.D., San Francisco.

### AN INSTANTANEOUS GAS-LIGHTER

ONE of the most important accessories recently added to the automobile is the instantaneous lighter. Many a time I have experienced difficulty and inconvenience when I had to step out in the wind and attempt to light my gas headlights. After canvassing the field pretty thoroughly, I finally experimented with a gas-lighter (201) which has just been put on the market. It has been a source of endless satisfaction to me; the convenience with which I can light my acetylene lamps from the driving-seat has been so pleasing that I want my fellow practitioners to know it. There is another advantage, however, namely, the saving of acetylene gas. It is true that the waste did not mean a great expense, but the inconvenience of having to change the tank is at least an annoyance. The saving comes from the fact that when the car is standing and it is not necessary to have the headlights going, I simply turn a switch and put them out. The advantage of the new gas-lighter over any other that I have seen comes from the fact that it is simplicity itself and comparatively inexpensive. I paid $10 for mine and the up-keep is nothing. There is no battery to wear out and to fool with, as the spark is furnished by the magneto or other igniting system of the motor.

S. Edward Sauer, M.D., Chicago.

# THE COST OF RUNNING A PHYSICIAN'S AUTOMOBILE

## WHAT TO DO WITH YOUR OLD CAR

IN buying my first car, I answered this question very satisfactorily for the other fellow, for I bought his car, which was then two years old. It had been fairly well taken care of and looked good, but manufacturers had not brought their products to the degree of perfection then (1907) that they have since. Troubles multiplied faster and were not so easily adjusted as now, so after a year of indifferent use I traded it for a mere pittance, firm in the belief that I would never own another car.

In the spring of 1910 my resentment at my loss and inconvenience had abated somewhat and, seeing so many cars being used with success and pleasure, I again invested in a car (138). After two seasons of very satisfactory use, except for the usual unsatisfactory experiences with repair men, I was confronted with the question that heads this article. The car was a four-passenger, 30 horse-power, costing originally about $1,400. I had an exceptionally good engine but the paint was dull and worn off in places, the fenders were badly rusted out, and, of course, the car lacked some of the things thought so essential in the latest models.

### THE DIFFICULTY OF TRADING A USED CAR

I went to the manufacturer's agents and endeavored to trade it in on the latest model, but was quietly informed that they would sell me a new car and use their best efforts to sell my old one for me, but that they could not afford to carry my old car; I also felt that I could not afford to own two cars so dropped negotiations with them and let it be known to some of the other agents that I was in the market for a new car on a trade. I saw several cars similar to my own, ranging in price from $900 to $1,500, but they all placed about the same value on my car, $400 or $500.

The best trade that I could make was my car and $460 for a car smaller than mine with less horse-power, and one that I considered inferior to mine in every way. Other trades ranged up to $1,000 and my car for a new one. Any one of these trades would have put me in the same position in another year or two when in the natural course of events I would be debating again whether to turn my car in on a new one or have it fixed up and if I should trade it I would have to lose as much on it and very likely more than the value of the car I had traded for it.

### PROBLEM SOLVED: OLD CAR REPAIRED

After consulting several repair men, I finally let one have it who painted it, put on rear doors, which had not been on before, put on new fenders and thoroughly overhauled my engine for a total cost of less than $150. My car now looks like a new one, runs better than some of the new ones I have seen and I am sure the depreciation will not be as great as on a new car, and in another year or two it will still be only an old car and I can sell or trade it for something of value.

My advice, therefore, is to keep the old car at work so long as the vital parts do not have to be replaced, unless you are in a position where it is not necessary for you to economize.

Fig. 42.—Automobile (206) and residence of Dr. J. L. Bolt, Easley, S. C.

T. R. Ayars, M.D., St. Louis.

### EXPENSIVE EXPERIENCE

WHEN a medical friend offered to trade me an automobile for my team, I had been driving horses in the practice of medicine for twenty-seven years. I traded without seeing the machine, which was a five-passenger car ($2,500) (116); but my friend said that it was in good condition, having been run only six months. After making considerable necessary repairs, I proceeded to learn to drive, under the direction of an experienced driver. I got along pretty well till I came to a bridge across a small stream. As the forewheels struck the edge of the bridge, which was elevated several inches above the roadbed, the steering-gear broke and before I could get my wits together sufficiently to stop the machine it had crashed into the side of the railing. Fortunately the railing of the bridge did not give way entirely, and we were saved from a watery plunge and perhaps something worse, as the bridge was about 12 feet above the water. This experience cost me $100 for repairs. I kept the machine for twelve months, getting perhaps one month's service out of it altogether, in the meantime making many repairs, buying tires and equipment. With it all I gained some experience of several kinds. At the end of the year I sold the machine for $750, and after balancing my automobile account I found that I was out $1,000 and my horses.

My second experience was with a steamer (117). My son induced me to stand his security for the purchase of this car with the view of running it for hire, he believing that he could within a year or two make sufficient clear money to pay for the machine. Within a few months I found that the boy was not only not making any money, but was not getting enough out of its hire to pay for the maintenance of the car. Being responsible for the purchase price, I bought the car of him in order to save both him and myself. I used the steamer in my practice (I do only surgery and not a general practice) for a year and got some very good service and considerable pleasure out of it. When the steamer is in prime condition it is the most powerful car I know; but it is not a practical proposition for one who is not a skilled mechanic and trained to the special problems embodied in the automobile steamer. At the end of the year I was fortunate enough to sell this car and found, on footing up the bills, that my second experience had cost me a little over $1,100.

In June, 1911, I bought a five-passenger car (118) which has proved to be a very good machine in many ways. The maintenance for the eight months I have had it has cost $358.89, which is nearly $1.50 a day, besides the depreciation on the value of the car. I have run the car 5,927 miles, making the cost of the maintenance per mile a little over 6 cents. I have bought four new tires; one of the front tires, however, has run the entire eight months without ever having been deflated and is in fairly good condition to-day.

J. W. Long, M.D., Greensboro, N. C.

### SIMPLICITY AND ECONOMY

ESPECIALLY in the South, the automobile is usable during the greater portion of the year; it is possible, however, that too much has been expected of any one machine. In many cases the shortcomings are due to the mechanical ignorance of the physician himself; many a man would like to have a car were he assured that he would not have to rely in the "yours for business" garage man. Whatever car we own, let us thoroughly understand its construction, how it works and why, and many of the little troubles that end in larger ones will cease to exist.

Fig. 43.—Dr. A. W. Davisson, of Corpus Christi, Tex., in his runabout (225), with the town in the distance.

If a prospective buyer will listen to all that is told him by the automobile salesman regarding the good points of his car (and the shortcomings of the other fellow's), and believe that all the automatic attachments thereon will "always, without fail, work" and that the whole "blame thing" is filled with brains, he will change his views some day when he is about ten miles out in the brush with a balky "self-starter" and no crank (but himself) handy.

I believe there is many a physician in moderate circumstances who would really like to become the owner of a car of inexpensive first cost and of low up-keep expense—a car that he can take care of himself, a car that will run when and where any other car, regardless of first cost or up-keep, will run, and in most places that a horse and buggy can travel—a car that is first of all non-complicated, with few useless parts to worry one. My car is never in a repair shop and seldom do I have to do more than tighten some nut or make some simple adjustment. The up-keep and running expense of my car is less than half what one horse would cost me in good weather, while in bad weather when not in use the expense is nothing.

When the friction-drive wears out I readily put in another at a cost of $2.60 plus three hours of my own time or that of a non-mechanic Mexican. I have now run my car eight months with not one cent's expense for repairs, the above friction excepted. My car (225) is one for the physician in moderate circumstances who wants a car that can negotiate hilly, rough roads, the car for tire-economy, and without intricate (automatic?) mechanism out of sight and non-get-at-able—a car with seldom a case that the wise garage man can diagnose as a bad case of appendicitis with adhesions (to one's pocketbook).

Probably one of the greatest causes of dissatisfaction with the automobile to-day in the hands of physicians, many of whom are not mechanically informed, is the fact that the automobile is too complicated in its construction. How many understand the exact workings of a "differential" or the contents of a "transmission case"? What cannot be seen cannot be thoroughly understood. All the mechanism of my car can be seen and examined at all times with the least possible trouble. And with no water-pump, no batteries, and no oiling to watch, I think I have the car for the busy physician who wants to "get there."

A. W. DAVISSON, M.D., Corpus Christi, Tex.

## QUACK GUARANTEES

I ALWAYS carefully read each Automobile Number of THE JOURNAL and have always learned something from someone's else experience. I hope that someone may benefit by mine. I am not a novice in the automobile world. I owned two cars before, and have had all kinds of experience with repair shops and mechanics—good, bad and very bad ones.

My present car (154), bought second-hand, had been used by the original owner for six months and the one year guarantee accompanying it was transferred and assigned to me. The guarantee covers "broken and defective part or parts FROM ANY CAUSE WHATSOEVER if not in fact due to misuse, negligence or accident."

In less than a month the car commenced to knock, and I at once took it to the factory branch here and they overhauled it. The bill amounted to $108. They allowed me $28 for broken gears but refused to allow me $6 on a reverse idler pin, reverse idler gear and crank shaft bearing bushing, claiming they do not replace worn parts. I argued that the parts showed an unnatural wear for a car that had been driven only 7,000 miles and, therefore, that the parts were defective. My arguments were overruled and I had to pay.

Fig. 44.—Dr. C. M. Nicholson, St. Louis, with his automobile (205) in front of his residence on Delmar Boulevard.

A couple of weeks later my steering wheel showed too much lost motion. A worn steering gear was replaced and I had to pay for it: again the same argument—"natural wear and we do not replace worn parts."

After running the car 500 miles from the time I overhauled it, the clutch collar got worn out, and I took the car again to the branch factory for repairs. The foreman called my attention to the fact that my front spring was broken and a new spring must be put in. I told him to do so. They presented the bill for $16.35, refusing to allow anything on the guarantee, claiming that the clutch collar was worn out; and, as the factory turns out perfect and tested springs, and as their foreman did not notice any flaw in the steel, therefore, the breakage must, of necessity be due to misuse, or accident, as driving into a choke hole, and they did not have to furnish the spring, valued at $6.

My position in the matter was that I neither misused or neglected the car, nor met with any accident—the spring was simply unable to stand the ordinary traffic, due, perhaps, to poor material and workmanship, and, if a spring cannot withstand an ordinary choke hole, which is unavoidable in ordinary traffic, such a spring is defective (also a source of danger to the driver's life) and certainly covered by the guarantee. Again my arguments were overruled, and it is again: "Pay the bill or you don't get the car."

Their argument about the spring seems to be: The factory turns out perfect and tested springs, therefore the breakage is due to misuse, negligence or accident and, therefore, not covered by the guarantee. To carry the argument further means that any part or parts are either worn out, or, if broken, it is due to misuse, negligence or accident, as the factory turns out perfect and tested parts and the foreman does not find any flaws in the steel, therefore it never comes under the guarantee and they do not have to furnish anything, unless they want to do it—when they think that your friend is about to buy a car of the same make. In short, you cannot hold them to their guarantee, as they put in jokers—"misuse, negligence or accident"—enough loopholes to evade their guarantee.

I do not know the legal aspects of the subject. I am sure their sophistic arguments would not be upheld by any fair-minded judge, as the spirit of the guarantee is not in accordance with their contention, as is plain in the case of my broken spring, where small pieces of the inner leaves were broken. But how many physicians, like myself, have the time and inclination to go to court? The result is they prefer to pay the bill, even if they are convinced beyond the shadow of a doubt, that they are in the right, as was the case with my broken spring. Now to the moral. Have the guarantee read that the factory will replace (means they will furnish parts and labor; instead of the word "furnish," which means you pay for labor) broken or worn parts, unless caused by accident. Otherwise you are at the mercy of the manufacturer who, like the quack, promises everything before you buy, and after you buy, falls back on the jokers of the guarantee, tells you to pay the bill or you don't get the car, adding insult to injury.

GEORGE I. BLUHM, M.D., San Francisco.

## TWO-CYLINDERS ARE ECONOMICAL

MY three years' use of the automobile has been extremely satisfactory from every standpoint. I live in a part of the country where sunshine and good roads are the rule, where a machine may be used with as much comfort in the winter as in the summer.

Fig. 45.—Two cars (144, 145) of Dr. B. F. Stevens, El Paso, Tex., in front of his nifty bungalow.

My first machine, a 16 horse-power magneto equipped runabout (144), cost $825 complete new. The total expense the first year, including all repairs, gas, carbid, tires, etc., was

$180. For the second year it was $200 and the third $250. This does not include depreciation, which should not amount to more than $150 a year, as there are two machines of similar make in this town, which have been running four and five years, respectively. Their owners declare they run as well now as ever. This machine will do the work of two horses at least. Even if only one horse were used, it could not be maintained for less than $200 to $250 a year, so in my experience this two-cylinder machine is more economical from every standpoint than even a horse.

I have recently purchased a four-cylinder roadster (145), not because the old one was worn out, but because it looked a bit antiquated. The new car has style, speed and easy riding qualities. It will cost three times as much to maintain as the old one. It will not do any more work or any better, but it has the one thing, "looks."

I know from my experience that the auto is cheapest from every point of view, where it can be used safely and comfortably without straining its mechanism, every day in the year. The ideal "doctor's machine" should not weigh over 2,000 pounds and not cost less than $1,500. It should have pneumatic tires; time has eliminated the solid tire and high-wheel affair for most of us. Do not experiment with new and fancy makes; let the other fellow, who has money and time to spare, do that.

B. F. Stevens, M.D., El Paso, Tex.

## A WAIL FROM A HUMORIST

SHOULD a country physician buy an auto? If he does I would strongly advise him to also buy a chicken incubator and quit the practice of medicine, for between the two he will have no time to fool away with patients.

A country doctor has about as much business with an auto as he has with salvarsan. Unless he is a man of means and practicing only to please a wealthy and senile relative I would advise him to stick to old Dobbin. Despite any catalogue or booklet one may have read, the auto is not a mudlark, and despite all agitation, good legislation and taxation one will often find mud on the public highways.

Last June I fell for an auto and I am glad to say that I have kept no account of my expenses, for if I had, I would dispose of my car (155), and I want it. I believe, however, that it is as good if not a little better than any other car of the same price.

I note that some physicians find using an auto as cheap as horse and buggy, but I notice no notary's name signed to such statements. "The auto is a source of great pleasure"; so is a steam yacht.

What does it cost to keep a car? Nothing; one had better not run it, however, but just content oneself with keeping it. Every man flatters himself that he has a mechanical turn, and that he can easily get the hang of the thing and repair his own car; the only cure for him is to buy a car.

"The automobile has come to stay"; that can be proved by any one who has a second-hand car for sale.

The above is addressed to the country doctor, and not to the man who has paved streets to travel over, and a repair shop every few blocks. I consider the auto number a great service to the physicians.

Eldred A. Davis, M.D., Earlington, Ky.

## BEST PROCEDURES WHEN BRAKES FAIL TO WORK

MY first experience with an automobile dates back to March, 1904, when I purchased for $700 a single-cylinder, chain-drive runabout with a 6½ horse-power motor (160). In two years and a half I ran the car 12,000 miles, accumulating considerable experience in motoring, the most unique being a ride of 16 miles back to my office with a broken crank-shaft, the break being to the right of the driving-sprocket, the only inconvenience resulting from it at the time being that the clutch was slow to engage on the high speed. The car taught me a great deal, the only parts that did not give trouble being the full elliptical springs. But as cars went in those days, I had no cause to complain and considered myself fortunate to sell it for $150 in cash, the final cost of running the car being 15.73 cents per mile.

### ACTUAL COST OF USING AUTO

Four years ago I bought my second car for $1,460, a two-cylinder, 20 horse-power, five-passenger, light touring car (161). So far I have run it 24,000 miles, mostly through the streets of Philadelphia, with a jolt across the car-tracks at almost every cross-street. The final cost, including the depreciation in value, but not counting the interest on the price of the car, has been 15.4 cents per mile. The records for each of the four years are as follows:

| Year | Total Mileage | Total Expense | Repairs | Cost Per Mile |
|---|---|---|---|---|
| First ....... | 7,000 | $542.83 | $ 8.68 | $0.077 |
| Second ..... | 5,500 | 698.58 | 167,00 | 0.127 |
| Third ...... | 5,000 | 508.36 | 118.00 | 0.101 |
| Fourth ..... | 6,500 | 724.72 | 106.03 | 0.111 |

In explanation of these figures it must be said that the depreciation in value of the car has not been included, accounting for the difference in the figures in the "cost-per-mile" column from the rate of 15.4 cents given above. The great jump in the cost of repairs in the second year was due to a general overhauling with replacement of all worn parts in the second half of the year, after about 10,000 miles had been covered.

If anyone considers that my car has been run at a low rate of expense, it can be explained partly by watchfulness on the part of the garage man and myself, but mainly on the fact that all my repair work has been done at a shop kept by a machinist who was originally with the agents and who understands the car thoroughly, besides being a skilled mechanic.

The makers were willing to replace one or two broken parts after two and a half years of running. This is a point worth considering by anyone about to purchase a car, but it is difficult to ascertain how the maker is going to treat his patrons, except by experience.

### GARAGE EXPENSE

If the rate of 15.4 cents per mile seems high it may be accounted for by the great depreciation in the value of a car in four years (relatively greater, the higher the price of the car), and by the fact that I have always kept the car in a public garage, paying $15 per month for three years and $12 per month for the fourth (the benefits of competition); and I have always had the garage man keep the gasoline and oil tanks filled, paying 16 cents a gallon for "gas" and 75 cents for oil. With the exception of one month I do not think I have been overcharged. I know that I could get gasoline and oil at lower rates, but that would necessitate going for them and filling the tanks myself; in fact, I tried it for a short time, but it proved too time-consuming and inconvenient, especially when the supply of gas ran out once and I had a stroll of a mile or two along a dusty suburban road on a hot summer day to the nearest garage. At the garage, the car is washed every night and the brass-work polished every morning and then the car is delivered at my office at the close of my morning office hour.

### TRIED CHAUFFEUR AND RESUMED DRIVING

I tried a chauffeur for one month but found the strain too great on my nerves; having driven so much I could not get up the necessary confidence in somebody else unless I rode blindfolded, so I resumed my seat at the wheel. I have had two minor collisions, in which, of course, I was in the right both times, the result of the first being that the other car (of the same make as mine, and run by a doctor) needed a new running-board, while from the second my car came out with a similar need.

### WHEN BRAKES FAIL TO HOLD ON A HILL

The most exciting time that I had was on a trip to see a patient out of town, when I had taken my wife and children for a ride. In going up a steep hill on the second speed there was a sudden thump which seemed to come from the gear-box; the engine suddenly stopped and the car slid down hill backward. The brakes were unable to hold the car, so, setting the emergency brake as hard as possible, I climbed out over the levers intending to get a rock from the roadside to block the wheels, but in getting out I unwittingly released the brake-lever, and pushed the change-speed lever into the reverse, so that the clutch engaged and turned the engine over, and as the switch was on, the car gave a start which threw me on my back in the road. Before I could pick myself up, I saw the rate of speed of the car perceptibly diminish, which I learned afterward was due to my wife's presence of mind in cutting off the switch. As fast as possible, I got back to my seat in the car and steered it down hill backward until near the bottom where the slope was more gradual and the brakes began to bind a little, and with the help of some boys, who were fortunately near and replied to my request to put rocks under the wheels, the car was brought to a standstill just before the road took a sharp turn.

### METHODS OF STOPPING RUNAWAY CAR

I had always heard that the course to pursue in such an emergency was to back off to the side of the road. But a colleague did this and the car upset, so I feared to try it. I have since learned that the proper thing to do in such an emergency (which seems to be happening to a number of cars) is to put the change-speed lever into the reverse, cut off the spark, engage the clutch and let the car descend the hill backward, slowly, the compression acting as a powerful and safe brake.

Alfred Hand, Jr.,
Philadelphia.

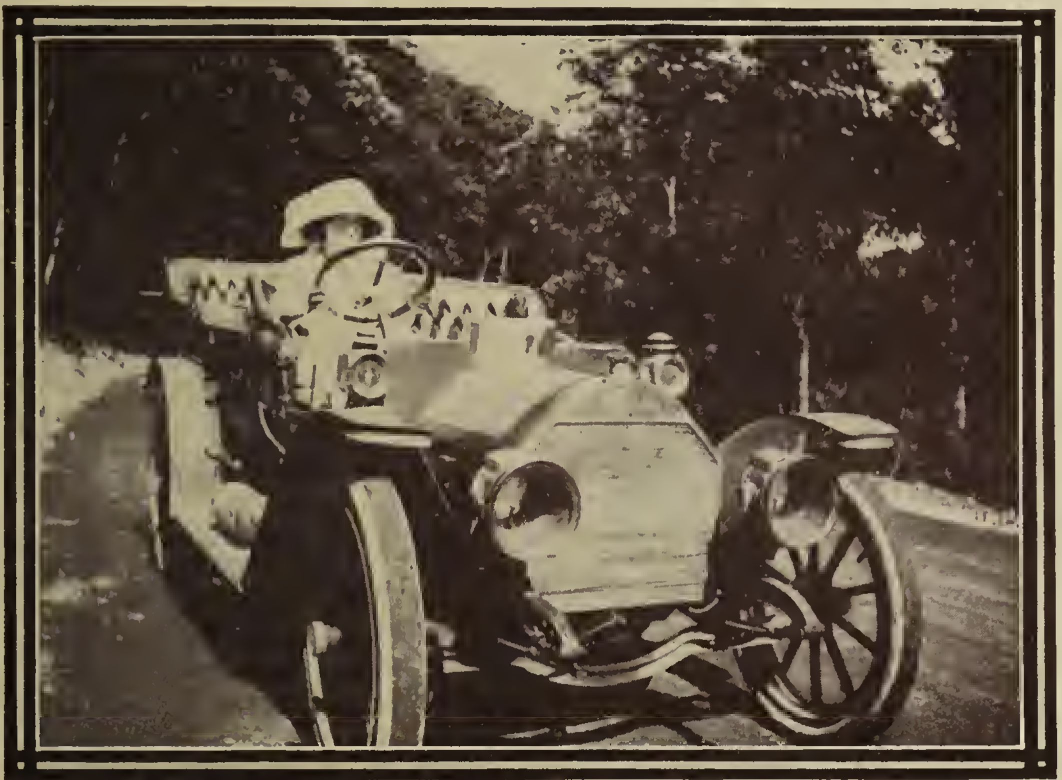


Fig. 46.—Dr. Dora Greene-Wilson, Kansas City, in her automobile (216) on one of the boulevards of that city. Dr. Wilson's article is on page 1060.

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## EXPERIENCES WITH A MOTORCYCLE

My experience with motor vehicles in a country practice consists of two years with motorcycles and one year with an automobile.

In 1909, I purchased and used, during the entire year, a 3½ horse-power motorcycle (208). This machine had not power enough to pull me up some of the hills around here, but that wasn't my greatest objection to it. It was rigged with a flat-belt transmission, and that same flat belt caused me a world of trouble and annoyance; it would slip on the pulley, in spite of all the contrivances that suggested themselves to me or to others to prevent a belt from slipping on a pulley. Finally I got a chance to sell it; then I registered a vow, "Never again a motorcycle with a belt-drive."

Then, in 1910, I rode a 4 horse-power motorcycle (209) with a chain-drive, which proved very satisfactory in every way except that it was shy on power in getting up all hills; still, it was a big improvement over my first one, both in power and in the fact that I didn't have a minute's trouble with the transmission. I had no tire trouble with these machines, except two punctures, in the two years. I would get from 70 to 75 miles from one gallon of gasoline. Expenses for repairs were 45 cents the first year and $1.25 the second year.

In 1911 I purchased a runabout (210), as I felt that this mode of travel was more dignified for a physician, and while my experience with this auto during the year, driving it about 4,000 miles, was entirely satisfactory from a standpoint of freedom from mechanical troubles, it was still shy many points in its supposed superiority over the motorcycle. My tires, after the season's use, are still in fair condition, and should last me 2,000 or 3,000 miles more before having to be replaced with new ones. I have had only one puncture so far. I have driven it over all kinds of roads, rocky and muddy, through pouring rain and through some snow, and so far have never had to be hauled to town. That doesn't mean that the machine has never become balky or gone back on me, for it has, several times, but I have always been able to get it back into a sufficiently good humor to get home again under its own steam. My expenses for the year, for repairs, are $265. I get from eighteen to twenty miles per gallon of gasoline. I keep my machine at my residence in a small portable garage (223), built at an expense of less than $40. I look after my machine myself and do my own repairing. I use acetylene lights and a generator (211) and have had absolutely no trouble from that source.

The question of economy, or lack of it, in the use of the automobile in country practice depends more on the man who operates it than on the particular kind of machine. If you can't carry a tune, why try to sing? If you have no mechanical sense—and that doesn't mean that you should be a finished mechanic, but that you should have a reasonable amount of natural ability in that line—you had better continue to call on your patients behind the faithful old Dobbin. For a little tinkering in the wrong place on an automobile may cause lots of annoyance or prove quite expensive. A physician should be able to make his own repairs and adjustments and not have to send to the garage every time a nut works loose or a wire breaks or short-circuits. There are thousands of little things that may happen and do happen at times, and it costs 70 cents an hour to employ a mechanic to look for them.

To say that I am satisfied with motor-propelled vehicles for the physician only expresses it too mildly; I am delighted with them and couldn't think of going back to the horse and buggy, except when the roads are so bad that I am compelled to do so.

C. O. Cranston, M.D., Madison, Kan.

**Take the Light, Simple Machine.**—After a not inconsiderable experience, first with an electric, later with a single-cylinder gasoline car, and now with a four-cylinder car, I have, for the present at least, decided that the most economic investment for a medical man requiring or desiring an automobile for both work and pleasure is a modest-priced, perhaps even a low-priced one (say costing between $750 and $1,000) of sound construction—and I believe there are such on the market. A car of this kind can be operated at less expense than a larger, heavier, more elaborate and more complicated one; less oil and gasoline are required; tires cost less and last longer; new parts cost less; and, above all, depreciation is less, absolutely if not relatively. Of course the service that any car gives will depend in considerable measure on the manner in which it is used and the care that is bestowed on it.—Augustus A. Eshner, M.D., Philadelphia.

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**It's a wise man that knows his own engine.**

## A MOTOR PIONEER

MY first power wagon was bought in 1904; it was the first ever seen in this part of the world. If I were starting in practice again, the first investment that I would make would be in an automobile. I am sure that the time saved pays for the machine, besides the pleasure. I have had several different machines and would buy one that would not run as quickly as one that would run. I have not found any difference in machines at the same price.

I use light machines on account of tire expense and trouble; I have run eighteen months without a puncture or tire trouble. I would not have a machine without rear radius rods. Carbureters are all good; the 1904 are as reliable as the ones made to-day. I use distillate for fuel; I never change brand of cylinder oil and the cylinders never carbonize. Spark-plugs last for years and the nine plugs in my engines have never been out of them. Through defective material I have been off the road three times and by rights should have been killed but escaped without injury. I have run machines about 40,000 miles and the only engine parts renewed were three piston rings in an air-cooled engine; I mention this because I think it remarkable that any thing could be made so satisfactory.

My first machine, a buckboard (213), I used continuously for several years; then I used a runabout (214) and another machine (215). I took the buckboard every place that the other machines have gone and about as fast and over worse roads, for the roads here have been greatly improved during the past two or three years. I use any spark-plug, but for a one-cylinder engine the plug with a central electrode, shaped like a little gear wheel, gives a great deal more power. I find distillate as satisfactory as gasoline for fuel.

Fig. 47.—Automobile of Dr. Walter Culin and view of the board-covered main street of Coquille, Ore.

To keep spark-plugs clean I use enough air to burn the carbon, and to clean carbon out of engine I run it light and open as much as possible. Having run a little while, the engine will be found to be clean.

Walter Culin, M.D., Coquille, Ore.

## THE AUTOMOBILE VERSUS THE HORSE

ONE car will do the work of three horses, with less attention—hence the time factor—and with not above half the expense. Three horses at livery would cost $60 a month; shoeing, carriage and harness repair at least $25 a month more. My own car, a four-door, torpedo-body (207), costs me $20 a month, storage, washing and polishing; from $6 to $8 for gas; oil and grease not over $1.50 a month.

The above expenses are fixed. Repairs and tires, harder to estimate, make an average expenditure of about $400 for the auto, as against $1,020 for the up-keep of three horses.

The unsatisfactory feature is the repair of the automobile. Even when dealers keep parts in stock, if they are permitted to do the repair work the item charged for labor, at from 60 to 75 cents an hour, is the factor which makes something of a burden out of the average machine. My experience leads me to advocate the purchase of parts direct and the employment of a good mechanic to do the work, rather than to trust to the self-styled "experts" employed by the average dealer.

After making up your mind as to whether a runabout or a larger car is necessary, proceed to select a standard make. This at once minimizes possible repair bills.

W. E. Robertson, M.D., Philadelphia.

## THE SECRET OF GETTING EFFICIENCY

A physician's car should be heavy enough to hug the road when going at full speed but not so heavy as to cause excessive wear on the tires, and, to make riding comfortable, should have a wheel-base of not less than 100 inches. A car which weighs not less than 2,000, nor over 2,200 pounds, will meet the requirements. For the last year I have been driving such a car (187), a 30 horse-power roadster, and it meets all needs. It has been in daily use since the first week in March, 1911, driven in all weathers and over all kinds of roads.

The secret of getting the efficiency from any standard car is: 1. Be liberal with the oil and grease. 2. Keep the engine clean and the cylinders free from carbon. (A few squirts of chloroform or turpentine in the priming-cocks every two weeks will take care of the carbon. About every four or five months drain the crank-case, transmission and differential, rinse out thoroughly with kerosene). 3. The farther one stays away from the garage men, the better for the car and the purse. 4. Know the car, so any sign of trouble can be located. 5. Keep the tires well inflated to lessen tire wear.

E. W. Knowles, M.D., Greeley, Colo.

## A CAREFUL ANALYSIS OF EXPENSE AND THE RETURNS THEREFROM

IN one of the Automobile Numbers of The Journal, it was stated that a physican whose income was not over a certain sum had no business with an automobile. Since my income comes rather close to this figure, my experiences may be of interest.

It is now three years, lacking a month, since I began with the automobile. During that time I have had three cars. The first, a second-hand two-cylinder (181), was good enough to learn on, but, after six weeks' use, I turned it in on a 1909 touring car (182). My real experience has been with this car, which was bought new and is still in use. I also have a small one-cylinder, air-cooled buckboard (183). I have run this very little, and though I still keep it, it has not proved a success.

### USES BICYCLE AND STREET CARS ALSO

Soon after buying my touring car I sold my horse, which had been doing all my work in a hilly country town. My drives are not over 6 miles in any one direction, so that my transportation has been a problem of 15 to 20 miles a day, or often even less. I ride a wheel about the center of the town for seven or eight months in the year, and use the electric lines, which are unusually convenient, whenever I can. I have used my car almost entirely for business, as a three years' mileage of 8,289 will show; only occasionally throwing in a short pleasure trip to the beaches. In the winter, I use a stable horse (which I hire by the day) for two or three months, having kept my carriage and sleigh. I drive and care for the car myself; no one else has ever driven it.

### THE YEARLY COST COMPARISON

The first cost of car and equipment was $1,366; I have paid for up-keep, in 1909 (half the season), $119.08; in 1910, $388.92; and in 1911, $338.92; a total of $846.92 for two and a half years' running, repairs and addition to equipment. The average cost of my horse and outfit for ten years was $350 a year. I have paid, then, as much for running my auto as for keeping my horse, aside from the first cost of the car, and the car-fare, horse-hire and cost of bicycles expended to save the auto. My transportation has cost me nearly three times as much as formerly. The longer I keep this car, however, the less the first cost will be per year; so that after two more years my transportation will have cost me only twice as much as my horse. Thus the relative increase will diminish each year.

### MORE COST, BUT MORE BUSINESS, PLEASURE AND HEALTH

As an offset to this greater cost, I have done more business and have had more time to rest. I have had enough fun of an innocent and healthful kind to make up for all the expense, and have given a great deal of pleasure to my family and to the friends who have ridden with me. I do not regret my investment at all.

### IGNORANCE IS NOT BLISS

My troubles were many the first year, but have become fewer every year since. The car had been hastily assembled at the factory. Nuts were loose, and the oiling system, my knowledge of which was conspicuous by its absence, was imperfect. I ran into a telegraph-pole and bent the axle and steering-rod. Then a nut in the gear-case became loose, and disarranged the transmission. When winter came on, I managed to freeze the radiator, because the garage people had told me it would be all right with the water drained off. I should have put in glycerin to fill the small pipes at the bottom, which never drain completely. There were many things I had to learn, such as the mysteries of dirt in the carbureter, the regulation of the needle-valve for cold and hot weather, the need of spring washers to keep nuts from working off, and how to make cranking easy by leaving gas in the cylinders when stopping, and using gasoline in the pet-cocks in cold weather.

Figs. 48 to 51.—Upper view, Dr. J. P. Torrey, Andover, Mass. Left view, Dr. Harry I. Wiel in his auto (132, page 1072) in front of the San Francisco City and County Hospital. Right view, Dr. J. W. Robbins, Naugatuck, Conn., an enthusiastic user of automobiles; he has two of the same make. The picture shows his runabout (217). Lower view, Dr. F. M. Vessells of Perryville, Mo., with his runabout (136, page 1057) in front of his residence.

### FOUND A MECHANIC WHO UNDERSTOOD CAR

As long as I went from one garage to another, to men who knew little about the car, my troubles continued. Finally I found a man who knew this particular engine and who fixed me up once for all, with the result that, for more than a year, my only repair has been to have the valves ground once. I have a cleaner which I use to remove the dirt and preserve the varnish. Since using this, I do not wash the car, and find that it is more easily cared for. At present I have to keep the car in a cold barn, so that it is hard for me to try to use it in the winter months. I hope, however, to fit up a garage in a shed attached to my house, and to heat it with hot water from the furnace. This would make winter driving possible for me. You cannot work to any advantage over a cold car in a cold barn.

### THE BEST TYPE OF CAR

My ideas as to the best type of car have changed during the last three years. For a man with long drives to make and an income large enough to afford it, a $1,500 or $2,000 car is good (for example, 184); but for a country practitioner with moderate income, a cheaper one, costing from $500 to $1,000, is, I believe, the better investment (for example, 185). It permits of frequent changes without so much loss on the first cost. The upkeep, moreover, is less, and the car is not so troublesome. I believe that a high-wheeled, air-cooled car with solid tires, such as is used for business wagons, would be very successful for winter use in the New England climate. The touring car is the most satisfactory, however, for all around work.

I feel no confidence in other than pneumatic tires. The amount of weariness is in large measure proportional to the shaking up; and an easy-riding car means better health, and years added to your life.

The automobile is a great benefit to the physician, and at first a great expense, too. The expense will be decidedly lessened after experience. I would not go back to the horse for any money. The fun of getting around quickly is worth the price of admission. Nevertheless, the statement referred to in the beginning of my story, about an auto and a given income, is right unless one uses the car carefully and helps out expenses in every way. It is especially important for a man to avoid the "joy-ride" habit, which adds much to expenses. Nowadays we have to be on hand all the time in order to get the business, or somebody else will take our place.

J. P. Torrey, M.D., Andover, Mass.

### DISCOUNT BETTER THAN GUARANTEE

MY first car was a one-cylinder (218), my second a two-cylinder (219); my third and latest (220) is the most satisfactory of the three. It has been in use eight months and has traveled 3,500 miles. The cost of maintenance and repairs in that time has been $193.07, or about 6 cents a mile. Deterioration and interest on cost of the machine and the little garage in which I keep it would probably be an equal amount, making all expenses about 12 cents a mile. This is more than the cost of one horse, but a little less than that of two, kept under similar conditions. Gasoline costs me 10 cents a gallon and oil (221) about 28 cents. This oil has been the most satisfactory I have ever used.

Experience of over three years has taught me that a little real money in discounts on buying is worth more to me than many high-sounding guarantees. This applies to machines, tires and accessories generally. Adjustments seem to mean a much greater loss of time and energy and money than repairing at the home town or buying at places where discounts are in style. Most automobile and accessories manufacturers seem to keep a very flourishing "circumlocution department," where complaints are received and where broken parts and broken promises are carefully mingled until the unfortunate automobile owner wishes he had borne his grief in silence, rather than waste precious months and break down good protoplasm in trying to get his dues for defective material or overcharges. I still find the village blacksmith or the much-abused plumber or some good factory mechanic the most reliable man for repairs. Our regular garage man advises me to buy a new pump when the old one needs a washer.

Gilbert Van Vranken, M.D., Passaic, N. J.

**Warm Legs in Winter.**—Every medical man realizes the importance of guarding against the dangerous effects of cold, especially when the strain of practice puts the vital energies to a severe test. In driving an automobile, he must keep his extremities as well as his body warm. By protecting my legs and ankles by leggings during two winters, I have conserved my energy and kept in good physical condition during the severe cold weather, going for long distances in my machine. They have given me more comfort and probably allowed less loss of heat than would have been the case had I used a foot-stove. I believe that my arterial tension has been less during this time. The leggings (178) were designed by a physician for use in his daily practice, because he could not find anything in the market that was both comfortable and convenient. He certainly struck a mighty good thing; they are easily applied and removed.—Wyllys K. Ingersoll, M.D., Philadelphia.

**Transient Flat Life Requires Physician to Cover Wide Territory.**—The practice of medicine in Chicago is no snap, for Chicago to-day is a city of flats, and people move so, that a patient living within a block to-day may be living five miles away next month. It is impossible to hold one's business unless one can answer calls quickly, and this is impossible without a motor car. I have not only held my own, but have increased my business by making distant calls promptly. During the past two years I have averaged about 75 miles a day and have had practically no trouble with my car (166). It is economical and is always ready, winter or summer.—G. A. Hibbert, M.D., Chicago.

**Uneasy works the spark that's clogged with carbon.**

### AN UNUSUALLY GOOD EXPERIENCE

MY second runabout (212) I have used two seasons; it appears to be good for two more years, if not longer. However, I intend to change it for a more modern one of the same make. Though a low-priced car, it has given me most excellent service. I bought it in March, 1910, for $650, fully equipped. Not till the following October did I spend one cent on it in the way of repair or up-keep. In that month (October) I purchased a spark plug. Even that little spark plug was not necessary, as in looking through the tool box a few days later I found one which had been given me by the agent when the machine was purchased. Thus, my auto cost me nothing during the first season, absolutely nothing, except one unnecessary dollar, outside of the necessary gasoline, lubricating oils and illumination. During the second season the cost was only $10. The company often wrote, inquiring if I needed assistance or information of any kind. They tried to keep in touch with me. Hence, my third machine is going to be, I expect, a more modern model of my present one.

Daniel Conboy, M.D., Bad Axe, Mich.

**Treated Right, Auto Gives Satisfaction.**—Care for your motor-car yourself, but lock up your wrench in your safe. Pay careful attention to your instruction-book, keep plenty of oil, gasoline and water in their places, run the car as you would any powerful machine, and you will get the best results and your automobile will be a pleasure and profit to you. I drove my first car 12,000 miles and only broke a rear spring; the car (174) is running and giving satisfaction to-day. This was a Model 10; I have since run a Model 19 touring car as my family car (see page 1071) and a Model 14 for my practice; I like this plan, as the expense is small to keep up this car, it seems to require less oil and gasoline than any small car I know. The company has always tried to do what was right. From the standpoint of our clay roads, a car of power, durability and strength and a good company back of it is the best proposition.—E. B. Huyck, M.D., Oak Harbor, O.

**Physicians Use Most Automobiles.**—Physicians have availed themselves of the advantages of the automobile with more alacrity than any other class. One manufacturer claims that 16,527 cars, or over 30 per cent. of an output of 51,000 cars (222), are owned by physicians. It would be interesting to know what style and price of car, the large and expensive or the small and cheap, met with most favor. This gives the medical profession a lead that is not likely to be overcome for some time. Several other manufacturers would probably make a similar report. Another interesting assertion, from a medical journal, is that there is a larger proportion of automobiles among physicians in small towns than in large cities.

**Makes Work Easier.**—I have used a 32 horse-power auto (165) for over a year, with very satisfactory results, both professionally and from the standpoint of enjoyment. I find it much easier to do my work with the auto than with the horse; in fact, the work becomes a pleasure. This is a hilly country (see page 1071), but the roads are fair, and I find my machine capable of going practically everywhere.—F. B. Bogardus, M.D., Eureka, Mont.

**Treads Solve Tire Problem.**—Last November I fitted my 32 by 3½ tires with leather treads (168), which have been in daily use ever since, and, excepting a couple of valve leaks, I have had no tire trouble since. My rear tires have not had air added since November last, and they stand at eighty pounds pressure now. As the pavements are very icy at times, I was obliged to add tire chains for the traction wheels, and with this equipment, my tire trouble has been nil.—A. F. Kingsley, M.D., Battle Creek, Mich. (167).

**A motor in your car is worth two in the shop.**

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# ALLERGY OR ANAPHYLAXIS IN EXPERIMENT AND DISEASE *

LUDVIG HEKTOEN, M.D.
CHICAGO

It is a general idea that when an animal previously injected with an antigenic substance is injected again with that substance, the immunity induced by the first injection is reenforced. Under certain circumstances, however, that would not seem to be the case, because violent, even fatal symptoms as well as other manifestations may set in after the second injection. This aspect of immunization has been studied very actively of late and results are being obtained that seem to place important pathologic processes in a new and clearer light.

In 1892, von Behring described an increased susceptibility in animals to diphtheria and tetanus toxins, even when they were immunized so that the blood contained antitoxin, and this condition he termed "hypersusceptibility." A few years later, Richet and Hericourt found that dogs, on reinjection with eel serum, which is primarily toxic, seemed to become increasingly susceptible rather than immune. And when Richet found that reinjection of extracts of actinia, in place of causing immunity, might give rise to acute symptoms that would differ from those ordinarily caused by the toxic constituents of the extract, he coined the word "anaphylaxis" to designate this peculiar condition as the reverse of prophylaxis. In 1905, von Pirquet, and Schick published their classical studies of serum disease and in this, and in other publications by von Pirquet, is developed with great clearness, the conception that it concerns a change in the reactive powers of the body to the introduction of foreign substances, to designate which von Pirquet introduced the word "allergy" (*ergeia*, "reactivity" and *allos*, "altered"). In 1906, Theobald Smith's phenomenon became known: this name has been given to the violent and convulsive symptoms that may arise when guinea-pigs injected previously with mixtures of diphtheria toxin and antitoxin are reinjected with horse-serum.

This observation gave rise to a series of important researches by Rosenau and Anderson, Otto, and many others, and it has become established that when foreign protein is introduced into the tissues and blood of the body, there develops a condition which may manifest itself in acute symptoms, often fatal, and in other special ways, when that protein is introduced again under proper circumstances. This condition is transferable to normal animals by means of the blood and organs of prepared or sensitized animals, and animals passively prepared in this way present the characteristic symptoms, soon to be described, when injected with the protein in question.[1]

### HYPERSUSCEPTIBILITY TO TOXINS

At first hypersusceptibility to toxins (Behring) and anaphylaxis were regarded as describing the same things, but now it seems that the toxin-hypersusceptibility may differ in important respects. Thus the symptoms of immediate anaphylaxis are essentially the same in the same species, no matter what the foreign protein, whereas toxin-hypersusceptibility is said to present the symptoms of intoxication caused by the toxin used for immunization. And then hypersusceptibility to toxins does not seem to be transmissible to normal animals, whereas in anaphylaxis the condition is so transferable, hence toxin-hypersusceptibility is excluded from further consideration at this time.

### THE ANAPHYLACTIC EXPERIMENT

The typical experiment involves the first or sensitizing injection (or injections), the period of incubation and the reinjection. The exact quantitative relations have been determined best in the case of the guinea-pig, the animal used the most in this work because the most sensitive. It has been found that 0.001 c.c. of horse-serum, for instance, so changes a guinea-pig, sensitizes it, that a violent and fatal reaction occurs on reinjection of horse-serum (Rosenau and Anderson); in the case of beef-serum, 0.01-0.001 c.c. and even less leads to acute death when 0.2 c.c. of beef-serum are injected intravenously at the end of the incubation period (Dörr and Russ); 0.1 c.c. of a 10 per cent. suspension of red corpuscles induces anaphylaxis with respect to the corresponding hemoglobin (H. Pfeiffer and Mita): of pure egg-albumin one-millionth of a gram suffices to set up a fatal reaction on intravenous reinjection of one-tenth to one-twentieth of a milligram, and as little as one twenty-millionth of a gram makes a guinea-pig distinctly anaphylactic (Wells). With respect to bacterial and other proteins the quantitative relations have not been worked out so exactly. The first injection may be given subcutaneously, intraperitoneally, or intravascularly. From observations in connection with serum disease we know that human beings may be sensitized by a single injection of horse-serum. Rabbits and dogs do not respond nearly so easily as guinea-pigs, and several preliminary injections at intervals of a few days may be necessary. Guinea-pigs may be sensitized by the introduction of horse-serum and egg-white into the stomach and the large intestine, and even by the inhalation of a fine spray of foreign serum. It is believed, also, that in man foreign proteins may enter the blood from the digestive tract, but probably only under pathologic conditions. The allergic reaction has been obtained in goats, sheep, horses, mice, chickens and pigeons, and is a phenomenon of general biologic significance.

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* This article is a part of lectures on "Immunity" given on the Herter Foundation, New York University and Bellevue Hospital Medical College, New York, Jan. 8-13, 1912.

[1] I omit all references to the literature on allergy or anaphylaxis, which I shall use as synonymous terms, because complete bibliographies are given by von Pirquet in his fine article on "Allergy," Arch. Int. Med., 1911, vii, 259; by Friedemann, "Anaphylaxie," Jahresb. ü. d. Ergebn. d. Immunitätsforschung, 1911, vi, 31, and by Schittenhelm, "Ueber Anaphylaxie vom Standpunkt der pathologischer Physiologie und der Klinik," ibid, p. 115.

In guinea-pigs injected with serum the period of incubation lasts about from six to eight days; when very small or very large quantities are injected it may last longer. In serum disease there is an incubation period of about the same length. At the end of the incubation the reinjection of the same protein as injected or of a closely related substance brings on the symptoms of allergy. Here the intravenous injection is the most effective, and the quantity injected must be several times that of the first injection (guinea-pig). The duration of the sensitive, allergic or anaphylactic state varies; facts obtained from various sources indicate that in some cases it may last for months and even years; in guinea-pigs the maximum sensitiveness occurs between the tenth to twenty-first days after the first injection.

In its various phases the allergic state recalls the course described by antibodies in the blood on introduction of antigens—there is the same latency, followed by a period of maximum intensity of development, and then a gradual fall. This correspondence becomes better understood when we consider that the allergic state is dependent, if I may anticipate, on the formation of specific antibodies.

## SYMPTOMATOLOGY

Generally speaking the severe, general symptoms produced by different proteins are quite uniform and characteristic in the same species, while in different species the symptoms may vary because the same organs are not involved to the same degree, even when the reaction is produced by the same antigen. We are most familiar with the symptoms as they appear in the guinea-pig, dog, rabbit and man.

*Guinea-Pig.*—This animal gives the most constant and most intense symptoms, being, according to one statement, four hundred times as sensitive an anaphylactic reagent as the rabbit. On intravenous reinjection, the symptoms may be explosive and death may result in a few moments with dyspnea and convulsions. The symptoms develop somewhat slower on intraperitoneal and subcutaneous reinjections, and some minutes may elapse before the animal begins to scratch its nose and body. It becomes restless, seems to choke; convulsive movements occur about the mouth and throat; there is retching, discharge of urine and feces, and then convulsions, respiratory arrest and death may ensue. In the so-called paralytic form weakness with flaccidity of the muscles is characteristic; there may be combinations of the convulsive and paralytic forms. If recovery takes place there follows loss of weight. The most striking change observed after death is permanent distention of the lungs—the Auer-Lewis phenomenon. The lungs fill the chest cavity completely; the alveoli are distended, the walls may be ruptured; and the walls of the bronchi (secondary and tertiary, Schultz and Jordan) are contracted, owing, it has been found, to peripheral action, the death in reality resulting from asphyxia due to folding of the bronchial mucosa by the contraction of the smooth muscle in the bronchi, and not, as Besredka and others have asserted, from central causation. Multiple hemorrhages occur in the lungs and elsewhere associated with fatty changes.

H. Pfeiffer has shown that depression of the temperature is constant in the severer forms of anaphylaxis in the guinea-pig. In fatal cases this fall may be as much as from 7° to 13° C. In all cases in which the animal survives there is a close relation between the severity of the symptoms and the extent of the fall of the temperature—the severer the symptoms the deeper the fall and the longer the time required for the animal to reach its normal temperature again. These two factors, the extent and duration of the fall, are used to obtain accurate measurements of the degree of shock. It is important to note that the reinjection of very minute quantities of antigen may raise the temperature.

Leukopenia and a temporary loss of complement in the blood also occur in instances not immediately fatal.

*Dogs.*—In this animal the symptoms are not so violent as in the guinea-pigs, and deaths are infrequent. On intravenous reinjection there is great restlessness often with screaming; soon the animal becomes very weak, falls over, and it may be still perhaps for hours; feces and urine are usually discharged; dyspnea is not marked, but there is a rapid fall of blood-pressure, sometimes to the extent of 80-100 mm. and it has been found that this is due to peripheral action on the splanchnics. When the pressure begins to rise, the other symptoms begin to disappear. In some cases blood is discharged from the intestines and there may develop a condition of hemorrhagic inflammation, in both the large and the small intestine, which Schittenhelm and Weichardt have termed "enteritis anaphylactica." There is leukopenia with loss of mononuclears, and the coagulability of the blood is reduced.

*Rabbits.*—Arthus noted that in rabbits subcutaneous reinjection of horse-serum may cause local edema and even necrosis—Arthus' phenomenon; (similar phenomena may occur in other species). In addition, nonfatal anaphylaxis is associated with respiratory disturbances, marked prostration, fall of blood-pressure, increased peristalsis. In rabbits highly sensitized to horse-serum by repeated injections and then given 5 c.c. of fresh serum intravenously, Auer observed a short clonic convulsion, weakness or absence of the heart-beat, and death; in this case death is due to a change in the heart-muscle, a chemical rigor, which is most pronounced in the right ventricle. Blood coagulation is delayed.

*Man.*—In human beings the injection of therapeutic serums may give rise to a variety of allergic phenomena. A few instances of alarming collapse and even of death, the immediate symptoms being not unlike those of immediate anaphylaxis in guinea-pigs, have occurred after the first injection of antidiphtheria serum, and in such cases it is not clear how sensitization has been produced. The suggestion has been made that, in some cases, sensitization has resulted from the oral introduction of horse-meat or closely related substances.

It is possible that under very special circumstances the poisonous substances causing the symptoms may develop through autolytic processes in the serum itself, or from the action of the serum on the proteins of the patient. In most cases we probably shall have to rest content with the assumption that for reasons not now understood, the persons so affected harbor in their blood an unusually large amount of the antibodies concerned in the reaction. Schultz and Jordan suggest that the occasional severe serum phenomena in man are due to an abnormal development of the bronchial mucous membrane whereby asphyxia is produced on contraction of the bronchial muscle.

The more familiar, typical serum disease, concerning the allergic nature of which there is no question, is peculiar in that the symptoms may appear after only one injection of serum, usually in from eight to twelve days. In this case part of the antigen, that is, the horse-serum, is assumed to remain unchanged, or incompletely changed, possibly in the skin at the point of injection and elsewhere, until enough of the substances required to cause a sharp reaction has been produced by the body. If serum is reinjected some days after the first injection, there may develop an immediate reaction, with marked local changes even in case of small doses of serum, and sometime with severe symptoms and collapse. In this case the conditions and general results of the anaphylactic experiment are reproduced quite accurately. Or the reaction after reinjection may be accelerated, that is, develop after a short period of latency (from five to seven days). Here also the manifestations may be severe. The ordinary symptoms of serum disease are so familiar that it is only necessary to mention them: urticarial and erythematous eruptions, local and general edema, swelling of lymph-nodes, pains in the joints, headache, weakness, fever and leukopenia. In some cases there may be a bloody diarrhea.

In by far the larger per cent. of cases the first injection of antidiphtheria serum as now used — concentrated and properly aged — does not produce any symptoms of serum disease; here we can assume that the foreign proteins are disposed of so gradually and in such a way that sufficient toxic substances are not formed at any one time to cause symptoms. Other forms of allergic manifestations in man are discussed later.

From this consideration of the functional and other disturbances in anaphylaxis it is clear that the criteria and standards of measurement are more or less peculiar to each species.

### THE ANAPHYLACTOGENIC OR ALLERGENIC SUBSTANCES

The anaphylactic reaction is obtainable with a variety of substances such as serum, milk, egg-white, cells (animal, vegetable, bacterial) and more or less pure proteins. These are substances that have the power to induce in suitable animals the formation of antibodies, i. e., they are antigens.

Now, the bodies that take part in the anaphylactic reaction follow the same laws of specific action as the antigens and antibodies, with the action of which *in vitro* we are familiar. In both cases, species-specificeness obtains with respect to most antigens, that is to say, in the case of anaphylaxis, the reaction that has been discussed is obtainable only by means of the protein used to sensitize the animal, or from some closely related species; and usually best by means of the very same protein as that used for sensitization. Dörr and Russ found that guinea-pigs of the same weight, passively sensitized in the same way with the same quantity of antisheep-serum, reacted on reinjection of the serums about to be mentioned in the following minimal doses:

| | |
|---|---|
| Sheep-serum | 0.004 c.c. |
| Goat-serum | 0.004 c.c. |
| Beef-serum | 0.01 c.c. |
| Swine-serum | 0.6 c.c. |
| Human serum | 1.0 c.c. |
| Horse-serum | 2.0 c.c. |
| Chicken-serum | No reaction. |

This illustrates species-specificeness in anaphylaxis. This specificeness is well marked in case of bacteria.

In strongly immunized or sensitized animals the scope of the reaction becomes extended so that it reaches over to more or less closely related species. It is said that in the case of fish protein the specific limitations are not so precise as in birds and mammals. Human and ape, horse and ass, sheep and goat, rat and mouse serum-proteins are not distinguishable by the anaphylactic reaction; rabbit and hare proteins are.

Some animal proteins appear to possess a specificness of their own, in addition to the specificness of species: Thus hemoglobin and blood-serum are limited in their reactions by species at the same time as they seem to be in some degree distinct the one from the other. In certain cases at least, milk is different from blood-serum.

It is highly interesting, indeed, that certain animal proteins have no species-specificness. This is illustrated by the crystalline lens. Uhlenhuth found that the lens of one species is not distinguishable from those of other species by means of the precipitin reaction, and this seems to be the case, also, with respect to the anaphylactic reaction: Guinea-pigs injected with extracts of beef-lens react not only to these extracts, but also to lens-extracts of widely separated species and even of the guinea-pig itself, but not to the corresponding serum-proteins. We may say that the lens-proteins are strictly organ-specific and without species-specificness. Results are recorded that indicate that the tissues of the uveal tract, the sexual cells, especially of the male, and cells of malignant tumors contain substances with organ-specific characteristics, but further investigation is necessary before any final conclusions are indicated.

Here may be mentioned that fetal tissue, placenta and amniotic fluid in experiment may cause anaphylaxis in their own species—observations of great significance in connection with the problem of eclampsia.

In order to determine accurately questions of specificeness it is necessary to work with pure materials. This is not yet possible with many protein substances of animal origin, but the results obtained with vegetable proteins and recrystallized ovalbumin are of much interest and indicate that the specificeness of the anaphylactic reaction is intimately connected with the structure of the protein (Wells and Osborne), and that this reaction can be used to determine the relation of one protein to another, when these are so nearly alike that differences between them cannot be recognized by careful comparison of their chemical and physical properties. To quote Osborne (Harvey Lectures, 1910-11):

> Preparations of globulin from the seeds of hemp, flax, squash, and castor-oil plant are obtained which are so nearly alike in ultimate composition, crystalline form, solubility and physical properties that only the most minute examination reveals any differences between them. While these proteins showed a strong anaphylaxis reaction, only those from the flax-seed and castor-bean showed any tendency whatever to react with each other, and between these the reaction was of a doubtful character. On the other hand, gliadin from rye reacts strongly with gliadin from wheat, a result in accord with the fact that by chemical and physical means no differences have been detected which were sufficient to indicate that these gliadins were different substances. Likewise legumin from the pea reacts with the apparently identical legumin from the vetch. No reactions were obtained between proteins of distinctly different structure nor between those from seeds botanically unrelated.
>
> From these facts it is evident that structural differences exist between very similar proteins of different origin and it is interesting to note that chemically identical proteins apparently do not occur in animals and plants of different species, unless they are biologically very closely related. In this

respect the proteins are in marked contrast to the other constituents of plants and animals, for not only do the same sugars and fats occur in many species of plants and animals, but many of these are common to both forms of life. The morphologic differences between species find their counterpart in the protein constituents of their tissues.

### ARE SENSITIZATION AND THE REACTION CAUSED BY THE SAME SUBSTANCES?

On heating horse serum, Besredka found that it would no longer cause reaction in sensitized guinea-pigs and yet would sensitize normal pigs; hence, he concluded that in serum anaphylaxis are concerned two substances in the foreign serum — a thermolabile intoxicating substance and a thermostable sensitizing substance. Since it requires only one-hundredth as much serum to sensitize as to cause the symptoms of the reaction, it becomes necessary to use exact quantitative methods in experiments of this kind and, on using such methods, Dörr and Russ have found that heating apparently affects both qualities of the serum equally, indicating that it concerns only one substance.

From their work on egg-white and certain bacterial proteins, Vaughan and his co-workers also conclude that the reaction depends on two substances, because on heating the proteins in question in hot alcohol with 2 per cent. sodium hydroxid they obtained two substances, one of which in normal guinea-pigs causes typical symptoms of the immediate anaphylactic reaction, including respiratory arrest and fall of temperature, while the other one, at least so far as the one that is derived from egg-white is concerned, sensitizes guinea-pigs to whole egg-white, but not to itself.

Using the purest protein obtainable, namely, crystalline egg-albumin, Wells found that one-twenty-millionth of a gram produced a distinctly sensitizing effect while one-millionth of a gram would prepare for a fatal reaction, the minimum second dose being one-twentieth of a milligram intravenously. This result would seem to indicate that sensitization and intoxication are caused by the same substance. At present the general opinion seems to be that the two effects are induced by the protein molecule itself and the fact that the purer the egg-albumin is made by recrystallization, the smaller the quantity necessary to sensitize, points in this direction.

Because gelatin, which is poor in aromatic radicles, does not sensitize and because it does not yield any toxic substances when injected into animals, it has been suggested that the anaphylactic reaction of proteins may depend on the aromatic radicles.

As protein substances that are not coagulated (like casein) when heated, may be heated to 100 C. without losing their allergenic characters, it would seem as if the physical change on coagulation suspends the sensitizing effect. As sensitization by the mouth must be exceptional, it would seem also as if the antigenic powers of proteins are destroyed by digestion, and Wells found that tryptic digestion gradually destroys the sensitizing power which runs parallel with the remnants of coagulable protein.

In all cases in which lipoids have been assumed to act as anaphylactogenic substances, the possibility that proteins were present in the alcohol or ether extracts used cannot be excluded.

### PASSIVE ANAPHYLAXIS

Passive anaphylaxis is produced by injection of normal animals with the blood or serum of animals or persons already sensitized. It is the analogue of passive immunization and is specific for the antigen with which the donor is sensitized. Guinea-pigs have been used almost exclusively for the study of this phenomenon, which plays an important rôle in the explanations of anaphylaxis, but it is not essential that the animal furnishing the blood or serum be of the same species as that injected. In guinea-pigs passive sensitization may last for fourteen days and longer. At this point may be mentioned that the young of sensitized guinea-pigs may be born sensitive, and remain so for a longer or shorter time. Passive anaphylaxis was described first by Otto on the basis of experiments illustrated by the following: A guinea-pig was injected in the peritoneal cavity with 0.1 c.c. of horse-serum; twenty-one days later it was bled and the serum injected in a healthy guinea-pig, which twenty-four hours later on injection of horse-serum responded with a typical anaphylactic reaction. First it was believed that a certain period must elapse between the injection of the serum of the sensitized animal, that is the antiserum, and of the antigen; this interval was assumed to be necessary in order that the active element or antibody in the serum might become anchored in the proper way to the cells, especially of the nervous system, of the animal injected. This assumption is no longer necessary because Dörr and Russ and others have shown that when the optimal quantitative relations are obtained, an immediate passive anaphylaxis may be produced. By simultaneous intravenous injection of antiserum and antigen after adjustment of the quantitative relations, Friedmann obtained immediate passive anaphylaxis in rabbits also. At the same time, it is true that this period of latency observed in so many of the experiments in passive anaphylaxis has not been explained altogether satisfactorily.

### ANTIANAPHYLAXIS OR ANERGY

This condition succeeds the anaphylactic reaction from which the animal recovers and is complete insensibility to further reinjection of the antigen. The animal behaves as if it never had been sensitized; after three weeks or longer it gradually becomes sensitive again. This refractory state may be demonstrable within one hour after the reaction. In the case described by de Besche, of severe acute symptoms with collapse, following injection of antidiphtheria serum, the patient became insensitive to odors and other emanations from horses which previously incited attacks of asthma; the former sensitiveness returned after about six months. Whether the refractoriness to tuberculin that develops in certain cases of tuberculosis is antianaphylaxis is not known. In addition to being produced by a non-fatal intoxication refractoriness may be induced also by a large dose of the antigen in the latter stages of the incubation. Reinjection of refractory animals with large doses of antigen is said to prolong the state of refractoriness. It is usually stated that this state is specific, that is to say, producible only by the protein used for sensitization, but this is not altogether clear as there are contradictory observations. In the dog and guinea-pig, it is claimed that it may be set up by intoxication with Witte peptone.

Several explanations have been advanced in regard to antianaphylaxis. At first it was thought that it concerned an antitoxic immunity, but the condition does not correspond to the induced immunity with which we are familiar, because there is no incubation period, and the serum of refractory animals, instead of being protective as would be expected from the point of view of this hypothesis, actually confers passive sensitization.

According to Friedberger, the refractory state results from the antibody in the serum being neutralized by the antigen; in other words, that we are dealing with a negative phase in antibody formation; but this does not cover the facts, first because the serum from refractory animals confers allergy and, in the second place, because the refractory state may develop after a passive anaphylaxis, that is to say, after the injection of antibody antigen mixtures. Among other possibilities we have the disappearance of the complement, but this is merely transitory whereas the refractory state may last for some time. At present this condition must be viewed as an unexplained suspended or reduced susceptibility to anaphylactic poisons.

### THE MECHANISMS OF ANAPHYLAXIS

The earlier observations were made on man, on dogs and on rabbits, and the relationships of the anaphylactic phenomenon to antibody formation seemed to be so clean-cut that it was regarded as an antibody reaction *in vivo*. It was believed that on the first injection an antibody was formed which, on meeting the antigen on reinjection, set free the poison (Weichardt, Richet, von Pirquet, Wolff-Eisner). Von Pirquet expresses this conception most clearly in his discussion of serum disease, the period of incubation of from eight to ten days being the period necessary for the formation of the antibody, while the immediate reaction and the accelerated reaction correspond to the shortening of the incubation in previously sensitized or immunized animals.

Richet advanced a hypothesis similar to this. He used a primarily toxic antigen and did not consider the possibility of the origin of the anaphylactic poison from non-toxic proteins. Consequently he assumed the development of an antibody which he called "toxogenin," which, acting on the toxin that he introduced, split off a new toxic substance, "apotoxin." Weichardt and Wolff-Eisner extended Pfeiffer's endotoxin hypothesis to anaphylaxis and regarded the toxic substance as preformed in the antigens and as set free by the action of the antibody on the antigen. Friedemann and Isaac observed that when foreign proteins are introduced parenterally they are reduced gradually to urea in normal animals, but in animals treated with protein the reinjection of that protein was followed by the manifestations of anaphylaxis and evidences of rapid protein splitting. Hence they concluded that the first injection resulted in the formation of antibodies which caused rapid splitting of the protein when this was reinjected, with the formation of toxic intermediary products. Similar hypotheses were advanced by others as, for instance, Nicolle.

Then came 1906, with the intense work on serum anaphylaxis, especially in guinea-pigs, that followed when Theobald Smith's phenomenon became known. The minuteness of the sensitizing dose, the duration of the sensitive state, the refractoriness following large reinjections and the failure to find in the guinea-pig any antibodies, the action of which *in vitro* was known, served to push aside the older view in place of which came various hypotheses of a cellular nature.

These conceptions were overthrown when Otto and others found that guinea-pigs might be rendered sensitive by the transfer of the serum of sensitized animals. As the transfer of anaphylaxis, however, seemed to succeed only when the serum was introduced twenty-four hours or so before the injection of the antigen, it still was insisted that the active substance in the serum must first be bound to the cells of the nervous system. The immediate inactivity of the antigen-antiserum mixture seemed to make it necessary to assign an active part to the cells. But this stumbling-block in the way of the humoral hypothesis was removed when it was found that mixtures of antibody and antigen in proper quantitative relations may cause an immediate passive anaphylaxis. At present the prevailing idea is that allergy both to protein in cells and to dissolve proteins is essentially a humoral process, and it is unquestionably true that the return to the general view expressed by Friedemann and others several years ago has pointed the road for further progress by presenting problems susceptible of attack.

On analyzing the circumstances under which an immediate passive anaphylaxis is obtainable it was found, first, that complement is necessary; second, that the specific element in the antiserum or sensitive serum is thermostable and that in case of anaphylaxis with respect to red corpuscles, it is bound by the corpuscles, hence, acts as an amboceptor. In serum anaphylaxis the binding of the complement also pointed to an amboceptor-like mechanism. It was found, further, that complement in the blood is diminished in anaphylaxis and that the reaction is preventable by the injection of hypertonic salt solution, which, as is known from other experiments, prevents the complement from acting.

The general conception at present is, then, that on sensitization, immunization with proteins, substances of the general nature of amboceptors are formed; these are specific and their union with the antigen in cooperation with complement results in the formation of substances that produce the anaphylactic symptoms and lesions. The action is regarded as one of protein digestion, first, because the toxic effect closely resembles that of substances in Witte peptone, i. e., substances obtained in the course of protein splitting, and second, because evidence of actual protein splitting in mixtures of antigen and antiserum may be obtained by chemical means as well as by observations on their rotatory power (Abderhalden's polariscopic method).

At this point it may be recalled that Vaughan, from the similarity of the symptoms of egg-white anaphylaxis and those following the injection of toxic split-products of egg-white, was one of the very first to advance the idea that the anaphylactic intoxication is caused by protein split-products and that there is an increase in the protein-splitting power of the blood of sensitized animals. Vaughan speaks of this power as dependent on a ferment which is present in extracts of organs of sensitized guinea-pigs, these extracts splitting the protein in question, namely egg-white, so that its injection into normal animals causes immediate symptoms. The active element in these extracts is rendered inactive by heating to 56 C., and may be reactivated with normal serum in quantities so small as to be without action by themselves, thus indicating a mechanism which immunologists would regard as dependent on the action of amboceptor and complement.

The production of proteolytic and peptolytic ferments in the blood after the parenteral injection of proteins is now being studied by chemical and physical as well as biologic methods. Abderhalden and Pinkussohn find that in dogs the introduction of gelatin, for instance, leads to the formation of non-specific peptolytic ferments. Dick, on injection of serum and bacterial proteins, obtained evidences of the formation of specific proteolytic substances of the nature of amboceptors, that is, activable by means of complement. Further developments may be anticipated with great interest, as the indications are that the conception of parenteral protein digestion will play an increasingly important part in our explanations of many of the phenomena of infection and immunity.

### THE RELATION OF THE ANAPHYLACTIC ANTIBODIES TO OTHER ANTIBODIES

I have tried to make it plain that in the typical anaphylactic reaction, bodies come into play which are of the nature of amboceptors because they require complement for their action. The relation of these bodies to antibodies whose action is demonstrable *in vitro* is still under discussion. In the case of allergy to red corpuscles, Friedemann finds that there is a close parallelism between the anaphylactic bodies and the hemolytic amboceptors. In rabbits, Dörr and Russ and others find a complete parallelism between the precipitins and the bodies concerned in anaphylaxis. There is no such parallelism, however, in serum disease, and the question whether allergy depends on the action of a distinct and peculiar antibody is still an open one.

### THE PRODUCTION OF ANAPHYLACTIC POISONS IN VITRO

Vaughan, Friedberger and others have shown that substances which in guinea-pigs cause symptoms indistinguishable from those of immediate anaphylaxis in sensitized animals may be produced *in vitro*. Various methods employed for this purpose may be divided into specific and non-specific.

By the specific method the antigen, the antibody and the complement are brought together under certain conditions and the question whether any poison is formed is determined by removing the antigen-antibody complex and injecting the clear fluid. In the case of red corpuscles, Friedemann obtained anaphylactic substances in this way, even before lysis occurred. He concluded that the poison is a split product and not a preformed substance because the mere laking of the corpuscles with water does not necessarily set free any poison.

Substances producing the symptoms of typical anaphylaxis have been obtained from a large number of bacteria by the action of antiserum and complement. Even normal guinea-pig serum may suffice, the normal amboceptor present being regarded as the active agent. In experiments of this kind the conditions that must be observed seem to vary in each case.

Friedberger has also obtained anaphylactic poisons from the specific precipitates that form when serum and the corresponding antiserum are mixed: the precipitate is washed and digested with guinea-pig serum. Here also certain quantitative relations must obtain and the digestion must not be continued too long.

R. Pfeiffer long ago obtained poisons in the course of bacteriolysis which he regarded as preformed and termed "endotoxins"; Weichardt obtained poisons from the action of specific antiserum on placenta and Wolff-Eisner in like manner from pollens, and these results were interpreted by them in the light of the endotoxin hypothesis, that is, as due to the setting free of preformed poisons.

Of the non-specific methods I mention the hydrolysis of egg-white and other proteins with hot alcohol, practiced by Vaughan and Wheeler, whereby they obtained an alcohol-soluble substance which in guinea-pigs caused all the typical symptoms of immediate anaphylaxis. Biedl and Kraus have found that in dogs, peptone (Witte) poisoning reproduces the symptoms of anaphylaxis including fall of pressure, incoagulability of the blood, leukopenia and a temporary refractory state not only to peptone, but also to true anaphylactic intoxication; furthermore, that in antianaphylaxis there is refractoriness to peptone poisoning. Manwaring, however, was not able to confirm the latter observation.

When pneumococci, streptococci, meningococci, gonococci, typhoid bacilli, colon bacilli, and other bacteria are suspended in salt solution for varying periods of time, Rosenow, in The Memorial Institute, finds that toxic substances develop which on intravenous injection give the phenomena of immediate reaction in guinea-pigs. In such suspensions evidences of protein splitting are obtainable by chemical and physical means. Rosenow also finds that intoxication with pneumococcus autolysates gives rise to conditions of refractoriness (antianaphylaxis). In man, solutions of this kind cause fever and leukocytosis. Rosenow's work seems to establish then that substances causing the symptoms of acute anaphylaxis may develop in the course of autolysis of bacteria without the presence of serum.

In all these experiments *in vitro* the criteria that it concerns similar substances as those that are at work in true anaphylaxis are the symptoms observed during life and the appearances after death. So far, guinea-pigs have been used, as they are the most sensitive. Objections have been made to the reliability of the conclusion that the same substances are at work in anaphylaxis in the sensitized animal and in intoxication by the substances obtained in the test-tube. It is very important to proceed cautiously in order not to fall into confusion, but it may be emphasized that by the specific test-tube methods the conditions obtained in life are closely imitated, so that it is not unlikely that the actual poisons exciting the symptoms in the sensitized animal are obtainable outside of the body. At all events an interesting field for further study has been entered. There is ground for objection to Friedberger's name of "anaphylotoxin" for all these substances; in the first place, it probably does not concern a single substance, but a variety of more or less closely related substances; in the second place, it does not concern substances of the nature of toxins in the immunologic sense because they do not appear to induce the formation of antitoxins. Further progress depends on obtaining an insight into the true chemical nature of the substances concerned.[2]

### ALLERGIC (UNPUBLISHED) MANIFESTATIONS IN DISEASE

There are various manifestations in infectious and other diseases that point to the occurrence of reactions of the nature of anaphylaxis or allergy. Let us first briefly consider infectious diseases from this point of view.

### THE INCUBATION PERIOD

In many infections the incubation period corresponds more or less closely to the period preceding the acme in antibody formation, and on the basis of this fact, von Pirquet has developed the idea that the symptoms are not the exclusive result of the direct and immediate action of the microbe, but in greater or less measure the result of interactions between microbe and host. In many cases it would seem as if the symptoms arise when the antibodies have become concentrated enough to break up the microbe, in other words, when specific proteolysis begins. The fact that the first symptoms of serum disease usually begin in from eight to twelve days after the first injection supports this idea. In persons previously injected with serum the incubation period is greatly shortened or practically absent because here the antibodies appear more quickly and attack the protein promptly. It is possible that in many of our common infections the incubation period is shortened on account of sensitization from previous mild attacks. The shortening of the incubation period is illustrated beautifully by von Pirquet's work on vaccinia. After primary vaccination the reaction about the point of inoculation reaches its maximum between the eleventh and fifteenth days, when there is also fever with leukopenia. Now, on revaccination after the lapse of some time, various types of early and accelerated reactions may be observed, and von Pirquet has shown that on daily vaccinations in an unvaccinated person for a fortnight or so, the maximum reaction occurs at the same time about all points of inoculation, namely, at the time it is due about the earliest inoculations. Here we may assume that the antibodies educed by the first vaccination, on reaching the required concentration, act in the same way on the virus deposited in the skin from day to day.

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[2] Rosenow seems to have been able to effect a separation of substances in toxic pneumococcus extracts by means of ether, the ether-soluble part causing death by pure bronchial spasm, while the insoluble part does not affect the bronchioles but may cause death in twenty-four hours or so with hemorrhage in various internal organs (unpublished).

It is possible that in some infections the microbes as they enter the body are broken up by the normal antibodies and also that a spontaneous or autolytic splitting may occur with corresponding irregularities in the period of incubation.

### FRIEDBERGER'S ANAPHYLATOXIN VERSUS PFEIFFER'S ENDOTOXIN HYPOTHESIS

Friedberger ventures the explanation that practically all symptoms of infections are caused by anaphylatoxin or substances of that general nature arising from protein splitting, the variations in the symptoms depending on the quantity of the poison set free, on the rate of liberation, and on the differences in localization. This leads to a brief consideration of Pfeiffer's endotoxin hypothesis according to which symptoms of intoxication are due to preformed substances—endotoxins—set free on lysis of the bacteria or protozoa.

All microbes are assumed to contain poisons of this general nature, the infectious microbes being dangerous because they can grow in the body for a time at least and thus furnish large quantities of poison. Immunization with this class of bacteria gives rise to specific lytic and opsonic amboceptors and other antibodies. Now the question is whether this endotoxin hypothesis is to be replaced by the anaphylatoxic. We observe that the mechanisms assumed at work are essentially the same, namely, of amboceptor-complement nature. Hence the question actually narrows down, one might say, to whether Pfeiffer's endotoxins are preformed or simply transitory split products formed in the course of bacteriolysis. Friedberger's view does not account so plausibly for the specific actions of the substances in question as the endotoxin conception. The symptoms and lesions in these infections are characteristic and peculiar in each case and it is hard to believe they can be caused by the same substances. Friedberger's view is also out of harmony with the prevailing idea that in the microbes the toxic and the antigenic substance is one and the same in each case, but different in the different bacteria because the resulting antibodies are specific. The indications therefore seem to be that the fragments of lysis which cause the toxic symptoms retain certain original peculiarities. It has been urged against Friedberger's view that we rarely if ever encounter, so far as we know, intoxication in natural infections resembling those of the typical anaphylactic reaction, but as to this it may be said that in infections the amount of poison set free at any one time may not be sufficient to produce such intense effects. Even if Friedberger's conception may not succeed in replacing the endotoxin hypothesis, progress in our knowledge of infectious and other diseases has resulted. Surely the non-specific and nonantigenic substances produced in the breaking down of foreign proteins may take part in causing general disturbances of temperature, of metabolism, and of the leukocytes.

### CUTANEOUS MANIFESTATIONS

Von Pirquet has pointed out the analogy between the eruptions in small-pox, varioloid and vaccinia to the skin lesions of serum disease. In small-pox the eruptions contain the living virus of the disease because this is transferable by means of the contents of the vesicles and pustules. This virus is brought to the skin by the blood, and as the eruption occurs at a period after infection that corresponds to the climax in antibody formation, it seems reasonable to believe that the cutaneous reactions develop as the virus is attacked. Indeed, by complement deviation it has been found that the contents of the pustules do react with the serum. Viewed in the same light varioloid may be regarded as an allergic modification of small-pox, due to reinfection in a sensitive person.[3] And it has been suggested that hemorrhagic small-pox may be an expression of a specially intense reaction between antigen and antibody. Of other diseases that present striking relationships of this nature I would mention measles with its definite incubation period, its leukopenia, and its eruption with fever at a time that corresponds nicely to the acme of the antibody curve. The skin, then, offers a series of very interesting phenomena from the point of view of allergy: the cutaneous lesions of serum disease, the eruptions of many infections, reactions like the tuberculin reaction, the urticarias and eczemas and other manifestations of what is coming to be called alimentary anaphylaxis all indicate that the skin has not only a marked affinity for foreign protein substances, but reacts in a striking manner to the various split products.

### TUBERCULIN AND SIMILAR REACTIONS

That the tuberculin and similar reactions, like Noguchi's recent luetin reaction, the gonococcus reactión of Irons, etc., are of allergic nature can hardly be questioned. The tuberculin reaction, though best developed in the tuberculous, is obtainable after sensitization with various forms of tuberculo-proteins. Typical immediate anaphylaxis has been produced in guinea-pigs with watery extracts of tubercle bacilli by Baldwin; and Friedberger has extracted anaphylactic poisons *in vitro*. The quantitative relations of the reaction are similar to those in repeated vaccination, progressive dilution leading to diminishing intensity. And passive transfer of the reaction has now been accomplished in a number of ways so that at least the general and local reactions are readily explained on a humoral basis. The failure to obtain the reaction in certain conditions of advanced tuberculosis and other states remains to be explained.

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[3] The recognition of the importance of allergy is preceded by isolated observations of allergic phenomena, the bearing of which, however, was not understood at the time. As examples, I would mention that long ago while transfusion of lamb's blood was practiced in anemia and other conditions, it was observed that sometimes urticarial eruptions would appear a few days after transfusion. Magendie noted (1839) that in rabbits, repeated intravenous injections of egg albumin may give rise to serious symptoms. But perhaps the most interesting of these early observations on allergy is that of Jenner on the character of the reaction to variolous matter by the skin of persons who had had either small-pox or cow-pox. In his "Inquiry into the Causes and Effects of Variolæ Vaccinæ, a Disease Discovered in Some of the Western Counties of England, Particularly Gloucestershire, and Known by the Name of Cow-Pox," 1798, he records (page 13, Case 4) that a woman who had had cow-pox thirty-one years before was inoculated with variolous matter, and that "an efflorescence of a palish, red color soon appeared about the parts where the matter was inserted, and spread itself rather extensively, but died away in a few days without producing any variolous symptoms." In a footnote he comments on this phenomenon as follows: "It is remarkable that variolous matter, when the system is disposed to reject it, should excite inflammation on the part to which it is applied more speedily than when it produces the small-pox. Indeed, it becomes almost a criterion by which we can determine whether the infection will be received or not. It seems as if a change, which endures through life, had been produced in the action, or disposition to action, in the vessels of the skin; and it is remarkable, too, that whether this change has been effected by the small-pox or the cow-pox, that the disposition to sudden cuticular inflammation is the same on the application of variolous matter." This remarkably clear statement probably records the first observation of allergy in an infectious disease.

### SYMPATHETIC OPHTHALMIA, ECLAMPSIA, HAY-FEVER, ASTHMA, IDIOSYNCRASIES

Space does not permit any attempt at discussion of the possible anaphylactic nature of many of the other local reactions and lesions of infectious diseases, many of which may be conceived as the results of the localization of foreign proteins and their destruction by antibodies in the blood and lymph. In passing, mention may be made, however, of the possibility that in infectious diseases proteins of the body itself, especially in the severe lesions, may become so changed or heterologized as to acquire antigenic powers, and on reacting with the antibodies give rise to toxic substances. It has been suggested that certain drug eruptions, notably iodid and bromid eruptions, may rest on some such basis as this.

At this point I would mention that since it has been shown that the lens protein, and possibly also uveal tract protein, may cause antibodies in the animal from which they are obtained, the thought has arisen that sympathetic ophthalmia may be an allergic phenomenon. After partial destruction of one eye and absorption, the uveal tract of the other eye might be affected by the antibodies thus formed. For the present this must be viewed as an interesting suggestion only.

And the hope that puerperal eclampsia may receive adequate explanation from the point of view of anaphylaxis has received new support since it has been announced that animals of the same species may be made anaphylactic not only with the placenta, but also with the amniotic fluid and fetal serum; and, furthermore, that immediate anaphylaxis may be obtained by injecting pregnant guinea-pigs with serum of their young, indicating that sensitization may occur during pregnancy.

The experimental evidence clearly favors the view that hay-fever is an anaphylactic reaction to various pollens which are believed to be split up into poisonous substances in the mucous membranes of the respiratory tract. And the asthmatic symptoms that appear in certain persons when exposed to the odors of horses and of other substances naturally are regarded as expressions of anaphylaxis.

The view that the peculiar idiosyncrasies, so-called, with respect to certain articles of diet — strawberries, cheese, fish, oysters, buckwheat, pork, eggs, cow's milk, etc. — are forms of anaphylactic reactions is steadily growing, and the chapter of alimentary anaphylaxis is already a large one, although in only a very few instances have cases been analyzed carefully from this point of view. Thus, Bruck found that guinea-pigs were made passively sensitive to pork protein by the serum of a person that always reacted violently to pork. Interesting examples of extreme sensitiveness to cow's milk in infants and to egg-white have been described. In connection with this subject of alimentary anaphylaxis it should be mentioned that the proteins of the intestinal bacteria under certain conditions might give rise to symptoms of sensitization.

This then, must suffice as indications and suggestions of the part that what is called allergy or anaphylaxis may play in guiding us to better explanation of various phenomena in infections and other diseases.

### WHAT OF ANAPHYLAXIS AND IMMUNITY?

The conception that introduction of microbes and their products induced distinctly protective reactions is seemingly not in harmony with the fact that an increased susceptibility seems to develop after introduction of all foreign proteins, whether cellular or in other forms. But this contradiction is only apparent. In the first place, there is, in most cases at least, probably no real increase in susceptibility — the actual degree of susceptibility to the same poisons being probably the same in the average normal and average sensitized animal; it is the power of reaction of the latter that is peculiar and for this reason "allergy" is perhaps the best word we have for the condition. Stated in the simplest way, we could say that the sensitized animal splits up a particular protein so rapidly that toxic substances are produced or set free in toxic quantities, while in the normal animal the process proceeds so slowly that no evident intoxication may result. Now in the case of microbes, lysis with splitting is not consistent with continued existence, and when small quantities are introduced as in natural infections, they may be killed in this way before they can multiply so as to furnish toxic doses of poison, and this would be immunity, either natural or acquired. The relations between antibacterial immunity and intoxication remains essentially the same as outlined by Pfeiffer. While he limited himself to the conception of preformed endotoxins, under the newer view we conceive the poisonous substances as being, at least in part, intermediary digestive products and as arising also in part from changes in harmless proteins. There is then no contradiction between immunity and allergy, which is a form of antibody reaction and, so to speak, an incident in the course of immunization.

The Memorial Institute for Infectious Diseases, 1743 West Harrison Street.

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# THE TREATMENT OF SACCULATED ANEURYSM BY WIRING AND ELECTROLYSIS

H. A. HARE, M.D.
Professor of Therapeutics in the Jefferson Medical College and Physician to the Jefferson College Hospital
PHILADELPHIA

The treatment of sacculated aneurysm by the introduction of various foreign bodies, ranging from nails to strands of silk and horse-hairs, was practiced many years ago. The design was of course to aid or produce clotting in the sac and so to reenforce the weakening aneurysmal wall. These measures failed chiefly because most of the operations were performed before the days of asepsis, or else they caused so much damage to the sac-wall that its continuity was destroyed and the end hastened. It is not my intention in this paper to go into a historical review of these cases, or of the early trials of more recent methods, such as the Moore-Corradi operation, which

I have performed on twenty-two occasions[1] for saccular aneurysm of the various parts of the aortic arch. Six of my cases are now recorded for the first time. In every instance the growth was so large that death in the early future was imminent, and in several the wall of the sac was so thin as to be blue or blackish in hue like a great ecchymosis, and bloody serum was oozing through the skin.[2] In most of the cases death because of the aneurysm eventually took place, but in many, if not all, life was prolonged, so far as human judgment can determine, and equally important, there has been practically in all instances relief, or partial relief, from pain which was severe before the operation.

Much depends on the general state of the aortic wall. If the aneurysm is solely the result of trauma and the rest of the vessel-wall is healthy it can withstand the pressure of the blood-stream. Thus a patient reported by my chief of clinic, Dr. Beardsley, is now in my wards,[3] twenty-seven months after operation, without any disablement, dyspnea, dysphagia, or pain, and with no sign of aneurysm save a heaving impulse at the second and third left interspace in the midclavicular line. The growth has been entirely controlled. The aneurysmal sac in this case with the wire coiled in the clot is shown in Figure 1. In a patient (operated on by the late D. D. Stewart) who was under my care for many months, although the growth projected nearly 3 inches from the chest, the patient lived in perfect health for three years, and died not from his aneurysm, but from pneumonia due to an alcoholic debauch. In this case the autopsy revealed the wire so firmly imbedded in organized clot that it could not be removed except by corrosion methods.

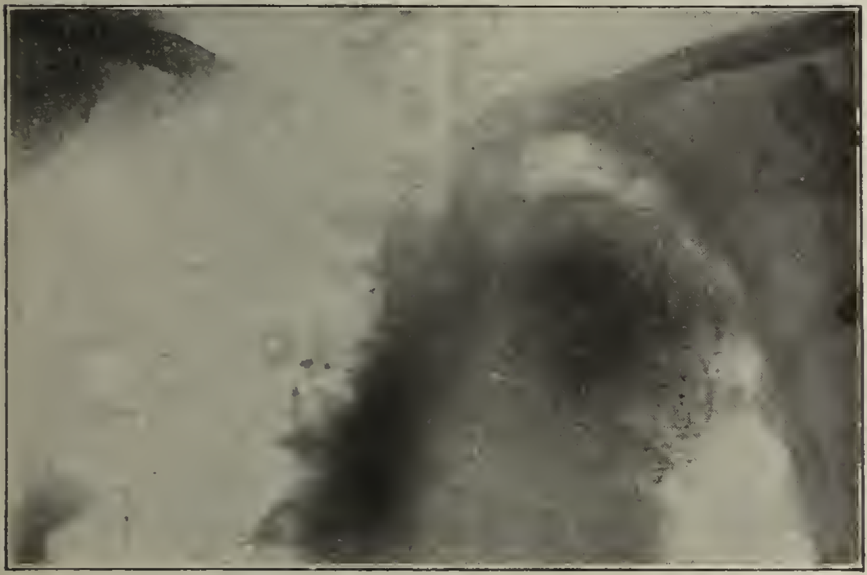

Fig. 1.—Aneurysm of the aorta, showing wire in the aneurysmal sac, two years after operation, with total arrest and no discomfort; from a skiagraph. (Case originally reported by Dr. Beardsley in *Therapeutic Gazette*, March 15, 1911.) Case 6.

On the other hand, if the vessel-wall be severely and generally diseased the proposition is akin to an attempt to mend a piece of rotten rubber hose. Some time after it is supported in one spot, it gives way at another point. If the second point of yielding is so placed that it can be recognized and reached by the hollow needle used to insert the wire, it also can be supported, and in four cases I have done a second operation, and in one case a third, thereby preventing rupture at these points. In the latter case a fourth soft spot on the posterior wall of the sac gave way, and six months later caused death. Yet in this case the skin at each point of wiring when operated on was so thin as to be weeping bloody serum. The giving way of adjacent tissue when the first point of weakness had been supported is illustrated in Figures 2, 3 and 4.

While it may be justly asserted that the number of cases in which life is greatly prolonged is very limited, on the other hand, it must be borne in mind that the condition is, except in the rarest instances, invariably fatal and cannot be materially benefited by any other measures. Further, the condition is often unrecognized until the growth is very large and the patient's state has become desperate. Thus in the cases now reported for the first time the operation was refused until the symptoms grew so desperate that the patient was willing to resort to any measure. In one of them pulmonary edema was already well developed as a result of pressure and the patient died four days later of this condition, with the gain, however, of great relief from terrible pain from which he had suffered for weeks. The pictures of this patient showing the tumor of the chest during life, and of the sac obtained at autopsy with the wire coiled in it, are seen in Figures 5 and 6. In another case operation was refused until after a lapse of two months the growth had tripled in size, large doses of morphin were needed to relieve the great pain, partial aphonia had developed, and expansile pulsation had extended for 6 inches down the vertebral column on the left side from the site of the original sac (Fig. 7). Here again the operation was performed as a last resort with small hope of cure and chiefly with the belief that the pain would decrease, which it did. Death took place twenty-eight days later from pulmonary edema, a not unexpected result as the left lung was already impaired by pressure at the time when the wiring was performed.

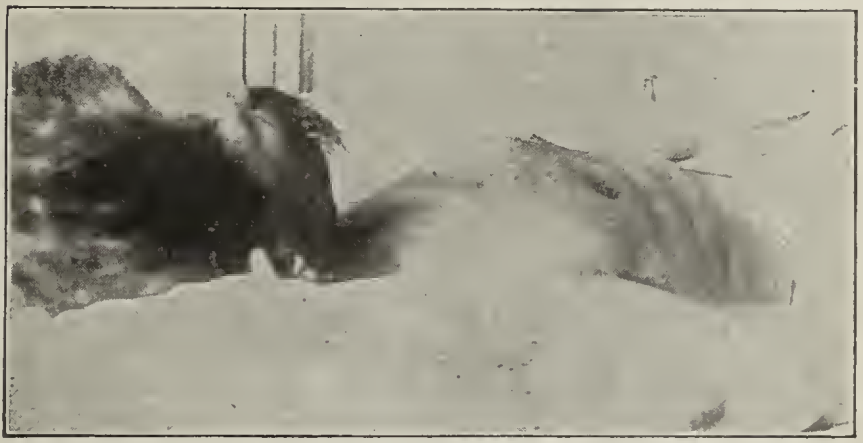

Fig. 2.—Aneurysm a few hours after wiring. The mass was less expansile and firmer than before.

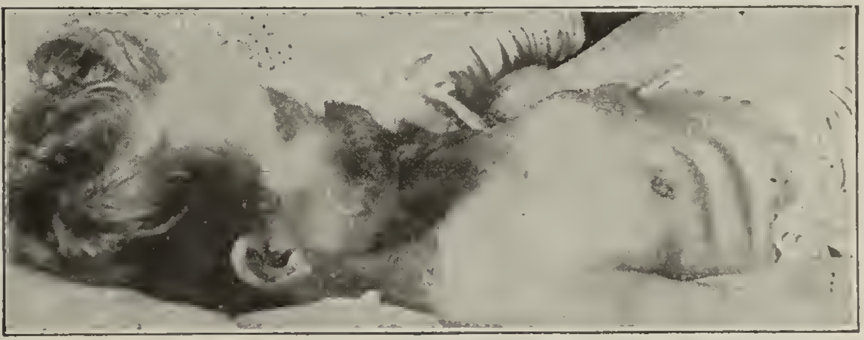

Fig. 3.—Same patient as in Figure 2, showing how, the upper area having been consolidated by wiring and electrolysis, the sac developed a second point of yielding five days later.

In another of these cases the patient absolutely refused to remain in bed, getting up several times night and day, beginning this breach of orders immediately after the operation, and thereby preventing the hardening and fixation of the clot about the wire. In still another case, in which the growth had eroded the chest-wall and was very prominent,[4] through the error of an assistant the non-insulated shank of the needle came in contact with the skin, already distended and devitalized, and caused an electrolytic burn. This never healed, the slough extended and so weakened the sac-wall that death ensued because the clot was pushed out of the sac through this orifice. This result, however, did not take place for months, during which time the patient was well enough to travel and to get married.

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[1] Since this paper was written I have operated on two other cases.

[2] Pictures of two of these patients are to be found in Therap. Gaz., Jan. 15, 1900; of another, Jan. 15, 1903.

[3] He is kept there for demonstration purposes.

The six unreported cases are as follows:

Case 1.—A negro, aged 43, presented a large diffuse swelling in the mid-sternal line extending into the episternal notch and downward to a point 4 inches below. Laterally, the growth extended 2½ inches to each side of the median line. The sternoclavicular joint on the right side was dislocated. The growth did not give a bruit, an expansile pulsation, or a thrill. After excluding sarcoma by the aid of the *x*-ray, the operation was advised and refused. Three weeks later the patient returned with marked dyspnea, incessant cough night and day, and the signs of beginning bilateral edema. At this time the growth was far larger than before, and the patient was very hoarse. Two days were lost getting the needful wire. Figure 5 shows the patient just after the operation. Thirty-five feet of gold wire were passed into the sac through an insulated needle. Beginning with 5 milliamperes, the current was increased by 5 additional milliamperes every five minutes until 50 milliamperes were passing and then the current was gradually turned off. During the operation the patient, although forced to lie in an uncomfortable posture, expressed himself as largely relieved of pain without being prompted to do so by a question as to suffering. The growth also felt firmer and harder at the end of twenty minutes. For a few hours after the operation the cough decreased, and the pain was greatly diminished until death took place from pulmonary edema four days later. The result of the autopsy was the confirmation of the diagnosis of bilateral pulmonary edema and both vagi were found to be involved in the growth. The aneurysmal sac with the wire coiled in it and nearly all the clot removed is seen in Figure 6.

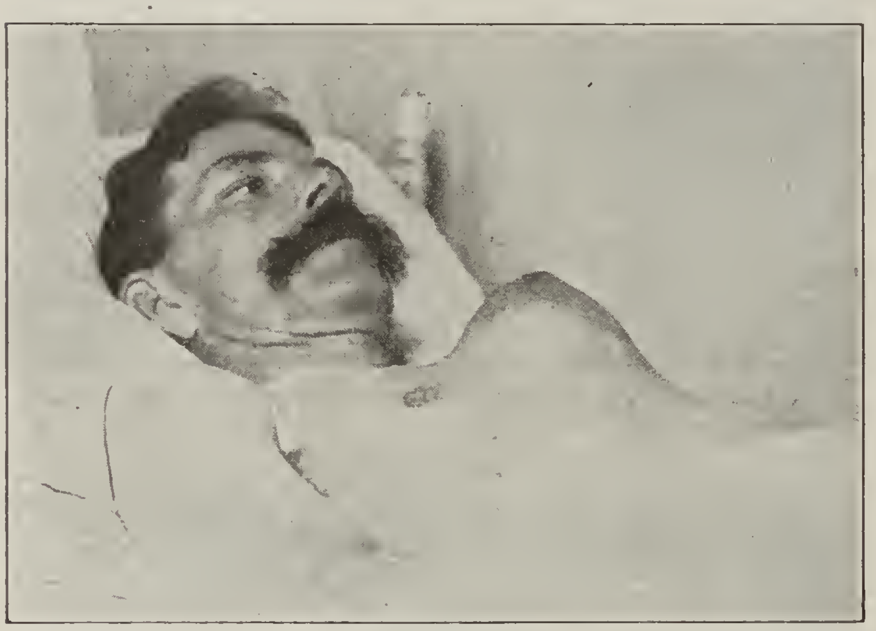

Fig. 4.—Same patient as in Figures 2 and 3, thirty-eight days later. The spot at which rupture threatened when operation was done is still firm, but the underlying growth has grown enormously.

Case 2.—A white man, aged 38, giving a long history of severe pain in the left arm, which had been diagnosticated as neuritis and treated with salicylates and heat, was found to have an aneurysm which had its greatest point of expansion posteriorly at the spot marked on Figure 7. There was a slight bruit and distinct heaving impulse at this point. The *x*-ray revealed a sacculated aneurysm of the latter part of the transverse and beginning of the descending aortic arch. There were no additional symptoms except severe pain. Here again operation was refused for two months and then called for as a last resort after the growth had greatly extended. The radial pulse in the left wrist was at that time almost, if not quite, absent. The left lung was dull on percussion along its posterior border in both lobes and the heaving impulse reached from the growth to the level of the sixth interspace in the para-vertebral line. The needle was inserted at the point marked in Figure 7, and 35 feet of gold wire introduced. Here again the patient, who was groaning with pain when the operation began, volunteered the information that the pain was less after the current had been passing for twenty minutes, and a little later, while the operation was being continued, he spoke jokingly about political affairs. The growth was now found to be distinctly firmer. Death followed from pulmonary edema in twenty-eight days. In this case the pain was decreased but not stopped, probably because the growth had already damaged the vertebræ in its downward progress. No autopsy was obtainable.

Case 3.—W. K., aged 44, had a brother whose death was probably due to aneurysm, as he died immediately after feeling something burst within him. The aneurysm in this patient arose near the sternum on the right side at the third rib.

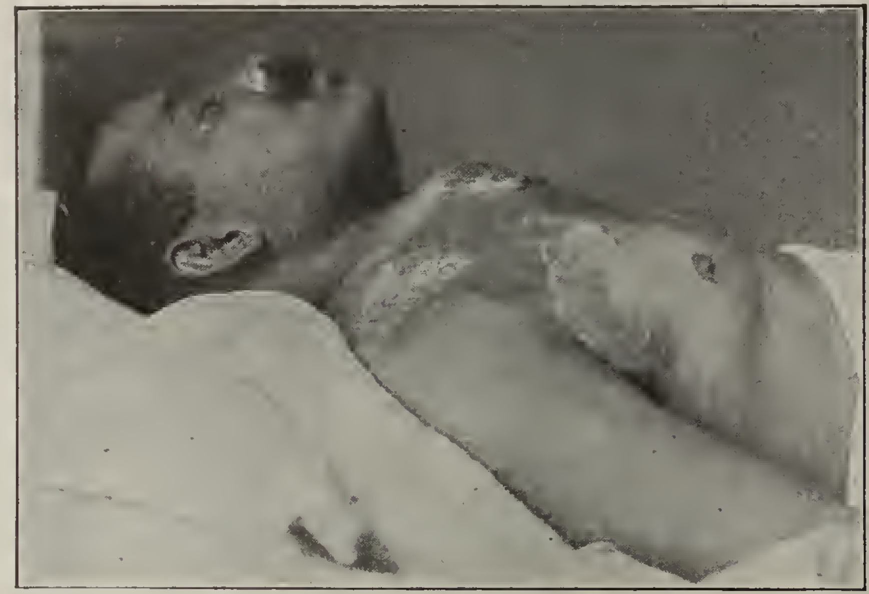

Fig. 5.—Aneurysm of the ascending arch of aorta a few hours after wiring and electrolysis.

An *x*-ray examination showed a saccular aneurysm of the ascending arch. The pupil on the right side was larger than on the left. In the upper part of the chest to the right of the sternum was a distinctly visible pulsating area about 4 inches in diameter in every direction. The apex-beat was in the seventh interspace in the left anterior axillary line. There was a systolic bruit over the aneurysmal sac, but no difference between the radial pulses.

Ten feet of gold wire were introduced at 12:45 p. m. After the introduction of the wire the operation was delayed for half an hour because of trouble with the milliamperemeter. The current was gradually increased 5 milliamperes every five minutes until 50 were passed, when it was gradually diminished until it was stopped. Eight minutes after the current began passing, the needle was noticed to be moving less than before, and the growth when palpated was firmer. That night the patient said that he felt the wire in his chest and asked for something to make him sleep, as he felt nervous. He complained of backache, which he thought was due to the position he had occupied on the operating-table. The next day he felt better. It was impossible to keep him in bed, and he disobeyed orders continually, arising and going about. Thirty-seven days after the operation the patient seemed to be still improving, but had some discomfort because of the bandage across his chest. The following day he complained of violent pain in his right side. The respirations became rapid and shallow, the lips blue and the face pallid. At 5:50 p. m. the patient was seized with an attack of tumultuous heart action with staring eyes, and death occurred in twenty minutes on the thirty-eighth day after the operation. In the cavity of the tumor was found the wire which had been introduced. The right pleural cavity contained 1,900 c.c. of blood-clot and 1,600 c.c. of serum, the sac having ruptured laterally into this space.

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[4] Therap. Gaz., Jan. 15, 1903.

Case 4.—A man, aged 54, had had pain under the sternum for several years. Six months before examination he had noticed a swelling coming from under the sternum which had eroded this bone and the second, third and fourth ribs on the right side and projected about 1 inch above the chest-wall. He attributed his difficulty to a kick on the chest by a pack-mule four years before. This patient was operated on on two occasions at an interval of a month and died eight weeks after the first operation and two weeks after the second, pressure on adjacent tissues causing pulmonary edema. He willed his body to me, and with the intention of having frozen sections made of the torso during the summer, it was placed in a large jar. No trace of specimen or jar could be found later, and it is supposed that some laboratory servant broke the jar and destroyed the specimen in order to avoid censure. The complete clinical notes were also lost.

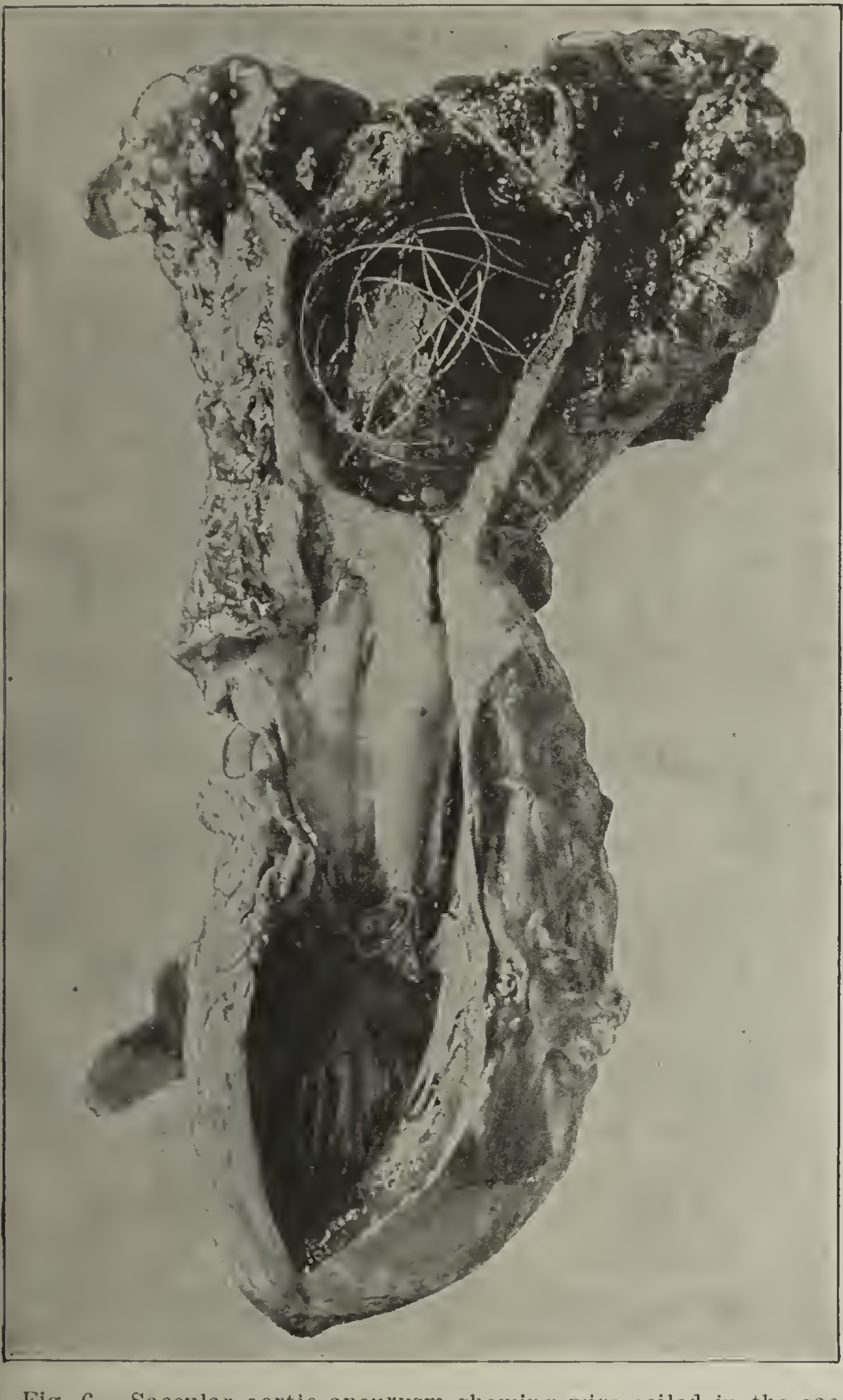

Fig. 6.—Saccular aortic aneurysm showing wire coiled in the sac. The specimen is split vertically and transversely and turned back. Most of the clot has been removed to show the wire. In the median line is seen the small opening in the aortic wall which communicated with the sac. From the patient in Figure 5.

Case 5.—A white man, aged 40, had a large diffuse heaving tumor to the left of the sternum from the second to the fifth rib. There was expansile pulsation and a bruit. The growth developed some months after the patient had been thrown from a car, striking his chest on a stone. When told of the operation as a measure of relief he asked that it be done at once, as the pain was so severe that he would kill himself rather than submit to it any longer. There was also urgent dyspnea. Before the electricity had been passing fifteen minutes the patient volunteered the statement that his pain was much relieved. He was warned of the need of rest and after a month in bed took a journey of several hundred miles. He transacted a large business for several months lying on a couch, and then began going about. Two years and a half after the operation he returned and the skiagraph showed complete arrest of the growth. Six weeks later he suffered from a severe attack of influenza, developed pulmonary edema and died a little over two years and eight months after the operation. No autopsy was obtainable.

Case 6.—This case has already been reported by Dr. Beardsley, who performed the first operation, in the *Therapeutic Gazette,* March 15, 1911. *Patient.*—A negro, aged 37, when first seen presented a large bulging mass over the second and third right interspace, which showed decided expansile pulsation and a loud continuous bruit. The *x*-ray examination revealed what was apparently a sacculated aneurysm of the ascending portion of the arch of the aorta. There was continuous pain in the right upper chest, occasionally shooting into the right arm and the right side of the neck. He was first wired Oct. 24, 1909 (18 feet of wire being used), the patient remarking that the pain was less shortly after the current began to pass. During the seven weeks he remained in the hospital at this time he complained of no discomfort or pain except after exercise. The patient presented himself at the Jefferson Hospital, nevertheless, on the day of his discharge from the Philadelphia Hospital, as he found himself unable to work and wished to escape the cold weather. We were also glad to have him for demonstration purposes. He had some cough at this time, and at the costal sternal junction of the third rib a pulsating mass was present, which was noted as softer in its upper portion, presenting also a blowing, systolic murmur. There were also some musical râles heard over both lungs. The systolic blood-pressure in his left arm was 115 as against 125 in his right. These symptoms became

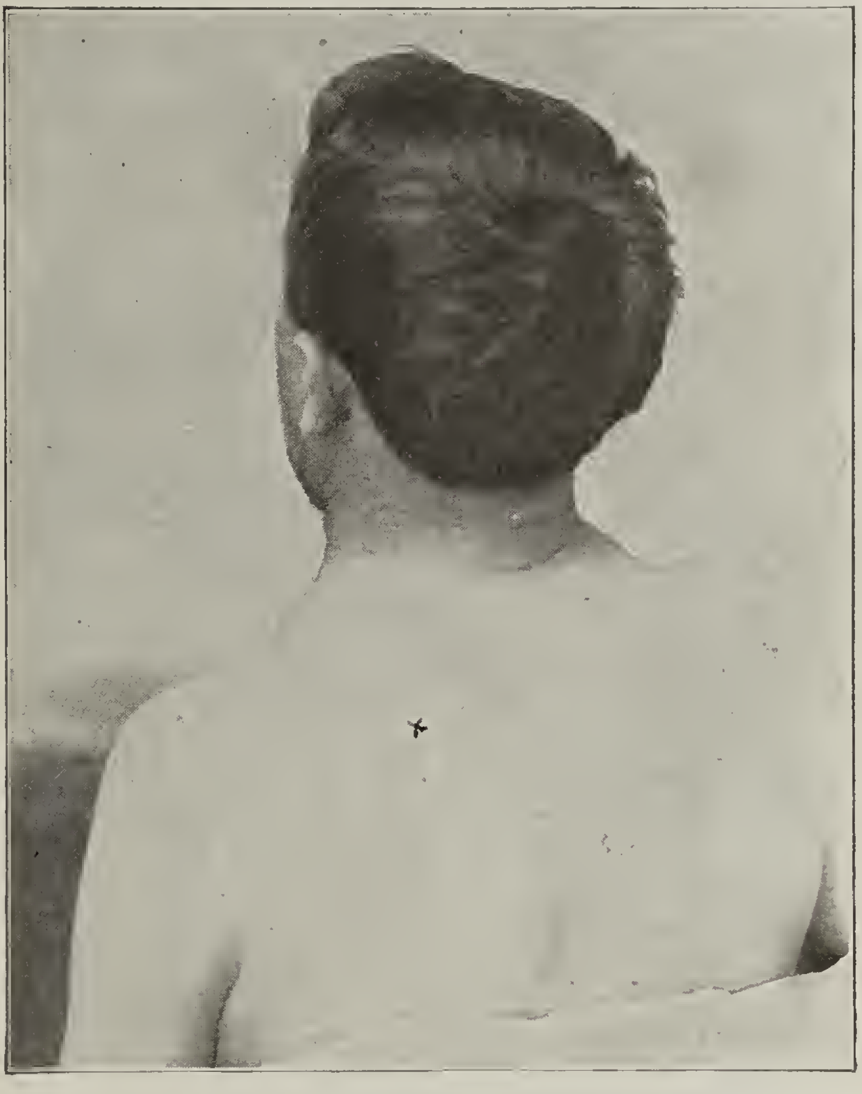

Fig. 7.—Aneurysm of the transverse and descending arch. Cross indicates point at which greatest heaving and expansile impulse were noticed and where needle and wire were introduced. Case 2.

temporarily better for a few days. A week later, however, the mass was found to be growing larger and seemed to be pointing at the place where the wire had been introduced. The pain recurred three weeks after admission and seven weeks after admission the mass was found to have greatly increased in size; the pain in the right arm had returned. Three months after the first operation I operated, choosing the point at which the tissues seemed thinnest and most yielding, and at which expansile pulsation was most marked. This is the only case in which during the operation the patient complained of discomfort and pain while the current was passing. Following the operation the patient was more comfortable for about ten days and then the tumor began to enlarge rapidly and the pain increased. The measurements of the mass at this time were 10½ cm. horizontally, and 8½ cm. vertically. Death occurred by rupture of the sac externally three weeks and four days after the second operation. This case is of interest because the autopsy showed that the sac which was wired and which ultimately burst was a false aneurysm, which had resulted from the escape of blood from a fusiform aneurysm of the aorta. Notwithstanding the fact that the history of the case as here detailed would seem to indicate that the patient was not greatly relieved of pain, it is nevertheless a fact that he repeatedly declared that he would gladly have the operation repeated because of the relief from the pain and distress which temporarily resulted therefrom. Possibly some of his pain was due to a second aneurysm about 8 inches below the first, which was discovered at autopsy.

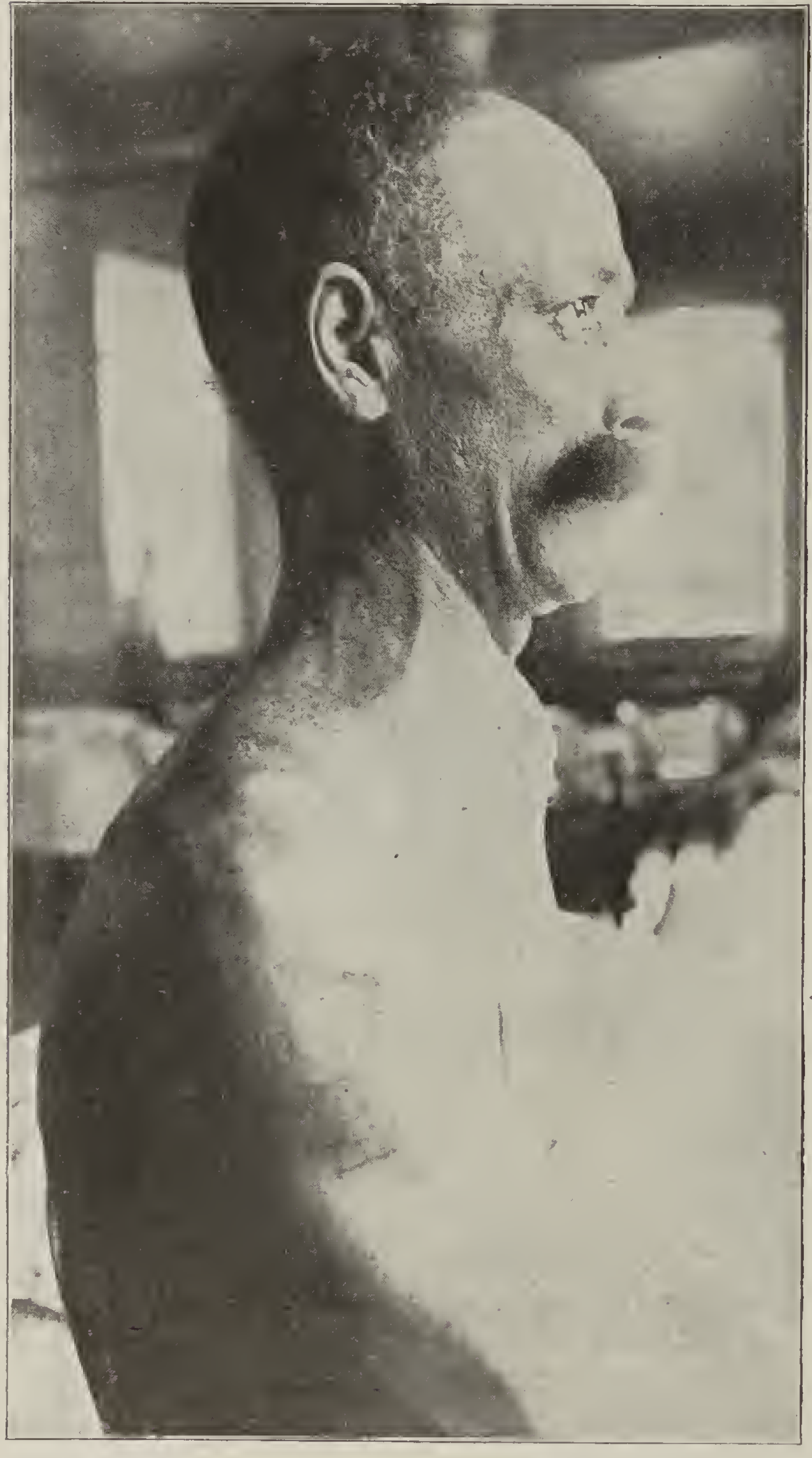

Fig. 8.—Aneurysm of the ascending aorta and innominate artery treated by wiring and electrolysis. At autopsy, four months later, no trace of the wire could be found. The patient must have pulled it out. (This case has been reported in the *Therapeutic Gazette* for July, 1905, but without this picture.)

In a case previously reported the growth involved the ascending aorta and innominate artery (Fig. 8). No picture of the patient has heretofore been published.

### CONCLUSIONS

1. The fact that no accident has occurred in any of the twenty-two operations I have performed leads me to believe that this very radical operation is not a dangerous one, the more so as I have no knowledge of any accident having taken place when the operation was properly performed by others. In one unreported case, an attempt to wire a fusiform aneurysm of the carotid artery resulted almost immediately in hemiplegia, and in another unreported case the mistake of using the negative pole in the growth loosened the clot already present and caused multiple emboli.
2. The operation is the only one that offers material hope of prolonging life, this having been prolonged in one case at least five years.
3. It is justified by the prompt relief of pain which nearly always ensues and lasts, unless the growth, extending in another direction, creates a new source of pain.
4. The diagnosis of saccular aneurysm should always be confirmed by *x*-ray examination, as this operation is contra-indicated in fusiform aneurysm for obvious reasons.
5. Great care that properly prepared wire is employed is absolutely necessary.

Spruce and Eighteenth Streets.

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# THE SURGICAL TREATMENT OF ASCITES SECONDARY TO VASCULAR CIRRHOSIS OF THE LIVER

## DESCRIPTION OF A SIMPLE TECHNIC *

EDMUND A. BABLER, M.D.
Surgeon to Deaconess Hospital; Visiting Surgeon, City Hospital
ST. LOUIS

In ascites secondary to vascular cirrhosis of the liver, epiplopexy is indicated as soon as the internist makes the diagnosis. It is conceded that many of these patients will demand repeated tapping before they will consent to surgical intervention. Sinclair White[1] contends that operation is contra-indicated in cases of Bright's disease and should not be performed on patients over 55 or 60 years of age, or on patients in whom the total amount of urea is greatly reduced. Organic disease of the heart or lungs also contra-indicates operation. When marked jaundice, emaciation and hebetude appear, practically all surgeons agree that operation is contra-indicated. Recently, however, Dr. Crandall, visiting physician to the City Hospital, referred a patient suffering with ascites secondary to vascular cirrhosis of the liver, and although he was jaundiced, emaciated and in a very poor condition, epiplopexy was performed under local anesthesia with very good results. Occasionally such patients will do well, but it is erroneous to offer them any hope at all. I believe that epiplopexy should be recommended in cases in which the ascites is due to luetic or alcoholic cirrhosis of the liver. In luetic cirrhosis the operation should be followed within two weeks with salvarsan administered intravenously. Turner,[2] however, holds that epiplopexy should not be performed in luetic cirrhosis.

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* From the St. Louis City Hospital.

[1] White, Sinclair: Brit. Med. Jour., 1906, ii, 1287.

### OPERATIVE RESULTS

The operative mortality depends on the time of the surgical intervention, the operative technic, and the character of the anesthesia. Careful selection combined with local anesthesia will insure marked reduction in the operative mortality. If operation is performed before the patient's general health has been impaired, the results should be satisfactory in 90 per cent. of the cases. In 1904, Monprofit[3] collected 234 cases of epiplopexy. Eighty-four patients died within a month of the operation. At present, however, internists are referring these cases at an earlier date and the surgeons are enabled to show much better results. In nine of my recent cases there has been no operative mortality. Two of these patients were considered hopeless owing to the extensive changes in the liver. They lived eight and fifteen days, respectively.

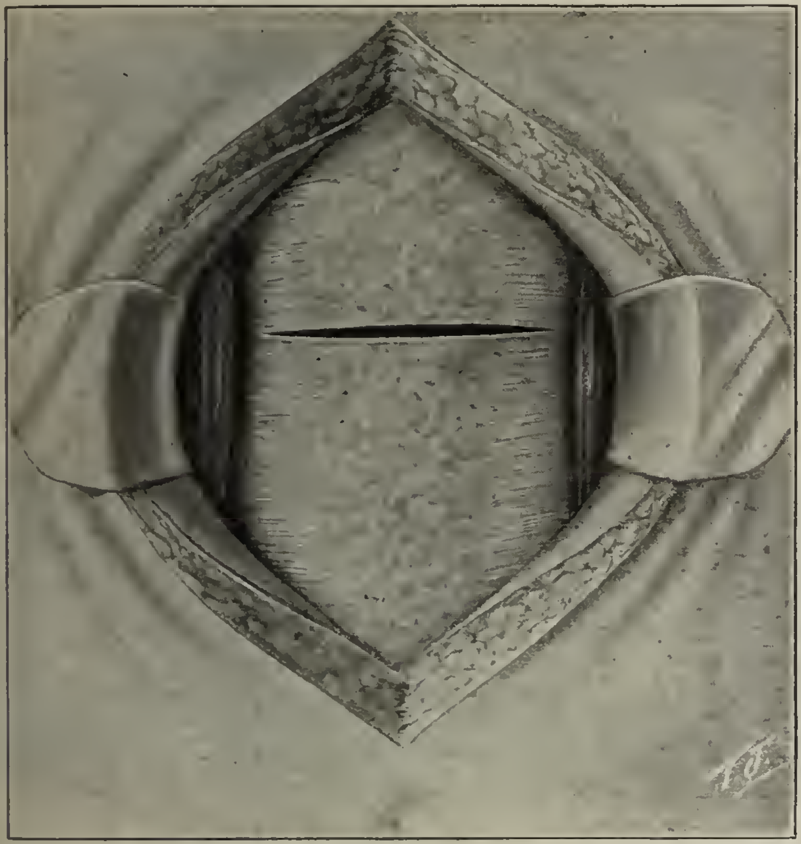
Fig. 1.—Peritoneum exposed and opened through a transverse incision.

### TREATMENT

The omentum is utilized for the purpose of establishing vascular channels of communication between the portal and systemic circulation, since it seems especially adapted for the purpose. Morison sutured the omentum to the parietal peritoneum. Schiassi was the first to suggest the placing of the omentum between the peritoneum and abdominal muscles. Sinclair White opens the abdomen through a right rectus incision and then tucks the omentum between the rectus muscle and its posterior sheath. Mayo[4] makes an exploratory incision to determine the condition of the liver and then makes a second incision, 4 inches lower down, and follows the suggestion of White. If desired, the operation can be repeated on the left side. White regards epiplopexy as a formidable operation.

### AUTHOR'S TECHNIC

Morphin and atropin are administered half an hour before operation. The peritoneum is exposed through a 4- or 5-inch median incision after the integument has been injected with a 0.1 per cent. solution of cocain or novocain. The posterior sheath of the right rectus is incised longitudinally near the inner border of the muscle and the latter separated gently from the posterior sheath. The procedure is repeated on the left side, after which the muscles are retracted and a transverse incision made through the peritoneum, care being taken not to cut the vessels in the round ligament. After having

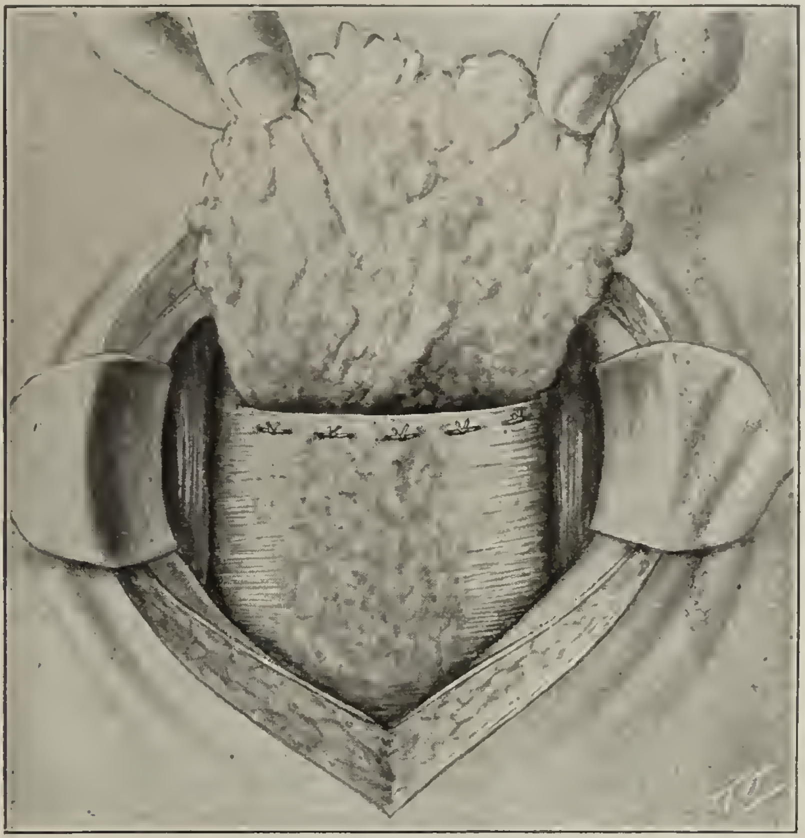
Fig. 2.—Omentum held upward and lower lip of incision stitched to its base.

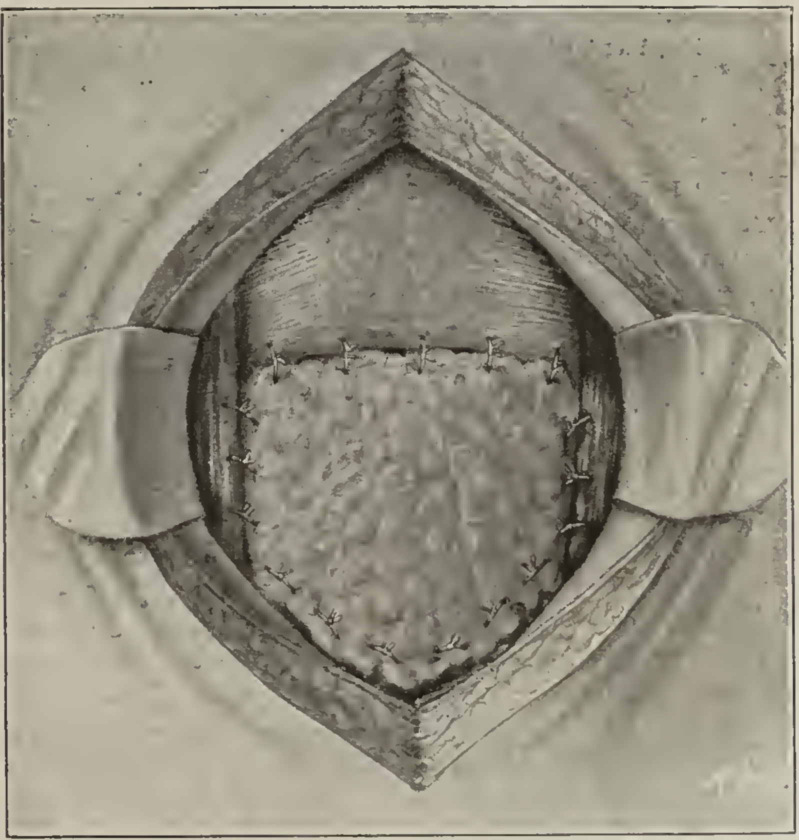
Fig. 3.—Omentum drawn downward and stitched behind the recti muscles and to upper lip of incision in peritoneum.

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[2] Turner: Brit. Med. Jour., 1909, ii, 1226.
[3] Monprofit: Tr. French Surg. Cong., 1904.
[4] Mayo: Keen's Surgery, 1910.

determined the condition of the viscera, the omentum is drawn through the incision and held upward by an assistant while the lower lip of the incision is sutured to the posterior surface of the omentum, care being taken to prevent wounding or including large vessels. The omentum is then drawn downward and tucked behind the recti muscles and round ligament. Several catgut sutures are necessary to retain the omentum in its new location. The upper lip of the incision is sutured to the omentum (see Fig. 3) and the abdomen is closed in the usual manner. In debilitated patients the linea alba should be overlapped.

### REMARKS

The advantages of the technic are manifold. The more important are as follows:

1. Possibility of thorough inspection of the abdominal viscera.
2. Utilization of practically the entire surface of the omentum without disturbing the normal relation of the stomach and transverse colon.
3. Prevention of compression of the omentum between the muscle and its sheath.
4. Practical elimination of danger of postoperative hernia and intestinal obstruction.
5. Avoidance of injury to blood- and nerve-supply of the recti muscles.

4826 Delmar Avenue.

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# CONTRIBUTION TO THE SURGERY OF BONES, JOINTS AND TENDONS

JOHN B. MURPHY, A.M., M.D., LL.D.
President of the American Medical Association
CHICAGO

(*Continued from page 990*)

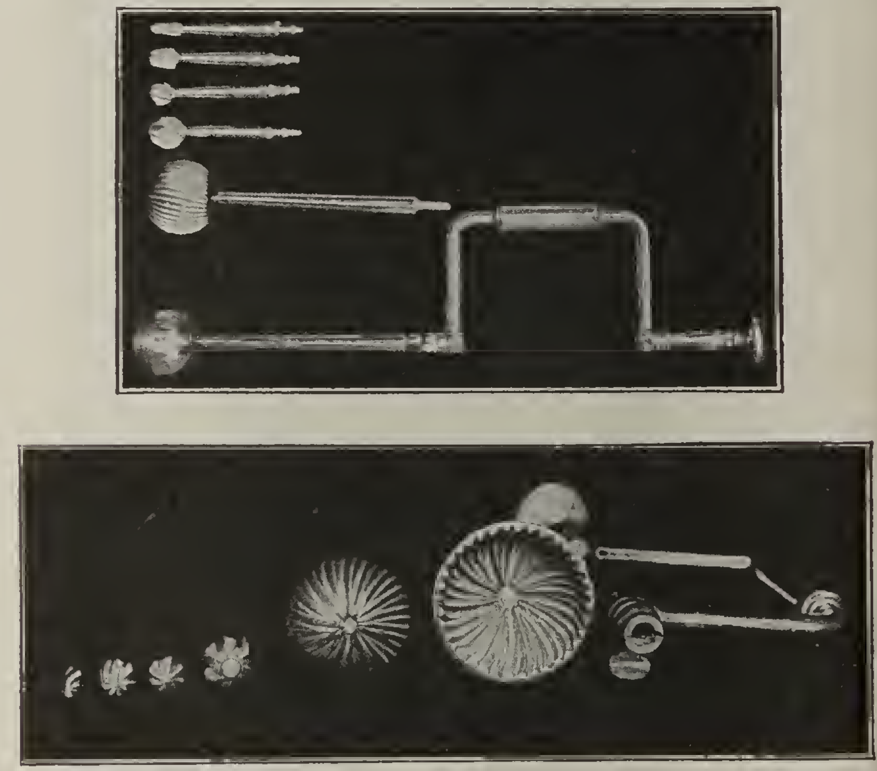
B. The repair of ununited fractures is one of the most important and practical fields for bone transplantation. It is unnecessary to consider here the causes of non-union, except to accentuate one fact that the *x*-ray brings out very clearly, namely, that non-union occurs frequently when the approximation of the bone ends is quite perfect and the fragments thoroughly immobilized, either with or without Lane plates or other external or internal supports. The *x*-ray shows in these cases that there is no osteogenetic effort on the part of the periosteum, medulla or compact bone tissue to span the gap with new bone. It is also a clinical fact that freshening, irritating, rubbing, wiring, or nailing these ends does not in a considerable percentage of cases stimulate the formation of an ossific callus. These failures are so numerous that a means more constantly and uniformly successful, without involving additional hazard for the patient, must be sought.

The means best adapted to meet these requirements, as I have demonstrated in a large number of cases, consists of the transplantation of the crest of the tibia from the same patient into the medulla, so as to span across the line of fracture. The medulla is reamed out with a reamer to the desired size and depth in the ends of both fragments. The transplant is then taken from the crest of the tibia of the patient and driven into one of the fragments to a degree sufficient to allow the other end to be inserted into the opposite fragment, so as to splint firmly and support the fragment across the line of fracture. The implant may be secured in this position by means of a bone or iron nail driven through it transversely.

The transplant forms a bridge over which the haversian vessels from the living bone at both ends pass over the gap and coalesce to form a callus, thus building new bone in the transplant.

I have not had a single failure of union in this class of cases, nor have I had to remove the transplanted fragment. If this work is done in an aseptic field and in an aseptic manner, and if primary union of the soft parts is secured, the result is uniformly good and the period of convalescence short.

The transplant (Fig. 9) should be of sufficient size to give firm mechanical support. Usually it is of the size of the adult index or middle finger, measuring about $\frac{3}{8}$ by $\frac{1}{2}$ by $\frac{5}{8}$ inch, and of such length as may be desired. It must be firm enough to carry the necessary resistance. It should be removed from the crest of the tibia, and may or may not be covered by periosteum. The defect that is left in the tibia from which this graft is removed fills in rapidly, so that after from four to six weeks the site can scarcely be detected. A curved Buck chisel or Gigli or Butcher saw may be used to remove the fragment guided by my special retractor-guide. The transverse division of the bone above and below should be made with a saw before the fragment of bone is chiseled away from the tibia, because otherwise it is liable to split in a wrong direction. It should be lifted up carefully with forceps and placed in the bed prepared for it without coming in contact with any other material.



Figs. 7 and 8.—Side view and end view of the author's reamers of various sizes and shapes and the end mill used in securing the normal conformation of bones forming enarthrodial joints, such as hip and shoulder, and to ream out the medullary canal of long bones before the fitting in of the transplant.

It requires about forty to sixty days for the graft to become firmly attached and therefore an external cast should support the limb during this time. Although it feels firm to the palpating finger within twenty days, it must not be strained until ample time has elapsed for complete regeneration to take place. It requires from seven to ten months to have a bone fully restored to the normal size.

### OLD UNUNITED FRACTURE OF NECK OF FEMUR

Case 1.—*Patient.*—Mrs. C. V., aged 58, was admitted to Mercy Hospital, June 18, 1909. Family history was negative.

Patient had had scarlet fever, measles, whooping-cough and mumps during childhood.

*Present Trouble.*—In 1905 ,while stepping backward from a slowly moving car, she landed on her right foot and fell to the ground, striking on her right hip. She was carried home and an osteopath called, who told her that her hip was dislocated and proceeded to reduce it. No cast or dressing was applied. Massage was instituted and continued up to the present time. Five months after the injury the patient was able to get around with crutches, but walked with a decided limp. There was slight pain in the hip on motion and some stiffness in the knee. She could not cross the right leg over the left without manual assistance. There was no loss of sensation. On pressure, hip was slightly tender. There had always been an enlargement of the hip since accident.

*Examination.*—Right leg, $33\frac{1}{3}$ inches; left leg, $35\frac{1}{2}$ inches. Tip of right trochanter almost up to level of a line drawn at right angles to the body through the anterior superior spine of the ilium. Tip of left trochanter $2\frac{1}{2}$ inches below this line. Arc of rotation greater in left than in right hip. In walking there is a drooping to the right side, despite a high heel. *X*-ray picture showed failure of union in old fracture of neck of femur.

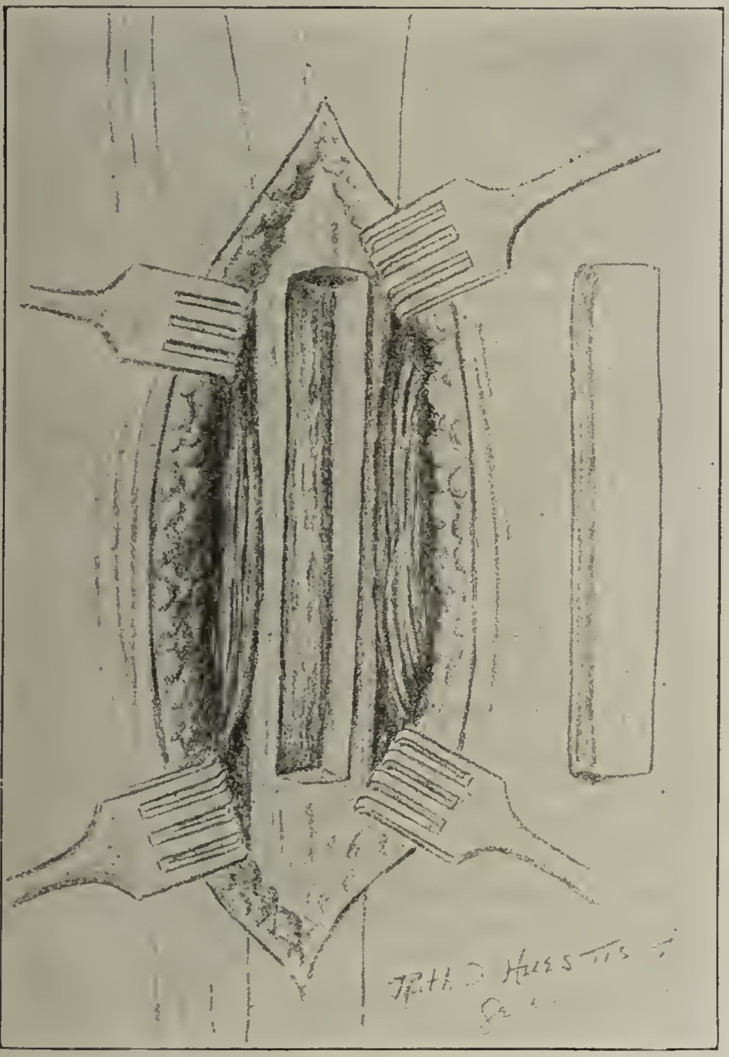


Fig. 9.—Exposure of crest of tibia, showing trough from which transplant was removed (transplant on right-hand side).

*Treatment.*—At the operation a fracture of the neck of the femur was found, with a large mass of cicatricial tissue surrounding the head of the bone. There was no effort at bony union. The head was exposed, the fractured surfaces freshened down to the cancellated bony tissue, and two nails were driven from the external surface of the shaft through it and through the neck well into the head.

*Result.*—Primary union of soft parts and firm bony union. Function normal.

C. The replacement of bone for osteomyelitic infection presents features not considered in the previous section. There is usually a large sequestrum and a considerable suppurating area. This suppuration must be entirely overcome and the wound healed before transplantation can be done. If it occurs in the leg, and particularly in the leg of a growing individual, the entire shaft of the bone may be involved.

The length of the extremity can be maintained by implanting the head of the fibula at the knee under the epiphysis of the tibia. If the femur or humerus be involved, extension must be maintained until the sequestrum is freed (Figs. 11-14).

If the periosteum is retained, a foreign body, such as a tube or column of magnesium, $\frac{1}{3}$ to $\frac{1}{2}$ inch in diameter, should be inserted into the granulating wound and contact at both ends with the bone, even in the presence of infection. It will thus prevent the shortening. This is more desirable and applicable to a necrosis of the femur and humerus than in the case of disease of the tibia or either bone of the forearm. The magnesium will be entirely surrounded by granulation tissue. If the periosteum has not been destroyed by the osteomyelitic process, an involucrum of bone will form around the magnesium and the latter will ultimately be absorbed. Carbonated water, weak alkaline or mineral acid solutions (1 to 5 per cent.) may be injected to dissolve the magnesium after it has fulfilled its purpose, if it does not disappear after a reasonable length of time has expired. It usually is rapidly dissolved by the wound secretions with evolution of hydrogen gas.

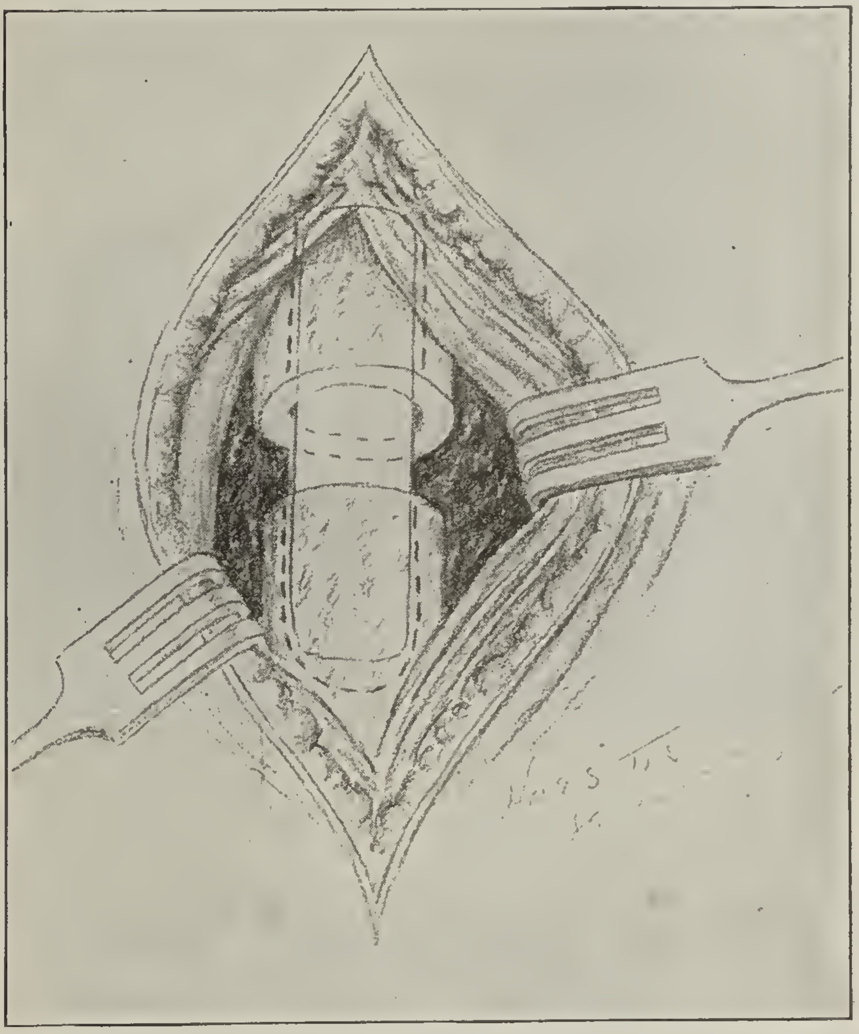


Fig. 10.—Transplant in place between ends of bones. The medullary canal is reamed out, the ends of the transplant shaped to fit, and the transplant fitted in tightly.

When the sequestrum is removed and the space is covered with cicatricial tissue or skin, a fragment of bone from the crest of the tibia may be transplanted into the scar tissue at the site of the former bone. It must contact above and below or, at least, at one end with osteogenetic living bone denuded of its periosteum. It is preferable to have it contact with both ends.

A small contacting area may suffice to supply the haversian vessels with osteogenetic elements, as was beautifully illustrated in one of my cases. Here the contacting areas above and below were not larger than the surface of an ordinary lead-pencil, and still there was supplied sufficient osteogenetic force for the full reproduction of the tibia to such an extent that it could scarcely be believed that it was a new tibia were it not for a hole that remains in the upper end and which is plainly to be seen in the skiagram (Fig. 13).

The periosteum over the living ends of bone must be removed carefully and the implant must be immobilized and firmly approximated at each end with phosphor-bronze wire, or any other non-absorbable material which would insure continued immobilization.

In tuberculosis of the shaft, a rare condition in this country, but a common one in Scotland, as shown by Mr. Stiles, the periosteum can be preserved, and preserved aseptically, as a rule. Here the bone can be reproduced fully without the implantation of a fragment of bone from elsewhere, but it will be evolved more rapidly and the conformation of the limb more perfectly maintained if a fragment of bone fills in the gap.

If bone is not accessible, then a bar, plate or perforated cylinder of magnesium may be inserted to maintain the normal conformation of the extremity during the process of evolution of the involucrum of bone around the foreign body. As stated before the magnesium will disappear in time, if it does not become infected.

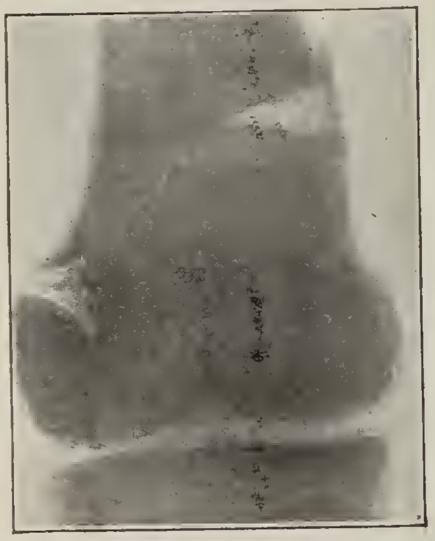


Fig. 16.—An incision was made into the bone from the inner side so as to permit of straightening the bone without disturbing the opposite side. The magnesium plate was inserted to maintain separation.

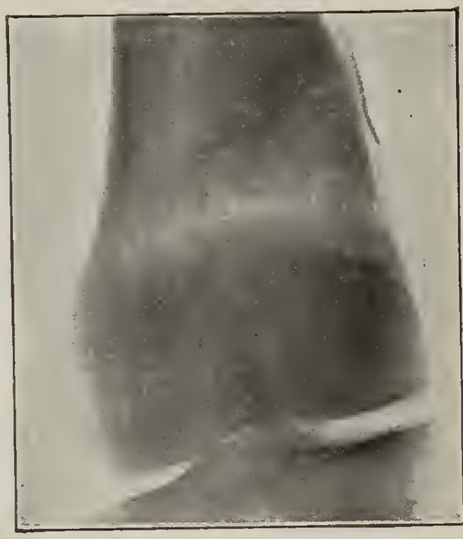


Fig. 17.—Ten months after the operation. Correction of deformity, complete bony development in the gap and absorption of magnesium plate, except that portion imbedded in the muscle and outside of the periosteum.

In the removal of a tuberculous shaft in the child, the periosteum should be freed from the bone, divided crosswise, and the shaft evulsed from its epiphyseal attachment. *The epiphyses must never be disturbed in children;* therefore, the bone should be fractured on the shaft side of the epiphyseal osteogenetic line. The gap then remaining should be filled with some non-elastic compact supporting material during the period of regeneration. The rapidity of absorption of the magnesium can be seen in the cases in which it was used (Figs. 15-19).

### IMPACTED FRACTURE OF THE INTERNAL TUBEROSITY OF THE TIBIA AND FRACTURE OF THE FIBULA

Case 2.—*Patient.*—J. S., aged 62, was admitted to Mercy Hospital Feb. 3, 1912. Family history was negative. Patient had had measles, whooping-cough and typhoid when a child; no injury except that relating to the present trouble.

*Present Trouble.*—May 19, 1911, while the patient was standing between a telegraph pole and a slowly moving automobile, the running-board of the machine caught him on the inner side of the leg, just below the knee, jamming him against the telegraph pole. He did not lose consciousness, but could not stand on his leg. A physician was called immediately, and pronounced it a bruise without fracture. The skin was not torn. The patient was confined to bed for ten days, and had walked on leg, with aid of crutches.

*Examination.*—There was great deformity just below the knee, with every evidence of the fracture. The line of tibial fracture was from the level of the upper tip of the fibula downward and inward, so as to break its inner surface 1½ inches below the articular margin of the internal tuberosity. The internal malleolus of the right ankle was displaced inward 5 inches out of plumb.

*Treatment.*—An incision 2 inches long was made parallel to the long axis of the tibia and an inch to the inner side of the patellar tubercle. The tibia was completely divided with a Murphy-Buck chisel along the line of impaction. With the limb in a straight position, abduction was then made until the gap at the inner margin of the line of fracture was an inch in breadth. A magnesium plate 1¾ inches long, 1¼ inches wide and one-sixteenth inch thick was prepared and driven into a crease made by the chisel in the upper and lower fragments until it was entirely imbedded in the bone spanning the gap. This immobilized both of the fragments, prevented rotation and maintained the gap. The periosteum and fascia were sutured over the plate and the skin closed with horsehair. The limb was then dressed in a straight position, but hyperabducted. A plaster mold was then applied extending from the trochanter to the toes. The mold was opened at the end of three weeks and showed a complete primary union of the soft parts, but they were vaulted forward as though there were a large quantity of serum or blood beneath. On percussion it was resonant. An aspirating needle was inserted and drew off gas formed from the secretions decomposed by the magnesium, a regular result when the wound is completely closed and the magnesium oxidizes more rapidly than the hydrogen gas is absorbed. The limb was in splendid position.

*Result.*—Five weeks after operation the *x*-ray showed that the magnesium had practically entirely disappeared and there was a good bony union of the tibia. The patient was permitted to walk on the limb, with the aid of crutches. Result was perfect.

### UNUNITED FRACTURE OF TIBIA AND FIBULA

Case 3.—*Patient.*—M. S., aged 22, was admitted to Mercy Hospital June 19, 1909. There was no record of family history or personal history.

*Present Trouble.*—Aug. 26, 1908, a laundry stove exploded and a piece of iron struck the right leg midway between the knee and ankle on the anterior surface. The patient became weak and dizzy and perspired, but did not vomit. He tried to walk, but was unable to do so because "his leg bent" at the point of injury. He had no pain, only a numb feeling. He said that blood ran down his leg and that there were two holes on the inner side of his leg. Then he had sharp shooting pains. He was taken to a hospital and operated on the following morning; double wiring of both ends was done. He thought that some muscle was united and a piece of bone removed. His temperature rose to 100 F. He had pain in leg on motion only. The leg was put in a mold. Patient remained in hospital until Nov. 22, 1908. Six weeks after the accident a very successful skin-grafting operation was done on the leg. Patient said that there was no infection at any time. He was in bed only fifteen days, and one month before leaving hospital was walking on crutches. He had a circular cast on all the time, from time of admission to hospital until now. Cast was removed every two weeks and new one applied. He had pain in the leg for two or three days following the operation. In December wound reopened and patient went to bed. He was in bed twenty days; had no pain, but at night would get a numb sensation. He had hobbled around on crutches. Slight tenderness on pressure.

*Treatment.*—Patient was operated on June 15, 1909. There was no callus production in tibia. Approximation was good. Effort at bone production made from the periosteum around the wire and outward. Ends of fibula had passed each other, the lower to the inner side of the upper. Edges were fresh-

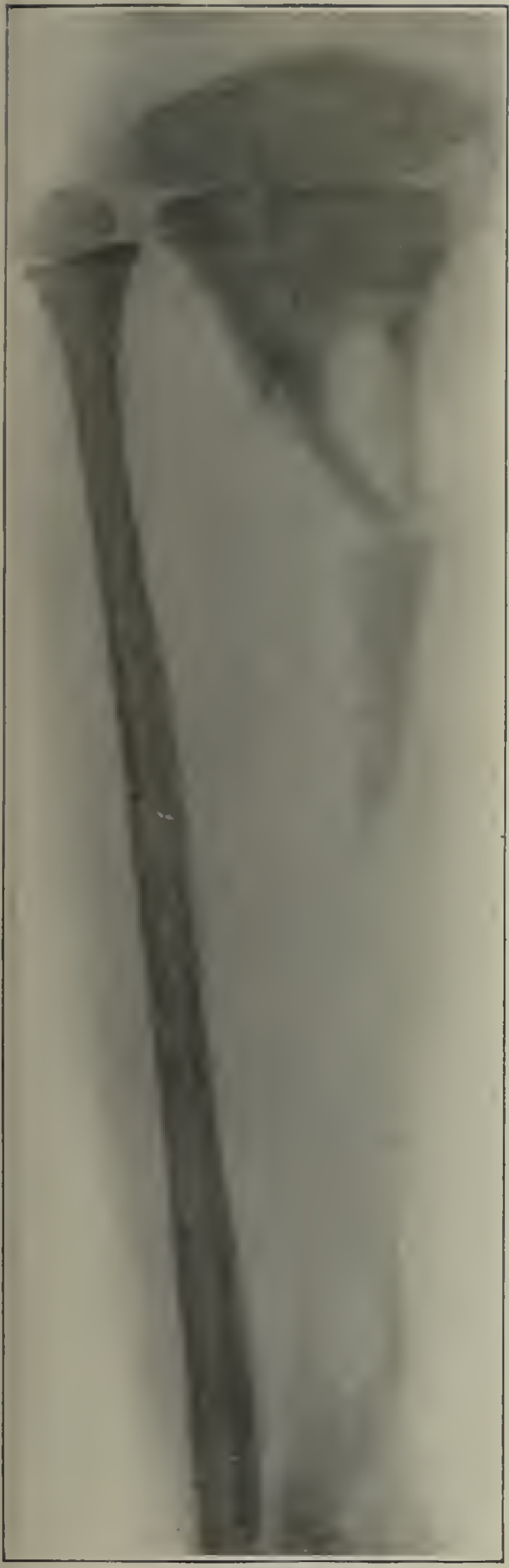


Fig. 11.—Destruction of the entire shaft of the tibia by osteomyelitis, the epiphyses and extremities remaining unaffected.

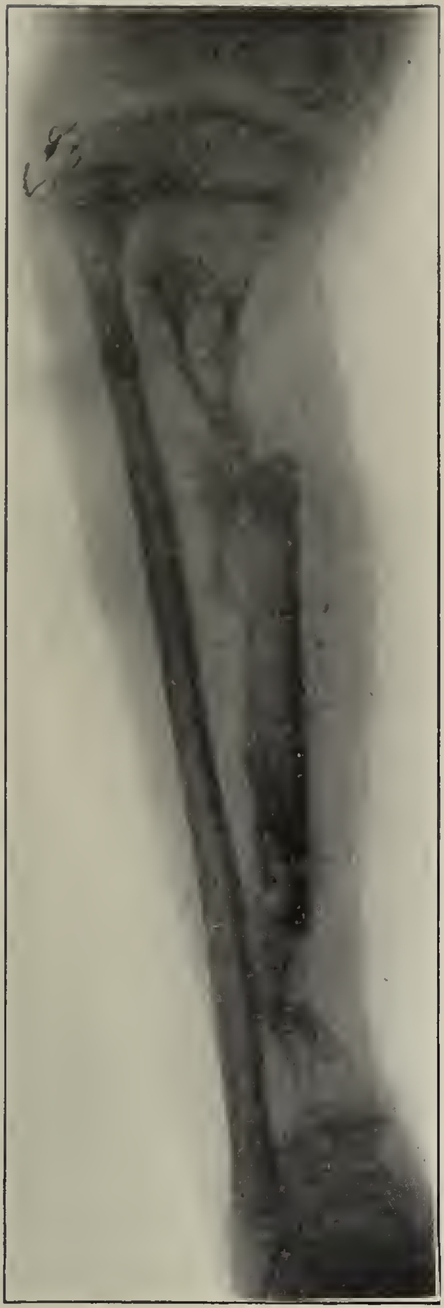


Fig. 12.—Three months after transplantation of a piece of the opposite tibia six inches in length. Beginning regeneration of bone.

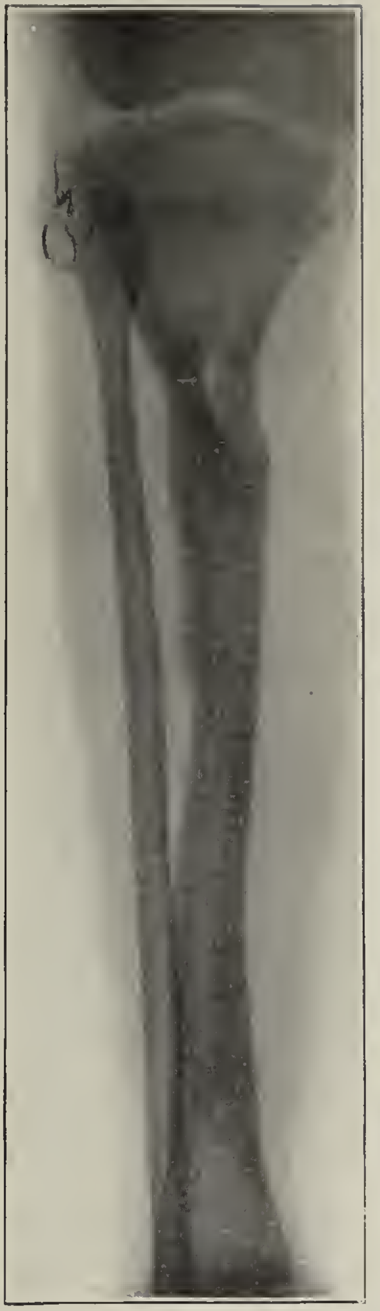


Fig. 13.—One year after operation, showing almost complete regeneration of the shaft of the tibia.

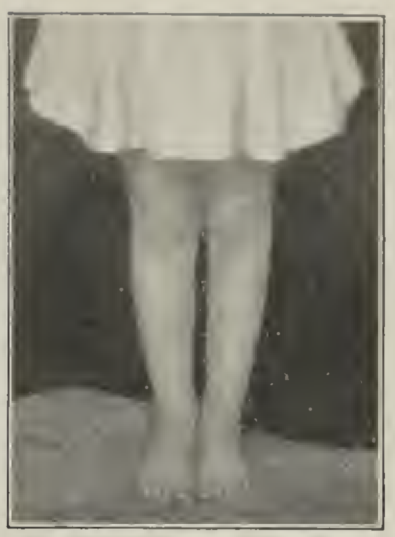


Fig. 14.—The leg operated on is normal in size, shape and function. The foot is placed squarely on the ground.

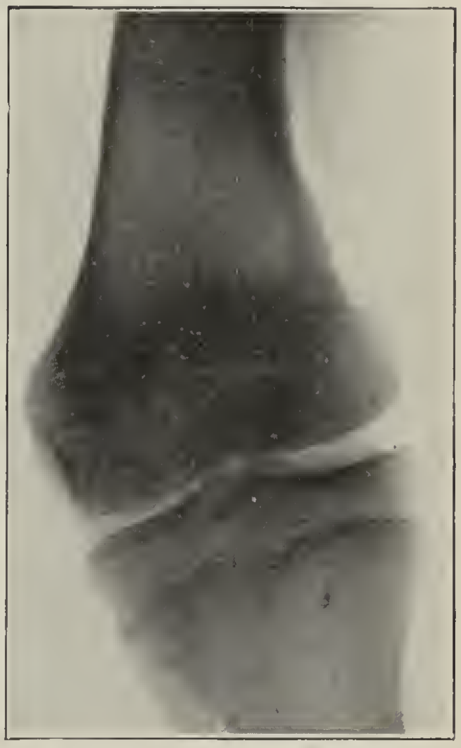


Fig. 15.—Bowing of femur, result of injury to internal condyle, the bone development from that side of the epiphysis ceasing, but continuing on the other side.

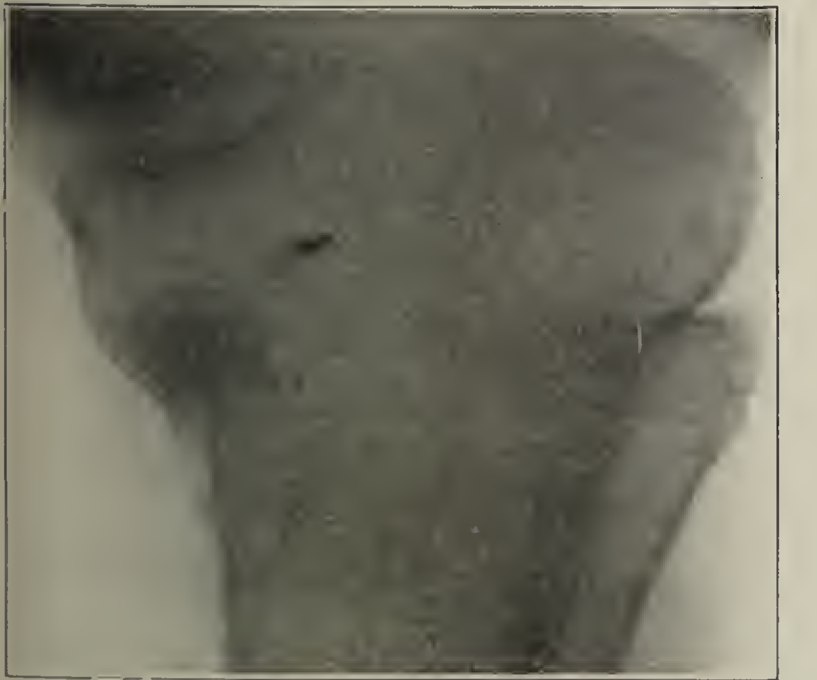


Fig. 18.—Impacted fracture of upper extremity of tibia and consequent deformity of leg.

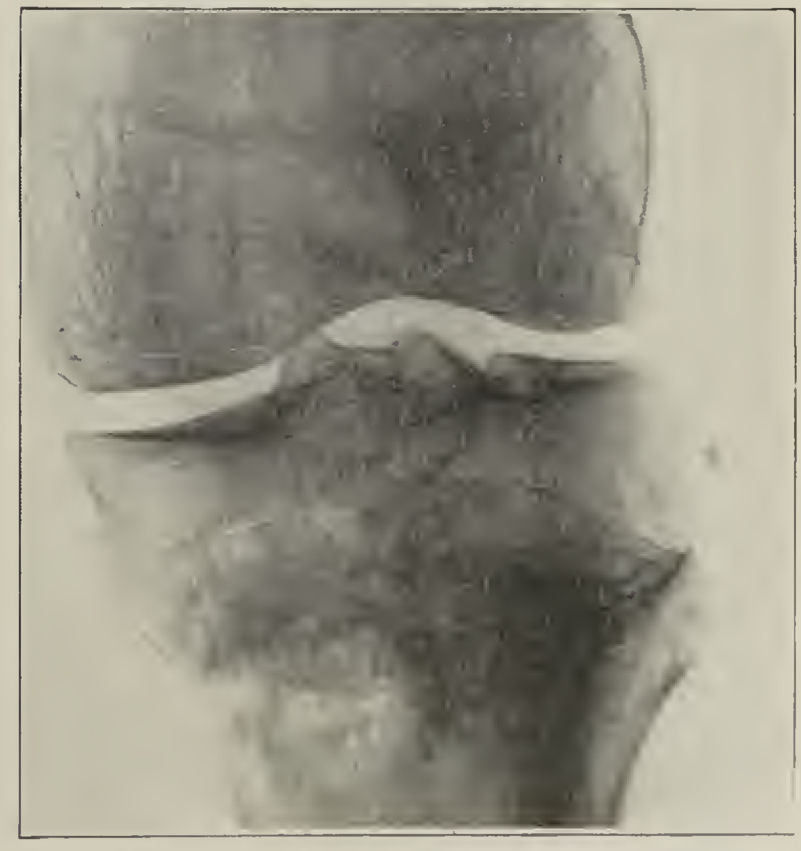


Fig. 19.—Refracture of tibia, correction of deformity and insertion of magnesium plate for retention of position. The magnesium was absorbed and the gap filled with bone. Perfect result.

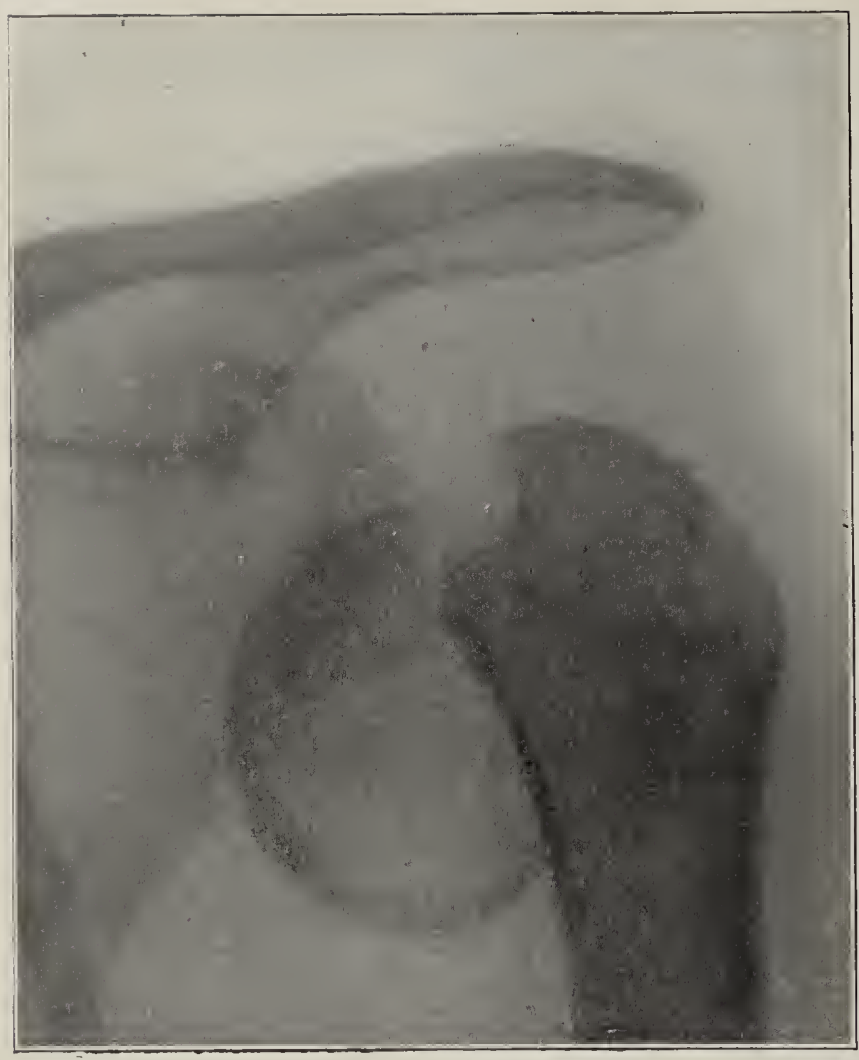


Fig. 20.—Fracture of the anatomic neck of the humerus with dislocation of the head of the bone into the subglenoid space.

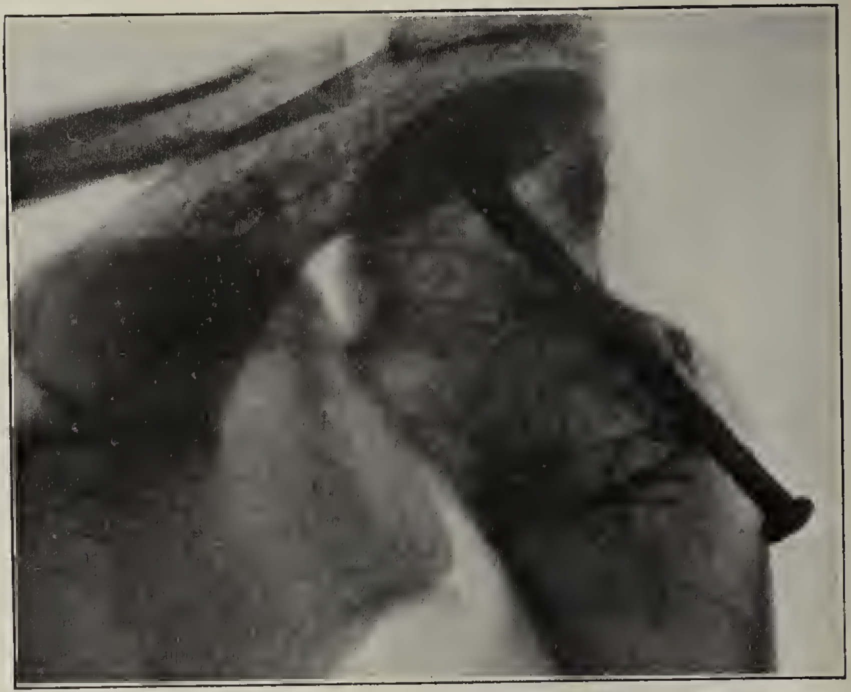


Fig. 21.—Replacement of head of bone into glenoid cavity and fixation of head to shaft by means of a wire nail.

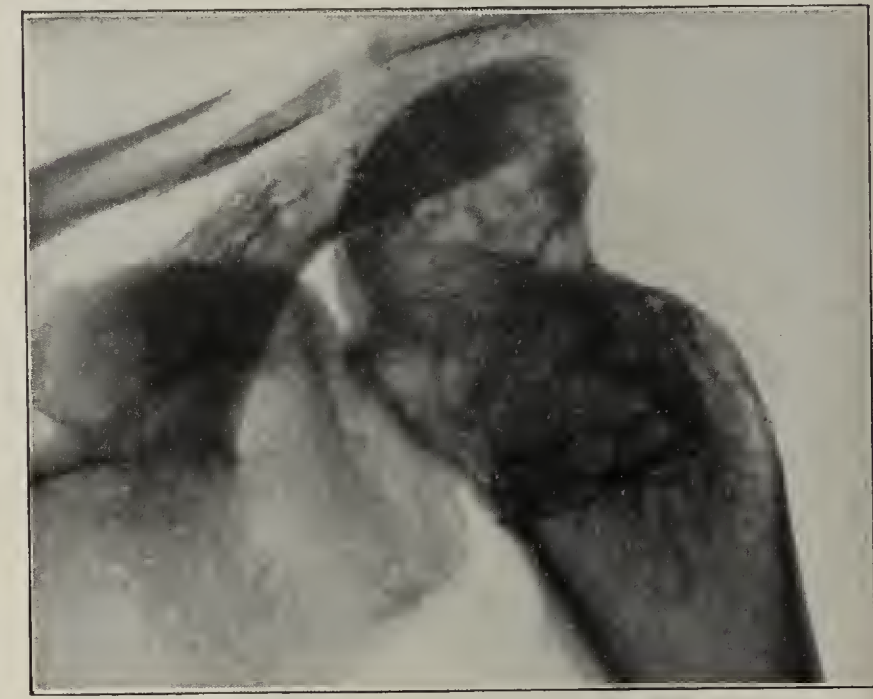


Fig. 22.—Four months later. Nail removed, sutures in situ; regeneration of bone complete, with return of function in joint.

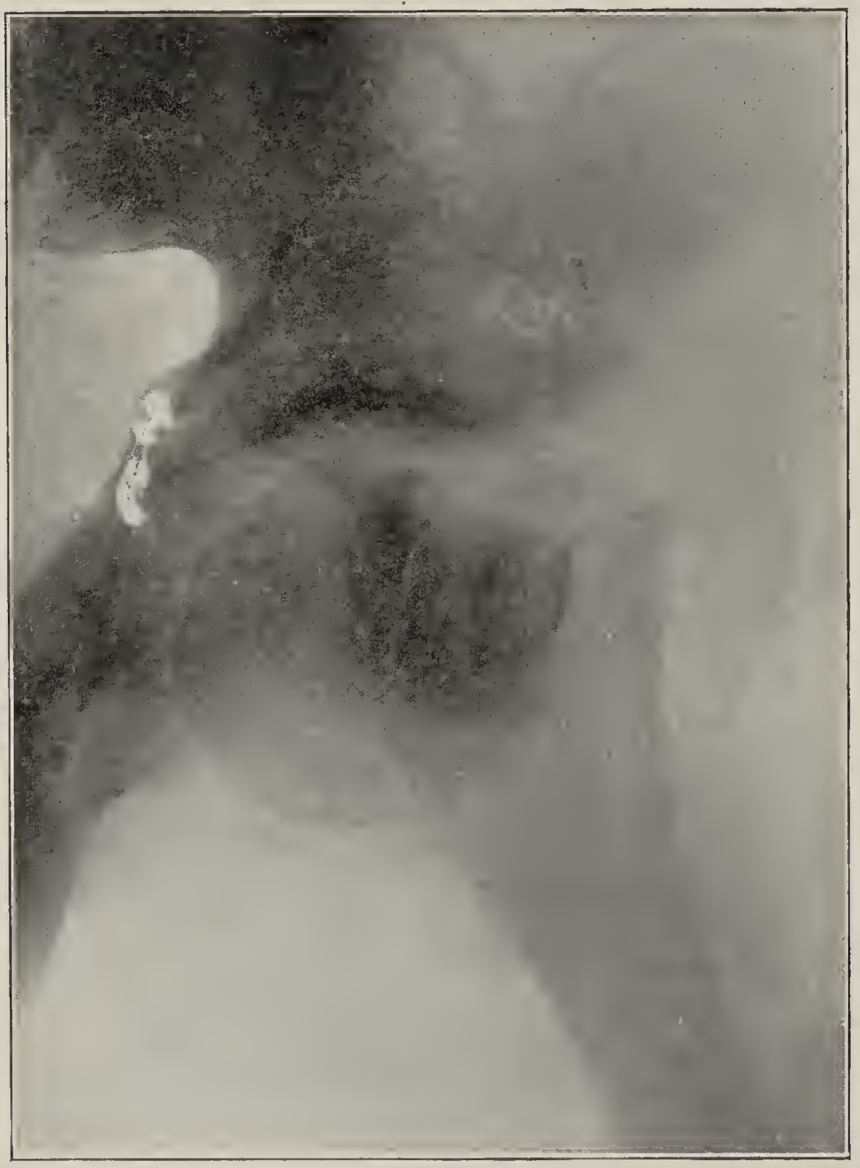


Fig. 23.—Fracture of neck of femur with separation of head, seven weeks after injury. Owing to separation of head from source of nourishment it was dead but aseptic, so that it could be used to bring about the formation of a new head. The globular mass in the center of the picture is the head of the femur. The shaft extends behind and above it.

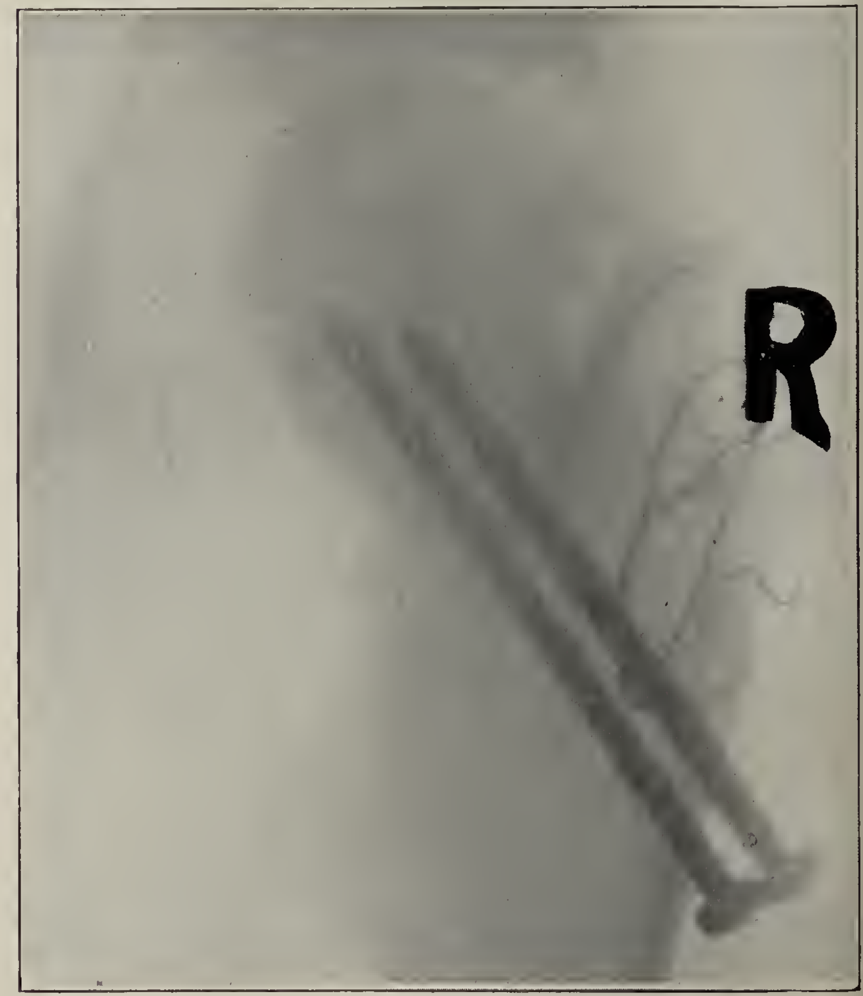


Fig. 24.—Head nailed to femur after reposition of fragments.

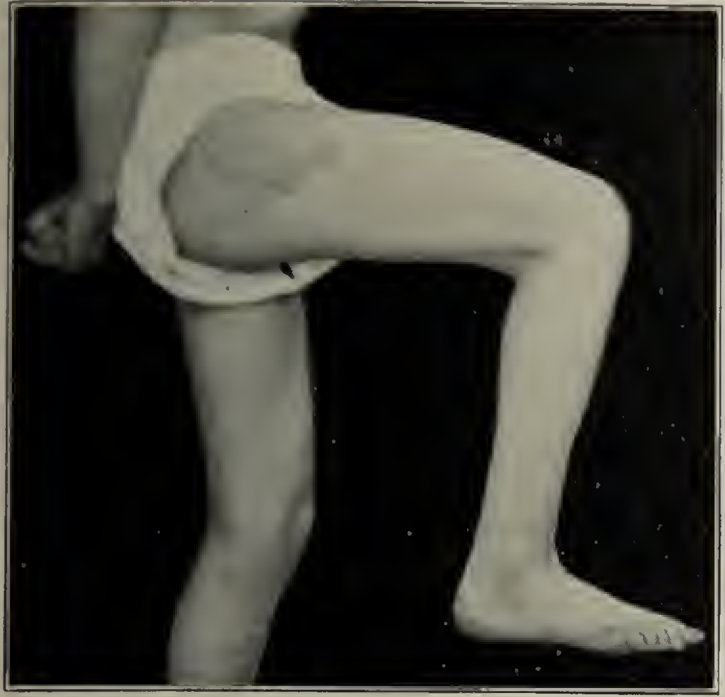


Fig. 25.—Regeneration of head of bone, with perfect restoration of function, showing that the dead but aseptic head met all requirements of a transplant. Flexion and extension normal. Leg can be rotated naturally.

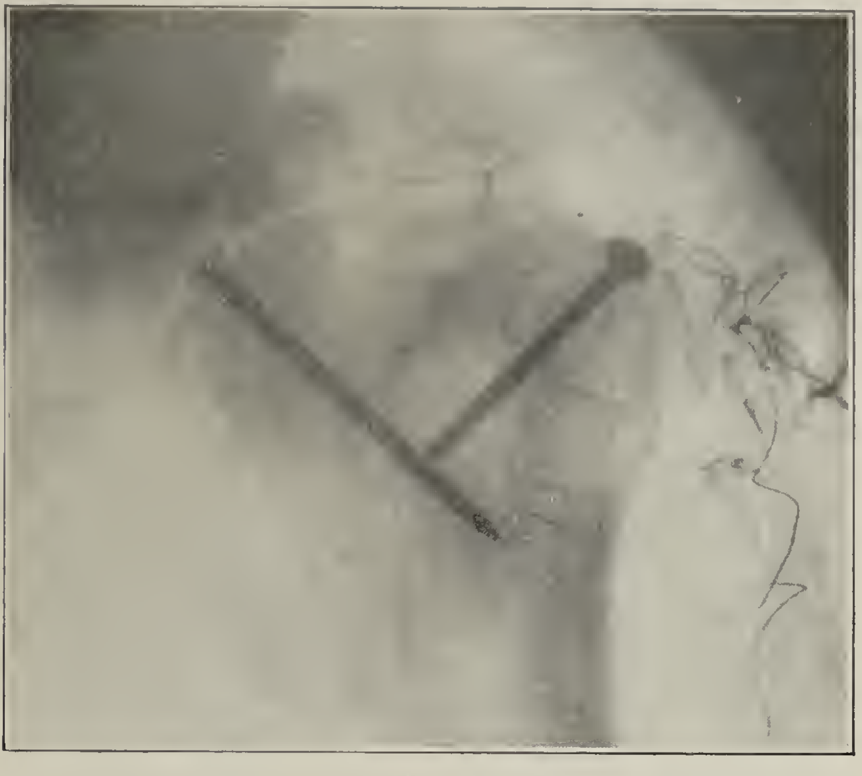


Fig. 26.—Old fracture of anatomic neck of femur. Absorption of bone and non-union. Four months after operation. A portion of the greater trochanter was removed and nailed to the femur to make a new head. The result was perfect. A firm bony union took place with restoration of function in the hip.

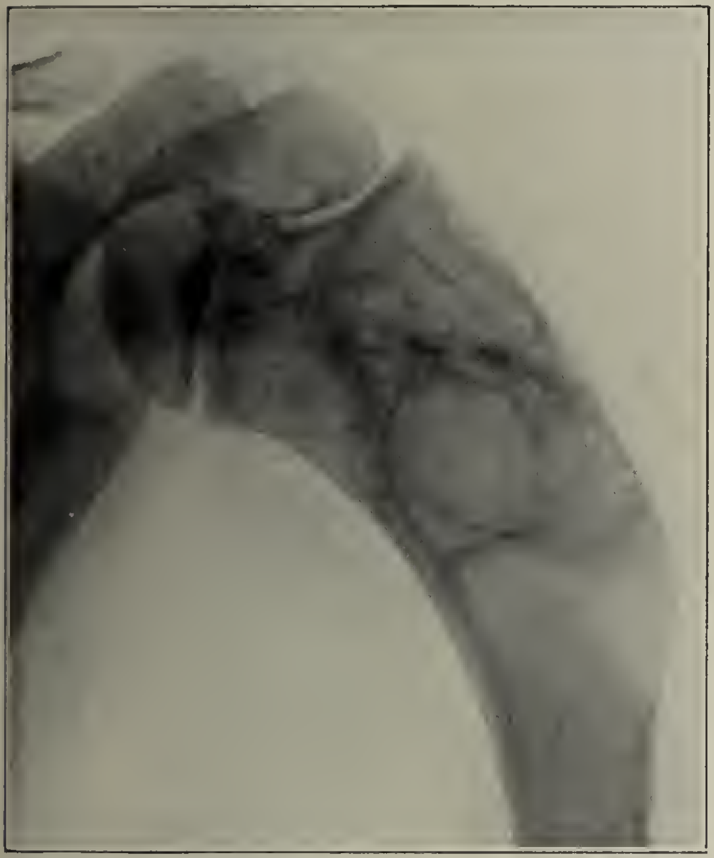


Fig. 27.—Cystic fibroma of upper third of humerus.

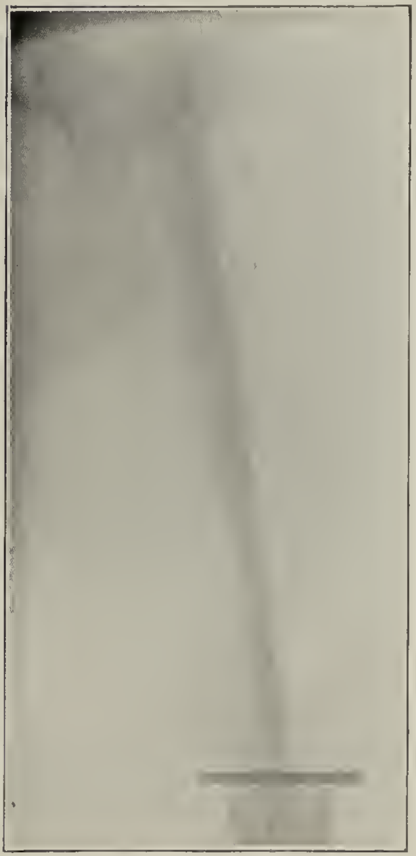


Fig. 28.—Entire upper third of humerus removed and tibial transplant inserted with nail locking it in place. Upper end of transplant was sutured into capsule with the idea of securing a restoration of auricular surface of humerus.

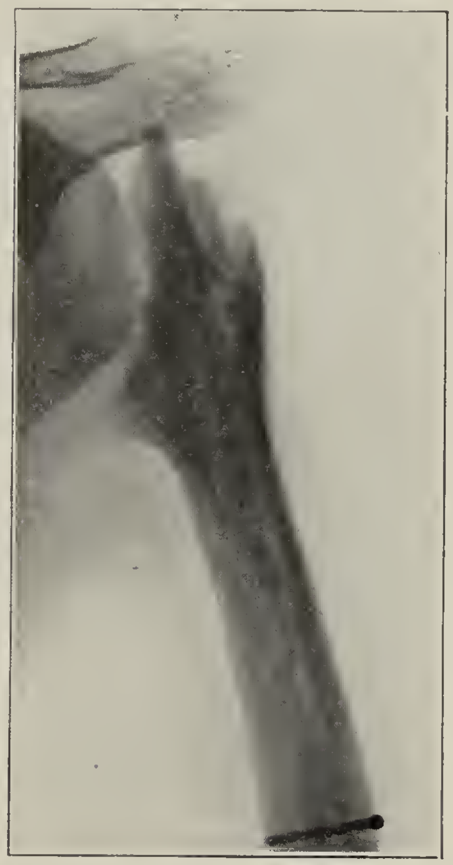


Fig. 29.—One year after the operation, showing regeneration of upper third of humerus, including the tuberosities and articular surface.

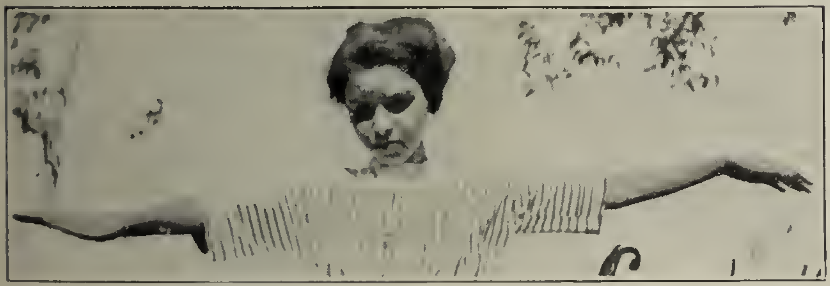


Fig. 30.—Showing full extension of arm.

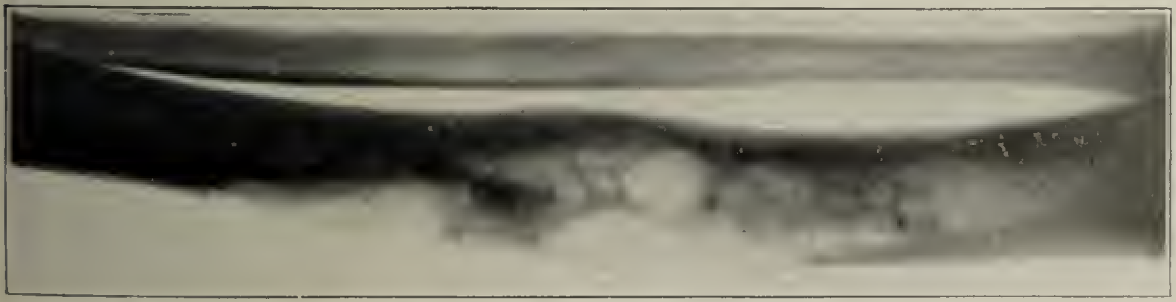


Fig. 32.—Boy, aged 13, with osteitis fibrosa cystica of shaft of right tibia.

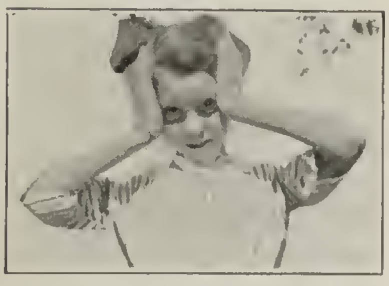


Fig. 31.—Showing complete flexion and ability to place hands on head.

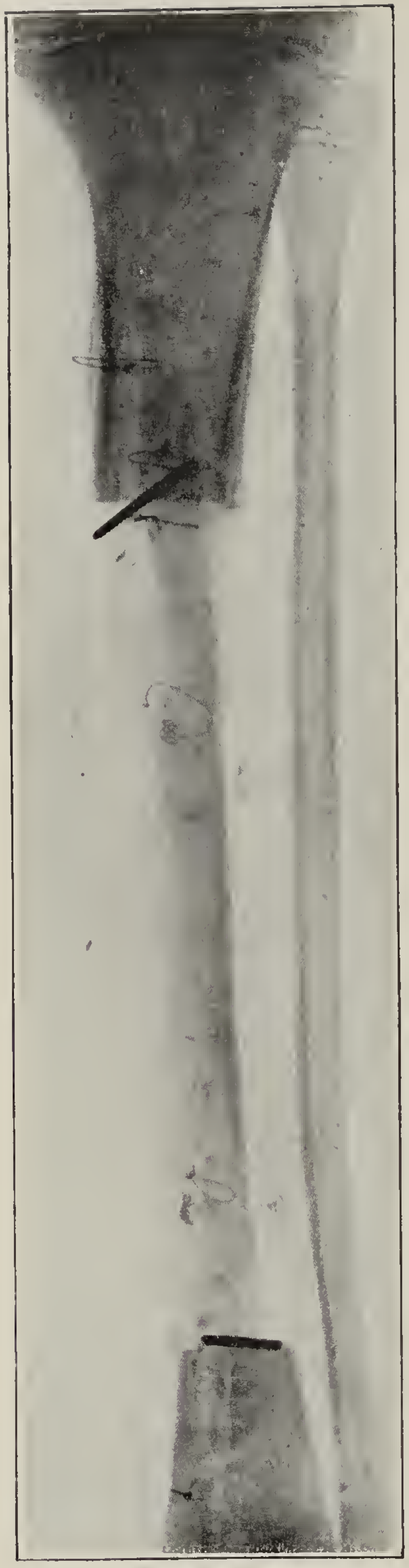


Fig. 33.—Three weeks after resection of tumor and transplantation of 8¾ inches of patient's well tibia into the gap. The transplant is held in place above and below by wire nails.

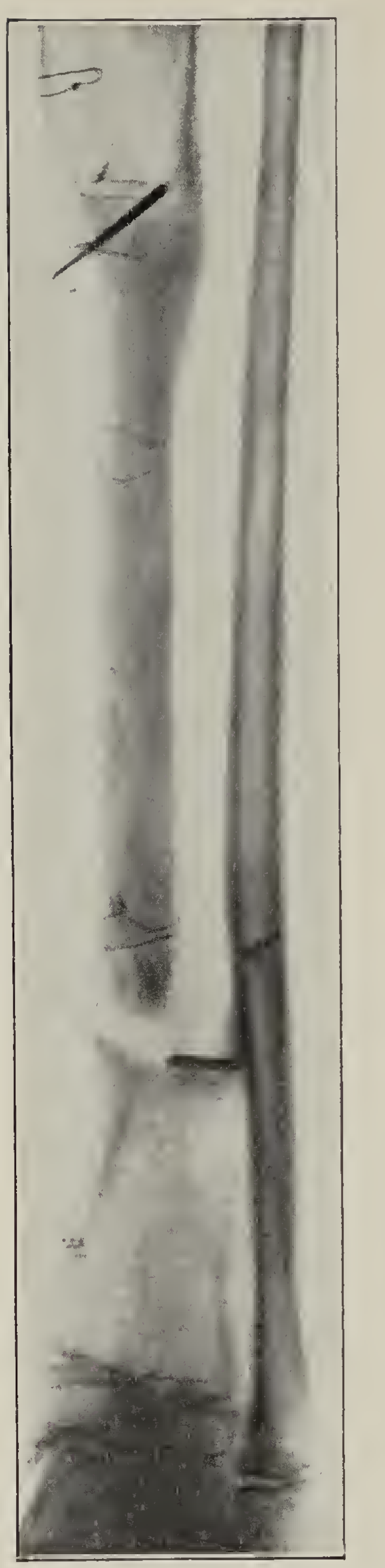


Fig. 34.—Seven months after operation, showing regeneration of bone, except at lower end of transplant, where a necrosis occurred, probably from the irritation of the nail. No return of neoplasm.

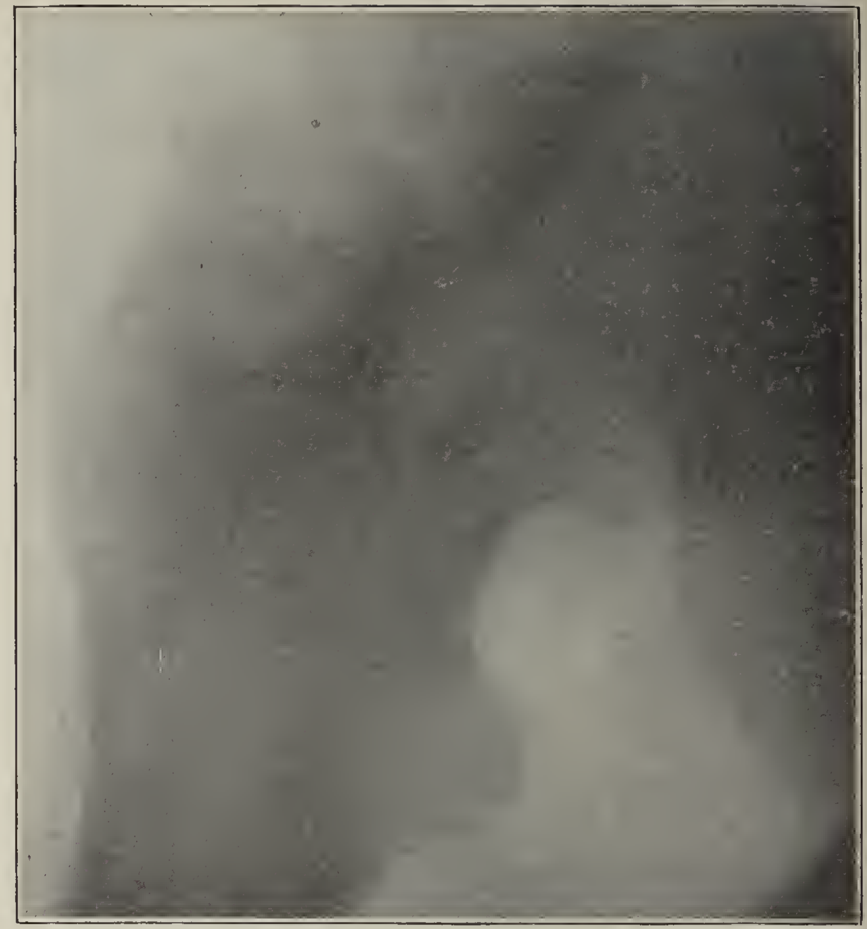


Fig. 35.—Chondrosarcoma of femur involving great trochanter and upper surface of the surgical neck.

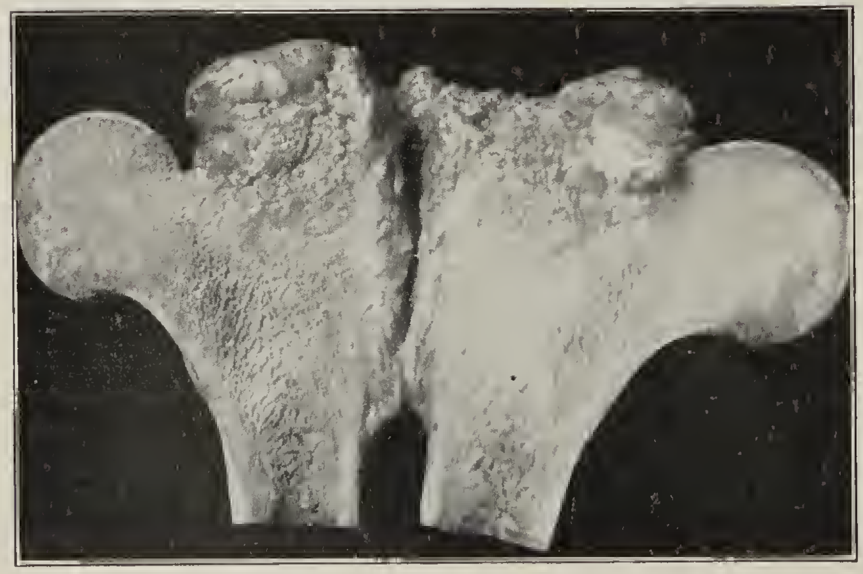


Fig. 37.—Condition of bone after removal and splitting. No apparent involvement of head by tumor process.

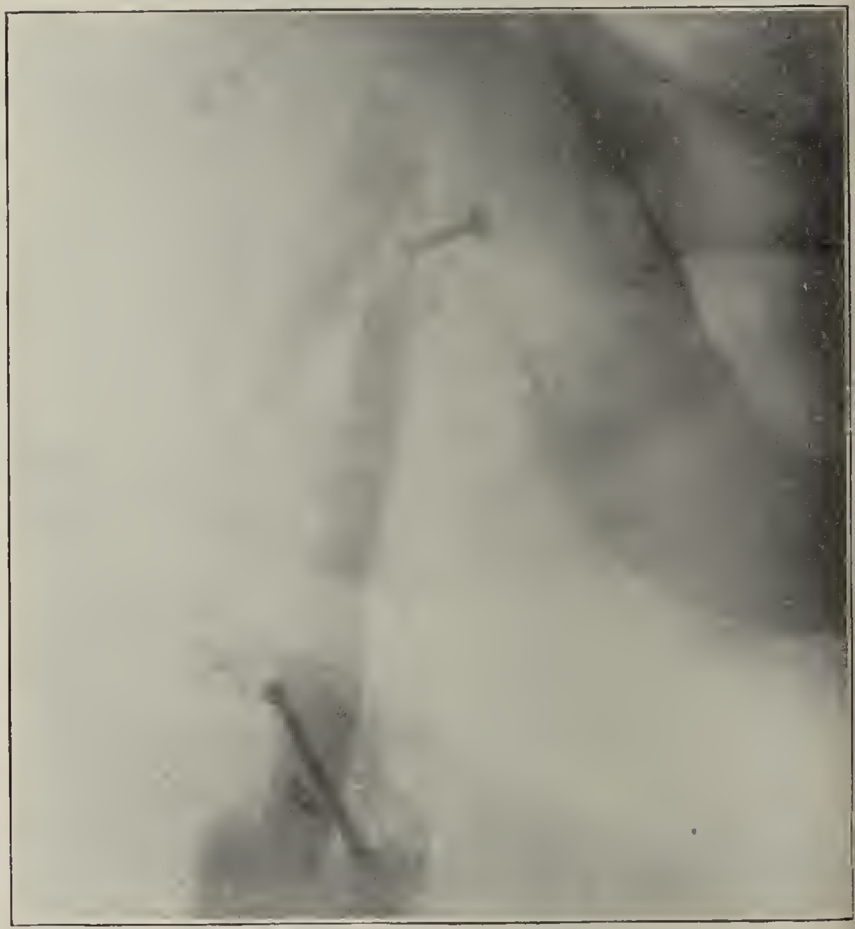


Fig. 36.—The entire extremity of the femur, including a portion of the shaft, was removed and a piece of tibia about seven inches long implanted, the upper end being placed into the acetabulum and the joint capsule sutured around it. The fragment fractured at its upper end during its removal from the tibia. It was wired, nailed as shown and implanted. This picture was made four months after the operation. On palpation there seems to be considerable regeneration of bone. The skiagram shows ossification for three-fourths of the entire length, but not so far advanced.

ened of both tibial and fibular fragments, and approximation secured by the use of bronze wire. No union resulted.

He was admitted to our service Oct. 6, 1909. There was no ossification; slight callus production; apposition perfect. Bones were spread out, connective tissue removed from between them and ends of bones freshened with chisel and all cartilaginous and fibrous tissue removed.

It was planned to make an intramedullary transplantation from the left tibia. The left tibia was exposed and two holes were bored through and nails inserted in these to steady the bone for sawing. A portion of bone was thus removed from the crest of the left tibia, measuring about one-half by five-eighths by three-eighths, and about 3 inches long. The medullary cavity of both the upper and the lower fragment was reamed out and the transplant from the left tibia was driven into the lower end first, then the upper end was inserted and a nail placed into the implant transversely to keep it from being displaced on motion. The wound was closed with catgut. No drain. There was primary union in both the right and the left tibiæ. Skiagrams were made repeatedly and showed the progress of ossification of the implant and of ossific union of the ends of the bone. An elongation of the tendo Achillis had to be made on account of the contraction that had taken place in the gastrocnemii during the long illness.

*Result.*—Perfect recovery, with full restoration of function.

### FRACTURE OF TIBIA AND FIBULA; NON-UNION

Case 4.—*Patient.*—H. P. W., a man aged 32, was admitted to Mercy Hospital Dec. 27, 1911. Family history was negative. Patient had been a civil engineer in the Canal Zone. He had tropical dysentery in 1908, and malaria for past ten years.

*Present Trouble.*—June 9, 1911, was in railway wreck and his tibia and fibula were crushed, resulting in a compound comminuted fracture with division of anterior tibial artery. A purulent discharge started on the third day and continued for fifteen days, when the external wound was entirely healed. Temperature ranged from 100.6 to 102 for first three days. Otherwise there was no constitutional disturbance. The leg was placed in a mold on the fifteenth day. *X*-ray picture taken the next day showed an overriding of both bones, with angulation of 45 degrees. No extension was put on. The mold was removed in four weeks. There was slight motion at the site of the fracture. Another mold was applied and left on for a month. The patient walked on crutches six weeks after the accident. When the second mold was removed the callus was a little more solid, but there was still some motion at the fracture. A plaster-of-Paris collar, 12 inches wide, was put on round the fracture and left on for three weeks. During this time he used crutches. The collar was removed. After two and one-half months a second *x*-ray picture was taken (December 5) and showed an overriding of one and one-half inches, with considerable mobility at the line of fracture. This mobility had increased slightly up to the time of admission.

*Examination.*—This showed a non-union of the tibia. Four *x*-rays of this case showed how important it is to have the pictures taken from various angles. One showed an apparently excellent union; the second a fair union; the third almost failure of union, and the fourth a complete separation of the two fragments by an interposed cartilaginous or fibrous mass. The fibula was united. There was a slight external angulation at the site of fracture.

*Operation.*—An incision 4 inches long was made over the anterior surface of the tibia near its lateral margin. The line of fracture was exposed. A fibrocartilaginous mass was deposited between the ends of the bones; there was no effort at bone reproduction. A groove one-half inch wide and 3 inches long was chiseled through the anterior surface of the tibia down to the medulla, intercepting the fracture at its middle. The reamer was then used to free the medulla one-half inch above and 1 inch below the groove. The tibia was then ready for the implant. A transplant 4½ inches by one-half by one-half by five-eighths was removed from the crest of the opposite tibia with the chisel in the regular way. It was driven into the lower fragment until the upper end of the transplant could be depressed into the groove in the upper fragment and admit of the insertion of the upper end into the medulla. It was then driven upward into the medulla beyond the end of the groove, so that the transplant locked. At the completion of this the leg felt strong enough to walk on it at that moment, so firmly did the transplant fix the end. The periosteum was then closed over the graft with catgut and the skin closed with horsehair. A plaster mold was applied, extending from toe to 8 inches above the knee. Primary union resulted.

The mold was removed at the end of three weeks. The implant had healed in nicely. The mold was reapplied, and removed at the end of five weeks, when the *x*-ray showed that a bony union had taken place. A leather mold was then substituted for the plaster mold and the patient was allowed to place some weight on the limb and walk with crutches. End result was perfect. (Figs. 43-45).

Tuberculosis of the shaft of the bones is a disease of childhood and infancy, and in this country rarely a disease of boyhood or girlhood or adolescence. In the adult the tuberculous disease is an epiphyseal lesion, while in the child and infant it is a diaphyseal or, as Mr. Stiles terms it, a metaphyseal lesion. Of course, it is hardly necessary to say that preparatory to carrying out any of these measures in these cases, either human or bovine tuberculin should be used to effect immunization, the type of the tuberculin depending on whether the infection is human or bovine.

In all of these cases (a) it is desirable that the sequestrum be removed early and completely; (b) also that the infected shaft be removed before a mixed infection of the periosteum takes place; (c) the epiphysis must never be disturbed in the case of children; (d) the normal conformation and length of the limb must be maintained either by internal or external mechanical supports or by extension; (e) the joints above and below the infected zone must be controlled carefully so that no deformity will result during the inflammatory process of destruction or during the period of restoration and repair, as these articular deformities are often more detrimental to the patient than the primary lesion. *Over this we have practically complete control if we take the necessary precautions early.*

D. In fractures of the neck of the humerus there frequently occurs luxation of the head out of the glenoid cavity and before union can be restored one is often required to detach the head completely and replace it in the glenoid cavity. In these cases it becomes necessary to separate it entirely from its vascular supply. It then becomes a graft as the fragment always dies and is replaced by new bone.

In this treatment the head is removed from the subglenoid space, brought out on the table, the end of the fragment is freshened, and accurately applied over the head. It is secured in this position by one or two eightpenny nails, driven through the humeral shaft into the head by an ivory peg, or a bone peg may be taken from the tibia and used in place of the nails. I believe that the wire nails fill all of the indications and meet all of the requirements in these cases. This gives a positive contact for transmission of the osteogenetic elements from the neck into the head.

The bone rapidly regenerates from the neck side and the head retains its full shape and size (Figs. 20-22).

### FRACTURE OF SURGICAL NECK OF HUMERUS WITH LUXATION OF HEAD AND NON-UNION

Case 5.—Mrs. M. K., aged 19, was admitted to Mercy Hospital Sept. 10, 1911. Family and personal history negative.

*Present Trouble.*—June 29, 1911, patient was thrown from an automobile. She did not know how she landed or whether she was unconscious. She was lying on her right side, with her arm under her, and was assisted to her feet by being picked up under both arms, when she felt a pain in the right shoulder-joint which increased on motion. She had shooting pains down the arm. After the accident the arm was put in a De Sault splint and a diagnosis made of dislocation. This was changed later to fracture of the neck. An *x*-ray picture taken a week later was said to show nothing (showing how dangerously misleading a defective *x*-ray may be). The arm was left in the original position for three weeks, when passive motion and massage were begun. The patient could now abduct the arm and had some deltoid motion, but could not raise it with the elbow flexed.

*Examination.*—Skiagram showed fracture of the neck of the humerus with displacement of the head out of the glenoid cavity into the subglenoid space. On examination it was found that the patient could abduct the arm 4 inches from the body, as she had some deltoid motion, but could not raise it with the elbow flexed.

*Treatment.*—Under ether anesthesia the shoulder-joint was opened by an incision 5 inches long, parallel to and in the anterior portion of the deltoid. The glenoid was freed from the remnants of the capsule and the cartilage exposed. The head of the humerus was then freed from its attachment in the luxated subglenoid position and brought out on the table. The fractured end was freshened and it was prepared for replacement in the glenoid. The fractured edge of the humeral neck was then freshened so that the cancellated tissue clearly showed. The head was then replaced in the glenoid cavity and nails were driven through the humerus well into the head. The first skiagram showed the bloodless head in position, and the second skiagram showed the head fully regenerated. There was primary union, and motion is rapidly returning. The joint is practically painless. Excellent result.

The head of the femur may also be luxated or, when separated from the neck, it may become necrotic through its retention and the separation or strangulation of the ligamentum teres. In the secondary operation it should be managed as above. As in the humeral separation, the head should be retained or replaced in the acetabulum and secured there either with a bone peg or two wire nails, which I prefer.

As shown in one case (Figs. 23-25) full regeneration of the head takes place without ankylosis of the joint following. In this case the time that had elapsed between the date of the injury and the operation was seven weeks. The head of the bone had been necrotic for that period, still its haversian canals acted as transmitting tubes for the osteogenetic capillaries coming from the living end of the neck of the femur. This forces me to the belief that a dead aseptic head of the femur from another individual might be transplanted into the acetabulum and grow, as it has in this case. The practical clinical test and demonstration of this belief, however, is left for the future.

When the head of the femur has been destroyed by absorption, due to its separation, with a fracture of the pelvis, as is shown in Figure 26, it can be reproduced by excising four-fifths of the trochanter with its cartilaginous ligamentous cover and as much of the external margin of the shaft as is necessary to fill the vacancy left in the neck of the bone. This trochanteric fragment can be nailed to the freshened end of the neck with the nail-head pointing toward the articulation. If it remains aseptic, regeneration of bone will take place through and into the transplanted trochanter, and the latter will make an excellent head. This was demonstrated in the case mentioned above (Fig. 26). This man can now place his entire weight on the new head; he can lift his leg and extend it horizontally at right angles to the body, when in a sitting position, which he could not do before the operation. This case also supports my belief that a new head may be transplanted from an aseptic cadaver.

The trochanter may be used in the same manner in the reproduction of a head for the humerus, in cases in which ankylosis exists, or in which the head has been destroyed by disease or injury.

The earlier these operations are performed, the better the results should be, as but little shortening will have taken place before the operative procedure is instituted. This favors a speedy full restoration of motion and function.

### FRACTURED PATELLA

Case 6.—*Patient.*—J. D., a man aged 48, was admitted to Mercy Hospital, Dec. 25, 1910. His mother had had carcinoma of nose. Patient had had scarlet fever at 18, typhoid at 29, and frequent attacks of acute articular rheumatism, last attack being at age of 40.

*Present Trouble.*—April 16, 1910, patient received an injury on his left knee, being struck by a door. The knee showed all evidence of a contusion and he could not walk away from the scene of the accident, but had to be carried, on account of the weakness of the knee and inability to control flexion and extension. On examination, a transverse fracture of the patella with a median fragment was palpable. As soon as the swelling disappeared from the knee, a posterior splint was applied and the fragments drawn into apposition by means of adhesive. For the following eight months the knee was kept perfectly at rest by means of posterior splints for the first eight weeks, after which a leather case was applied and the patient allowed to go around on crutches. On December 5 the leather case was taken off. There was a very little amount of flexion of the knee. December 9, 1910, while walking, he felt something tear in his knee and he gradually sank to the sidewalk. After this he could flex the knee, but with considerable pain. Examination showed the patella to be refractured in the old place. Since then the knee had been kept perfectly at rest.

*Examination.*—This showed a transverse fracture of the left patella with a large upper fragment, a smaller lower fragment, and a small median fragment. The leg could not be flexed. There was no effusion in the joint.

*Treatment.*—Dec. 27, 1910, the knee-joint was injected with 20 c.c. of a 2 per cent. dilution of liquor formaldehydi in glycerin (it had been mixed more than twenty-four hours). It was then placed at rest in extended position, a 15-pound Buck's extension being applied. This was kept up for seven days.

*Operation.*—Jan. 3, 1911, Esmarch bandage applied. An incision 8 inches long was made, beginning at the lower end of the patella and extending up over its mid-line and over the mid-line of the quadriceps tendon. It extended down to the bone and to the fibrous surface of the quadriceps tendon. The fibrous tissue and cartilaginous surface of the fractured edge of the patella were all removed, and the edges of the fibrous capsule elevated clear across the transverse surface of the patella and for three-fourths inch to either side of the fractured angles. The ends of the bone could now be drawn into apposition with the assistance of heavy catspaw retractors. A strip of quadriceps tendon, three-fourths inch wide and 5½ inches long, was then elevated from the middle of the quadriceps tendon with its patellar attachment retained. The aponeurosis of the patella was sutured all across and on both sides of the patella, with phosphor-bronze wire suture, so the bone came into good apposition. This flap of tendon was reflected downward, its end split up for 1½ inches, and both fragments drawn through a split in the tendon patella, and then one-half twisted around to the right and the other half to the left of the divided portions of the patellar ligament, and both ends united across the front of the patellar ligament below the split, locking firmly in it. This tendon flap was the same as I used to supplant the patella when I removed it for tuberculosis in 1904, and frequently since. It gives an ideal support to the patella after fracture, and it is so easily applied. The slit in the quadriceps tendon was closed with catgut suture.

This is a very effective means of supporting the patella, particularly in old cases.

Primary healing and good recovery resulted.

### BOWING OF FEMUR

Case 7.—*Patient.*—D. S., a boy, aged 16, was admitted April 20, 1910. Patient's father died at 58 of paralytic stroke; family history was otherwise negative. Patient had chickenpox at 8; no other acute diseases.

*Present Trouble.*—When 3 years old, while trying to steal a ride on a wagon, the patient stuck his left foot through the spokes of the wheel and was thrown to the ground. The wagon passed over his left knee. He was unable to rise and was immediately taken to a hospital, where it was said that his patella was fractured. The leg was flexed on the thigh and could not be straightened out. The patella was removed and splint applied, with extension. The patient remained in the hospital for three or four months. On leaving he could not put his foot on the ground, and could walk only with crutches. The leg was straight, shorter than the right leg, but not painful. He finally discarded the crutches and then his leg began to bend, or bow, outward at the knee. Three years later another operation was performed and plaster mold applied for two months, and when it was removed the patient could walk without the crutches. About three years afterward his leg again began to bow outward at the knee, and at the end of the fourth year he was again removed to the hospital and operated on. The plaster mold was left on for three or four weeks. He then went home with his leg straight and he could walk without crutches. The leg was stiff, but not painful. Gradually it again bowed outward at the knee, and in four years the patient returned to the hospital for a third operation. The plaster mold was left on for five weeks. When it was removed he could walk, but the leg was stiff. It remained straight about three years. About eighteen months ago he was struck on the knee by a piece of coal weighing 20 or 30 pounds, falling from a height of about 4 feet. The patient walked home. The next day he had an aching pain in his thigh and hip which bothered him for about a month. When he began to walk again he noticed that the leg was gradually bowing once more. He had no chills, fever or sweats.

*Examination.*—There was an outward bowing of the knee, with an abduction of the leg and some rotation inward of the toes. The knee was in a state of complete bony ankylosis. This patient was under my care during his original treatment at the Cook County Hospital. There was then a compound fracture of the femur with a destruction of the inner half of the lower epiphyseal line, taking off a part of the internal condyle and a part of the shaft. The bowing which occurred subsequently is a beautiful illustration of the effect of the removal of a part of the epiphyseal line so early in life. The femur grew in length in its outer half, where the external condyloid epiphyseal line was intact, but did not grow at the inner condyle. This caused a recurrent abduction of the leg and bowing out at the knee. The internal malleolus was 7 inches out of plumb when he appeared for operation. Considering the patient's age it may be assumed that there will be little if any further growth in length of this femur.

*Treatment.*—I made a complete transverse division of the femur through a longitudinal incision just above the internal condyle, using a thin flat Buck chisel. The bone was divided and fractured. It was hyperadducted, so that there was a gap in the bone three-fourths inch wide at the inner extremity, which was the seat of the greatest bowing. A crease was chiseled in the bone upward and downward for the insertion of the magnesium plate, which measured 1¼ inches in width and three-sixteenths inch in thickness. This plate was driven into the crease, so that it spanned clear across the line of fracture. It was driven down to within one-sixteenth inch of the level of the bone. This firmly fixed the fractured ends, preventing lateral or anteroposterior displacement. The deep tissues were approximated with catgut, and the skin with horsehair. Primary healing occurred and primary bony union.

*Result.*—The last skiagram made in this case shows that the magnesium plate was entirely absorbed except that portion which was extra-osseous. Here some of the plate is still visible. Perfect bony union has taken place.

E. The restoration of bone removed for non-malignant neoplasms, such as osteofibrosis cystica, hemorrhagic cysts, myeloma, etc., has also been accomplished successfully. The bone should be removed for a sufficient extent, with or without its periosteum, depending on one's ability to make a diagnosis from the gross appearance as to the probability of malignancy. If the periosteum can be preserved, regeneration of bone will always take place, but the conformation of the limb and the speed of reproduction and restoration of usefulness of the extremity are greatly facilitated by the implantation of a fragment of bone from the crest of the tibia. Where the periosteum is removed, it is essential that the implant contact with the living bone at least at one end, so that osteogenetic living elements can pass over into the transplant.

The best plan is to implant the fragment into the medulla and to prevent its penetration to a deeper degree than that desired by blocking it with a nail placed transversely, as has been mentioned previously. If the articular end of the bone has been removed, one end of the transplant should be inserted into the capsule and relieved from pressure by an extension until such time as a soft callus or a mass of fibrous tissue has formed about the implant to fix it. The muscles should then be sutured around the implant in their normal anatomic position. In one case (Fig. 28) 7½ inches of the shaft of the humerus with the epiphyseal line and articular end were removed.

By studying the radiograph (Fig. 29) one can observe the stages of reproduction very well. At the end of five weeks, on palpation, the humerus appeared to be as large as a normal humerus, although the *x*-ray showed small calcareous deposits only here and there. The development of compact bone proceeded along definite lines — from extensions of the periosteum, from the medulla, through the implant, up to the capsular attachment and into the joint, as shown in the last *x*-ray picture taken nine months and some days after the operation.

Here also can be observed the evolution of the tuberosities at the points of muscular fixation. Again, it will be noted in Figure 29 how the transplanted periosteum remained as a white line for seven months after the implantation, and that it was an apparent detriment to the production of bone. It was finally involuted by bone formed from the new periosteum around the new-formed callus.

This shows how completely the humerus can be regenerated and how perfectly function of the extremity can be restored in cases in which formerly amputations were made. This patient does not know from anything, except her inability to lift her arm up close by the side of her head, in an extended position, that any operative procedure has been performed on her. This case shows how completely a new bone may be produced in a transplant, and how it enlarges to meet the anatomic and functional requirements.

In the case of my associate, Dr. Golden (Figs. 32-34), it will be seen that ossification commenced from the upper end and that there was a small zone of late infection at the lower end around the nail. Some absorption has taken place at the site of the infection so that osteogenesis in this case must come entirely from the proximal attachment, because of the gap present at the distal attachment. It has extended down now within half an inch of the lower fragment as shown by the dark color in the *x*-ray made seven months after the operation. In this case Dr. Golden took a fragment, nine and a half inches long, from the opposite tibia and implanted. This case also shows that an infection may take place at one end and not spread throughout the entire bone.

The infection, however, did not show itself until about three weeks after the operation, and then only a very circumscribed accumulation of seropurulent material made its appearance at the point where a nail was placed.

In the myeloid tumors excision of the diseased area well above and below the neoplasm should be the practice, and a bone fragment should be inserted to fill the gap. The same line of treatment is applicable in the case of hematogenous cysts, as these are occasionally infected and it is not safe to resort to curettement and implantation of a fragment of bone.

In septic osteomyelitic cavities fragments of bone should not be used for filling material unless the cavity is rendered absolutely sterile, and of this one can never be certain, except as the subsequent course of the disease may indicate. The aseptic blood-clot of Schede will give as good results as the implantation, if asepsis is attained. The bony canopy of the osteomyelitic abscess should be retained, attached to the periosteum and soft tissues after the plan of Tillmonns and depressed into the cavity at the completion of the operation.

F. For malignant disease of bone, such as giant-cell sarcoma, large spindle-cell sarcoma, encapsulated chondrosarcoma and circumscribed intra-osseous sarcomata, the bone and periosteum can and should be removed for a considerable extent above and below the malignant focus. A fragment is then implanted to fill the gap. We know that a giant-celled sarcoma can be removed by a local operation and the patient survive without local or constitutional recurrence for years. We also know that the same thing is true, in a smaller percentage of cases, however, in the case of chondrosarcoma. In a still smaller percentage of cases the removal of a spindle-cell sarcoma by a local operation without an amputation can be accomplished and the patient live for years without recurrence.

This has led me to hope that the early removal of these neoplasms while they are still circumscribed and encapsulated should give good results. The bone can be removed to a considerable extent with its periosteum, with its musculotendinous attachments, and still an excellent functionating extremity be preserved. With this operative outlook early operation will be conceded by the patient, whereas early operation is practically never conceded when amputation is suggested.

In the case of Mr. N., I removed 5½ inches of the upper extremity of the femur for a chondrosarcoma of the trochanter, which originated from a trauma received two years previously. The *x*-ray picture showed that the sarcoma involved the trochanter and a portion of the neck and of the shaft for a considerable length downward. The trochanter, neck head and shaft with its immediate muscular attachments, were all removed, as is shown in the skiagrams (Figs. 35-37).

A fragment of bone, 6 inches in length, was taken from the opposite tibia, and inserted into the medulla of the femur at the distal end and the proximal end was inserted into the acetabulum and surrounded by the capsule. A nail was driven through a hole in the fragment to which the muscular attachments could be fixed, thus preventing motion of the fragment and at the same time securing the future function of the leg. Later, when pressure was put on, the bone split at this point. The fragments were immobilized by a circular wire and catgut ligature. The muscle ends were drawn around the shaft in various positions approximating as nearly as possible their normal location. The wound healed *per primam*. Extension was applied to maintain the full length of the thigh during the process of regeneration.

The skiagram (Fig. 36) shows the evolution of bone from the medulla and from the periosteum of the living bone, making a bony involucrum around the soft callus.

In eight weeks the upper end of the femur, judging by external manipulation, appeared to be of full size. The skiagram, however, showed only here and there bony deposits. Regeneration is taking place, as can be seen in the most recent skiagrams taken three months after the operation, between the split fragments and well up into the acetabulum. The patient is going about on crutches and suffers but little pain. He is not permitted yet (3 months after operation) to put any weight on his leg.

The extensions were removed at the end of three months. It appeared to me after operating in this case that it would have been a good plan to use bones from the embryo to surround the compact bony tissue that was taken from the patient's tibia, because this might stimulate regeneration or act of itself in the reproduction of bone.

(*To be continued*)

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# VOLUNTARY SUBMISSION TO TREATMENT AND CUSTODY IN HOSPITALS FOR THE INSANE *

FREDERICK A. FENNING, LL.M.
Of the Bar of the District of Columbia
WASHINGTON, D. C.

The lunacy laws of some states — and particularly the District of Columbia — are strikingly deficient. While the makers of these laws manifestly knew little of the needs and condition of the unfortunates for whom they sought to provide, the fault must not be charged in whole to them. These legislators acted in accord with the then existing views of the people, and, we may assume, in response to the dictates of their own best judgment. But the knowledge of the people at large on this subject, and that of the legislators in particular, was vague, and the whole face of the problem was charged and surcharged with doubt and suspicion. In place of actual knowledge, there were the long existing traditions that the insane were "mad," that they could be cared for only in strong rooms under constant restraint, and that their very presence was to be shunned as full of danger. Moreover the prognosis of the layman was always very positively unfavorable, and the possibility of a complete recovery never seriously considered. Public knowledge, however, and the sentiment which is its outgrowth, have increased in late years in wonderful degree.

The open methods more recently employed in the management of hospitals for the insane, the publicity concerning such institutions incident to the inspections and reports of lunacy commissions, the activities of boards of charities charged with the care and maintenance of insane persons, and the more intimate professional association of medical men in private practice with those conducting hospitals for the insane, are some of the factors which have brought about an enlightenment of the public. And so it happens that the people are coming into possession of actual facts and laying hold on new beliefs concerning the temporary detention, the early care, the adjudication and court hearings, and the custody and treatment of the insane. The ignorance of the past is giving way to intelligent understanding and the wild traditions long held by men are being superseded by an appreciation of the condition and requirements of the man who is mentally sick. The medical profession has led in this progressive march. In no field of medical science has there been so much advancement in the past decade, in proportion to the development prior thereto, as in that of psychiatry. More and more has the profession, by its activity and its achievements, emphasized the true hospital conception of the problems connected with the insane.

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In some jurisdictions this broader and more intimate familiarity with the subject has borne fruit as evidenced by radical changes in the lunacy laws. In other jurisdictions—including the District of Columbia—there must be more agitation, more well-founded criticism to bring about the needed amendments and corrections. These changes must come; their coming will be hastened in the proportion of the degree of earnestness of the public's demand. It is in the hope of assisting in this general demand that I call attention to one of the most beneficent provisions of law ever written on any statute books. I refer to the plan of voluntary or self-commitment of the insane. Some states have for several years had such a provision of law; others have but recently adopted it.

One of the earliest self-commitment statutes was passed by the legislature of Maryland. It is recorded as Section 38 of Chapter 487 of the Public General Laws of 1886, and provides that:

> Any person believing himself to be mentally diseased and approaching a state of insanity and being advised by his attending physician that such is his condition, may voluntarily commit himself to any lawfully authorized institution for the insane to be detained for the time specified by written agreement, signed by such person in the presence of a friend or relative or any disinterested person and by his attending physician, for a period not exceeding three months; said contract may be extended by renewal; but if, at the expiration of the period of contract, such person should be insane and unfit to be discharged in the opinion of the medical superintendent, the lunacy commission shall be duly notified in writing of the facts and said commission shall investigate the same, and if, in their opinion, such person is unfit to be discharged, then and in such case said commission shall be authorized to renew the contract by their own authority for one month at a time.

Ever since the enactment of this legislation, self-commitment in Maryland has not only been lawful, but it has been steadily practiced.

In Rhode Island voluntary commitment to the Butler Hospital has been permitted since the passage of the act of 1893, Section 41, Chapter 1199 of which provides that:

> The superintendent or keeper of any hospital except the State Asylum for the Insane as aforesaid may receive and retain therein as boarder and patient any person who is desirous of submitting himself to treatment and makes written application therefor, but whose mental condition is not such as to render it legal to grant a certificate of insanity in his case; no such boarder shall be detained for more than three days after having given notice in writing of his intention or desire to leave such hospital.

In 1896, this section was amended and became Section 41 of Chapter 82, and in 1902 this law was amended by Chapter 990 of the Public Laws, Section 2, by omitting the words referring to the State Asylum for the Insane.

As will later appear, many patients have been treated under the provisions of this act.

Very similar to the Rhode Island law is that of Illinois, designated as Section 37 of Chapter 85 of the Revised Statutes of Illinois (1909):

> Any person who may be in the early stages of insanity who may desire the benefit of treatment in a state or licensed private hospital for the insane as a voluntary patient, may be admitted to such hospital on his own written application, accompanied by a certificate from the county court of the county in which such applicant resides, stating that such person is a private or county patient, as the case may be, and such person shall, if admitted to a state or licensed private hospital for the insane, have the same standing as other private or county patients; provided, that all voluntary patients shall have the right to leave the hospital at any time on giving three days notice to the superintendent.

By an act passed by the legislature of New Jersey and approved April 9, 1910 (Chapter 184), provision is made for admission to any state hospital for the insane, as a private pay patient, of any resident of the state who, to use the language of the act, "believes himself about to become insane, or in danger of losing his reason, and is desirous of committing himself to treatment for the betterment of his mental condition, or the prevention of any further advance toward insanity, and whose mental condition is such as to render him competent to make such application."

Continuing, this act provides that a bond for cost of maintenance must be given within ten days after admission, that there may be a discharge on certificate of the medical director of the hospital showing either that the patient is cured, or that further treatment is unnecessary or undesirable, and the right is reserved to the patient to withdraw from the institution on three days' notice to the medical director thereof.

Massachusetts has an admirable self-commitment law now known as Section 45 of Chapter 504 of the acts of 1909, embodying the principles of an act of 1905. By the provisions of this section the superintendent of any institution, public or private, to which insane persons may lawfully be committed, may receive a patient on the written application of such person, the detention to determine on three days' notice in writing. There is a proper qualification to the effect that the mental condition of the applicant must be "such as to render him competent to make the application." This latter qualification is either embodied in the law or adopted in the practice in all of the states having voluntary commitment statutes. The reason for it is clear.

Of course, the question arises as to whether a person in need of treatment for mental disorder can enter into a binding agreement. The decision of this question must rest on the condition of the patient's mind on the subject of his liberty and the necessary restraint which he is about to undergo. If the opinion of the hospital physicians (and they are usually at such times acting in consultation and cooperation with the applicant's family physician) is that the patient is fully aware of the effect of the agreement, his signature thereto is binding. This same principle has been often invoked in the settlement of legal questions concerning the capacity of lunatics, and the books of reported cases contain many decisions upholding the competency of even adjudged lunatics as witnesses, as contractors and as testators. This is, indeed, the "partial insanity" of the law, repudiated as to technical interpretation by some medical authorities, but recognized by the highest legal tribunal of the land. And while the term "partial insanity" may be objected to by some medical men, all agree, physicians, lawyers and laymen, that the man who is insane may be competent to act intelligently and advisedly in many matters. An ancient case on this point was Dew *vs.* Clark, reported in 3 Add. E. R., 79, in which the Prerogative Court of Canterbury holding to the doctrine of partial insanity, maintained that a party could be "both sane and insane at *different* times on the *same* subject, and both sane and insane at the *same* time on *different* subjects." Of course, it will be readily understood that patients who are deemed by hospital authorities as incompetent to sign an application for admission with a full and free understanding of the nature of the agreement, are denied, and quite properly so, the benefits of self-commitment. It is important to note in connection with this practice of voluntary commitment that there is apparently an entire absence of record of attempts to get out of hospitals by habeas corpus proceedings. This is striking evidence of the integrity of the institutions operating under the provisions of self-commitment statutes. Patients are kept because they continue to realize the desirability of treatment, or because, the mental disease having progressed, they have become indifferent as to freedom. In all other cases of voluntary admissions the patients are either discharged on their own written demand, or more formal proceedings having been instituted they are held by virtue of additional authority. Self-committed patients are not unnecessarily detained in hospitals any more than any other class of patients. Some day we may hope to have the public at large accept the belief that hospitals for the insane harbor only the insane and that the sane man is released from such hospitals as promptly and with the same facility as the man whose fever has subsided is discharged from a typhoid ward.

An alienist whose reputation extends far and wide — Dr. John B. Chapin of Philadelphia — in a record of voluntary admissions to three institutions a few years ago, reported an average of recoveries as 25 per cent., and stated that he had been unable to learn of a single habeas corpus application in the cases thus reviewed.

Dr. G. Alder Blumer, superintendent of Butler Hospital, in his report for 1908, referring to self-commitment, said:

> Over 46 per cent. of our patients have been admitted under this latter form, whose value and importance as a means of taking in time the stitch that saves nine and of getting at the work of restitution and repair before the disease has passed the limits of a salvable vitality cannot be overestimated.
>
> The hospital conception has superseded that of custody and it has come about that immediate treatment is generally regarded as of higher obligation than mere documentary forms of law.

Thus has been stated, by the eminent authority whom I have just quoted, the high purpose of self-commitment laws. There should be, and in these states there is, a method which permits persons with border-land and early stage cases to seek and receive treatment unattended by publicity, unaccompanied by painful and harmful distractions.

The patient who is so fortunate as to live in a state having a voluntary commitment law is enabled of his own motion, without the knowledge of anyone outside his family, and, particularly, without publicity of any kind whatsoever, to place himself under competent medical attention, direction and control. If his ailment is one which responds readily to scientific treatment, he returns in a short time to home and business without attracting any more attention than he would on returning from an ordinary vacation. Such a patient knows, and his family knows, that the state hospital or the private institution, subject as both are to the zealous visitations of lunacy commissions, will not keep him unless his condition so requires. This realization is a most important factor in assisting in the upbuilding of the disturbed mind. Far different, indeed, is the reflection of the man who, in order to be treated, has been obliged to submit to an open court proceeding and has been formally and publicly adjudged to be mentally unsound. The former is full of hope and looks forward to early resuming his place in business and society, the latter broods over his change of legal status, dreads to meet his friends and associates again, and when finally he emerges from the hospital finds a permanent sentiment against association with one who had been at any time pronounced insane.

The percentage of recoveries in other states compares most favorably with that given by Dr. Chapin, to which I have just referred. This is the natural result of the adoption of the plan of voluntary commitment. We have long since passed the time when custodial care of the insane was practically the sum-total of hospital treatment. The laws permitting voluntary commitment have done a great deal toward assisting medical men in giving to those afflicted with mental disorder the advantages of our latest methods in the hope of not only alleviating suffering, but with the larger and broader purpose of restoring the disturbed mind to its normal condition.

There remains for consideration the other side of the subject, the reflection, in the light of the foregoing, on the condition of the mentally sick who have the ill fortune to live in those communities which know not such a law. No more striking comparison can be presented than the situation which exists in the District of Columbia. The man with mental disorder here goes not to a hospital, though the government hospital of international reputation is at his very door. Instead he goes to police headquarters! And there he is told that he must have two residents of the District of Columbia make affidavit that he is insane, and two physicians so certify, and then he will be sent to a hospital for not exceeding thirty days, during which time the city fathers will hale him into court to have a jury of twelve men determine his mental condition. It might be suggested in passing that a jury of one or two good doctors could come closer to making a diagnosis than a dozen men of various occupations, not one of whom is a physician. The responsibility of those who have made this and somewhat similar laws in other jurisdictions, and those who are obliged to enforce such laws, is one which no thoughtful man can consider lightly. This thirty-day interval, during which time the patient must be brought into open court, covers a considerable part of the period when quiet and careful ministrations may strengthen the disordered mind. Is it conducive to quietude and repose to be served by a marshal, or a sheriff, with a summons to come to court and hear one's mental condition publicly discussed, and then to attend in court, with possibly a dozen other persons all mentally ill, and listen to the testimony concerning each? The practical and actual working of such a law is both a farce and a cruelty. On this subject a former president of the New York State Commission in Lunacy, Dr. Albert Warren Ferris, recently said: "It is an important fact that medical care of the insane should begin before the time when sufficient mental change has occurred to make a commitment possible."

Time is so essential that the delay of technical court proceedings is as dangerous as the effect of such hearings.

There is, to my knowledge, no sound argument against voluntary commitment, and in personal investigation conducted in the several states, to which I have referred herein, I have found no complaint against such proceedings. The value of such a provision of law I have attempted to show. If the plan has helped the unfortunates in some jurisdictions, and never been the subject of just attack, it is due the unfortunates of other jurisdictions that they be given the opportunities and privileges that it offers. Apart and aside from the professional viewpoint of the physician, not only do the insane command our sympathy, but as our fellowmen they present to us an obligation which we must and should assume. As members of a great race, it is incumbent on the strong to assist the weak, and this must be done not only because of the personal sympathy which applies toward some, but because the conservation of the body social makes necessary such assistance.

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# CONTRIBUTION TO THE DIAGNOSIS OF MALTA FEVER *

JOHN R. MOHLER, V.M.D., and ADOLPH EICHHORN, D.V.S.
WASHINGTON, D. C.

On the island of Malta there has been endemic for an indefinite period a febrile disease of the inhabitants, termed "Malta fever," and also known as "Rock," "Mediterranean" or "undulant fever." It is a specific infectious disease caused by the *Micrococcus melitensis,* which was discovered by Bruce in 1887. This infection was so exceedingly prevalent among the British soldiers and sailors stationed on the island that, in 1904, a commission was appointed by the British government, under the supervision of an advisory committee of the British Royal Society, to investigate the possible sources of infection and advise methods for its control. The commission has since investigated the disease in all of its phases in a most exhaustive manner and, as early as in 1905, was led to consider that the milk from the native goats was an important, if not the main, factor in the dissemination of Malta fever among human beings. It was found not only that the goats were susceptible to artificial infection, but also that about 50 per cent. of them acquired the disease naturally and that the organisms were eliminated in their milk and urine. It was then decided to investigate the milk of such infected, though apparently healthy goats, with the result that in Malta 10 per cent. of the goats were found to be eliminating the specific coccus in the milk, and that this milk when fed to monkeys even for a day was able to produce typical attacks of Malta fever which ran a course parallel to that of the disease in man. The only logical conclusion which could be formulated from this work was that the Maltese goats were carriers of the virus of Malta fever and were one of the principal means of transmitting the disease to human beings through the ingestion of their milk. All the available evidence points to contaminated food as the vehicle by which these goats become infected with the virus of Malta fever. Furthermore, it has been shown that the urine of infected goats and of ambulatory cases in man at times contains the *Micrococcus melitensis,* so that goats feeding on material that has come in contact with such urine (which is not at all infrequent by the usual method of handling these animals) are readily infected. Thus the frequency and the method of infection in goats are quite readily explained.

By the recent investigations of E. R. Gentry and T. L. Ferenbaugh,[1] the existence of Malta fever in Texas has been definitely established. Its occurrence in human beings has been demonstrated bacteriologically among certain families in the goat-raising sections of Texas, and since goats have been incriminated as carriers of the infection to man, the serums of a number of these animals in the infected localities were subjected to the agglutination test with positive results. The isolation of the *Micrococcus melitensis* from these goats has thus far not been successful, and the agglutination test was therefore relied on for the diagnosis of Malta fever in these animals.

The existence of this disease in Texas is of great moment, inasmuch as the general opinion has prevailed that the United States is free of Malta fever, and that the only occasions when the disease has appeared in this country were isolated instances, occurring through importation. In 1905, the Department of Agriculture imported a number of Maltese goats from the island of Malta for the purpose of obtaining foundation stock for a milch goat industry in this country. Certain facts in the history of their voyage to this country, which came to our attention about this time, suggested that some of the imported goats were infected with Malta fever virus. The presence of this infection among the Maltese goats was subsequently demonstrated by Mohler and Hart,[2] both bacteriologically and by a series of agglutination tests conducted in this laboratory. As a result of these tests it was deemed advisable to destroy not only the imported goats, which during these investigations were kept in quarantine, but also their offspring, as it was found that even the kids gave positive reactions to the agglutination test in many instances.

The numerous investigations which have been carried out relative to the methods of diagnosis of Malta fever appear to be quite uniform as to the reliability of the agglutination test for the diagnosis of this malady. Nevertheless, the results of some of the investigators prove that the agglutination value is by no means constant in the suspected patients, and it has further been established that human beings, as well as goats, although apparently recovered from the disease, give an agglutination value of the serum indicative of Malta fever even years after the infection. It has also been found that the agglutination value in the presence of this affection is by no means constant, and occasionally it may even fail to indicate the presence of the infection.

Furthermore, there appears to be a diverse opinion among the investigators of Malta fever relative to the height of the agglutination value which should be considered as indicative of an infection. Thus, by some writers, an agglutination of 1 to 10 is considered as sufficient proof of the presence of the disease; others claim 1 to 20, while still others require 1 to 30 as the lowest value for a positive diagnosis. During the quarantine of the goats imported from Malta, referred to above, the Bureau of Animal Industry conducted a number of experiments in order to determine the agglutination value of normal goat-serum for the virus of Malta fever. It was found repeatedly that such serums from healthy goats, born and raised at the experiment station, gave an agglutination value of 1 to 40. Hence, in the tests of the quarantined Maltese goats, an agglutination value of 1 to 70 within a time limit of one and one-half hours was required for a positive diagnosis. Kolle and Hetsch[3] state that the agglutination test is indicative of Malta fever only when its value represents a titer of at least 1 to 100.

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* From the Pathological Division, U. S. Bureau of Animal Industry.

[1] Gentry, E. R., and Ferenbaugh, T. L.: The Journal A. M. A., Aug. 26, 1911, p. 730; Sept. 9, 1911, p. 889; Sept. 23, 1911, p. 1045; Sept. 30, 1911, p. 1127.

[2] Mohler and Hart: Twenty-Fifth Ann. Rep., Bur. Anim. Ind., 1908, p. 279.

In consideration of this difference of opinion regarding the agglutination value of serums from suspected and infected patients, it was deemed advisable to carry out preliminary experiments to determine whether the complement fixation test could be utilized for the diagnosis of Malta fever. Serums of a large number of goats from the experimental farm at Beltsville, Maryland, were obtained and tested both with the agglutination and complement fixation tests. In the meantime, two goats were subcutaneously injected with 0.5 c.c. of a washed agar culture of the *Micrococcus melitensis*.

The agglutination test was applied both by the microscopic and macroscopic methods, but the best results were obtained from the macroscopic method carried out by a procedure similar to that practiced for the diagnosis of glanders. For this purpose the test fluid is prepared from a four-day-old glycerin agar culture of the *Micrococcus melitensis* by heating the culture at 60 C. for one and one-half hours, which is then washed with phenolized salt solution, filtered and diluted to a desired density. This is established by comparative tests with serums of known agglutination values determined by microscopic agglutination. Once the titer of the agglutination fluid has been established by these comparative tests, the proper density of a newly prepared fluid is readily obtained by pouring a sample of each, respectively, into two beakers of equal size up to the height of about 2 cm. The density of the old and new fluids may then be compared by placing the beakers on print, preferably engraved print, and observing the legibility of the print through the fluid. The dilution of the new fluid is continued until the density becomes similar to that of the old fluid. The numerous comparative tests which have been undertaken with the microscopic and macroscopic agglutination tests show that a reliable uniformity has always been obtained. The technic of the macroscopic agglutination test is carried out as follows:

The suspected serum is diluted with phenolized salt solution in the proportion of 1 to 4 (0.5 c.c. serum to 1.5 c.c. phenolized salt solution). This constitutes the basic dilution, and from this all the dilutions of serums are made in test-tubes in such a way that with the added 2 c.c. of test-fluid (bacilli emulsion) the desired dilutions are obtained. Thus, 2 c.c. of test-fluid added to 0.2 c.c. of the basic dilution would give a serum value of 1 to 40. Any number of different dilutions can be prepared in this manner. The rack containing the test-tubes is then placed in the incubator for one-half hour, after which the tubes are removed and centrifugalized for ten minutes at 1,600 revolutions per minute. The test-tubes are then returned to the rack without further incubation and the results read after one to two hours. The sharply circumscribed lentil-shaped sediment in the center of the bottom of the test-tube with cloudiness of the upper portion of the fluid indicates the failure to agglutinate, while an irregular, veil-like clumping of the sediment over the bottom of the tube with a clearing of the upper part of the fluid is indicative of agglutination. The racks are so constructed that they have a conical opening on the lower shelf into which the bottom of the test-tubes fit, and through these openings the reaction is plainly visible, especially when placed on a dark background.[4]

This method of agglutination would come especially into consideration if large numbers of serums were to be tested, and particularly if it were desired to examine the blood of a great number of goats in certain localities for the control or possible eradication of the disease.

The serums of healthy goats from the experimental farm and that of twenty suspected goats from Texas, as well as the serums from the artificially infected animals, were carefully tested by the microscopic agglutination and also by the method just described. The results showed practically no variation in these two methods, and in consideration of the simplicity of the macroscopic method as described, it would appear that it should be given the preference over the microscopic method, especially in cases in which a large number of individuals are to be tested.

In the meantime, experiments have been conducted with the complement fixation test for the diagnosis of Malta fever with serums from normal as well as from infected animals. The hemolytic system consisted of sensitized rabbit-serum, serum from a guinea-pig, and a 5 per cent. suspension of washed sheep-corpuscles. An antigen was prepared from four-day-old glycerin agar cultures, and after being heated for two hours at 60 C., it was agitated for four days in a shaking-machine.

The extract was then placed in centrifuge tubes and centrifugalized for two hours at a speed of about 2,500 revolutions per minute. The clear fluid was drawn off and preserved with 10 per cent. of a 5 per cent. phenol (carbolic acid) solution. A titration of the antigen was then undertaken in order to establish the smallest quantity which would no longer prevent hemolysis. A dilution of 1 to 50 was found to be the proportion of antigen to be used in the tests.

The goat-serum to be tested was inactivated at 56 C. for thirty minutes. The complement was titered in each instance in order to establish the necessary smallest quantity required to produce complete hemolysis. Of the serums to be examined, 0.2 c.c. and 0.1 c.c., respectively, were used, and the customary control-tubes were always included in the test. Thus, in routine testing, four tubes were taken for the test proper, the first pair receiving 0.1 c.c. of serum, and the second pair 0.2 c.c. The second and fourth tubes served as controls for the serum, in order to establish that the serum without the antigen would not produce a fixation of complement.

The serums from the goats at the experimental farm failed to give a fixation in any instance, although, in several cases, it was observed that the hemolysis resulted slowly, and sometimes a very small quantity of blood corpuscles settled to the bottom of the tube, but in all these instances the reaction was the same in all four tubes; namely, in the tubes for the test proper, as well as in the control-tubes. Of the serums examined from the suspected cases sent from Texas, four gave positive complement fixation, and in all these instances the fixation was complete, even in the tube in which only 0.1 c.c. of serum had been used, while sixteen other examinations of serums from the same source gave negative results.

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[3] Kolle and Hetsch: Die experimentelle Bakteriologie und die Infektionskrankheiten mit besonderer Berücksichtigung der Immunitätslehre, 1911

[4] A more detailed description of the technic of this method as applied to glanders, together with drawings showing the above-described appearances of the sediment in both positive and negative reactions, will be found in Circular No. 191 of the Bureau of Animal Industry, to be issued shortly.

The agglutination test of the serums from the cases in which a fixation of the complement was obtained showed a value in one instance of 1 to 50, in two, 1 to 15, and in the fourth it failed to agglutinate even at 1 to 10. The remaining sixteen cases failed to agglutinate in the proportion of 1 to 10.

The serums of the goats which had been artificially infected were drawn every day from the time of infection and examined both by the agglutination and the complement fixation tests. On the fifth day an agglutination of 1 to 40 was obtained, which on the subsequent days was marked at 1 to 500 and reached a height of 1 to 2,000, continuing to give an agglutination value of over 500 for the two months after infection, during which period the animals have been under constant observation. A partial complement fixation was first obtained on the seventh and ninth days, respectively, and from that time on a perfect fixation was obtained in all instances. In these tests even smaller quantities than 0.1 c.c. gave a fixation; thus, in establishing what would be the smallest quantity of serum which would give a complete fixation, it was found that on the twenty-second day after the infection in one goat, 0.04 c.c. of serum gave a complete fixation.

From the results of these investigations it appears that the complement fixation test can be utilized for the diagnosis of Malta fever, and in consideration of the fact that the agglutination test is not always reliable for such purposes, the complement fixation would be of great advantage as an adjunct in the diagnosis of this malady.

Additional samples of serums will be obtained from goats in those localities of Texas where the disease has been known to exist in human beings, and a further opportunity will therefore be presented to determine whether the very favorable results thus far obtained with the complement fixation test will be confirmed.

# AN EPIDEMIC OF SEPTIC SORE THROAT IN BALTIMORE AND ITS RELATION TO A MILK-SUPPLY

## A PRELIMINARY REPORT *

LOUIS P. HAMBURGER, M.D.
Associate in Medicine, Johns Hopkins University
BALTIMORE

During the month of February, 1912, it became evident to a number of practitioners of Baltimore that a throat affection presenting an unusual clinical picture was epidemic in the city. Cases apparently similar had been observed during the early winter months, but the sudden appearance of hundreds within a few weeks could not fail to attract attention.

Though children were chiefly affected, adults were not spared. The malady was characterized by a sudden onset, high and irregular fever, inflammation of the fauces of varying degree, marked enlargement of the cervical glands and a course much longer and much more severe than the usual type of tonsillitis. At first discussed indefinitely as "grip" it was not until the close of the month, when at least three fatalities were reported, that it became apparent that we were dealing with a "new and very terrible disease."[1]

At this point I was impressed by the uniform results of the cultures taken from patients' throats and of the examination of smears from the inflammatory exudates complicating the disorder. Thus, the discharge after paracentesis of the ear-drum in the case of a child 5 years old showed within leukocytes numerous pairs of Gram positive cocci, while a culture from the secretion of the opposite ear discovered the cocci in chains still retaining their diplococcic arrangement. Since then, this streptococcus has been obtained whenever it has been sought, often in pure culture. In this way, it has been recovered not only from the fauces and otitic exudate, but from the suppurating lymph-nodes, from the peritoneum during laparotomy and from the blood of the femoral vein at autopsy.

The organism is being studied in Dr. Charles Simon's laboratory by Dr. Simon and his associate, Dr. G. Howard White, and a full report of their findings will be published in due course of time. At present it may be said that in the direct smears it often appears as an end-to-end diplococcus, intracellular in some specimens. Each pair seems surrounded by a halo, but with the capsule stain of Welch, Burger and His, no envelope can be demonstrated. On agar it grows in dew-like droplets. It coagulates and acidifies milk and in this liquid it develops in long chains with end-to-end arrangement and sometimes in tetrad form, division having taken place in two planes. The organisms are not dissolved by bile salts. Blood-agar plates show a hemolytic zone around individual colonies. In broth the cocci cause uniform turbidity. They do not ferment inulin.

The organism was demonstrated to a number of colleagues Friday evening, March 15, 1912, and the following day the report of Davis and Rosenow appeared,[2] describing a "peculiar streptococcus" obtained in the course of an epidemic of sore throat prevailing this winter in Chicago. It is obviously the same organism and the same infectious disease.

A significant feature of the Baltimore epidemic is the large number of cases of severe type appearing suddenly within a few weeks in the month of February. Indeed, many of the cases appeared within a few days in widely separated portions of the city. Struck by this fact I ventured to assume that one of the more general carriers of epidemic disease, such as milk, might be at fault. Thereupon, inquiry was instituted in twenty-five households in which the type of sore throat under discussion prevailed with the noteworthy result that in every instance it transpired that the milk-supply was derived from the same dairy. These returns were submitted at the meeting of March 15, and, making allowance for statistical error, confirmatory evidence as to the coincidence of disease and dairy was added and appeared so convincing that it was deemed advisable to caution the public to boil all milk. Accordingly, through the medium of the newspapers the advice to boil milk was repeatedly promulgated during the week following March 16. Immediately, too, the dairy in question raised its pasteurization temperature to 160 F. and during the ensuing week changed its method from "flash" system to the "holding" device. In other words, instead of maintaining the milk for three minutes at a temperature of 145 it increased the duration of pasteurization to twenty minutes. It is of interest to note that at present, a week later, the new cases, which are apparently neither so severe nor so numerous, do not follow the milk-supply, but occur in prosodemic fashion; namely, they appear to be transmitted from individual to individual through various channels of communica-

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* From the Medical Clinic of the Johns Hopkins Hospital.

[1] Sedgwick, William T.: Boston Med. and Surg. Jour., Dec. 14, 1911, p. 910.

[2] Davis and Rosenow: The Journal A. M. A., March 16, 1912, p. 773.

tion. Many patients mildly affected are ambulatory, and it can be readily understood how these foci of infection may distribute the disorder in irregular manner and thus obliterate the traces of the milk-route.

There is in process of organization a statistical inquiry into the incidence of the disease as it was distributed in the city in the month of February and the first half of March.

The proprietor of the dairy along the route of which the overwhelming number of primary cases developed is esteemed an able dairyman and gave us every opportunity to investigate the possible trouble and safeguard the public delivery. It was disclosed that on Feb. 26, 1912, Driver 10 was sent to a hospital suffering from abdominal pain, with a tentative diagnosis of appendicitis. The affection was obscure and in its course a sore throat became the prominent feature. A few days later Driver 11 contracted a sore throat and was very ill. The policy of the dairy has been to allow its employees to drink milk while in the establishment, and when these two men were stricken the proprietor was quick to enforce the rule that only individual cups should be used and that any indisposition among employees should be promptly reported. It is unlikely, however, that these men infected the supply because of the great number of cases antedating the onset of their illness. Indeed, the date of their attacks corresponds with the height of the epidemic in the city. The infection must have proceeded from another origin.

The statement was then volunteered that during the rigorous winter weather of the latter part of January it was necessary to make repairs in the room in which the pasteurizer was situated, and for the time it was disabled. Certain it is that the milk was not heated from Jan. 28, 1912, to Feb. 5, 1912. and unpasteurized milk was delivered during that period and perhaps longer. It was thought that during such extreme cold the risk of incubating a pathogenic organism was practically negligible. It is probably fair to assume that the organism was conveyed in raw or inadequately heated milk during the latter part of January and for some time in February.

The source of the presumably infected milk is still to be determined. The dairy derives its supply from many Maryland farms, and its proprietor has begun an investigation to ascertain, if possible, the presence of either human or bovine disease on the premises of its tributaries. He has also called to his aid an expert bacteriologist who is likewise determining the thermal death-point of the streptococcus in question.

For the second time there is herewith recorded in the United States an epidemic of severe throat infection probably connected with a milk-supply. The eastern Massachusetts epidemic of May, 1911, is ably described by C. E. A. Winslow,[3] and was without doubt milk-borne. Professor Winslow calls attention to several similar outbreaks that have occurred in Great Britain, each having been traced to milk. In England the affection is known as "septic sore throat," a term which it is advisable to continue to use for the present.

At another time, the clinical history of the Baltimore outbreak will be written in detail. Since, however, there is reason to believe that this streptococcus infection may be widely distributed through the country, it is justifiable to indicate in abstract the symptomatology of septic sore throat as it occurred in this city.

In contrast with the Massachusetts epidemic in which adults suffered more, children were more frequently attacked and more severely ill in the Baltimore outbreak. The onset was sudden with chill or chilly sensations or with a convulsion in infancy. The little ones who could talk complained of a sore throat. The appearance of the fauces varied. Most frequently there was a dusky red discoloration, a faucitis. In other cases there was a typical follicular tonsillitis or a diphtheroid condition, or much peritonsillar infiltration, which in some adults led to the formation of an abscess, to the development of a "quinsy." In most of the severe examples of the malady the faucial lesion was of small import as compared with the constitutional disturbance.

Within the first week, in children, the cervical lymphatic glands in the vicinity of the angle of the jaw enlarged so as to form visible tumors of considerable size. These cervical buboes gave a characteristic picture to the disorder. When bilaterally prominent the little ones looked like victims of Hodgkin's disease. It is known that because of these swellings the condition was mistaken in several instances for mumps. The adenitis ran a variable course. In the majority, even when the glandular mass was of large proportion it slowly subsided without suppuration, varying in size from day to day, now increasing and again diminishing. Occasionally, suppuration occurred and surgical intervention was indicated. In many children who have recovered the buboes remain visible, a source of anxiety to the parents, but of no discomfort to the children. It was soon apparent to many of us that in the case of children who were markedly ill the size of the cervical bubo was of prognostic value. A large and persistent bubo was regarded as of good omen; for, in the fatal cases the glands were only moderately enlarged and quickly diminished in size.

The spleen and edge of the liver were frequently palpable beneath the costal margin. Vomiting at the onset was common. Abdominal pain without subsequent development of general peritonitis was a disturbing symptom. Prostration was generally marked and the children became pale and thin and gave all the indications of having undergone a severe illness. There was a leukocytosis but the differential count gave no noteworthy information.

The temperature rose quickly, in one case to 106.6 F. The curve has been very irregular. With the onset of suppurative processes the temperature assumed the usual intermittent type.

The course of the illness was marked by great variation. In the same household there were those who were so mildly ill that they did not take to bed, while others exhibited all the signs of a profound septicemia for three or four weeks. Even in an individual case there was great irregularity One day the patient seemed bright and convalescent: on the next, there might be a return of fever, somnolence and increase in the size of the bubo.

The complications so far observed have been otitis media, peritonsillar abscess, suppuration of the cervical lymph-nodes, erysipelas, tenosynovitis, arthritis, "transient edema of the eyelids," nephritis and peritonitis. It is the last-named condition, peritonitis, which was the cause of most of the deaths. Of eleven fatalities of which I have record peritonitis was the terminal event in at least eight. Erysipelas proved fatal in the case of a four months old baby.

How quickly disaster followed inflammation of the peritoneum is illustrated by the following history:

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[3] Winslow, C. E. A.: Boston Med. and Surg. Jour., Dec. 14, 1911, p. 899.

A little boy, 3 years old, whose sister was suffering from the same streptococcus septicemia, and who himself had been well the previous day, complained on March 4, 1912, of a sore throat.

At 10 a. m. his temperature was 104.4 F. The anterior pillars of the fauces were of a dusky red color. The tonsils were not enlarged, and there was no exudate. The cervical glands were slightly enlarged. At 7 p. m. the temperature was 106. During the following day he was delirious and suffered from diarrhea, having passed ten small yellow liquid stools.

A culture taken from the throat disclosed the streptococcus previously described. On the morning of the third day, March 6, he was much improved, bright and crying for cake and permission to leave the bed. The rectal temperature at 10:30 a. m. was 100.4. Yet, at noon he vomited and the temperature rose so that at 4:30 p. m. it registered 106. He had had three liquid stools during the day. Examination of the ears was negative. At 5:30 p. m. he looked very ill. His pale skin presented a purplish mottling. The pulse was of small volume, the abdomen was tender. He begged for water.

It was given repeatedly in small quantity but was vomited each hour. The child retained consciousness throughout the night although the radial pulse was not palpable; the abdomen became distended, vomiting continued, and at half past eight on the morning of the fourth day of his illness he was dead.

A letter written during the Massachusetts epidemic of 1911[4] appears so graphic to those of us who saw many of the cases that I append it as a summary.

"The death of Mrs. X. seems the very culmination of this tragic season. Cambridge is like a city of the plague. Whomever one meets, the talk is all of who is ill, who has had a relapse, who has died. The diagnosis of it is ill. It is no tonsillitis, but a most malignant poison, issuing now in erysipelas, now in abscesses, now in rheumatism or neuritis, sometimes fatal in three days. All of the principal doctors here are now convinced that it comes through—milk."

1207 Eutaw Place.

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# EPIDEMIC OF SORE THROAT DUE TO MILK

## A PRELIMINARY NOTE

J. L. MILLER, M.D.
AND
J. A. CAPPS, M.D.
CHICAGO

For several weeks we have been investigating the possibility of the recent epidemic[1] of streptococcus sore throat in Chicago originating in the milk-supply. In our own personal observations we have found that the great majority of the victims drank milk from one dairy. This fact, taken in connection with the sudden appearance of a great number of cases over a large portion of the city, has convinced us that the infection was probably spread by means of milk.

The investigation is being continued in cooperation with the Department of Health and will be reported later in full.

This preliminary statement is made in order to emphasize the importance of a thorough inquiry into the milk-supply in the many communities where a similar epidemic exists.

122 South Michigan Avenue—32 North State Street.

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# CERVICAL RIB

EVAN S. EVANS, M.D.
GRINNELL, IOWA.

In 1907, Drs. W. W. Keen and C. K. Russell reported series of cases of cervical rib, and reviewed the literature to that date. The condition occurs apparently in the proportion of three females to one male. This may be on account of the fact that deformities of the neck are more apt to be noticed in women than in men. The age at onset of symptoms is usually between 20 and 30, and is frequently determined by some occupation which necessitates the use of the arm. It is occasionally marked by the occurrence of an injury.

Anatomically, these ribs are analogous to the supernumerary floating lumbar ribs, and are often no more than hypertrophies of the transverse processes of the cervical vertebræ. A vestige is always present in the embryo. They are bilateral in 80 per cent. of the cases. They may extend anteriorly to join the sternum or end at a variable distance from it. In the latter case, they may join the first rib near the scalene tubercle, or merely project out into the neck, being connected with the first rib by a strong tendinous band. Occasionally the rib is represented only by an elongation of the transverse process in the form of an exostosis. Rarely, the first thoracic pair is incomplete and assumes the anatomic characteristics of a cervical rib, except in the matter of location and relations.

The cervical rib comes off the seventh cervical vertebra and, if it joins the sternum or the first rib, the scalenus anticus muscle will be attached to it. Indeed this often happens when the rib is incomplete and connected to the first rib by a tendinous band. In these cases the subclavian artery arches up over the rib behind the scalenus anticus muscle and passes down again into the neck, making an acute angle over the rib. The vein will be found lying lower down, separated from the artery as usual, by the muscle. This explains the absence of edema due to interference with the vein. The nerve-trunks of the brachial plexus pass over the rib at a higher level than the artery. The nerve-trunks are angulated — especially those of the eighth cervical and first dorsal roots—and occasionally stretched sufficiently to produce disturbances in innervation of varying degree in the muscles supplied by them. When the nerve is incomplete and short, it may grow forward into the structures of the neck and produce the same symptoms by irritation. Or it may, by lying close in against the carotid sheath, produce disturbances of the vagus and recurrent laryngeal nerve-fibers with symptoms referable to their irritation. The rib, when sufficiently developed to supply insertion to the scalenus anticus, is usually supplied with intercostal muscles extending to the first rib. The phrenic nerve, lying along the edge of the scalenus anticus, is occasionally in relation to the end of the cervical rib. The subclavian artery, arching across the rib behind the scalenus anticus, may show a narrowing of its lumen at the point of crossing, and occasionally a slight dilatation proximal to the point of crossing. Small aneurysms have been observed within this location. The artery may become occluded at this point by thrombosis, and, unless sufficient collateral circulation be speedily established, a dry gangrene attacks the limb, usually limited to the finger-tips. The pleural cavity extends up into the neck directly under the cervical rib, and the costal periosteum lies directly in relation to the parietal peritoneum. The pleural cavity normally reaches a point one-half inch above the clavicle between the sternal and clavicular heads of the sternomastoid, or about one and one-half inches above the anterior end of the first rib. Hence the presence of a cervical rib increases the capacity of the thorax by the amount of an intercostal space.

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[4] Sedgwick: Boston Med. and Surg. Jour., Dec. 14, 1911, p. 910.

[1] Davis and Rosenow: The Journal A. M. A., March 16, 1912, p. 773.

When long enough to be demonstrated clinically a cervical rib will appear as a rather hard tumor in the supraclavicular region at the root of the neck, usually on the left side. As a rule there is a visible pulsation of the tumor due to the passage over it of the subclavian artery. Light compression gives to the fingers a curious bruit, not unlike the bruit of aneurysm. Firm compression will obliterate the pulse in the radial artery on the affected side.

We may group the symptoms under two heads: (I) nervous and (II) vascular.

### I. NERVOUS SYMPTOMS

1. *Sensory Symptoms.*—A. Pain, usually of a dull, aching variety, gradually increasing over a long period of time and frequently most marked over the ulnar distribution. It may be throbbing or boring in cases of pressure neuritis. Pain is aggravated by the use of the arm and by moderate degrees of cold, and alleviated by holding the hand affected on or above the head. B. Hyperesthesia, especially over the ulnar distribution, and sometimes over the whole arm. C. Paresthesia, frequently associated with pain and hyperesthesia and commonly noted in the hyperesthetic zones.

2. *Trophic Muscular Atrophy.*—Of the muscles, those muscles supplied by the ulnar nerve are notably liable to atrophy. The interossei and the thenar and hypothenar eminences are most prominently affected.

3. *Respiratory Disturbance.* — Such disturbance, due to irritation of the phrenic nerve in its course along the scalenus anticus by a long cervical rib, is believed to be a possibility. Hunt[1] reports a case of spasm of the diaphragm which was immediately relieved by the removal of a cervical rib. Dysphonia, cough, and even laryngeal paralysis are occasionally noted from pressure or irritation of the inferior laryngeal fibers by the rib or by dilatation of the subclavian artery.

### II. VASCULAR SYMPTOMS

Vascular phenomena depend in part on a constriction of the artery between the rib and the scalenus anticus, and in part on vasomotor influences not clearly understood. Osler mentions cases in his paper, in which a condition identical with intermittent claudication existed in the affected limb, stiffness and redness of the parts while at rest, and blanching or cyanosis, with cramping pains in fingers after moderate use. Cyanosis is not so common as blanching, but in either case the parts are cold and clammy to the touch especially when dependent.

Compression of the artery apparently does not account for all the cases in which these symptoms appear. Miller reports several cases of the kind in which the rib was removed, in only one was there indication of constriction of the artery by pressure. In some cases the interference is, not by the rib itself, but by the tendinous band which extends from the end of the rib to the scalene tubercle. Gangrene is occasionally seen when the artery is nearly or entirely occluded by pressure, or by a thrombus. It is usually limited to the tips of the fingers. Muscular weakness is the rule, especially after continued use.

### DIAGNOSIS

The salient points in the diagnosis are: (1) the *x*-ray; (2) ischemia, with cramps in the hand, persistent or continuously intermittent; (3) pain in the arm, gradually increasing over a considerable period of time, aggravated by moderate cold and by use, and alleviated by elevation; (4) brachial neuritis, especially of ulnar distribution, with atrophy of the interossei and the thenar and hypothenar eminences; (5) a small firm pulsating tumor in the supraclavicular region with or without accompanying symptoms of pain, atrophy, etc., is, nine times in ten, a cervical rib. It is estimated that only about 10 per cent. of cases of cervical rib have any symptoms at all.

It must be differentiated from (1) aneurysm of the carotid, subclavian, or vertebral arteries; (2) brachial neuritis; (3) bursitis of the subscapular or subdeltoid bursæ; (4) occupation neurosis.

### TREATMENT

The treatment is obviously surgical. Some cases do well enough for a time on treatment by rest and position, but ultimately excision is the only recourse. The results are sufficiently satisfactory to warrant its use in those cases which produce symptoms. The pain is usually relieved after a period of days or weeks, but occasionally persists in less degree for a longer time. Postoperative paralysis from rude manipulation of the brachial plexus is not unknown or uncommon, and while it usually disappears is occasionally permanent.

### REPORT OF CASE

In my case a cervical rib was discovered during the course of a physical examination of the chest. The patient is a woman, aged 40, married, with nothing suggestive in her personal history. She has never been subject to rheumatism, nor had any difficulty with her hands or arms. She presented herself to me with a history of a cough of two months' standing. In the course of the examination, a pulsating tumor was noted above the left clavicle. It is about 1¼ inches long and 1 inch wide, and lies at the root of the neck behind the sternomastoid and about 1 inch above the clavicle. On palpation a thrill synchronous with the pulse was transmitted to the finger, and the radial pulse was obliterated by firm compression. The tumor was firm and hard and could be traced with the fingers backward under the edge of the trapezius almost to the vertebra. Examination of the lungs was negative for signs of tuberculosis and the cough cleared up under treatment, so the conclusion was reached that the two conditions were not related.

As the *x*-ray is not accessible, we have based our diagnosis of cervical rib on the presence of a firm pulsative tumor in the supraclavicular region, traceable nearly to the spinal vertebra, and carrying over it an artery, compression of which cuts of the corresponding radial pulse.

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# DUPLEX UTERUS (DIDELPHYS)

CHARLES H. FRAZIER, M.D.
PHILADELPHIA

The malformations and deformities of the uterus, varying in degree from the almost complete absence of that organ to the very rare cases of its duplication, known as duplex uterus (dihysteria, didelphys), are of intense interest because of their clinical and pathologic aspects. These malformations are due, on the one hand, to the imperfect development of the Müllerian ducts and are classed as uterus deficiens, uterus rudimentarius, uterus fetalis, and uterus unicornis, and, on the other, to the imperfect blending or non-union of those two ducts, which normally fuse during the third fetal month to form the uterus and vagina. The latter malformations result in the so-called double uterus, and embrace the uterus septus, the uterus bicornis, and the uterus duplex separatus or didelphys, of which the case to be recorded is an example.

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[1] Hunt: Brit. Med. Jour., Aug. 7, 1909

In the uterus septus, the uterus is divided internally by a septum of which there is no evidence on the exterior, the vagina also being septate. When there are two horns which are united to a limited degree we use the term "uterus bicornis." If these two horns enter a common cervix at the os internum, it is known as "uterus bicornis infrasimplex"; if the cervix is separated either partially or completely by a septum, the term "uterus bicornis unicollis" is applied; and if there are two cervices with their median surfaces close together, it is known as "uterus bicornis duplex."

By far the rarest of the so-called double uterus malformations is the duplex uterus, in which both uteri and both cervices are completely separated, save for a loose fold of the peritoneum; sometimes viscera even lie between them. Each half is supplied with its own tube, ovary and round ligament, though the halves are often very unequally developed, and one vagina may end blindly above the vulva, so that the corresponding uterus is shut off from the outside. The vagina may be single, double or partially divided, and it may be imperforate on one or both sides.

The duplex uterus is of the utmost importance pathologically, for hematometra and pyometra have occurred in such a uterus, and gestation has taken place in one half or in both halves simultaneously. Giles, in a paper read before the Obstetrical Society of London in 1895, classified twenty-five cases of duplex uterus which he had been able to collect from literature as follows:

Five cases of hematometra or pyometra in one half; eight cases of gestation occurring in one half; two cases of gestation occurring simultaneously in both halves; six cases uncomplicated by gestation or retained menstrual products; four cases discovered on the postmortem table.

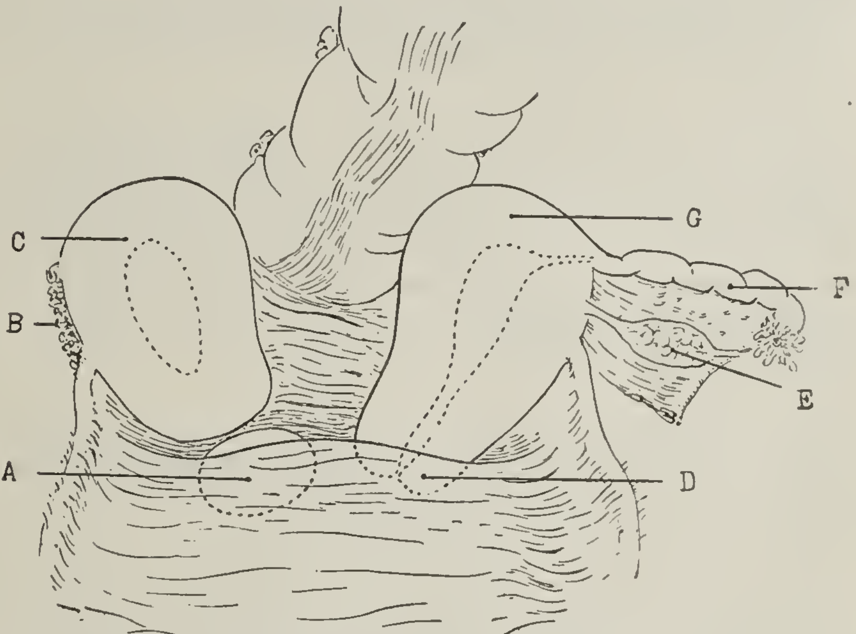
Occasionally instances do occur, as is evident from the tabulation above, uncomplicated by menstrual disturbances or gestation and in which the deformity is revealed only at necropsy. But usually numerous and grave complications accompany this malformation among which are unilateral atresia, dyspareunia, double vaginitis or endometritis, obstruction to labor by the retroverted non-gravid half, obstruction due to the vaginal septum and retained and undiscovered products of conception in one half in cases of double pregnancy.

The patient who came under my observation was admitted to the Episcopal Hospital, Jan. 4, 1912, with the following history:

*Summary.*—Uterus duplex separatus (didelphys); single vagina; left uterus and adnexa normal; right hematometra, uterus without outlet, and with only vestige of cervix. Right salpingo-oöphorectomy and hysterectomy. Recovery.

*Patient.*—Louisa L., aged 19, unmarried, had been in good health until the age of 16 when her menses began. They had been irregular and always associated with extreme pain and often vomiting. About one year ago a dilatation and curettage were practiced without any relief, and two months ago a right salpingo-oöphorectomy was performed, also without relief. When she came under my observation she was still complaining bitterly of pain in the right lower abdomen. The muscles of the lower abdomen were extremely rigid, and she was very sensitive to pressure on the right side below McBurney's point. On account of the muscular rigidity a satisfactory examination could not be made, but a round mass about the size of an egg could be detected in the right sulcus and the cervix was displaced somewhat to the left of the median line.

*Operation.*—The patient's suffering had been so extreme and so constant with each menstrual period since her menses began that she was willing to undergo any operation which would assure her of absolute and permanent relief. Accordingly I decide to operate without further delay, and on opening the abdomen through a median incision I found that the left uterus with its tube and ovary were normal, although the uterus was deflected to the left. A sound was readily passed into the uterine cavity, showing the absence of atresia of the cervix. The left uterus was separated by a space of 3 inches from the right uterus, which was adherent to the stump of the broad ligament (the right tube and ovary having been removed before the patient came under my care). As the pain had always been on the right side, I assumed the right uterus to be at fault and proceeded to remove it. It was found to be filled with blood (hematometra) and to have no outlet and no cervix. After its removal further exploration revealed a small cystic swelling almost in the median line just beneath the peritoneal reflection of the bladder. This swelling had no communication with the uterus or with the vagina and no doubt was the mass felt on vaginal examination, and believed at one time to be a pyosalpinx. This was dissected free with some little difficulty, as it lay just beneath the vaginal mucosa and the two structures were not separated easily. The denuded arms were covered with peritoneum and the abdominal wound closed. As the left uterus, tube and ovary appeared normal in every respect and the cause of the dysmenorrhea had been removed, there seemed to be no indication for their removal and every reason why they should be conserved, especially as in the removal of the right uterus and its adnexa, we had removed the source of the more serious complications such as double pregnancy, hematometra, pyometra and complications of labor.



Diagrammatic representation of author's case of double uterus (didelphys). A, vestige of right cervix represented by a cyst with no communication with the uterus; B, the stump of the broad ligament after salpingo-oöphorectomy; C, right uterus without any cervical canal or outlet; D, cervix of left uterus; E, left ovary; F, left fallopian tube; G, fundus of left uterus.

Fortunately, however, this condition is not of very common occurrence. In 1859, Kussmaul wrote that the double uterus had been seen only in cases of still-born children; and in 1873, Frankel cited the cases of Olliver and Bonnet as the only two observed in living adults. Gile was able to collect only twenty-one such cases from literature between the years 1875 and 1900. An analysis of these cases reveals the following facts:

1. *Age.*—The condition was discovered earlier in the cases of hematometra and hematocolpos than in the others, viz., at 16 and 18. The remainder were mostly between the ages of 20 and 30.

2. *Marriage.*—Fifteen out of twenty-one were married; in two of these there was history of dyspareunia. In three, coitus had taken place in both vaginæ.

3. *Parity.*—Of the fifteen married only one had not been pregnant; three others had had only a miscarriage, and in one of these the miscarriage occurred from double pregnancy. The remaining eleven had borne living or viable children. Among these eleven there were sixteen labors, of which ten were natural. The remaining six had the following characters: in three, obstruction by the retroverted non-pregnant half; in one, obstruction by the septum. It is curious that in this case the two previous labors were unimpeded. Lastly, in two cases forceps were required. The prognosis as regards fertility is therefore good. The prognosis is not so good, however, as to labor, although this is better than one would be led to expect.

4. *Relative Size of the Two Halves.*—In four cases they must be regarded as about equal, inasmuch as both halves had become pregnant. In the remaining seventeen the right half was the larger in six, and the left in eleven.

5. *Vaginal Condition.* — In only one case was the vagina originally single; in six there was atresia of one half; in fourteen the two channels were patent and quite separate.

6. *Menstruation.* — The age is given for fifteen patients, and there seems to be a slight tendency to delayed menstruation. In twelve patients menstruation was regular, in four irregular. In eleven menstruation was painless, in one there was slight pain; three complained of dysmenorrhea.

1724 Spruce Street.

## NOTE ON TREATMENT OF TYPHOID PERIOSTITIS BY VACCINES

F. C. Sharpless, M.D., Rosemont, Pa.

*Patient.*—John M., carriage-builder, aged 32, previously healthy, had a typical attack of typhoid six years ago, in the Bryn Mawr Hospital. One month after recovery he noticed, in the middle of the right tibia, an area of tenderness and edema measuring about 3 inches in length. The condition was only slightly painful and did not interfere with his work. It inconvenienced him greatly, however, because any accidental abrasion in the affected region was very slow in healing; behaving, in fact, like an ordinary varicose ulcer and yielding only to firm strapping and bandaging. The condition continued without intermission, and the area involved increased in extent upward, until within 1 inch of the tubercle of the tibia.

*Treatment.*—Nov. 20, 1911, a dose of 90 million dead typhoid bacilli was injected in the right ankle and ten days later, 180 million. Following the second injection there was an intense local reaction marked by swelling of the entire leg below the knee, a temperature of 102 F. and great pain.

*Course.*—One week later the patient announced that his leg was well. The injections of 180 million bacilli were continued, however, at ten-day intervals. At present (March 12, 1912) there is a trifling edema which disappears over night, but no pain or tenderness. The patient is convinced that his leg is well.

## AN UNUSUAL LITHOPEDION

Henry G. Smith, M.D., Cedar Grove, N. J.

*Patient.*—Mary C., born in the West Indies, was admitted to Essex County Insane Hospital in December, 1888, aged 65. The diagnosis was acute melancholia. General condition remained fair until Nov. 15, 1911, when she was placed in bed. Physical examination revealed chronic endocarditis and a mass in the right iliac region which appeared to be adherent to the fundus and right uterine adnexa. On account of a thin abdominal wall the mass was easily palpable and the rough outline discernible. A diagnosis of calcified fetus was made. The patient died December 16 from pulmonary edema.

*Necropsy.*—December 16, by Drs. Davies, Wardner and Smith revealed pulmonary edema, the mitral valve admitting tips of four fingers, forty-two gall-stones of assorted sizes and the mass in the right iliac region. The uterus and left tube showed senile changes. The right tube was imbedded in the mass with the exception of the fimbriæ, which projected anteriorly and to the right of the mass. On removal the tumor weighed 13½ ounces, was apparently of about four to five months' development and was embedded in caseous material, showing direct attachment to the tube.

*Comment.*—I am unable to state positively whether the condition was one of an abdominal or a ruptured tubal pregnancy but am of the belief that the condition was a rare one of a ruptured tubal pregnancy continuing growth.

The patient's age at death was 88 years. She was in the hospital twenty-three years and removal of the lithopedion about forty-three years after the menopause led me to the belief that the condition had existed for probably about sixty years. Cheston, Barnes, Chiari and others have reported cases existing for fifty years or longer and this case is of sufficient age to justify recording.

# *New and Nonofficial Remedies*

The following additional articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association. Their acceptance has been based largely on evidence supplied by the manufacturer or his agent and in part on investigation made by or under the direction of the Council. Criticisms and corrections are asked for to aid in the revision of the matter before publication in the book "New and Nonofficial Remedies."

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that, so far as known, it complies with the rules adopted by the Council.

W. A. Puckner, Secretary.

**MENINGOCOCCUS VACCINE.**—A vaccine believed to be useful in immunizing against the meningococcus of Weichselbaum.

H. K. Mulford Co., Philadelphia.

*Meningo-Bacterin.*—This product is marketed in three strengths, each dose containing respectively 500 million, 1,000 million and 1,000 million killed meningococci. For the first injection 500 million killed meningococci are used and the second and third injections are made at ten-day intervals. The preparation is put up in two styles: (a) in syringes containing each dose in a separate syringe intended for the immunization of one individual and (b) in packages containing thirty ampules or ten complete immunizing doses. The successive doses are distinguished by red, white and blue labels. No syringe is contained in this package.

### PHARMACEUTICAL PREPARATION ACCEPTED FOR N. N. R.

The following dosage form of an accepted proprietary article has been accepted for N. N. R.:

*L-Suprarenin Synthetic Bitartrate Tablets, 0.001 Gm.* Each tablet contains l-suprarenin synthetic bitartrate equivalent to 0.001 Gm. (1/65 grain) l-suprarenin synthetic.

**Hunter on the Value of Anatomy.**—"Anatomy is the only solid foundation of medicine. It is to the physician and surgeon what geometry is to the astronomer. It discovers and ascertains truth; overturns superstition and vulgar error, and checks the enthusiasm of theorists and of sects in medicine, to whom perhaps more of the human species have fallen a sacrifice than to the sword itself or pestilence."—William Hunter.

# Therapeutics

## NOCTURNAL ENURESIS IN CHILDREN

This troublesome condition causes much distress to the child and the family, and yet the physician many times feels hopelessly incompetent to treat it. Dr. John Ruhräh (*Am. Jour. Med. Sc.*, February, 1912) gives tables of the etiologic factors, and of the many suggested treatments. The list of causes is valuable, for, if a cause can be determined positively, the treatment becomes immediately apparent.

Perhaps one of the most frequent causes is carelessness on the part of the parents in allowing the child to drink largely in the early evening and then expecting it to sleep, without being awakened for urination, from 7 or 8 p. m. until 7 or 8 the following morning. In other words, the child, with a small bladder, is expected to hold his urine for a period that would be almost impossible for an adult; and the habit of wetting the bed continues, even when the cause is removed.

Another very common cause of this enuresis is local irritation, whether from an inflammation, from an elongated or adherent prepuce in the boy or from an adherent clitoris in the girl, or from actual balanitis or vulvitis. Rectal irritations, as from pin-worms, is another cause.

Dietary mistakes, as feeding the child too rich, irritant food, food that digests poorly, or food that causes intestinal indigestion, may cause bed-wetting by making the urine irritant; or gas in the intestine may so press on the bladder as to produce the same result. Also, even with care in the diet, the urine may be hyperacid, or it may be alkaline. Either condition can readily be discovered by analysis of the urine. A hyperacid urine should cause meat to be removed, at least temporarily, from the diet, and the diet to be made simply milk and cereal for a time, with possibly the administration of some drug to alkalize the urine. If the urine is alkaline, this should be remedied by the administration of a drug to render it acid.

There being no apparent local reason or dietary reason for the nocturnal enuresis, the nervous condition of the child should be very carefully studied. Children who are not suspected of epilepsy may have such slight attacks at night as to be unnoticed except for the fact that the urine is involuntarily evacuated. Nervous irritabilities, nervous excitement, or some abnormality of the spinal cord may be found to be a cause of the trouble; or an insufficiency of the sphincter muscle of the neck of the bladder may seem to be the reason why the urine cannot be long retained.

The object of Ruhräh's paper was more especially to call attention to the fact that nocturnal enuresis, besides being caused by the conditions above named, may be caused by adenoids and by insufficient thyroid secretion. It is not unusual to find nocturnal enuresis ceasing after a necessary operation for adenoids. This is, perhaps, because the more quiet, restful sleep that the child obtains causes a better tone and less irritability of the bladder.

It is not so clear just why insufficient thyroid secretion should allow nocturnal enuresis, but other signs of insufficiency of the thyroid, such as subnormal temperature, lack of growth, and a tendency to become fat and flabby, may be associated with insufficiency of the bladder and incontinence in children. It is quite possible that this, however, is more a mental indifference to the calls of Nature, and therefore not quite to be classed with true, simple, nocturnal enuresis. It is a fact, however, that these children who need thyroid and are given it, do improve as to their ability to retain their urine.

Before deciding on the proper treatment, the child must be carefully examined in every respect, and the urine must be carefully examined. Any kidney inflammation, diabetes, hyperacidity or alkalinity—any of these suggests the line of treatment necessary in the given case of enuresis.

If the urine is too acid, potassium citrate, combined with a modified diet, as suggested above, is the best treatment.

| ℞ | Gm. or c.c. | | |
|---|---|---|---|
| Potassii citratis | 5 | or | ʒiss |
| Aquæ menthæ piperitæ | 100 | | fl.℥iv |

M. et Sig.: A teaspoonful, in water, three times a day, after meals.

The above prescription is for a child 5 years old, and the amount can be temporarily doubled, if deemed advisable. But a diet without meat and composed mostly of milk and cereal would almost alone correct the condition.

If the urine is alkaline, the following is the treatment. Leave meat in the diet, and give:

| ℞ | Gm. | | |
|---|---|---|---|
| Hexamethylenaminæ | 3 | or | gr.xlv |

Fac chartulas 20.

Sig.: A powder, dissolved in one-fourth of a glass of water, four times a day.

The above is for a child 5 years of age.

If worms of any kind are discovered in the stools, these should be treated. Constipation should be prevented.

Local inflammations should be properly treated. Circumcision should be done when needed; and the clitoris should be freed from adhesions. This last alone has often cured young girls, even in their teens, of nocturnal enuresis.

Raising the foot of the bed; tying a knot under the child so that he will not lie on his back; restricting the liquids taken in the late afternoon and early evening; waking the child up once, at least, in the middle of the night to urinate, are all simple, every-day methods of considerable value.

Obstructive adenoids, of course, carry with them the indication for operative treatment, and indications of subsecretion of the thyroid present the necessity for thyroid medication.

If there is believed to be an insufficiency of the sphincter of the bladder, various electric applications may be tried, and some with benefit principally the faradic current. Sometimes the cold sound is of benefit.

It has been thought at times that ergot as a tonic to the smooth muscle fiber of the bladder was of value, and it has seemed many times to be successful. The dose of the fluid-extract of ergot for a child 5 years old would be, perhaps, 20 drops, three times a day, in water, after meals.

Atropin, given at night, has also seemed of benefit as possibly relieving the irritability of the neck of the bladder and thus preventing the undesired contraction of the bladder. The dose for a child 5 years of age would be about 1/400 to 1/300 of a grain, given once a day, an hour or two before bedtime. There is no preparation of belladonna that will have any other action than that of the atropin.

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[*For other information see second page following reading matter*]

SATURDAY, APRIL 13, 1912

## PHRENOLOGIC TENDENCIES IN THE INTERPRETATION OF MENTAL PHENOMENA

The correlation of structure and function in organisms has many features which appeal to any one who observes the activities of a living individual. What is more natural than to expect that organs which differ structurally should have unlike functions? And in truth the view finds a substantiation in the familiar facts of physiology, which show a remarkable differentiation of animal structure in adaptation to specific uses. Do not muscle and gland, nerve and connective tissue fiber, exemplify in their anatomic individuality the unlikeness of the uses to which they are put in the body? Accordingly we have come to associate certain physiologic phenomena with definite types of structures.

The attempt to connect mental processes with special anatomic structures had its beginning years ago. In a sense it was exhibited in the phrenology of earlier days. Some localized part of the brain was presumed to be concerned with each of the different mental states or faculties which went to make up the "units" of the mind. When more precise experimental studies on the cerebral localization of motor and sensory processes widened our knowledge of brain phenomena, the facts elicited by investigations like those of Fritsch and Hitzig, Munk, Goltz and others were hailed by some as conclusive indications of the essential validity of the hypotheses underlying phrenology. Clinical observations taken in connection with post-mortem findings in the brain were also drawn on to support the claims of psychic localization. Flechsig's well-known studies were applied to strengthen the doctrine of an anatomic localization of mental faculties. Histologic investigations have been strained to furnish evidence for some differentiation correlated with assumed independent activities of individual parts of the brain. To quote a recent writer: "There were some who disputed the functional dismemberment of the brain, and withstood the establishment of spatial localizations for definite mental functions, but their voices were not listened to, or their facts were denied, or their arguments disregarded. They contended that the clinical and physiologic facts gave no warrant for a localization in parts of the cerebral cortex of mental functions as such, and furthermore they pointed out that the cortical centers did not operate independently, and that functions could not be considered apart from the totality of the elements involved. The schematism of phrenology was, however, too alluring; it gave a definiteness to diagnosis, and it satisfied certain other practical and theoretical desires."[1]

It is not always clearly kept in mind that the possible connection of brain lesions with motor, sensory and associational derangements by no means demonstrates that psychic processes are definitely localized. Professor Franz of the Government Hospital for the Insane at Washington has taken pains, in a recent address from which we quoted above, to express his conviction that mental processes are due to the activities of the brain as a whole. The individual parts "do not work independently; they work interdependently, and it is because of the possible functional or anatomic connections that certain types or kinds of mental states are more in evidence than others."

Precisely because we have been encouraged to associate function with structure so definitely in other fields, a similar tendency to connect mental abnormalities with definite brain-centers is current. But a reaction has set in; and the protest of the opponents has been formally promulgated and is quoted here from Franz as a "sign of the times" rather than as a final pronouncement on the subject. "All that we do know is that certain disturbances of the brain are accompanied by certain mental abnormalities, and that similar mental abnormalities are produced by or accompany diverse lesions. We have no facts which at present will enable us to locate the mental processes in the brain any better than they were located fifty years ago. That the mental processes may be due to cerebral activities we may believe, but with what anatomic elements the individual mental processes may be connected we do not know. Notwithstanding our ignorance. it would appear best and most scientific that we should not adhere to any of the phrenologic systems, however scientific they may appear to be on the surface. We should be willing to stand with Brodmann, believing that mind is a function or an attribute of the brain as a whole, or is a concomitant of cerebral operations, but I at least am unwilling to stand with the histologic localizationists on the ground of a special mental process for special cerebral areas or for special cerebral cell groups."

## FOOD WASTES IN PUBLIC INSTITUTIONS

In these days of scientific management it is a hopeful sign to note the tendency toward economical efficiency which is spreading to public institutions. Any charity which is characterized by inconsiderate extravagance defeats its widest usefulness; and organized benevolence which is forgetful of the limitations of human helpfulness does not deserve a continuance of public support.

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[1] Franz, S. I.: The New Phrenology, Science, March 1, 1912, p. 321

We shall not open the argument as to whether the great increase in public charges in the past decade is justifiable or to what extent the protection of the unfit and the care of the human derelict is an unavoidable duty. No one will deny the sacrifices which the medical profession has always freely made in the aid of the helpless. The solution of the broader problems of the rights and obligations of the dependent must be left to the sociologist.

Public institutions — asylums, prisons and the like — are here to stay and their financial resources must be carefully husbanded. In many departments this is being done with marked success. The efficiency of various parts of the plants is pushed to its utmost. Every ton of coal is weighed, every pound of ashes is taken into consideration in the attempt to secure a maximum of energy in the forms desired. But in one direction which concerns no small share of the total expenditure, namely, the food problem, less consideration has hitherto been brought to bear than the best interest of all concerned really demands. Of course, numerous exceptions to this broad statement might be cited in noteworthy individual cases.

Broadly speaking, however, our contention is correct. The reason for this apparent neglect of conservation in the handling of supplies is partly to be sought in misguided sentiment. There is an impression easily spread that economy in food management is synonymous with enforced starvation and mistreatment; so that the guardians of public dependents are unwilling to face hysterical charges of the abuse of their wards.

Economy of the sort here referred to means not only the substitution of cheaper, yet adequate nutrients for dearer foods; it means likewise a careful consideration of the problem of waste. The kinds and proportions of food to serve are large questions about which there is none too much information at the present time. The disposal of sewage and garbage is being carefully studied, but little systematic inquiry has been made in this country into the means of reducing the amount of waste which is disposed of through these channels. The wide disparity in the amounts of food used in similar institutions has led Henry C. Wright of the Russell Sage Foundation to institute an investigation at King's Park State Hospital to determine to what extent kitchen and dining-room waste could be regulated and reduced. Uneaten food was separated into "usable" and "waste" and carefully weighed or measured. These records served as a guide from time to time for the perfection of the service. Mr. Wright says of the classification thus introduced: "The results of its operation have been pronounced . . . a redistribution was made, resulting in a much better feeding of the working patients. . . . Thus far there has been no attempt to cut down the total amount of food served. The excesses of one department have been transferred to other departments where less waste was noted. It is highly probable, however, that after the system has been in operation longer the aggregate amounts of certain foods will be reduced. The waste indicates that such a reduction would be safe."[1]

The same story comes from other sources. At the Massachusetts General Hospital an inspection of waste in garbage led to a saving of $5,000 in one year. Another aid to economy is the application of expert knowledge of dietetics. At the Bay View institution in Baltimore, this has led to the introduction of a successful dietary for 7½ cents per day. Quoting Mr. Wright: "Every state needs to do more than it is at present doing for its sick and dependent. Unless capital and operating costs can be reduced, expansion will be exceedingly slow. If the taxpayers become convinced that their money is as carefully expended as in private business — yes, more carefully — funds for enlargement of the work will be readily granted."

## JENNER'S DISCOVERY OF ALLERGY IN SMALL-POX AND COW-POX

The discovery by Koch that in the tuberculous guinea-pig a second injection under the skin of bacilli, in place of causing a progressive infection, leads to necrosis and sloughing at the point of inoculation, and his further observation that only the tuberculous organism reacts in a typical way to the soluble tubercle substance, are currently regarded as the first demonstration of a specific hypersusceptibility or, better, allergy in infectious diseases.

It now appears,[2] however, that Jenner in the course of his inoculations of cow-pox and small-pox very clearly recognized that the animal organism, once thoroughly influenced by the virus of these diseases by passing through an attack of either one, may respond to the cutaneous application of the virus, if made even years afterward, by an evanescent, early local reaction, a "sudden cuticular inflammation." Reflecting on the significance and cause of this interesting phenomenon, he remarks that "it becomes almost a criterion by which we can determine whether the infection will be received or not," and that it seems as if a change in the vessels of the skin may be produced by either small-pox or cow-pox whereby a "disposition to sudden cuticular inflammation" on the application of variolous matter is established. Jenner consequently virtually recognized in this early reaction the evidence of a previous infection and his interpretation of the nature of the reaction approaches in a general way very closely that in vogue at the present time.

This remarkable observation and the comments thereon testify convincingly to the masterly thoroughness and keenness exercised by Jenner in his great work. It is a striking commentary on the prevalent utter neglect of the real classics of the literature of scientific medicine that Jenner's observation should have passed seemingly wholly unnoticed for more than a hundred years and until several years after the early reaction was rediscovered and studied from all sides by von Pirquet, who used it as one of the foundation-stones in building up the doctrine of clinical allergy. We should study the writings of the founders of medical science because, as illustrated in this instance, hidden away in their pages may be records of observations and reflections that through the lapse of time and the growth of science may have acquired a specially suggestive and stimulating significance.

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[1] Wright, H. C.: Some General Principles Applicable to the Purchasing and Handling of Supplies for Public Institutions, Jour. Home Economics, 1912, iv, 26.

[2] Hektoen: Allergy, this issue, p. 1081.

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## A GREAT PAPER ATTEMPTS THE IMPOSSIBLE

The newspaper which, while wishing to conserve its readers' interests, is unwilling to reject all medical advertising, has a problem for which there is no satisfactory solution. The question is sometimes asked: Why is it not possible for a newspaper so to censor its "patent-medicine" advertising that all objectionable matter is rejected and only the unobjectionable retained. The answer is: Because there is no such thing as an unobjectionable "patent-medicine" advertisement in a newspaper.

Probably one of the best examples of a newspaper whose advertising and editorial ethics are of a high order, but which still persists in accepting a certain class of medical advertisements is that of the Chicago *Tribune*. The crude, coarse, indecent "medical-specialists" advertisements are never found in this paper; the suggestive "patent-medicine" advertisement is debarred from its pages. In its acceptance of medical advertising the general rule seems to be to take only those preparations that are to be used externally, with the exception of cathartics.

As a result of this policy, the *Tribune* presents some curious anomalies. On its editorial page is a department entitled "How to Keep Well," in which Dr. W. A. Evans, formerly commissioner of health of Chicago, answers questions of general interest "pertinent to hygiene, sanitation and prevention of disease." The department is an excellent one, sane, conservative and instructive. Since its inception, however, the discriminating reader must have been led to marvel at the inconsistency between the editorial utterances and the claims made by some of the *Tribune* advertisers. A few examples will make this incongruity evident.

Under the title "Peril in Reducing Weight," Dr. Evans gave this advice to an inquirer, who claimed to have reduced his weight "forty pounds in six months":

> "You are not justified in reducing at a more rapid rate than twenty pounds a year and ten pounds would be better judgment."

Sane advice, every word of it, but possibly the *Tribune's* correspondent had felt that he was justified in reducing his weight as rapidly as he had after reading a quarter-page Marjorie Hamilton obesity cure advertisement in the same paper. Marjorie sells, it will be remembered, a drugless, dietless obesity cure (which, by the way, is neither drugless nor dietless) and appeals to *Tribune* readers as follows:

> "Fat vanishes one pound a day—Reduce fat quick with my safe and sensible no-drug home treatment."

An even more remarkable inconsistency was to be found in a recent Sunday edition of the *Tribune*. Another editorial department conducted by Lillian Russell contained the following statement regarding obesity cures:

> "Leave antifat remedies severely alone. They are positively dangerous or they are quack nostrums that accomplish nothing, but help you waste your money. The only sensible things are diet and exercise."

More excellent advice; more good sense. But alas, on the opposite side of the same page that impudent fraud, Marmola, was advertised:

> "Overfatness condemned . . . Many are trying exercises or diet, but it is certain they will find these methods are slow and undesirable. The cheapest and safest way to get in form for the Directoire mode is by means of Marmola Prescription Tablets . . . A large-sized case of these elegant little fat reducers containing a good generous supply for seventy-five cents and even this quantity should be enough to make a decided impression on your excess fat. Many have lost as much as a pound a day."

Another seeker after knowledge wrote to the "How to Keep Well" department: "I would like to know what you think is the best blood purifier." Dr. Evans very properly and naturally replied:

> "There is no such a thing as a blood purifier."

Of course there isn't. Every physician knows that; but most laymen have an undying faith in "blood purifiers." Why shouldn't they? Here we find in a recent issue of the Chicago *Tribune* the following advertisement:

> "Wonderful home remedy—Every person's blood at times becomes laden with impurities . . . If one will dissolve an ounce of Kardene and one-half cupful of sugar in one-half pint of alcohol, then add hot water to make a quart and take a tablespoonful before meals, the blood will soon become pure . . ."

A few months ago, Chicago was threatened with an epidemic of diphtheria. Rationally enough, Dr. Evans explained at some length the need of medical attention being given to every child that showed symptoms of sore throat. This excellent article closed as follows:

> "If your child has a sore throat, do not trifle with it, do not neglect it, do not attempt to 'cure it up' or cover it up."

This splendid advice was necessary because the average mother, as soon as her child shows symptoms of "sore throat," at once purchases a bottle of whatever "patent medicine" happens to be most widely advertised in her locality. The *Tribune* at this time was carrying an advertisement of a sore-throat "cure" fraud called "Tonsiline."

> "A quick, safe, soothing, healing antiseptic cure for sore throat . . . Tonsiline cures sore mouth and hoarseness and prevents quinsy and diphtheria."

These examples of inconsistency between the editorial and advertising departments of a great paper are not given for the purpose of criticizing the Chicago *Tribune*. They are merely quoted for the purpose of showing how impossible it is for even a careful and conscientious newspaper to avoid making itself ridiculous so long as it accepts "patent-medicine" advertising. There can be no effective censorship of nostrum advertising. Whenever a "patent medicine" is advertised in truthful and unexaggerated language, that "patent medicine" will go out of existence. Nostrums can flourish only on falsehood and deception. There is no half-way course. The newspaper that accepts "patent-medicine" advertising, even though it confines its acceptance to nostrums of a certain type, may just as well make up its mind that, so far as those products are concerned, it is deceiving its readers and perpetrating a greater or less fraud on its subscribers.

## BERIBERI, RICE AND BEANS

In a recent number of The Journal[1] attention was directed to some of the very recent investigations on the relation of rice to beriberi, and it was pointed out that the etiologic factor in this disease under conditions in which polished rice forms the essential basis of the dietary is most probably the lack of certain substances which are present in other foods and notably in polishings of the rice. It was further stated that a type of polyneuritis can be induced in fowls by feeding them on milled rice. Drs. Chamberlain and Vedder, members of the United States Army Board for the Study of Tropical Diseases as they Exist in the Philippine Islands, have stated that the pathology and symptom-complex of the two diseases, i. e., polyneuritis gallinarum and human beriberi, are practically the same with the exception of the fact that edema is commonly observed in beriberi and only rarely found in the multiple neuritis of fowls. The similarity, they remark, is so striking that it is hard to avoid the conclusion that the two conditions are due to the same pathologic process causing, as might quite naturally be expected, slightly different manifestations in diverse species. The surprising thing is not that there are minor differences in symptomatology, but rather that the similarity is as great as it is. This lends great importance to the use of fowls in the experimental study of the etiology of beriberi.

In our earlier comment we noted that Dr. Casimir Funk of the Lister Institute, London, had isolated from rice polishings a relatively simple substance curative in very small doses for the polyneuritis of the fowl. Since then the *Philippine Journal of Science* has brought additional reports of progress in a similar direction by American workers[2] to whom we are glad to bring recognition. They appear to have obtained sufficient information with regard to the nature of the curative agent to attempt to identify it by direct methods of chemical analysis. We shall watch for the complete solution of what has now become a chemical problem, keeping our attention centered now on London, now on Manila, with an interest as keen as that with which others have followed the race for the pole.

It is of significant moment that according to Hulshoff-Pol[3] and Chamberlain and Vedder,[4] decoctions of white beans cure polyneuritis in fowls. The same substance which is present in the rice millings, or a similar substance, is present in a decoction of ordinary white beans; in fact, bodies corresponding to this description are found among decomposition products of the proteins. These facts are of importance, since they suggest that beans may be used as a preventive against beriberi in the rations of our native Philippine troops, native prisoners and others whose diet by preference consists largely of rice. As the Army investigators remark: "If the natives do not happen to care for mongos, or the other articles introduced into the ration for the purpose of preventing beriberi, they will not eat them, but will live on an almost exclusive diet of rice; but the man, native or white, who does not relish well-cooked beans is hard to find."

## INCREASED PAY IN THE PUBLIC HEALTH SERVICE

In reviewing the annual report of the Surgeon-General of the Public Health and Marine-Hospital Service[1] mention has been made of the so-called personnel bill now pending before the House of Representatives, designed to make the salaries of officers of the Public Health and Marine-Hospital Service equal to those of the Army and Navy Medical Corps. A moment's consideration shows the importance of this measure.

The Public Health and Marine-Hospital Service is the single national agency charged with the prevention of the introduction of contagious diseases into the country and their spread in interstate traffic. It has demonstrated its efficiency and proved its right to confidence and support in many a bitter campaign against disease. Not alone has its work resulted directly in saving life and improving public hygiene and sanitation; it has also saved the country an inestimable sum by preventing epidemics. As an illustration, during the three months of the New Orleans yellow-fever epidemic in 1905 the service saved the nation $100,000,000 as compared with the state of affairs in 1878, which caused a loss of more than a hundred millions in the Mississippi Valley.

The officers of the service are exposed to continual danger because of their contact with contagious diseases, and because their duties take them to the most insanitary and unhealthy localities in the country. Many of them have succumbed to disease contracted in the line of duty. Yellow fever has claimed fourteen, tropical dysentery five, typhoid four. Typhus fever and cholera likewise have taken their toll. The excellent scientific work of the service has been referred to in these columns repeatedly.

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[1] The Journal A. M. A., Feb. 24, 1912, p. 557.

[2] Chamberlain and Vedder: Second Contribution to the Etiology of Beriberi, Philippine Jour. Sci. (B), 1911, vi, 395.

[3] Hulshoff-Pol, J.: Polyneuritis gallinarum en beriberi, Geneesk. Tijdschr. v. Nederl. Indie, 1909, xlix, 116.

[4] Philippine Jour. Sci. (B), 1911, vi, 401.

[1] The Journal A. M. A., March 30, 1912, p. 942.

The commissioned officers of the service constitute about 1.5 per cent. of the total number of commissioned officers in the United States service. Since 1889 all of the other 98.5 per cent. have received substantial advances in their pay amounting to 20 per cent. and upward. In addition they have been given faster promotion, equivalent to a further 20 per cent. increase in pay. The Marine-Hospital Service officers alone have received no increase, in face of the fact that their duties are equally hazardous, or even more so, as proved by the character of their work and the morbidity rate of disease among them.

In the first session of the Sixtieth Congress the Senate passed a bill which included all the features of the present personnel bill, but failed to pass the House. In the third session of the Sixty-First Congress, the House passed a similar bill which in turn was rejected by the Senate. In the same session an amendment to the Sundry Civil Bill was adopted by the Senate, embracing the same features, but it was stricken out in conference. Finally the present bill[2] has been passed by the Senate in the present Sixty-Second Congress. Thus it is seen that the provisions of this bill have at different times been passed favorably by both the Senate and the House.

The bill has now been reported favorably and without amendment to the House by the Committee on Interstate and Foreign Commerce, and is No. 64 on the union calendar.[3] The bill would necessitate an additional appropriation of about $100,000 annually. At this really insignificant figure, Congress can insure the continued efficiency of the service, enable it to improve the character of its work, and make it more attractive to young physicians. Its requirements are of the highest, and to secure the high-class men necessary to carry on its work, a salary must be paid which is adequate to meet the demands of the increased cost of living. Small indeed is the increase asked for the Marine-Hospital Service as compared with the millions invested in a new battleship. True economy calls for the passage of the bill.

It is believed that the merits of the bill are so strong that it would receive an overwhelming majority if brought to a vote, and it is to be earnestly hoped that it will soon be brought to a vote and passed. Justice and the interests of the nation alike demand its passage. No semblance of valid argument has been raised against it. Partisan politics least of all should be allowed to obstruct its passage.

# Current Comment

## THE INTERRELATIONS OF RESEARCH AND PRACTICE

In a recent address before the American Society of Animal Nutrition, Professor Armsby struck a keynote which deserves to be resounded quite apart from the immediate circumstances of the original. He spoke of the wide gap which still exists between the work of the student of the science of nutrition and that of the expert in the art of feeding. This obvious weakness in any broad scheme of scientific pursuits applies with singular aptness to the situation in many domains of the field of medicine. It is, perhaps, the old question of theory versus practice which is here suggested. This controversy, it is safe to say, has long since lost all serious significance — if, indeed, it ever possessed any. The investigator in pure science is, in the long run, as responsible for the advances in practice as is the individual who devotes himself to so-called applied science and arts. As Armsby points out, "both have sought to serve the public and both have done creditable work, but their labors have not always been as mutually helpful as they might have been. The scientific man has been too exclusively scientific and the practical man too exclusively practical and the result has been unfortunate for both." We may properly ask what can be done to bring the two groups into more efficient and mutually helpful relations—to integrate the deductions of the investigator and the experience of the practitioner. "Mere sympathy with research amounts to little more than benevolent toleration." The practitioner has an important function in relation to the student of science which he can carry out without departure from his own field. It consists not merely in a sympathetic attitude and hearty encouragement, but in a further earnest attempt to make scientific work of greater practical significance by appreciation, by intelligent criticism, and above all by the attempt to convert the achievements into actual practice. The practitioner who is not himself an investigator should be enough of a student to understand and to apply critically his colleague's findings. Such men are needed; they not only serve to guard the investigator against unsuspected errors, but occasionally also indicate the real significance of a scientific discovery. There are few minds equally suited to pure research and practice. It is highly important, however, that the two types should be brought into vital contact, without disputing the fundamental fact that "the search for knowledge with exclusive reference to its application is generally unrewarded."

## EXAGGERATION IN REPORTING MEDICAL ADVANCES

Unfortunately advances in scientific medicine are frequently heralded as being of much more value and importance than they can possibly prove to be. Sometimes this is due to the desire of the newspaper reporter to make a good story, but it is occasionally suspected that medical men are not wholly innocent in the matter. W. M. Barton[1] analyzes the cause of this tendency:

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[2] Senate bill No. 2117, Sixty-Second Cong., first session.

[3] Report No. 233, H. R., Sixty-Second Cong., second session.

[1] Barton, W. M.: Washington Med. Ann., January, 1912, p. 314.

Men who are deeply thoughtful, thorough students appreciate the relative importance of new discoveries, and in the majority of instances the charge of exaggerating the importance and effect of their work cannot be sustained against them. "The very difficulty of carrying into execution the simplest principles of their science teaches them a demeanor of conservatism and humility. But to the dilettante or amateur in hygiene nothing is impossible in sanitary science." No human plague exists which cannot be scientifically eradicated if only the rules proposed by these neophytes are followed. Barton further points out that the public loses confidence in medical science, after finding that some of these heralded improvements accomplish far less than was promised. The thoroughly cultivated, scientific man is conservative concerning the significance of a new discovery. His experience has taught him to hesitate to make emphatic statements. He may not interest the public so much at the moment, but his wisdom and reputation will last longer.

### CONGRESS ON HYGIENE AND DEMOGRAPHY

Attention has been called in a previous issue[1] to the Fifteenth International Congress on Hygiene and Demography, which will be held in Washington next September. The importance of this congress makes it fitting that we should emphasize again some of its valuable features. Demography may be defined as the study of vital and social statistics in their relation to ethnology and anthropology. This congress is of vital interest to physicians because it is quite likely to be the starting point for a wide-spread and general movement for betterment of health conditions in the United States. In connection with the congress there is being planned an extensive health exhibition, at which will be illustrated the recent progress of the public health movement in this country and its dependencies. No exhibition dealing with the general field of public health has ever been held in the United States, and consequently this exhibition is of peculiar sanitary significance. All agencies working for the promotion of public health in any of its phases are requested to contribute material for it. The congress is to be held under the auspices of the federal government. Twenty-five foreign countries and forty-three states will send delegates, and there will be a large attendance in this country of those specially interested in hygiene. It furnishes a peculiar opportunity for all such persons, including state and municipal health officers, to get together, correlate their work, get new ideas and enlarge their point of view. It promises to be the most important event of the kind that has occurred in the United States. Its particular object is to extend the knowledge and improve the practice of vital statistics and hygiene in the countries which participate. The congress is organized in two divisions. The Division of Hygiene includes eight sections, covering the topics of hygienic microbiology and parasitology, dietetic hygiene, the hygiene of infancy and childhood, including the prevention of infant mortality, and school hygiene. This division will also cover industrial hygiene, the control of infectious diseases, hygiene of traffic and transportation, and military, naval and tropical hygiene. The Division of Demography will consider such topics as the development of vital statistics as a science, statistics of pauperism and accidents and of marriage and divorce, and other practical applications of demography to broad medical problems.

### SQUIBB & SONS' FAIR ACTION

A month ago[1] we published a report from our chemical laboratory and a contribution from Dr. Pusey on Thoremedin, manufactured by E. R. Squibb and Sons. On page 1135 of this issue we print a letter from this firm which deals with the matter in a way that cannot fail to be satisfactory to the medical profession and a credit to the old name of Squibb. The letter explains — and in view of the long and excellent record of the house the explanation should be accepted—that the composition of Thoremedin was kept secret only because the preparation was deemed in the experimental stage and that it was the intention of the firm to submit it in due course to the Council on Pharmacy and Chemistry for consideration. The letter further shows that E. R. Squibb and Sons undertook the manufacture of Thoremedin only after extremely favorable reports had been received from medical men in whom they had confidence. The firm now announces that it has submitted Thoremedin to the Council on Pharmacy and Chemistry and that it will abide by the conclusions of the Council. From evidence submitted THE JOURNAL is satisfied that no change in the methods of this house has occurred and that the ideals of Dr. E. R. Squibb are still being honored and lived up to. We feel convinced that whatever mistake Squibb and Sons have made in regard to Thoremedin has been one of judgment and not of intent. In consideration of their explanation and their fair action in this matter they should continue to receive the full confidence of the medical profession.

### "THERAPEUTIC EFFICIENCY"

The gentlemen who are coming so valiantly to the defense of proprietary frauds of the so-called ethical variety make much of the fact that the rejection of a product by the Council on Pharmacy and Chemistry is no proof that the product itself has no therapeutic value. As one of these champions of proprietary humbugs says:

> "I could give you numerous illustrations of remedies that have been attacked by the Council for reasons not affecting at all the therapeutic efficiency of these drugs."

So could we! "Therapeutic efficiency" is by no means the only element to be taken into consideration in determining whether a product is or is not a fraud. Suppose an unscrupulous individual with no knowledge of medicine or pharmacy, but with an hypertrophied advertising sense conceives the idea of exploiting an "ethical" proprietary. He takes equal parts of quinin sulphate and starch, has them made into tablets or put up in fancy-colored capsules. He gives the mixture a catchy but meaningless name and obtains a perpetual monopoly of that name under our trade-mark law. He buys advertising space freely in the so-called independent medical press. He tells the physicians of the country that his wonderful preparation is a tertiary diamin of the natural order of *Cinchonaceæ* in combination with amylose $(C_6H_{10}O_5)_n$. He recommends it for everything from soft corns to hard chancres. Has the stuff any "therapeutic efficiency"? Certainly it has. For malaria, it will be just as valuable as one-half the same quantity of quinin. True, quinin sulphate sells for 25 cents an ounce while our advertising friend asks $5 an ounce for his proprietary preparation. Notwithstanding this, it must still be admitted that it is good — for malaria. It has "therapeutic efficiency." Why then should not the Council on Pharmacy and Chemistry approve it? Why should not medical journals aid the swindler in exploiting it by sharing the profits in the fraud? This hypothetic case is no exaggeration of conditions that exist in the pharmaceutic world to-day. Hundreds of simple mixtures are sold under the most fraudulent claims. The physician does not know their composition, but because the medical journals of the country are willing to stand sponsor for these frauds, the medical profession, in many instances, seems to be equally willing to accept such products as scientific additions to the materia medica. What a farce! A simple mixture is sold under a proprietary name, its identity hidden under a mass of semi-scientific jargon; and with claims that would put Peruna to shame, and the editors of medical journals solemnly assert that the rejection by the Council of this "valuable and useful product" is an outrage. Is such a spectacle one that is likely to inspire confidence in the medical press?

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[1] Fifteenth International Congress on Hygiene and Demography, THE JOURNAL A. M. A., Dec. 23, 1911, p. 2087.

[1] THE JOURNAL A. M. A., March 9, 1912, pp. 706, 716.

### A NEW TEST FOR COLOR-BLINDNESS

The detection of an anomaly so wide-spread and persistent as is color-blindness calls for effective and simple modes of recognizing the defect. Among the methods in current use schemes for matching colored objects are widely employed. These would be decidedly satisfactory if the cases of color-blindness were identical — a situation which is far from the fact. It has long been appreciated that the intensity and other features of the color must be taken into account in accurate examinations. For example, if letters of one color are printed on a background of the confusion color, an apparent match may easily be found so that one dichromic will not be able to distinguish the letters; yet another dichromic individual may read the letters quite easily because the confusion colors are not both completely within the monochromatic region of the observer. Cases of color-blindness are rarely exactly alike — hence the difficulty of the contrast devices. Dr. Edridge-Green has introduced another scheme, that of classification tests.[1] An ingenious application of the principle has just been described by him.[2] The test consists of a number of colored beads in which every variety of confusion color of the color-blind is well represented and a box with four compartments into which the beads can be dropped The important feature is that the observer cannot see the bead after it has once been dropped into the selected compartment labeled red, yellow, green or blue. In conducting the test the examinee is told to select from the beads in front of him, which are placed on the white porcelain lining of the box, all those that are red, keeping as nearly as possible to the exact hue, but selecting those that are lighter or darker of the same color, and to drop them one by one into the compartment labeled red. The process is repeated with the other colors; and since the subject has no opportunity to compare the colors directly, he must select them according to the name which he gives to the color. Whereas the normal-sighted are able to select correct colors with the greatest ease, the color-blind will make their characteristic mistakes. Dr. Edridge-Green says that his test, like the ordinary lantern methods, will detect cases of color scotoma as well as those of ordinary color-blindness.

### INFORMATION CONCERNING PELLAGRA

The discovery that pellagra is a widely prevalent disease in this country, particularly in the south, has made it a subject of unusual medical and public interest. The *Southern Medical Journal* devotes the entire March issue to a symposium of thirteen papers on pellagra, all of which were read before the Southern Medical Association last November. These, with the discussions, constitute a valuable contribution to our knowledge of pellagra. A number of these articles have been abstracted in The Journal. The papers are by physicians of the south, some of them health officers, who have been brought into very direct contact with the disease for some years. The symposium is particularly valuable in that it gives the results of the observation and conclusions of a number of different men of practical experience, rather than those of one man, as in a text-book. While the exact etiology of the disease has not been determined and no definite form of treatment devised, yet it is worthy of note that the tendency of opinion is toward a hopeful prognosis when treatment is begun before the disease is too far advanced.

### GRADUATE SCHOOL OF MEDICINE AT HARVARD

About a year ago a graduate school of medicine was established as a department of Harvard University and placed under the control of the faculty of medicine. Recently Dr. Horace D. Arnold of Boston was selected as dean. The new feature of this school is not the giving of graduate instruction in medicine, since that has been encouraged by Harvard Medical School for a number of years. The action taken is a recognition that graduate instruction was important enough to justify the establishment of a separate department of the university and that this department should be developed along the same high plane as that of the other departments. With the rapid improvement that the undergraduate medical schools of this country have been experiencing, it is highly important that the graduate schools undergo an even greater development so that medical graduates will have opportunity for postgraduate instruction in medicine at least as thorough and as scientific as that furnished in the best undergraduate medical schools. Furthermore, it is probably a fact that graduate medical instruction in this country, generally speaking, has been even more neglected than undergraduate instruction, and there is much greater need of improvement. The creation of this new department at Harvard University, therefore, is a step in the right direction.

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[1] Edridge-Green, F. W.: Hunterian Lectures on Color-Vision and Color-Blindness, London, 1911, p. 66.

[2] Edridge-Green, F. W.: A New Test for Color-Blindness, Proc. Physiol. Soc., Jour. Physiol., 1912, xliii, p. 34.

## *Medical News*

### ALABAMA

**Medical Alumni Organize.**—The Mobile Alumni Medical Society of the School of Medicine of the University of Alabama was organized March 25. Dr. John O. Rush was elected president; Dr. P. O. Chaudron, vice-president; Dr. Eugene Thames, secretary, and Dr. M. J. Bancroft, treasurer.

**State Medical Meeting.**—The Medical Association of the State of Alabama will hold its annual meeting in Birmingham, April 16-19. The entertainment committee has made elaborate plans for the association, and invitations have been mailed to every physician in the state, enclosing a card giving privileges to all the clubs of the city during the meeting. Luncheons, receptions, banquets and barbecues have been arranged. Medical and surgical clinics will be held at the different hospitals. Elaborate entertainments are planned for the ladies in attendance. The meetings of the association will be held at the Jefferson theater and the money received for concessions in the exhibit hall will be applied to the entertainment fund of the association.

### COLORADO

**Physicians in Automobile Crash.**—Drs. H. H. Martin and Norbert K. Knoch, Denver, were seriously injured in a collision between automobiles, March 28.

**Semi-Annual Clinics.**—The Medical Society of the City and County of Denver held its semiannual clinics in the various hospitals in the city, March 29 and 30.

**Tuberculosis a Reportable Disease.**—The State Board of Health has issued a circular declaring tuberculosis a communicable and infectious disease and requiring health officers to report all cases in their districts.

**Fresh Air Rooms in Schools.**—Two of the public school buildings of Denver have rooms with one side completely open, with removable windows which extend from the floor to the ceiling, so that the room may be closed during the severest weather.

**Change of Name.**—The Colorado State Association for the Prevention and Control of Tuberculosis has filed articles of incorporation as the Rocky Mountain Health Association. The intention of the association is to enlarge its work so as to include a campaign against all communicable diseases. The same officers were retained.

**Christian Sanatorium Planned.**—A group of local professional and business men is planning to establish a large sanatorium in Denver, to be called the Christian Sanatorium. The enterprise will involve an investment of at least $1,000,000, will be religious in its conduct and Protestant in creed. Dr. Henry S. Keyes, Los Angeles, Cal., is the originator of the project, which is said not to be organized for profit.

### FLORIDA

**State Association Meeting.**—The Florida Medical Association will hold its annual meeting in Tampa, May 8, and the State Board of Medical Examiners will be in session in that city May 6 and 7.

**New Building for State Board.**—The new building for the State Board of Health at Jacksonville is nearing completion. It is a two-story structure, the lower floors of which will be equipped with laboratory service, the upper floor being used as headquarters and offices.

### ILLINOIS

#### Chicago

**Personal.**—Dr. Edmund J. Doering has returned from a trip to the Mediterranean.——Dr. W. H. Wilder has sailed for Europe.

**Clean Milk.**—Drs. Robert A. Black, R. R. Ferguson, and Frederick Tice, members of the Chicago Medical Society's Milk Commission, discussed clean milk, its production, transportation and distribution, at a public meeting in the public library building, April 6.

**Good Work by a Physician Alderman.**—Dr. Willis O. Nance, the only physician in the city council, recently reelected by a majority of more than 1,700 votes, introduced an ordinance providing for the report to the commissioners of health of all cases of sore eyes in babies. This was passed by the council and signed by the mayor. He introduced ordinances providing for the abolishment of roller towels in public lavatories, and for the more stringent control of the sale of cocain and narcotic drugs, both of which were passed. He also introduced an ordinance prohibiting the sale of hypodermic syringes to persons other than physicians, but this was not passed by the council, as the corporation counsel decided it to be unconstitutional, notwithstanding the fact that such a law for the same purpose was enacted by the New York legislature a little over a year ago.

### IOWA

**Personal.**—Dr. David E. Beardsley has been appointed city physician of Cedar Rapids.——Dr. C. C. Shope, Des Moines, physician of Polk County, resigned April 1.——Dr. Sydney H. Smith, Council Bluffs, was painfully injured in a collision between his automobile and a trolley car, March 31.

**Homeopathic College Merged.**—The board of education of Iowa has merged all the chairs of the College of Homeopathic Medicine with those of the College of Medicine and Surgery of the State University of Iowa excepting two chairs, one of homeopathic medicine and the other of homeopathic materia medica and therapeutics.

**Clinics for Drake Alumni.**—The Drake Medical Alumni Association, Des Moines, has arranged a two-day clinic for its members, to be held April 17-18. The clinics will be held in the Mercy and Methodist hospitals and at the Medical College Building. The address of welcome will be given by President H. M. Bell and the response by Dr. George W. Newsome, Indianola. Dr. George F. Jenkins, Keokuk, will speak on the "Early Medical History of Iowa"; Dr. Ben C. Everall, Waterloo, on "Salient Points in Diagnosis and Treatment of Urinary Diseases," and Dr. Frank M. Fuller, Keokuk, on "Rheumatism in Children." After the close of the program a buffet luncheon will be served. On the second evening the annual banquet will be held and Dr. Charles F. Smith, Des Moines, will preside as toastmaster. The dean, Dr. W. W. Pearson, will respond to the toast on "The Future"; Dr. David S. Fairchild, Clinton, to "The Past," and Dr. C. F. Wahrer, Fort Madison, will speak on "The Things We Ought to Do." Special work will be provided in the various laboratories for visiting members, if they so desire. All arrangements are in the hands of Dr. Elmer B. Mountain, 619 Walnut Street, Des Moines.

### MARYLAND

#### Baltimore

**Superintendent's Salary Increased.**—The salary of the superintendent of the insane department at Bayview Hospital has been increased from $1,500 to $2,000.

**Thayer Declines Call.**—Dr. William Sidney Thayer, professor of clinical medicine in Johns Hopkins Medical School, has declined the call to a similar chair in Harvard University.

**Annual Meeting of State Society.**—The annual meeting of the Medical and Chirurgical Faculty of Maryland will be held in Baltimore, April 23-25. The annual oration will be delivered by Dr. Albion W. Hewlett, professor in the University of Michigan, Ann Arbor, on "High Blood Pressure." Dr. Harry Friedenwald will present to the society, on behalf of the committee, the "John M. T. Finney Fund for the Advancement of Surgery." The scientific session on April 25 will be devoted to "Septic Sore Throat." At the smoker, April 24, the newly organized orchestra of the society will render selections.

**Personal.**—Dr. Adolf Meyer sailed for Europe, March 16.——Dr. Thomas McCrae, associate professor of medicine in Johns Hopkins Medical School, has been elected to the chair of medicine at Jefferson Medical College, vice Dr. J. C. Wilson, resigned, and will enter on his duties in October.——Dr. William Simon, Catonsville, sailed for Panama and Central America, April 6.——Dr. Charles E. Simon has purchased from Dr. John C. Hemmeter his former residence on Linden Avenue.——Dr. D. W. Cathell has sold his residence on North Charles Street and has taken apartments with his son at the Emerson hotel.

## MASSACHUSETTS

**Request Appropriation for Contagious Ward.**—The trustees of the Boston City Hospital have requested an appropriation of $300,000 for a new contagious ward.

**Hospital Fund Assured.**—A week's campaign has brought pledges of the $100,000, which is to assure Melrose a new city hospital. Clock dials and team work were the successful methods employed.

**Cancer Hospital Opened.**—The Collis P. Huntington Memorial Hospital, connected with Harvard Medical School, was opened with formal ceremonies, March 26. The hospital is devoted solely to the care of cancer patients and is under the charge of the cancer commission of Harvard University.

**Personal.**—Drs. Henry A. Christian and Francis W. Peabody sail for Europe, April 30.——Dr. Thomas F. Leen will, it is reported, succeed Dr. Christian as physician in chief of Carney Hospital, Boston.——Dr. Patrick H. Mullowney, V.S., has been reappointed health commissioner of Boston and Dr. Francis J. Keaney a trustee of the City Hospital.

**District Nurses' Work.**—The Instructive District Nursing Association of Boston has made during the past year, 112,018 visits to 9,932 patients at an expense of $49,126; of these 3,391 were maternity cases. Earnest efforts are being made to raise a $100,000 twenty-fifth anniversary fund, which will permit the necessary expansion of the work, $59,645 of which has already been raised.

**Ask Appropriations.**—The trustees of the Boston City Hospital have asked for an appropriation of $5,000 to establish a tuberculosis clinic. They also ask for a similar appropriation to start an orthopedic clinic in view of the large number of deformities found by the recent physical examination of school children of the city. For enlarging the south or contagious department, an immediate appropriation of $297,000 is required.

**At the State House.**—The Committee on Ways and Means has been urged by the farmers to appropriate a large subsidy to encourage them to produce milk. They claim that there are 15,000 less cows in the state than there were five years ago owing to the "persecution of milk inspection."——The Committee on Public Health and Agriculture, sitting jointly, has rejected the Ellis Milk Bill which medical men wanted and voted to report in favor of the Meaney Bill. This creates a new milk board, of six, three appointed by the State Board of Health and three by the State Board of Agriculture. The Cattle Bureau, a department of the State Board of Agriculture, will be in charge of the barns, and local boards of health will look after the sale of milk within their own territory under the control of the new Milk Board.——After an adverse report by the Committee on Public Health the optometrists secured the substitution of a bill favorable to them, and its reference to the Ways and Means Committee.——The Committee on Public Charitable Institutions has reported in favor of an appropriation of about $110,000 for the enlargement of the Worcester State Hospital for the Insane.——A bill regulating the construction, sanitation, overcrowding, etc., of tenement houses in towns has received the approval of the Committee on Public Health.——The Worcester State Hospital for the Insane is to be entirely removed to the Grafton State Colony by Jan. 1, 1915, if the present plans already approved by the trustees are carried out. The expense at Grafton, about $400,000, will be largely met by the sale of the Worcester property.——The bill allowing for the registration of dental nurses to assist the dentists in their work in caring for the teeth of school children has been rejected.——The bill to authorize cities and towns to provide free meals for school children, has been defeated.

## MINNESOTA

**Antituberculosis Campaign.**—The campaign to obtain 2,500 new members for the State Antituberculosis Association started March 15, under the charge of Dr. H. L. Taylor, St. Paul.

**Epidemiologic Investigation.**—The Department of Epidemiology of the State Board of Health has conducted forty-four epidemiologic investigations and delivered fifteen public health lectures in various parts of the state, between October 1 last and the end of February. The work was under the care of Dr. H. W. Hill, Minneapolis, and Dr. A. J. Chesley.

**Civic Association Activities.**—The Civic and Commerce Association of Minneapolis is making efforts toward the prevention of incurable diseases and the reduction of unnecessary mortality. To carry out the plans for the coordination for public and private efforts for public health, a committee has been appointed, of which Dr. Archa A. Wilcox and Dr. P. M. Hall, city health commissioner, are members

**Personal.**—Dr. Beardsley has resigned as physician in charge of the Northern Pacific Hospital, Brainerd.——Dr. H. Longstreet Taylor has resigned from the St. Paul Antituberculosis Society.——Dr. L. J. Green has been appointed resident physician at the state reformatory, St. Cloud.——Dr. Howard Lankester, health commissioner of St. Paul, who has been critically ill, is reported to be improving.

**The Work Against Trachoma.**—Dr. Harrison of the U. S. Indian service, assisted by a nurse and three members of the medical force of the Indian agency, are making a house-to-house examination in the White Earth Reservation to determine the presence of trachoma and other communicable affections of the eye. Dr. Harrison will conduct similar examinations at Leech Lake, Red Lake and other Indian reservations in the state.

**State Aid for Rochester.**—Dr. Henry M. Bracken, Minneapolis, secretary of the state board of health, at a meeting, March 24, agreed to employ a public health officer to have charge of medical supervision of the public schools and who will devote his entire time to the care of the public health of the city, provided the municipality raises $2,000 to add to the $1,000 appropriated by the state board, making a total of $3,000, as the salary and expenses of the office.

## NEBRASKA

**State Board Bulletin.**—The secretaries of the State Board of Health met in Lincoln, March 15, and decided to issue a monthly bulletin, of which Dr. C. P. Fall, Beatrice, is to be editor, to be printed at the expense of the vital statistics fund.

**Oppose Contract Practice.**—Douglas County Medical Society at its March meeting in Omaha adopted an amendment to the by-laws to become effective on and after January 1, next, which provides that "no member of the medical profession, doing either private or contract work for smaller fees than the average charge for the same class of work demanded by the regular profession in the locality where said professional services are rendered, can become or remain a member of this society. Exception to the above rule can always be made in cases of the poor and needy, who can be treated gratuitously or for fees that such patients can afford."

## NEW YORK

**Personal.**—Dr. R. M. Pearce, Philadelphia, delivered the annual Alpha Omega Alpha address at the Syracuse Medical School on "Medical Education."——Dr. Ira F. Hart, Elmira, is seriously ill with pneumonia at his home.——Dr. Edwin V. Ross has resigned as a city physician of Rochester.——Dr. E. R. Linklater, Buffalo, is seriously ill at his home.——Dr. William P. Faust, health officer of Schenectady, has resigned on account of ill health.——Dr. Harry J. Brayton, for four years a member of the staff of the State Hospital for Incipient Tuberculosis, Ray Brook, has been appointed medical officer of the Iola Sanatorium, Rochester.——Dr. Ira A. Hix, Binghamton, is reported to be seriously ill with typhoid at his home.

**Governor Protects Milk Supply and Signs Weight Bill.**—Governor Dix has vetoed the Wheeler bill which would have allowed the unscrupulous milk dealer to sell milk containing solids much below the proportion the law requires. It is said that the statements of New York physicians as to the effect that this bill would have in increasing infant mortality influenced the governor to veto the measure.——On the same day that the Wheeler bill was vetoed, Governor Dix signed the Brooks bill which provides that ice, meat, meat products and butter shall be sold by weight and all other commodities, not in containers by the standard weight, measure or numerical count, and that containers must have inscribed in them the amount of their contents in net weight.

**Hospital Notes.**—The Rome Hospital bill, which provides for the management of the hospital by a commission to be appointed by the board of supervisors and for the care of both tuberculosis and general patients among the county poor, has passed both the senate and the assembly.——Plans have been prepared for the Tompkins County Tuberculosis Hospital, Taughannock Falls. The main building is to be 60 feet in length and 30 feet in width, exclusive of the porches. In addition to the shacks for patients, there is accommodation for four patients on the second floor of the main building.——The General Hospital site has been decided on as the most advantageous location for the Utica Tuberculosis Hospital.——The Sisters of St. Francis, Niagara Falls, have arranged for a mammoth sale of American flags on Flag Day, to increase the funds for the new hospital building, which is to cost about $300,000.

**Bill Threatens Pure Milk Supply.**—It was believed last January when the Board of Health of New York City changed the sanitary code so that the milk supplied to the city was divided into grades and a standard established for each that the problem of securing pure milk had been solved, so that the passage of the Wheeler bill during the closing hours of the legislature came with a shock to the New York milk committee. This bill, which has been branded as vicious by the New York milk committee, permits a person accused of selling milk of inferior quality or alleged as unfit for consumption, to produce a fair sample of the milk produced by a cow or dairy daily, his source of supply, and if the sample is up to the standard, no penalty shall be exacted. On receipt of the news that this bill had passed the legislature, the milk committee sent a telegram to Governor Dix stating that the bill was vicious and requesting a hearing. Dr. Charles E. North, New York City, secretary of the National Commission on Milk Standards, has also declared that the bill is thoroughly bad and that he will do all in his power to defeat it.

**Insanity Law Changed.**—The Bayne bill signed by Governor Dix on April 4, changes the name of the Commission in Lunacy to the State Hospital Commission and instead of a president there is to be a chairman to be chosen by the members of the commission. Any commissioner may be removed by the Governor for cause. The commission is authorized to establish a bureau of deportation which shall maintain a careful inspection of the methods and facilities for examining immigrants at the Port of New York. In New York City, it will be the duty of the authorities of the public city hospitals to send a nurse or medical examiner in lunacy attached to the psychopathic wards of their institutions, to any place where an alleged insane person is. If the person is found to be in need of immediate treatment, he shall be removed to the psychopathic ward for a period not to exceed ten days. The hospital commission hopes that this will obviate the necessity for police interference which frequently has an unfortunate effect on these cases. An important change provides that citizens are eligible for treatment in state hospitals whereas the old law provided that "residents" were eligible.

## New York City

**Harvey Society Meeting.**—The annual meeting of the Harvey Society was held at the College of Physicians and Surgeons, April 10.

**Fire at Hospital.**—A fire in the basement of the Bushwick Hospital, Brooklyn, March 26, caused considerable excitement, but it was not necessary to remove the patients, and only small damage was done.

**Pick to Speak in New York.**—Professor Ludwig Pick, of the University of Berlin, has accepted the invitation of the Alumni Association of the College of Physicians and Surgeons of New York City to deliver the Middleton-Goldsmith lectures —three in number—on November 7, 8 and 9.

**Personal.**—Dr. George H. Mallett has been appointed gynecologist to the General Memorial Hospital.——Dr. Joseph A. Blake was operated on for appendicitis at his home in Manhattan, March 30.——Dr. Alfred C. Carpenter was seriously njured by a circular saw at his summer home in Port Jervis on April 4.——Dr. J. R. Hayden is recuperating from a recent llness.

**New Polyclinic Hospital to be Opened.**—The medical profession has received an invitation to inspect the new buildings f this institution which have just been completed at 341-351 West Fiftieth street from 3 to 6 p. m. on April 17, 18, 19 and 20. The hospital will be opened for patients on April 22 nd the ambulance service will be inaugurated on May 1. The formal dedication of the buildings will take place n June 8, the day after the adjournment of the American Medical Association.

**Christian Scientist Convicted.**—Willis Vernon Cole, the Eddyist practitioner, whose first trial resulted in a disagreement, was convicted on the second trial on March 30, of practicing medicine without a license. In making the charge ustice Seabury said that one who held himself out by sign, ard, or public advertisement as being able to cure, treat, or rescribe for any human disease, pain, or deformity, or ailment and who maintained a public office to which persons might come for treatment and who receives a fee, is engaged in he practice of medicine under the meaning of the law. He aid further that, even though surgery was not resorted to and o drugs given, and even though the person so holding himself ut engages in prayer, he is engaged in the practice of medicine under the meaning of the law. Cole was fined $100. The se was appealed.

**Health Records.**—The Court of Appeals has handed down a decision upholding the right of the Bureau of Municipal Research to examine certain records of the New York City Health Department. Access to these records was denied to Dr. William L. Allen some months ago. Dr. Allen then applied to the Supreme Court for a writ of mandamus, which was denied. An appeal from the Supreme Court order to the Appellate Division was also dismissed and Dr. Allen then took the matter to the Court of Appeals. A statement issued by the Bureau of Municipal Research, of which Dr. Allen is director, states that this decision makes it clear in the State of New York under existing laws, that a taxpayer may have access to all public records of the city with the exception of those of the police and law departments, and the health department, where the taxpayer must comply with the reasonable rules and regulations of the Board of Health governing access.

## NORTH CAROLINA

**New Laboratory to be Dedicated.**—The trustees and the faculty of the University of North Carolina have issued invitations to the dedicatory exercises of the new medical laboratories in Caldwell Hall, May 8.

**Personal.**—Dr. Baird U. Brooks, West Durham, who was brought to the Union Protestant Infirmary suffering from kidney disease and was operated on March 12, is reported to be doing well.——Dr. Ralph B. Seem, for four years superintendent of the James Walker Memorial Hospital, Wilmington, has resigned and will locate in Wilmington after a course of postgraduate work.

**State Board of Health Upheld.**—The Supreme Court has finally decided the various issues involved in the appeal case from Wake County involving the right of the secretary of the State Board of Health to appoint a county superintendent of health and to fix his salary, providing the county authorities have failed to elect such an officer. In the case in question, Dr. J. J. L. McCullers, as has already been noted in THE JOURNAL, was appointed by the secretary of the State Board of Health, health officer of Wake County, as the county authorities had failed to make a choice. The secretary also fixed his compensation, but the Wake County commissioners resisted the payment of the bills of Dr. McCullers for professional work until the question had been decided by the courts; then they paid Dr. McCullers in accordance with the agreement made with the secretary of the State Board of Health.

## PENNSYLVANIA

**The Coatesville Typhoid Epidemic.**—Up to April 3 there had been thirty-four deaths from typhoid at Coatesville, the total number of cases in the borough exceeding 300. The public schools, which had been closed for twenty days, opened March 25. Miss Katherine Gillespie, supervisor of state nurses, who had been in charge of the County Hospital, died from typhoid in the Presbyterian Hospital, Philadelphia.

**Personal.**—Dr. Mary A. McCay, Sunbury, is reported to be seriously ill with nephritis.——Dr. Edwin St. Clair Wren, Reading, is ill with appendicitis, at Reading Hospital.——Dr. and Mrs. Ferdinando Colletti, Reading, have returned after nearly a year abroad.——Dr. A. J. Ainey, Brooklyn, has retired after forty-five years of practice.——Dr. J. Ray Light, Lebanon, who has been ill for two months, is reported to be convalescent.——Dr. J. J. Robb, a member of the staff of the State Hospital for the Insane, North Warren, has resigned to take graduate work.——Dr. R. C. King, Hellerstown, is ill in St. Luke's Hospital, Allentown, with an infection of the hand, following an operation wound.

**Plans of Medical Bureau.**—The new State Bureau of Medical Education and Licensure, April 1, completed the agreement on reciprocity on medical practitioners' licenses to be offered to the other states. Reciprocity applies only to the holders of diplomas from medical colleges recognized as in good standing by the licensing authorities of the state in which the candidate seeks the right to practice; the licensing authorities of either state are to follow the laws of their state in rating preliminary education.——The bureau has also decided to put into effect this year a system of examining and licensing midwives. ——The bureau urges strict rules of standardization and states that students of medical colleges who fail in their final examinations must be compelled to repeat the senior year, and has decreed that hereafter it will admit to practice no student who has failed first, and finally passed a second examination several weeks later.

### Philadelphia

**Addition to Hospital.**—Plans are being prepared for a three-story addition to the University Maternity, which will give a total capacity of more than one hundred and twenty beds, and thus placing the Maternity here on an equality with Sloan Maternity, New York, and the new Magee Maternity of Pittsburgh. Plans are also in preparation for a dispensary building to be added to the Maternity amphitheater.

**Memorials to Drs. Kelly and Long.**—Friends of the late Dr. Aloysius O. J. Kelly have presented $1,000 to the trustees of the University of Pennsylvania to create a prize in clinical medicine as a permanent memorial of Dr. Kelley's services to the university.——Besides the unveiling of the tablet to the memory of Dr. Crawford Williamson Long at the university on March 30, additional honor was done to his memory, April 1, when a portrait of Dr. Long, painted by his daughter, was unveiled with appropriate ceremonies in the medical school building.

**Penny Lunches Beneficial.**—The penny and three-cent lunches of the Home and School League have proved so beneficial to the children, not only to their health but to their mentality and deportment, that the Home and School League committee have opened branches in two schools, the Northwest Grammar, at Fifteenth and Race, where 800 children have been served in three weeks and the Miller School at Howard and Diamond. There are now eight public schools having the penny and three-cent lunches. Bowls of bean soup, piles of graham wafers, milk in big glasses, fruit, chocolate and cereal form the basis of the meal.

## VIRGINIA

**Stokes on Sanitation.**—A reception was held at the Naval Hospital, Norfolk, April 2, at which Surgeon-General Charles F. Stokes delivered an address on "Sanitation in the Navy."

**Personal.**—Dr. C. Mason Smith has been elected president and Dr. J. N. Barney, Jr., secretary of the Fredericksburg Board of Health.——Dr. E. C. Fisher, Richmond, was attacked by a negro highwayman in Fulton, in an attempt at robbery, but fought off his assailant.

**Health Association Formed.**—A meeting was held in Norfolk, March 18, at which the Health Association of Hampton Roads was organized. The following officers were elected: president, Dr. Southgate Leigh, Norfolk; vice-president, Dr. Joseph T. Buxton, Newport News, and secretary, Dr. L. T. Royster, Norfolk.

## WISCONSIN

**The Public Health Degree.**—By vote of the regents, on recommendation of the faculty, the degree of "Doctor of Public Health" has been established at the University of Wisconsin. Candidates for this degree must hold the degree of doctor of medicine from medical schools of approved standing, and must have spent at least two years subsequent to the regular medical course in the study of science relating to hygiene and public health.

## GENERAL

**Interstate Tuberculosis Congress.**—Governor Colquitt of Texas has invited the governors of Arizona, California, Colorado, Kansas, Nevada, New Mexico, Oklahoma and Utah to join in and to appoint delegates to the conference on tuberculosis to be held in Waco, April 16-17, under the auspices of the Texas Antituberculosis Association.

**Missouri Valley Meeting.**—The annual meeting of the Medical Society of the Missouri Valley, March 21-23, at Colfax, while handicapped by storm, was a successful and interesting one. There were symposiums on diseases of the kidneys, migraine and tuberculosis. The next meeting, the twenty-fifth anniversary of the society, will be held in Council Bluffs, Iowa, September 5 and 6.

**Pathologists and Bacteriologists Elect.**—At the annual meeting of the American Association of Pathologists and Bacteriologists, held at the University of Pennsylvania, Philadelphia, April 5 and 6, the following officers were elected: president, Dr. Herbert U. Williams, Buffalo, N. Y.; vice-president, Dr. J. J. MacKenzie, Toronto, Ont.; secretary, Dr. H. C. Ernst, Boston; treasurer, Dr. F. B. Mallory, Boston, and councilors, Drs. W. H. Park, New York City; Leo Loeb, St. Louis and E. R. LeCount, Chicago.

**Urologists Meet.**—At the eleventh annual meeting of the American Urological Association, held in New York City, April 2 and 3, more than two hundred were present and the following officers were elected: president, Dr. Granville MacGowan, Los Angeles; vice-president, Dr. J. Bentley Squier, New York City; secretary, Dr. H. A. Fowler, Washington, D. C., and treasurer, Dr. H. G. Fuller, Washington, D. C. At the annual banquet Dr. Louis E. Schmidt, Chicago, the retiring president, served as toastmaster.

**Naval Medical School Graduation.**—The closing exercises of the United States Naval Medical School, Washington, were held March 25, when a class of seven was graduated. Diplomas were presented and the principal address was made by Surgeon-General Charles Francis Stokes. Dr. William Webber Ford, professor of hygiene and pathology in Johns Hopkins University, delivered an address on the "Advancement of Medicine as a Science," and closing remarks were made by Medical Director Henry Gustave Beyer, dean of the school.

**A Call to Anesthetists.**—The New York Society of Anesthetists asks the anesthetists in the United States and Canada to meet in Atlantic City, N. J., at the time of the session of the American Medical Association, June 4-7, to form a national organization. The preliminary meeting for organization will be held June 4, when officers will be elected and committees appointed. All anesthetists are urged to join their local county and state associations and thus become eligible for membership to the American Medical Association. The symposium on anesthesia will be held June 6 in the Section on Pathology and Physiology. The headquarters of the anesthetists will be at the Hotel Marlborough-Blenheim.

**Conventions Elect Officers.**—The fifth annual meeting of the American Association for Cancer Research was held at the University of Pennsylvania, Philadelphia, April 3 and 4. The following officers were elected: president, Dr. E. E. Tyzzer, director of the cancer research of Harvard University; vice-president, Dr. Leo Loeb, St. Louis; secretary, Dr. S. B. Wolbach, Harvard University.——The fifth annual meeting of the International Association of Medical Museums was held at the University of Pennsylvania, Philadelphia, April 4. The officers of the association are as follows: president, Dr. A. S. Warthin, University of Michigan, Ann Arbor; vice-presidents, Drs. G. Sims Woodhead, Cambridge, Eng., Edward Souchon, Tulane University, New Orleans, and J. Ludwig Aschoff, Freiburg, Germany; secretary and treasurer, Dr. Maud Abbott, Gill University, Montreal and assistant secretary, Dr. Joseph Kaufmann, McGill University.

## LONDON LETTER

*(From Our Regular Correspondent)*

London, March 30, 1912.

### The Suffrage Question from the Medical Point of View

The attempts of a certain portion of the female population to obtain the right to vote for representation in Parliament have been marked by repeated outbreaks of disorder and mobbing of ministers, interruption of speeches at public meetings, raids on the House of Commons and, finally, by the smashing of the windows of unoffending shopkeepers. The medical profession regards the agitation as a neurotic manifestation, such as is familiar in the consultation-room in women who have no occupation and have missed their vocation in life. Sir Almroth Wright has published in the *Times* a remarkable letter of three columns under the title "Militant Hysteria," in which he advances many reasons why women are both mentally and physically unfitted for the franchise. In the first place, menstruation and child-bearing are associated with hypersensitiveness, unreasonableness and loss of the sense of proportion. The recruiting field for the militant suffragists is the half million of our excess of female population. Sir Almroth divides into types the women in the militant movement: (1) Women who hold, with minds otherwise unwarped, that they may, whenever it is to their advantage, lawfully resort to physical violence. (2) Women who have all their lives been strangers to joy, whose instincts, long repressed, have broken out into flame. In them everything is turned into bitterness and hatred of men. Their legislative program is license for themselves or restrictions for men. (3) The incomplete. One side of their nature has undergone atrophy, with the result that they have lost touch with their fellow men and women. Their program is to convert the whole world into an epicene institution in which man and woman shall everywhere work side by side at the same tasks and for the same pay. (4) The woman who is poisoned by her misplaced self-esteem, and who flies out at every man who does not pay homage to her intellect. She is affronted when a man avers that for him the glory of woman lies in her capacity for motherhood and in answering allegiance to the ethics special to her sex. In the wake of these embittered women come troops of girls just grown up. "All these will assure you," he says, "that woman has suffered all manner of indignity and injustice at the hands of man. To obey a man would be to commit the unpardonable sin." Discussing the resort to physical force by the suffragists he goes on. "Up to the present in the whole civilized world there has ruled a truce of God as between man and woman. That truce is based on the solemn covenant that within the frontiers of civilization the weapon of physical force may not be applied by man against woman or by woman against man. Under this covenant the reign of force which prevails in the world without comes to an end when man enters his household and that half of the human race which needs protection is raised above the waves of violence. It is this solemn covenant so faithfully kept by man which has been violated by the militant suffragist in the interest of her morbid, stupid, ugly and dishonest program."

### The National Insurance Act

A meeting of representatives of the medical faculties of the English universities, the Royal College of Physicians, the Royal College of Surgeons and the Society of Apothecaries, that is, representatives of most of all the licensing bodies of the metropolis, England, has passed a resolution recognizing that there is remarkable unanimity of opinion within the medical profession as to the attitude which its members should adopt toward the national insurance act and generally approving of that attitude, while conscious that there is some difference of opinion as regards details. The conference has expressed its willingness to support the demand that these principles should be recognized by the government. In Ireland, the profession views the act with apprehension, as in England, but on different grounds, for the system of practice is quite different. There, in private practice, the traditional $5 fee prevails, but for poorer patients is mitigated by giving two or more attendances for the one fee. The physician writes a prescription which the patient gets compounded by a pharmacist at his own expense. In England, for the same class, fees running as low as 50 cents or even 25 cents are charged and medicine is supplied with the advice. On the other hand, n England all classes, except absolute paupers, pay fees to the physician or obtain attendance through benefit societies, while n Ireland, the working class, for which the fees in vogue are out of the question, obtains free medical attendance at the pub-ic dispensaries, which are established all over the country and maintained out of the rates. In deference to the wish of the Irish members of Parliament, Ireland has been excluded from the portion of the act which concerns medical benefits, as the class for which they are intended already obtains medical attendance free. Objection to this exclusion was at once raised by the Irish physicians, curiously at the very time their English colleagues were strenuously objecting to the medical portion of the act. The reason was probably that the Irish dispensary doctors, whose stipend is small, thought that they might fare better under the act, or perhaps had some idea that while still drawing their stipends they could also receive fees under the act. Now they are beginning to see that if the medical benefits are introduced into Ireland a grave revo-ution in medical practice must occur. Benefit societies do not lourish in Ireland as they do in England, but it seems likely hat the act will lead to their development, and politicians are urging the people to join or form benefit societies to be administered under the act and so eventually obtain medical attendance. It is becoming evident to the Irish physicians that if his is done on a large scale and medical benefits are extended o Ireland, which they will be as soon as there is a popular demand for them, a reduction must take place in the number and salaries of dispensary physicians. Physicians will not be required as such, except for actually destitute persons. In one direction, those who have paid moderate fees, and, in the other, hose who were dispensary patients will be swept into the nsurance net. In order that the new system may not bring uin on the profession thorough organization is considered nec-ssary. This is now proceeding and a conjoint committee of he British Medical Association and the Irish Medical Associa-ion has been appointed for the purpose.

## PARIS LETTER

*(From Our Regular Correspondent)*

PARIS, March 22, 1912.

### Treatment of Syphilis in Pregnant Women

On March 19, Dr. Pamard of Avignon read before the Académie de médecine a paper which elicited a very interesting discussion. He reported four cases in which women married to syphilitics gave birth to syphilitic children without ever having presented a single syphilitic symptom themselves. After mercurial treatment of the fathers, these women, again becoming pregnant, had children that were as healthy and vigorous as the children of sound parents. Dr. Pamard believes that in such cases the uterine mucosa alone is infected. Never having had any failure with mercurial treatment of pregnant women or new-born infants, he believes that there is no reason to employ another drug, such as salvarsan.

Dr. Pinard, professor of clinical obstetrics at the Faculté de médecine de Paris, remarked that it could not be too often repeated that congenital syphilis was by far most frequently of paternal origin. Dr. Pinard insisted on the necessity of treatment of the fathers before conception and of the mothers during gestation. As for the syphilis contracted by the mother from the fetus, as believed by many authors, Pinard declared that he had never observed a single piece of evidence in support of it. He had lately seen a woman who had two normal pregnancies by one man, then by a second man two pregnancies each terminated by the expulsion of the dead syphilitic fetus; then without any intervening treatment, she had by a third man two pregnancies terminated by the birth of living and healthy children. Such a fact can be explained only by admitting that the maternal organism remained immune to all syphilitic contamination.

Dr. Balzer, physician at the Saint-Louis hospital, believes that all women who bear syphilitic children ought to be considered as infected with syphilis, even if they do not present any symptoms, it being possible that such symptoms may not manifest themselves until several months or years after the pregnancy.

Dr. Bar, professor of clinical obstetrics at the Faculté de médecine de Paris, believes that women who bear syphilitic children by syphilitic fathers may themselves present specific symptoms without a chancre ever having been discernible in them. But on the other hand, there are cases in which a woman who has given birth to a syphilitic child shows no trace of syphilis. In such a case, the Wassermann test is found clearly positive in the fetus, but feebly so in the mother, and this question of the degree is one of the first importance. After the observation of the positive reaction, Colles' law was denied in Germany. Bar, taking into account the degree of the reaction, asks if a febrile positive reaction is not the result of a passive immunity of the mother. What seems to favor this view is that some weeks after childbirth, the reaction tends to become negative, even in the absence of all treatment.

### The Neomalthusian Propaganda and the Falling Birth-Rate.

At the second Congrès de la Fédération des Sociétés contre la pornographie, M. Bureau, professor of the Institut catholique, read an interesting paper on neomalthusianism and its relation to depopulation. The doctrine of Malthus is today completely changed.

Malthus, fearing that the means of subsistence might not increase in the same proportion as the population, recommended abstinence and chastity to avoid that increase of the human race which, he believed, led to misery. Those who proclaim themselves to-day disciples of Malthus are far from adhering to that ascetic doctrine. There seems to be a direct relation between their propaganda and the diminution of the birthrate. M. Bureau especially cited the examples of three cities where the neomalthusian movement has ardent disciples: Roubaix, Tourcoing and le Creusot. At Roubaix, there were in 1897, 3,837 births; in 1906, 2,568. At Tourcoing, there were in 1898, 2,445 against 1,675 in 1906. At le Creusot, there were in 1893, 855 births for 28,229 inhabitants; in 1904 there were 592 for 30,000 inhabitants.

Unfortunately, owing to a defect in the law, so that only obscenity of the text is punishable in advertisements, it is very difficult to make headway against this propaganda. The courts in three cases have declared that it was impossible to convict those who dealt in objects for such purposes, much as the given action was to be reprobated.

## BERLIN LETTER

*(From Our Regular Correspondent)*

BERLIN, March 22, 1912.

### Personal

Professor Posner, the publisher of the *Berliner klinische Wochenschrift*, has received the title of medical privy councilor (Geheimer Medizinalrat).

At the close of the winter semester Professor Schottel, director of the hygienic institute at Freiburg, will retire. As his successor Professor Hahn, director of the hygienic institute at Königsberg, is proposed.

Professor Dürck, former director of the pathologic institute at Jena, now prosector at the municipal hospital at Munich, will go to Brazil for six months at the invitation of the Brazilian government to organize the instruction in pathology and the management of institutes for pathologic anatomy.

Professor Dönitz, a department superintendent of the institute for infectious diseases, died March 13, aged 73. In the year 1872 he went to Japan, where he introduced European medicine into the medical academy of Tokio and into various Japanese hospitals and at the same time was an adviser of the government in the regulation of state medical affairs. When he returned to Germany, he became a fellow worker with Robert Koch, first in the hygienic institute and then in the institute for infectious diseases. In 1896 he became a member of the newly founded institute for the investigation of serums and serotherapy, under the direction of Ehrlich, as a result of which he later settled in Frankfort with the institute. When Professor Brieger resigned the directorship of the clinical department in the institute for infectious diseases, Dönitz was called to this place by the Ministerialdirektor Althoff, with whom he was very friendly, because as was claimed at the time, Althoff had great confidence in the medical skill of Dönitz and wished to be treated by him. A few years ago Dönitz resigned this place in order to devote himself to essentially scientific laboratory work. While in Japan he published a series of anthropologic articles, but his principal work was in the field of bacteriology, especially on the action of tuberculin, tetanus antitoxin and diphtheria antitoxin. Other studies were on the treatment of leprosy and on insects transmitting malaria and sleeping sickness, in which Dönitz' extensive knowledge of insects stood him in good stead.

At the end of the winter semester Professor Stieda, director of the anatomic institute at Königsberg, will retire from his position.

In addition to Professor Schütze still another medical member of the expedition of the German Red Cross to the Turkish camp in Tripoli, a recent medical graduate, has succumbed to typhoid.

Dr. Löhlein, surgeon at the Lazarus hospital, died March 11, in Berlin, at the age of 56.

### Another Paratyphoid Epidemic in Soldiers

According to the law of duplication of cases, the wholesale poisoning at Potsdam has been followed by an epidemic of intestinal catarrh in an infantry regiment stationed in Mainz. Altogether about 80 soldiers were taken sick in about twenty-four hours. The Gärtner bacillus was found to be the cause of the illness.

### Proposed Establishment of a University at Frankfort

As I mentioned some time ago, a number of influential citizens of Frankfurt a. M., under the leadership of the mayor, desire to found a university in that city. The intent is to make the university organization distinct from that of the other Prussian universities to the extent that the city of Frankfort shall bear the cost of the maintenance of the university and in turn shall mainly control the management and selection of the professors. At a discussion held a few days ago in the Prussian parliament, the minister of education made a statement in connection with this question which dampened the hopes of the Frankfort people to a considerable extent. He stated that investigations of the conditions at Frankfort by the officials of the department had led to the result that the material prerequisites for the founding of the university had been provided, but that the government must insist on the following points before the institution is established, namely, that the university must be completely independent of any sort of influence of the founders. It must have the same origin as any other university, that is, by letters patent from the king, the statutes to be approved by the king and the faculty by the minister. The professors must be called according to the same procedures as the professors of other universities. The minister must not be limited to the nominations made by the faculty; he may make to the king other nominations. In their other official relations the professors must be governed in the same way as in other universities. The external organization must be the same as elsewhere. The distinction from other universities consists only in the fact that the support is not derived from the state but from the Frankfort community and the other founders. It is in no way to be regarded as a special property of the city of Frankfort but a number of corporations must unite, among them the city of Frankfort, and must provide those institutions and means which are necessary to establish and maintain the university. As a distinction from other universities, a certain organization for the supervision of the external properties of the university shall be established. A commission is proposed that shall conduct the general management and a board (*Grosser Rat*) which shall to a certain extent act as a representative assembly for the determination of the budget, etc. This would act as an authority for regulation of the external affairs of the university. The newspaper statement that the university was already founded the minister characterized as not authentic. In the debate, all political parties, with the exception of the radical party, expressed themselves as opposed to the foundation of the university. With reference to this condition of affairs the *Deutsche medizinische Wochenschrift* remarks that, this being the case, one may well consider it doubtful whether a Frankfort university will be established. After the statement of the minister not much remains of the dreams of the Frankforters, and we need not suppose that the practical citizens of Frankfort will content themselves with the solitary privilege of paying the bills. On the other hand, one may believe that it was in fact the purpose of the Frankforters to establish "a" university *coute que coute* but not necessarily a high-grade, leading educational institution.

## VIENNA LETTER

(*From Our Regular Correspondent*)

Vienna, March 23, 1912.

### Regulations of the Sale of Poisons and Firearms

The increasing number of accidents caused by the ease with which poisons and firearms (especially air-guns, fowling-pieces and revolvers) can be procured here has often been criticized, hitherto without any effect. But now a petition has been sent to the Ministry of Home Affairs asking for strict regulations in dealing with these conditions. There are certain poisons, like caustic potash in solution, phenol (carbolic acid), mercury bichlorid, as well as potassium cyanate and prussic acid, which are much used in commercial and industrial life, and which can be bought without any restriction whatever. Guns and pistols may be obtained by any boy, together with the projectiles belonging to the weapon. Therefore, teachers, magistrates, physicians and lawyers have combined to bring about a change in the existing state of affairs, in spite of the violent protests by the makers of firearms.

### The Conflict Between the Profession and the "First Aid"

As has been told in a previous letter (February 10) the conflict between the profession and the Rettungsgesellschaft or "first aid" corps of Vienna, had assumed an unpleasant degree, as personal differences had been dragged into the discussion. Finally, the judgment of an ordinary court had been invoked, and Vienna would have had the painful occurrence of a body of physicians fighting against a medical institution which it tried to benefit. Peace was made, however, just when it was least expected. The "first aid" consented to recognize the Organization of the Practitioners as the legitimate representative body of its medical staff's wishes to work out a scale of fees and a house order for its physicians, in cooperation with this body; to regard the work done by its staff as fully equivalent to that done in hospitals; in short, all the desiderata and complaints of the physicians were complied with.

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# Miscellany

**Effects of Altitude.**—In their report to the Royal Society of a series of observations made on the summit of Pike's Peak during the summer of 1911 (*Nature*), Drs. J. S. Haldane, C. Gordon Douglas, Y. Henderson and E. C. Schneider draw the following conclusions, slightly abbreviated from the original. The symptoms first observed—cyanosis, nausea, bowel disturbance, headache, fainting in some persons, periodic breathing and great hyperpnea on exertion—are referable, directly or indirectly, to partial want of oxygen from diminished pressure of oxygen in the air. After two or three days on the summit very distinct signs of acclimatization begin to appear. After acclimatization has occurred, these symptoms disappeared, except hyperpnea on muscular exertion or after holding the breath. Periodic breathing was observed occasionally, also blueness of the lips and face after severe exertion. The respiratory exchange during rest remained about normal in the one subject on whom exact experiments were made and did not seem materially increased during work. After acclimatization the alveolar carbon dioxid pressure ran down from about 40 mm. to 27 mm. during rest or moderate exertion, which corresponded to an increase of about 50 per cent. in the ventilation of the lung alveoli. During severe exertion the $CO_2$ pressure was about half what it normally is during similar exertion which corresponded to about 100 per cent. increase of the hyperpnea; and owing to a temporary alteration in the respiratory quotient the breathing was still further increased, for a time, to three times what it would have been at sea level with the same oxygen consumpion. This change in the alveolar carbon dioxid pressure occurred gradually on going up and disappeared in the same way on going down, taking a number of days to reach completion. The hemoglobin percentage increased for several weeks on the summit and there was parallel increase in the number of red corpuscles. A large increase in the hemoglobin occurred during the first three weeks on the summit and with his, except during the first week, there was a slight increase n blood volume. On coming down the hemoglobin percentage iminished much more rapidly than the total hemoglobin. So ar as observed, no marked change in rate of the circulation occurred though they mention a slight increase in the pulse-ate in most cases. After acclimatization the oxygen presure in the arterial blood (measured by the carbon monoxid method) rose during rest by about 5 mm. of mercury, or 66 per cent. above the alveolar oxygen pressure, and remained at level of only about 12 mm. below the normal oxygen presure at sea level. Before acclimatization had occurred the rterial oxygen pressure was about 45 mm. below normal and nly slightly above the alveolar oxygen pressure. This change ppears to be due to a progressive increase in the activity of he alveolar epithelium in secreting oxygen inward. Acclimatization to altitude is mainly due to this increased activity, ut partly also to the increased lung ventilation and to a ess extent to the increased hemoglobin percentage in the lood. All these changes require some days for their develpment and this accounts for the difference in the effects of ltitude on balloonists or travelers on mountain railroads who make rapid ascents and mountain-climbers who ascend more gradually.

### Practical Eugenics—Medical Marriage Certificates

New Zealand has léd the van in a number of social experiments, and a New Zealand writer, A. N. Field, has an article in he *Eugenics Review*, 1912, iii, 306 (quoted in the *Training chool*), advocating legislation to compel a medical examination before marrying.

The chief danger of eugenics, says Field, is that when the iologic theories on which it rests have become popularized, here are certain to be a large number of energetic oversanuine people who will proceed to experiment vigorously before cientific knowledge is really ripe for application. The main hing to be done at present is to bring people to think about ugenics, and to collect data in order that a more exact knowldge of the laws of heredity may be obtained. Human beings re not to be bred like farm stock.

As matters stand to-day, it is not possible to obtain accute data as to human heredity, except in a comparatively mall number of cases, and it seems that if the trouble were ken to educate public opinion up to the point, it would be uite feasible to obtain a most valuable contribution to the udy of eugenics at a comparatively trifling cost.

Briefly, the idea is that every person before marrying hould be compelled by law to undergo a private and confiential medical examination. The public has been accustomed r many years past to submit without complaint to examiation by doctors when taking out life-insurance policies, and e examinations now proposed would not be one whit more ksome. The law might, however, provide that where one arty to a proposed marriage refused to show this official edical certificate to the other party, no action for breach of promise would lie. The result of such an examination would be that no person could contract a marriage without having attention directed to his or her physical fitness to do so.

Of course, when two people, presumably more or less in love, get to the stage of applying for a marriage license, no doctor's views as to their physique are likely to have much weight with them. Still the mere fact that there is a medical examination to be undergone before a marriage can take place will cause the whole population to think much more seriously about this important question than it has done in the past. A direct national premium, as it were, is placed on good health. People assess most factors in a marriage, and here would be a new one in which not only the parties themselves, but also their relatives, would show a keen interest.

From the national point of view the result would be that a return could be issued every year along with the other vital statistics showing the number of "a's" marrying "a's," the number of "a's" marrying "b's," the number of "c's" marrying "d's," and so on through the list. The country would be able to see at a glance how things were tending, and in case of the "d's," more specific information might be published in another table, showing the grounds on which they were so classified. The marriage of "d's" with "d's" would give a clue as to what extent the production of degenerates was going on, and the course of the statistics would soon indicate whether further legislation was desirable. While the whole examination would be private and confidential, a duplicate of the certificate concerning each person would be filed away in the government archives, just as the private and confidential income-tax returns of the community are already filed in government offices. [It should be remembered that this plan is proposed for New Zealand.] From these records properly accredited officials would, in time, be able to secure definite information as to the ancestry of the great majority of the inmates of mental hospitals and defectives generally. In the course of a hundred years, which, after all, is a short time in the life of a community, an enormous mass of data would be available, and invaluable light would doubtless have been shed on many obscure problems of heredity.

Of course, when one talks in a general way of health certificates before marriage, people immediately jump to the conclusion that the idea is to divide society into two classes, the fit and the unfit, and to permit only the fit to marry. No one is at present competent to say who is fit to marry and who is not. It is doubtful whether it will ever be humanly possible to draw a hard-and-fast line. It is easy to pick out extreme cases—the thoroughly sound and clean-bred youth, and the lunatic descended of lunatics—but between these lies a great mass of population, neither especially fit nor especially unfit. Who is there that would dare to say just where the line was to be drawn?

Such an examination is worth striving for as an end in itself. It would make people think for themselves on this most important matter. It would offer a direct incentive to good health, particularly if the highest-grade certificates were refused to persons who, though free from disease, were not physically well developed. It would enable the state medical service to watch over the children of degenerate parents, and see that they were given the best chance possible. And, finally, it should tend to discourage experimenting before scientific knowledge is ripe for application.

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## Marriages

T. Edward Moore, M.D., Berkeley, Cal., to Miss Virginia Potter of San Francisco, March 29.

J. Morton Blissard, M.D., La Jara, Colo., to Miss Grace Rauch of Alamosa, Colo., March 15.

Casriel J. Fishman, M.D., Oklahoma City, to Miss Miriam Goldberg of Chicago, March 31.

Robert Eustis Hoyt, M.D., U. S. Navy, to Miss Lucille Cook of Oakland, Cal., April 10.

## Deaths

**John Herr Musser, M.D.** President of the American Medical Association in 1903-4, eminent as an internist, died at his home in Philadelphia, April 3, from angina pectoris, aged 55.

He was born in Strasburg, Pa., June 22, 1856, the son of Dr. Benjamin and Naomi Herr Musser. He came of a line of physicians, his grandfather being Dr. Martin Musser and his great grandfather, Dr. Benjamin Musser.

His early education was received at the Strasburg (Pa.) High School and the Millersville State Normal School. He took his medical course in the University of Pennsylvania, graduating in 1877. He immediately commenced practice in Philadelphia and soon built up an enormous practice. After a few years he associated himself with his uncle, Dr. Milton B. Musser, in West Philadelphia, and on his death succeeded to his extensive practice.

The first fifteen years of Dr. Musser's professional life were spent in general practice, including his internship in the Philadelphia Hospital. After this he devoted his time more and more to internal medicine as a specialty, and to consultation work.

Dr. Musser was one of the group of able young men whom Dr. William Pepper gathered around him in the University—a group notable for ability, means and social standing; a group which Professor Pepper brought up in his own line of teaching, making them consummate diagnosticians and clinicians of unusual ability.

Dr. Musser early began his teaching work in his alma mater; first as a quiz-master, later as demonstrator and associate professor, and finally as professor of clinical medicine. He was also director of the Department of Research Medicine in the University. He held many positions in connection with hospitals, among them those of pathologist of the Presbyterian Hospital; physician to the Philadelphia, University, and Presbyterian hospitals; consulting physician to the Jewish Hospital, West Philadelphia Hospital for Women, Germantown, Chestnut Hill and Rush hospitals, Philadelphia, and Mercy Hospital, Springfield, Mass. In his hospital work, Dr. Musser's studies were chiefly along the lines of morbid anatomy and diagnosis.

He had been president of the following societies: American Medical Association, 1903-4; American School Hygiene Association, 1909; Philadelphia Pathological Society, 1893-1897; Philadelphia County Medical Society, 1899, and of the National Medical Library Association at the time of his death. He was vice-president of the Pennsylvania Society for the Prevention of Tuberculosis in 1910 and was also an active, corresponding, or honorary member of many other learned societies in this country and abroad. He was given the honorary degree of LL.D. by Franklin and Marshall College in 1908 and was commissioned First Lieutenant, Medical Reserve Corps, U. S. Army.

In addition to his contributions to current medical literature, Dr. Musser was the author of a work on medical diagnosis, which has gone through six editions; was editor of the volume on diseases of the lungs in Nothnagel's Encyclopedia and co-editor with the late Dr. Aloysius O. J. Kelly of a system of therapeutics. He also was the author of the article on pneumonia in Osler's System of Medicine and of various articles in Hare's system of therapeutics.

John Herr Musser, 1856-1912

Dr. Musser was actively engaged in the formation of the Committee of One Hundred of Philadelphia to inspect the public charities of the city, and was also chairman of the committee to present to the mayor the plans and methods of action of the new Vice Commission, which is about to be appointed. He was a pioneer in social service work in the Hospital of the University of Pennsylvania, and president of the organization formed for that purpose. He also started tuberculosis classes in the Presbyterian Hospital.

In the death of Dr. Musser in the prime of life and at the zenith of his professional career, the medical world has lost an internist and diagnostician of the highest grade; medical education, an enthusiastic, earnest and painstaking instructor; medical literature, a writer of no mean degree; science, a brilliant laborer in its research field, and social service, a pioneer.

**Henry O. Walker, M.D.,** a pioneer surgeon of Michigan and a man well-known and beloved throughout the Middle West, died at his home in Detroit, April 5, from pneumonia, aged 68. Dr. Walker was a native of Detroit, studied in Albion College and the University of Michigan and took his medical course in Bellevue Hospital Medical College, graduating in 1867. He commenced practice in his native city and after two years became secretary of the Detroit College of Medicine, a position which he held until his death. He was also professor of surgery in the institution. He was a member of the American Medical Association, third vice-president in 1888-9, first vice-president in 1892-3; chairman of the Section on Surgery in 1899; secretary in 1883 and a member of the House of Delegates from the section in 1904. He was a charter member and once president of the Mississippi Valley Medical Association. He had also served as city physician of Detroit and physician of Wayne County and as a member of the Board of Estimates and Board of Health of Detroit. He was commissioned First Lieutenant, Medical Reserve Corps, U. S. A., in 1908, and was a member of the Association of Military Surgeons of the United States. He had been surgeon to Harper's, St. Mary's and St. Luke's hospitals, Detroit, and the Eastern Michigan Asylum. His contributions to the medical literature were chiefly on genito-urinary surgery. In 1869 he became editor of the *Detroit Review of Medicine*.

**Russell Broughton, M.D.** Rush Medical College, 1869; a member of the American Medical Association; a veteran of the Civil War; proprietor and manager of the Broughton Sanitarium, Rockford, Ill., who had made the treatment of alcohol and drug addictions a special study for many years and had been remarkably successful in this line of work; esteemed and beloved as a practitioner and friend by his professional brethren and patients; died at his home in Rockford, April 4, from pneumonia, aged 69.

**George Washington Scollay, M.D.** Missouri Medical College, St. Louis, 1840; who had not practiced since 1851, but had devoted his time to chemistry, with especial reference to glass-making; a pioneer glass manufacturer of St. Louis; died at the home of his daughter in St. Louis, March 4, from arteriosclerosis, aged 92.

**Alfred Buckingham, M.D.** Miami Medical College, Cincinnati, 1856; in charge of the Camp Dennison hospitals during the Civil War; died at his home in Camp Dennison, Ohio, March 23, aged 79.

**George Washington Maser, M.D.** Bellevue Hospital Medical College, 1881; a member of the American Medical Association and a charter member and formerly president of the Labette County (Kan.) Medical Society; a specialist on diseases of the eye and ear of Parsons, Kan., and consulting oculist to the Missouri, Kansas & Texas Railroad; died at his home in Parsons, March 26, from an infection of the gall-bladder with perforation, aged 56.

**Darius Mason, M.D.** College of Physicians and Surgeons, New York City, 1853; a member of the American Medical Association; formerly president of the Washington State Medical Association and a member of the judicial council of the American Medical Association; who was the guest of honor at the annual meeting and banquet of the Spokane Medical Society in 1910; died at his home in Spokane, March 26, from heart disease, aged 82.

**Julius Lincoln Salinger, M.D.** Jefferson Medical College, 1886; a member of the American Medical Association; a neurologist and medical expert of Philadelphia; at one time assistant professor of the practice of medicine in his alma mater and a member of the staff of the Philadelphia Hospital; while testifying in the court of common pleas, March 24, became unconscious and died from angina pectoris, aged 46.

**Gideon E. Blackburn, M.D.** Pulte Medical College, Cincinnati, 1879; a veteran of the Civil War; superintendent of, and surgeon to, the Blackburn Hospital, Butte, Mont.; a member of the legislature and chairman of the house committee on appropriations; died suddenly in Butte, March 24, from nephritis, aged 72. The Silver Bow Medical Society at a special meeting, adopted resolutions of regret.

**Thomas Nicol McLean, M.D.** McGill University, Montreal, 1882; a member of the American Medical Association, and formerly president of the Park Region District and Ottertail County medical societies; local surgeon at Fergus Falls, Minn., for the Great Northern Railway; mayor of Fergus Falls from 1894 to 1895; died in Chicago, March 22, from carcinoma of the kidneys, aged 52.

**John Little Morris, M.D.** Rush Medical College, 1893; formerly a member of the American Medical Association, consulting physician to Cook County Hospital and chief surgeon to the Union Elevated Railway, Chicago; since 1902 manager and chief of staff of the Columbus (Ind.) Sanitarium; died in the Southeastern Hospital for the Insane, Madison, Ind., March 23, aged 42.

**William Craig, M.D.** Philadelphia University of Medicine and Surgery, 185—; assistant surgeon of the Twenty-Sixth Pennsylvania Volunteer Infantry during the Civil War and later a practitioner of Chicago; for several years an inmate of the Home for Disabled Volunteer Soldiers, Danville, Ill.; died in that institution, March 8, from chronic interstitial nephritis, aged 80.

**William Bushy Dewees, M.D.** University of Pennsylvania, Philadelphia, 1877; formerly of Newark, N. J.; a member of the American Medical Association; formerly president of the Golden Belt Medical Society of Kansas, and surgeon-in-chief of the Dewees Sanitarium, Salina, Kan., died in a hospital in Morris Plains, N. J., March 27, aged 57.

**Morris Stanley Guth, M.D.** University of Pennsylvania, Philadelphia, 1876; a member of the American Medical Association; for twenty-five years assistant physician and later superintendent of the State Hospital for the Insane, Warren, Pa.; died suddenly in Erie, Pa., March 27, from heart disease, aged 60.

**Everett W. Fish, M.D.** Homeopathic Medical College of St. Louis, 1868; of Pittsford, N. Y.; a large part of whose life was spent in newspaper work; for a time a member of the faculty of Pulte Medical College, Cincinnati; died in the railway station at Pittsford, N. Y., March 24, from heart disease, aged 66.

**George Rea, M.D.** Memphis Hospital Medical College, 1908; formerly resident physician at the Nordrach Ranch Sanatorium, Colorado Springs; since September, 1911, surgeon for the Uintah Railroad, with headquarters at Dragon, Utah; died suddenly in that place, March 2, aged 30.

**Annie M. Tremaine, M.D.** Woman's Medical College of the New York Infirmary for Women and Children, 1899; head woman physician to the Craig Colony for Epileptics, Sonyea, N. Y., for several years; died in the Willard State Hospital for the Insane, March 25, aged 45.

**Adolph C. Holtzendorff, M.D.** Fort Wayne (Ind.) College of Medicine, 1879; a member of the American Medical Association; was found dead at his home in Plymouth, Ind., February 18, from valvular heart disease, aged 72.

**William Edward Holbrook, M.D.** Harvard Medical School, 1879; a member of the Massachusetts Medical Society and of the staff of the Lynn (Mass.) Hospital; for several years city physician of Lynn; died at his home in that city, March 23, from acute gastritis, aged 57.

**Frederick Robie, M.D.** Jefferson Medical College, 1844; Governor of Maine from 1882 to 1886 inclusive; a veteran of the Civil War, in which he served as lieutenant-colonel, U. S. V., died at his home in Gorham, February 2, from arteriosclerosis, aged 89.

**Stansbury W. Lemmon, M.D.** Western Reserve University, Cleveland, Ohio, 1855; a member of the Indiana State Medical Association, and said to have been the oldest practitioner of Noble County; died at his home in Albion, March 20, from diabetes, aged 82.

**Frank William Rulien, M.D.** University of Minnesota, Minneapolis, 1897; a member of the American Medical Association and a practitioner of Joliet, Ill., since 1903; died in the Presbyterian Hospital, Chicago, March 29, from organic heart disease, aged 40.

**Walter Taylor, M.D.** University of Toronto, 1898; L.R.C.P. London, M.R.C.S. England, 1908; F.R.C.S. Edinburgh, 1909; a member of the St. Catharines (Ont.) Medical Society; died at his home in St. Catharines, February 13, from pneumonia, aged 41.

**Howard C. Spencer, M.D.** Eclectic Medical Institute, Cincinnati, 1893; a member of the Florida Medical Association; of Gainesville; was shot and killed while making a professional call five miles from Gainesville, February 26, aged 49.

**William H. Barcroft, M.D.** Starling Medical College, Columbus, Ohio, 1875; of Coshocton, Ohio; who started to make a professional call south of the city, March 17, was found frozen to death in a field 5 miles from Coshocton, March 23, aged 59.

**Joshua Washington Seiberling, M.D.** Bellevue Hospital Medical College, 1873; a well-known practitioner of the Lehigh Valley; died suddenly near his home in Hynemansville, Pa., March 23, from cerebral hemorrhage, aged 64.

**Gustave Demars** (license, Minnesota, Act of 1887); a practitioner for fifty-five years; died at his home in Hallock, March 28, as the result of injuries received the day before, when he was struck by a passenger train, aged 76.

**John Henry Bradley, M.D.** Louisville (Ky.) Medical College, 1897; formerly of Bradley, Ga., and a member of the Dublin (Ga.) Board of Health; died at his home in Blue Ridge, Ga., March 26, from tuberculosis, aged 36.

**Samuel Thomas Keith** (license, years of practice, Ohio, 1896); a practitioner for forty-one years, and a veteran of the Civil War; died at his home in Canton, Ohio, March 28, from cerebral hemorrhage, aged 67.

**Barclay Ratliff, M.D.** Medical College of Indiana, Indianapolis, 1881; a member of the Indiana State Medical Association; school inspector of Decatur township; died at his home in West Newton, March 22, aged 57.

**Wilson H. Swales, Jr., M.D.** Medical College of Ohio, Cincinnati, 1878; of Logan, Ind.; formerly coroner of Dearborn County, was thrown from his buggy in a runaway accident, March 24 and instantly killed.

**James Chalmers Cameron, M.D.** McGill University, Montreal, 1874; professor of obstetrics and diseases of infants in his alma mater; died recently and was buried from his residence in Montreal, March 19.

**Frank Cogswell, M.D.** Northwestern University Medical School, Chicago, 1876; formerly of Lincoln, Kan., Oaksdale, Wash., and Madison, Wis.; died at his home in Seattle, March 22, aged 65.

**Osker F. Taylor** (license, years of practice, Illinois, 1878); a member of the American Medical Association; died at his home in Granville, January 27, from arteriosclerosis, aged 74.

**Joseph Robert Cravens** (license, Indiana, years of practice); a veteran of the Civil War; for many years a practitioner of Franklin; died at his home in Anderson, from uremia, aged 80.

**Philip Henry Bartells, M.D.** an eclectic practitioner of Roxbury and Durham, Kan., for more than forty years, died in Lawton, Okla., February 2, from senile debility, aged 71.

**William Gaston Raines** (license, Tennessee, 1889); one of the oldest practitioners of Decatur County; died at his home in Parsons, March 22, from pneumonia, aged 74.

**Edgar H. Stoll, M.D.** Hahnemann Medical College, Chicago, 1900; of Gilt Edge, Mont.; died in that place, March 23, a few days after a surgical operation, aged 35.

# The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

## MISCELLANEOUS FRAUDS

### Three Prescription Fakes and their Analyses

### FLOWERS OF OXZOIN

Harriet Meta of Syracuse, N. Y., advertises extensively her "marvelous discovery for removing wrinkles." In the New York *World* almanac, 1912, we read that "arrangements have been made with Mlle. Meta to furnish free information" to all its readers regarding this wonderful wrinkle eradicator. Those who write to Harriet Meta receive a form letter from the To-Kalon Manufacturing Co., who claim to be the proprietors of the Harriet Meta system. The letter, which is signed Harriet Meta, says that the recipient is being sent "absolutely free my $3 formula for making my wonderful skin and complexion beautifiers known as 'Milk of Roses.'" The "formula" is of the "prescription fake" type and calls for rose water, tincture of benzoin and "flowers of oxzoin." The flowers of oxzoin is the joker; that is to say it is a "patent medicine" sold by the To-Kalon concern. Flowers of oxzoin have been analyzed by the state chemists of Kansas and North Dakota. The latter state publishes the following result of its analysis:

| | |
|---|---|
| Zinc oxid ....... | 15.6% |
| Glycerin ........ | 16.7% |
| Rose water ...... | 67.7% |

This combination is said not only to remove wrinkles but also to remove "pimples, blotches, blackheads, sunburn and tan." It is also said to be "unsurpassed for the treatment of eczema and other skin diseases." It is hardly necessary to say that the stuff is sold under fraudulent claims and by disreputable methods.

THE GOLD-BRICK SWINDLE UP TO DATE

AMERICAN MEDICAL ASSOCIATION CARTOON SERIES

### SAXOLITE

Saxolite is another "wrinkle eradicator" sold under the prescription fake method. It is said to be manufactured by the Dearborn Manufacturing Company, Chicago. Advertisements, published to simulate reading matter, recommend the purchase of one-half pint of witch hazel and one pound of powdered Saxolite. These are to be mixed and, if we are to believe the exploiters—which we are not—will not only eradicate wrinkles but will remove double chin and baggy cheeks. Saxolite was analyzed by the state chemists of Kansas, who report that it has the following composition:

| | |
|---|---|
| Alum ................................................ | 52% |
| Epsom salts ....................................... | 48% |

The actual effect of this mixture is to cause a temporary "tightening" of the skin that will be followed by a more pronounced "bagginess." This makes the nostrum a good "repeater," an element that is essential to the continued sale of fraudulent preparations of this kind.

### VILANE POWDER

Vilane Powder is sold as a "concentrated powerful antiseptic germicide and disinfectant" by the Blackburn Products Co. of Dayton, Ohio. This concern sells a number of nostrums under fraudulent claims and by dishonest methods. One of its methods of advertising is to publish, in such newspapers as will accept it, a fake answer-to-correspondents department entitled "The Doctor's Answers on Health and Beauty Questions. By Dr. Lewis Baker." Each of these answers contains recommendations for certain combinations of drugs, each combination containing as one of its ingredients a "patent medicine" put out by the Blackburn Products Co. Vilane powder is recommended for "catarrh, hay fever, leukorrhea, hemorrhages, tonsillitis and sore throat." It was analyzed by the North Dakota chemists who reported it to be essentially a mixture of washing soda, cooking soda, common salt, sodium salicylate and a little thymol; or, to tabulate:

| | |
|---|---|
| Common salt .... | 42.4% |
| Sodium carbonate. | 14.1% |
| Sodium bicarbonate | 21.0% |
| Sodium salicylate.. | 4.6% |
| Thymol .......... | 0.1% |

The North Dakota laboratories tested this mixture for its germicidal power and found that it did not possess any germ-killing action whatever. To quote: "As a germicide, this preparation is valueless and the claims made are absolutely false and misleading. It has very slight antiseptic properties due to the small amount of salicylic acid it contains."

## ADVERTISING TO THE PUBLIC OF ANTISEPTICS, GERMICIDES AND DISINFECTANTS

### Report of the Council on Pharmacy and Chemistry

With the view of encouraging the use of reliable and efficient antiseptics, germicides and disinfectants by the public, so far as is compatible with safety, the Council appointed a committee to formulate conditions under which the advertising to the public of such preparations accepted for inclusion with New and Nonofficial Remedies should be permitted.

The Council adopted a report which authorizes the advertising of antiseptic and germicidal preparations to the public provided that the advertising is limited to recommendations for use as a prophylactic application to superficial cuts and abrasions of the skin and to the mucous surfaces except those of the eye and the gastro-intestinal and genito-urinary tracts. The report follows.

W. A. Puckner, Secretary.

## Report of the Committee on Advertising of Antiseptics, Germicides and Disinfectants to the Public

Antiseptics, germicides and disinfectants are freely used by the public and as the result has proved, on the whole, to be beneficial, no restriction of this use has hitherto seemed advisable, contrary to that advocated for remedies taken internally. This principle has been recognized by the Council on Pharmacy and Chemistry in Rule 3:

> "No article that is advertised to the public will be admitted, but this rule will not apply to disinfectants advertised for uses other than on the human body or to non-medicinal food preparations, except when advertised in an objectionable manner."

In the advertising of antiseptics, germicides and disinfectants directly to the general public, the first and only consideration should be the public welfare, and two distinct divisions of the question may thus be formulated:

1. Shall the exploitation to the public of antiseptic, germicidal and disinfective preparations (already accepted for inclusion with New and Nonofficial Remedies) be permitted when these preparations are to be used on the human body?

2. Or, shall their exploitation be limited to recommendations for veterinary use or for uses other than those on the human body?

The arguments advanced in favor of the first division are:

A. The general public is constantly using some antiseptic solutions, advertised for cuts, bruises, and other external injuries. Why should not the public be aided in selecting the most effective preparation?

B. Antiseptic mouth-washes, tooth powders, etc., are commonly used without consulting a physician. The employment of efficient substances for these purposes is beneficial, and it would be a distinct benefit were the public given more definite instruction regarding their use, particularly for prophylaxis.

C. Ordinarily the use of antiseptics for the above-mentioned purposes is not likely to handicap the physician in his efforts to conserve the public health.

It must be admitted that the general use of safe, non-proprietary antiseptics and germicides like boric acid and hydrogen peroxid does much good and little harm. The public is fairly well informed concerning both the advantages and limitations of these remedies, because no one is interested in misrepresenting their action or exaggerating their merits. The situation is different with regard to proprietary antiseptics. The constant tendency is to assure the public that the remedy is a sure preventive or cure of all kinds of diseases and to encourage its use in all conditions. Thus the public is led to feel a sense of safety in the presence of danger and this often keeps the individual from obtaining that treatment which is necessary to prevent serious illness. The advertising of proprietary antiseptics, germicides and disinfectants by means of pamphlets and circulars accompanying the trade package is particularly objectionable and liable to be harmful to the public, if the claims are exaggerated or if the article is recommended as a treatment of specified diseases.

One needs only to recall the advertisements in the lay press, during a recent epidemic of meningitis, of a proprietary antiseptic preparation which, it was claimed, would prevent and cure the disease if applied to the mucous membrane of nose and throat. Likewise the use of another proprietary antiseptic preparation exploited to the public by means of recommendations accompanying the trade package has lured many a victim of venereal diseases into a sense of safety and thus deprived him of proper treatment.

Tragedies of this nature are bound to occur with inefficient remedies dishonestly exploited. It is to be determined whether the sanction of the Council on Pharmacy and Chemistry for conservative advertising to the public of good antiseptics, germicides and disinfectants for the purposes indicated would decrease or increase the number of such mistakes.

Experience shows that proprietary brands of hydrogen peroxid, an otherwise most valuable germicide, have been falsely advertised to the public, in the lay press, or by means of circulars accompanying the trade packages, in such a manner as to encourage the belief that they are capable of preventing diphtheria, tetanus and other diseases amenable to cure only by proper medical measures.

The following paragraph (quoted from the comments on Rule 3 in New and Nonofficial Remedies) pointing out the objections of lay advertising of proprietary remedies in general applies with equal force to the dangers of advertising antiseptics and germicides to the public:

"The impossibility of controlling the irresponsible claims which are usually made in advertisements to the public, the well-known danger of suggesting by descriptions of symptoms to the minds of the people that they are suffering from the many diseases described, the dangers of an unconscious and innocent formation of a drug habit, and the evils of harmful self-medication, including the dangers of the spread of many infectious and contagious diseases when hidden from the physician, and similar well-known considerations are the reasons for discouraging, in the interest and for the safety of the public, this reprehensible form of exploitation."

It is our opinion that the harm likely to result from lay advertising of proprietary antiseptics, germicides and disinfectants for use on the human body, except as a means of prophylaxis, far outweighs the possible good.

The advertising of antiseptics, germicides and disinfectants for veterinary use and as a means of prophylaxis is not open to the same criticisms. Especially is truthful advertising of disinfectants for privy vaults, manure heaps, stagnant pools of water, soiled clothing, etc., a valuable means of educating the public in these matters of sanitation.

It appears to the committee that proper advertising to the laity of disinfectants for veterinary and non-medicinal use does not imperil the health of the community, as is the case with preparations used for medicinal purposes. On the other hand, it is to the interest of the public to receive reliable information concerning the value of these preparations for the prevention of disease and concerning the best methods for their employment.

At the present time inferior preparations are found in a large proportion of households, and the Council would thus confer a real boon to the public by endorsing reliable preparations. It is therefore recommended that the Council permit the advertising to the public of antiseptics, germicides and disinfectants accepted for inclusion with new and Nonofficial Remedies, and that the following should be added to Rule 3 of the Council:

> The advertising to the public of antiseptics, germicides and disinfectants accepted for inclusion with New and Nonofficial Remedies shall be permitted, provided that it be limited to conservative recommendations for their use as prophylactic applications to superficial cuts and abrasions of the skin and to the mucous surfaces except those of the eye and the gastro-intestinal and genito-urinary tracts. In no case shall it include recommendations for use as curative agents, nor shall the names of any diseases be mentioned in such exploitation.
>
> If the preparation is sufficiently toxic to require caution in its use to prevent poisoning, this fact shall be stated on the label.

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**Business Methods of Profession.**—Meet your own obligations to your creditors and make your debtors meet theirs. Do your part of real charity, or all of it if you wish, but require people who can pay you to do so, they will think more of you and you of them. Be just in your charges and collect them, but don't render nominal service thinking to increase gratitude or hold patronage, for it will not do it. Measure your fee by the value of your service. Don't make other people pay for your own mistakes so if you haven't knowledge, then get knowledge, for there is plenty for sale. But don't get too wise, especially in your own conceit. Don't know it all, leave a little for the other fellow to prevent atrophy and stasis when you are gone. Try to be professional if they will let you. Be charitable to the old doctor and merciful to the young. Don't be the dog in the manger, but be a gentleman of culture and character, a laborer of energy and purpose, and a good doctor who conserving all the rich elements of manly virtue hopes only for that which is wisest and best and strives to attain it.—E. G. Moore in *Old Dominion Journal of Medicine and Surgery.*

# *Association News*

## A NOMENCLATURE OF DISEASES FOR THE UNITED STATES

A precise nomenclature of diseases is very important for the advancement of medical science and is absolutely essential for thoroughly comparable statistics of general mortality, morbidity, and for hospital statistics, as well as for the comparison of individual results. The need for such a nomenclature is becoming yearly more urgent, with the rapid extension of the registration area for vital statistics, the application of more refined clinical and laboratory methods for the differentiation of diseases, and with the greatly increased knowledge of the causation of diseases and the special interest now taken in diseases of the tropics. The great desideratum would seem to be that each definite pathologic entity should have one definite name, by which it could be everywhere recognized, and concerning the precise application of which there would be no shadow of doubt. Questions of classification, or even of the best names for given diseases, would seem to be of less practical importance than the general agreement on accepted or authoritative names, which could thus be employed by physicians in a precise way. The present condition is analogous to what would obtain in the practice of medicine if the writing of prescriptions were hampered by the use of several names, more or less synonymous, for each article of the Pharmacopeia, instead of having a single precise official name.

The remedy is plain and the Committee on Nomenclature and Classification of Diseases, originally constituted by the American Medical Association in 1907, will present at the next meeting of the Association at Atlantic City in June, 1912, a draft of a provisional or tentative nomenclature of diseases and conditions, which it is hoped may be published by the Association and thus put at the service of the profession in this country for immediate practical use. It will be based largely on the excellent Bellevue Hospital Nomenclature, prepared by the Committee on Clinical Records of Bellevue and Allied Hospitals, New York, and rearranged by that committee in cooperation with the American Medical Association's Committee, then under the chairmanship of the late Dr. Frank P. Foster, in accordance with the International List of Causes of Sickness and Death. This system has now been adopted by a large number of countries and very complete manuals, showing the assignment to its titles of all terms reported by physicians, have lately been published by the United States Bureau of the Census and by the Registrar-General of England. Such manuals, however, are designed for the use of statistical offices only and not for general reference by physicians, inasmuch as they necessarily provide for a large number of indefinite and unsatisfactory terms that occur upon certificates of cause of death. The Bellevue nomenclature contains only fairly precise terms and has been adopted, with excellent satisfaction, by many hospitals in this country besides those for which it was especially prepared. Surgeon-General Torney has recently issued a supplement to the manual for the Medical Department, United States Army, which contains a nomenclature for the guidance of the medical officers of the regular army and the organized militia of the United States arranged largely in the order followed by the Census Office and the Bellevue nomenclature. Nevertheless, for the profession as a whole, no complete and convenient authority on the nomenclature of diseases, with special reference to the correct reporting of causes of death and sickness, is available, although the little "Physicians' Pocket Reference to the International List of Causes of Death,"[1] which was distributed not long ago by the Bureau of the Census to all physicians in the United States, has to some extent familiarized practitioners with the form of the International List and helped to secure more definite statements of cause of death.

The field of usefulness of the proposed nomenclature will therefore be a wide one, and it will be especially serviceable if, as the Committee desires, it be regarded not as a finality but as a first step in the preparation of a complete international nomenclature, with all necessary definitions and with suitable revision with respect to classification, that may serve as a basis for the next or Third Decennial Revision of the International List of Causes of Sickness and Death. Thus will the statistical lists prepared for the compilation of general mortality and morbidity statistics, the lists for hospital statistics, and the underlying nomenclature of diseases and pathologic conditions be at last brought into complete harmony, as proposed by the resolution adopted by the House of Delegates at Chicago, June 3, 1908:

> *Resolved*, By the American Medical Association: . . .
>
> That after the revision of the International Classification in 1910 [changed by the French Government, at the request of the United States, to 1909] the Nomenclature of Diseases be recast in corresponding form, so that there will be available under a uniform arrangement and with precise agreement in the meaning of terms (1) International Classification [preferably *List*] of Causes of Death; (2) International Classification [List] of Sickness and Disability; (3) International Nomenclature of Diseases and Injuries.

There are still some objections to the present form of the International List of Causes of Death and Sickness, many of which relate to more or less theoretical questions of classification (now regarded as relatively unimportant) and some of which disappear when the nature and practical use of a statistical list are fully understood. For example it has been objected, by Dr. Jorge Le-Roy y Cassá,[2] Chief of Statistics of the Public Health Department of Cuba, that—

> Under the title "recurrent fever" we find included recurrent fever and Malta fever and its synonyms. How is it possible to group under the same title the disease caused by *Spirillum obermeieri* and that caused by *Micrococcus melitensis?* Even though the recurrent febrile periods might make them comparable, yet the fact that they are produced by different organisms should put them in separate groups.

The explanation is very simple. No identity is assumed for the terms, grouped as a matter of statistical convenience, under the international title "relapsing fever." In nearly all countries the deaths from either relapsing fever or from Malta fever are so few that it is of no statistical consequence whatever that they should be distinguished separately. The content of the title "relapsing fever" is known to the medical statistician, and if the total number of deaths thus included should be sufficient to warrant it, separate statements of the deaths from relapsing fever and from Malta fever (recently occurring in Texas) may be given, as is in fact provided for in the Bellevue nomenclature:

3. Relapsing fever:[3]
  3A. Malta fever.
  3B. Relapsing fever.

In the same way any other title of the international list can be subdivided to give any desired precision of statement, but the totals corresponding to the titles will remain comparable with the totals from offices that do not find the subdivision necessary. It may perhaps be said that as both Malta fever and relapsing fever are usually unimportant, it would have been well to include them as part of International Title 19, "Other Epidemic Diseases," stating them individually only when the number of deaths or cases of sickness justify such procedure. This change, however, cannot be made until the next meeting of the International Commission, and it would be unwise to make unauthorized rearrangements until that time because such changes, which are usually quite unnecessary, disturb the international comparability of the data.

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[1] Copy can be obtained on request from the Director of the Census

[2] American Journal of Public Health (The Journal of the American Public Health Association), January, 1912.

[3] The title need not in fact appear in the tabular list, but only the subdivisions, thus:

1. Typhoid fever.
2. Typhus fever.
3A. Malta fever.
3B. Relapsing fever.
Etc.

The international reference numbers are retained so that comparisons can be made readily and with certainty with the statistics of any country employing the system. As a matter of fact, there was only one death from relapsing fever in the registration area of the United States for the year 1910 out of 805,412 from all causes, and only two, on the average, for the period 1900-1909.

The question of a proper *nomenclature*, however, is quite a different one from the question of classification or the propriety of the inclusions of the international titles. In the example cited above, the committee is concerned at present only as to what is the proper name to be selected as the authoritative designation for these diseases. Shall we distinguish the *relapsing fever of Europe* [Synonyms: febris recurrens, five days' fever, spirillum fever, five days' fever with relapses, typhus recurrens, seven days' fever (not Rogers'), icteric typhus, remittent fever, bilious typhoid, epidemic remittent fever, miliary fever, relapsing fever], the *relapsing fever of America*, the *relapsing fever of India*, and the *relapsing fever of Africa*,[4] and for Malta fever, shall we prefer *undulant fever, Mediterranean fever, Malta fever, Bruce's septicemia, Gibraltar fever, Neapolitan fever, Cyprus fever, febris undulans, febris sudoralis?*[1] If there are several definite specific diseases to be distinguished, then a definite specific name should be applied to each, and used for it alone and for no other disease. The confusion of synonyms and of near-synonyms is appalling and destructive of accuracy in all descriptive and statistical work. Hence the great problem is the definite naming or selection of the best name, for it is apparent that the reform or reconstruction of names already in general use and acceptance would be an insuperable task and one not at all likely to yield practical results.

The Committee will therefore appreciate any suggestions from physicians as to the preferable names to be included in the nomenclature and also as to terms that should be disused. So far its work has related entirely to English terms, except of course when no English terms are available, in which case the Latin or Anglicized Latin terms must be used. It is hoped that later on cooperative work may be undertaken with the Committee of the Royal College of Physicians of London, which will probably soon be constituted to prepare the next decennial revision of the nomenclature of that college, so that a uniform nomenclature will be available for all English-speaking physicians throughout the world. In the meantime, however, a provisional nomenclature will be of great service, and the interest and aid of the profession will be welcomed by the Committee. Cressy L. Wilbur, M.D., Chairman,
Bureau of the Census, Washington, D. C.

# Correspondence

### Treatment of Pneumonia

*To the Editor:*—I have just read, under Therapeutics, the treatise on pneumonia in The Journal for March 30. I would not detract an iota from that most excellent article. It is all good. I wish only to add an observation from personal experience as follows:

In this great southwest there was a time when the average family lived and multiplied and got sick and died in that primitive habitation called a dugout. It was the best that could be done at that time. The country was new and building material was expensive. In those days physicians learned a great deal about practical therapeutics, the like of which is seldom found in books. Among other things they found that pneumonia patients died in the dugout, not every time, but entirely too often. They found that a cyanosed patient would rapidly regain his normal color if taken out of the dugout and placed in the fresh air on top of the ground, no matter how cold the weather, or how wet or how hard the wind blew. After the people had houses to live in it was somewhat better, but the kind neighbors still insisted on coming to sit up. Sitting room was often at a premium, and fuel being high and hard to get, there was often but one source of heat for the "sitters," the family and the sick.

More than once have I seen fifteen people in one room on a cold night, with a red-hot stove, doors and windows closed, come to sit up with a suffocating pneumonia patient. I have taken the same patient, placed him between an open window on the north and an open window on the south, so that a 40-mile-an-hour wind could blow across him, and have stood with my overcoat on between the bed and those fifteen friends of his till the last one of them had been frozen out of the house. Treat a patient like that, suffering from what I call pneumocyanosis, and he will fight for the open door ever afterward. Another advantage is in getting rid of the loafers.

S. H. Landrum, M.D., Altus, Okla.

### Boiling Cocain Hydrochlorid

*To the Editor:*—In light of recent contributions as to the sterilizing by boiling of solutions of cocain hydrochlorid for use in local anesthesia, my experience may be of interest to some readers.

In my dispensary work as district physician for the Isthmian Canal Commission, I am daily called on to perform minor operations in which cocain solution is used to induce the desired anesthesia. I invariably use a 1 per cent. solution and I invariably boil my solution for about two minutes over a spirit lamp before injection. I have never failed to obtain the anesthetic action of the drug and I have had no untoward symptoms in my patients. In such clean cases as digit amputations, circumcisions, etc., I know that by boiling my cocain solution I shall have no infection from the water used, which may have previously been faultily sterilized or may have become contaminated while standing, nor is there danger from the cocain itself, which may have become contaminated while being handled or while standing in the bottle.

The chemical change that takes place while boiling the solutions must be so slight as not to be worth considering in actual work, as the results obtained have been in every way satisfactory after this method of sterilizing.

Alfred G. Farmer, Corozal, C. Z.

### Messrs. Squibb & Sons Explain About Thoremedin

*To the Editor:*—In The Journal for March 9 (p. 716) there appeared an article by Dr. William Allen Pusey, attacking Thoremedin. In the same issue (p. 706) there appeared an editorial which, assuming that Dr. Pusey's conclusions were correct and incontrovertible, also condemns the remedy.

The charge that we should be capable of furnishing to the medical profession a product, the composition of which we intended to keep secret is, in the light of the well-known ethical character of our house, incomprehensible, and especially so in view of the printed announcement in the January number of *Squibb's Memoranda*, where it was plainly indicated that the publication of the quantitative formula was delayed only for good and sufficient reasons and was to follow in due course. This was certainly the meaning we intended to convey—our purpose being to have the Thoremedin products, as furnished by us according to the Semerak directions, given a broad trial by the American dermatologists, before the use of imitations (such as extemporaneous mixtures) would expose the new remedy to discredit and also in order to ascertain more definitely the limitations of the new remedy before allowing the formula to go into medical literature. This course was deemed necessary in the best interests of the medical profession.

We frankly admit that we made a mistake in not furnishing, at once, the quantitative formula. Our course was open to misinterpretation, but was an error of judgment only. We give now the quantitative composition with every package.

The name Thoremedin was chosen because thorium, although present in but a small percentage, was considered an essential ingredient and mainly responsible for the therapeutic efficiency of the product. Whether thorium actually does play so important a part in the composition should, in view of the controversy that has arisen, be ascertained by further clinical trials.

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[4] Castellani and Chalmers: Manual of Tropical Medicine.

The therapeutic statements contained in *Squibb's Memoranda* were not our own, but those of American dermatologists whose judgment we had every reason to trust. We are perfectly willing to have the Council on Pharmacy and Chemistry investigate Thoremedin with the view of either proving or disproving those statements; and, believing that Dr. Pusey will also be willing to accept the findings of the Council, we have this day made formal application to the Council for its assistance in this matter. We shall abide by the decision of the Council. To get at the facts has been throughout our anxious desire and if we were misled we certainly desire to know it at the earliest possible moment. As for the rest, we merely wish to state that we agreed to undertake the manufacture of the remedy only after it had been used by a number of dermatologists in this country with results that could leave no doubt in our minds as to the merits of the preparation. From the very moment when the request was made to us to manufacture the product to the present, our conduct has been inspired by the same ethical considerations that have always characterized the house of E. R. Squibb & Sons since its foundation.

May we submit the following copy of a letter addressed by us to Dr. L. Duncan Bulkley nearly a year and a half ago?

New York, Oct. 18, 1910.

*Dr. L. Duncan Bulkley.*

*Dear Sir:*—A Mr. C. B. Semerak of Paris called on us some time ago for the purpose of enlisting our cooperation in the manufacture and marketing to the medical profession of a remedy for the treatment of certain skin diseases.

This remedy, devised by Mr. Semerak, he claims has been in actual use in the Saint Louis Hospital of Paris, under the direction of leading specialists, and with excellent results. In support of these claims he submitted to us many original communications of the dermatologists who have employed the remedy, all of whom speak in high terms of the results obtained. He further submitted to us a series of photographs taken before and after treatment, all of which seem fully to uphold his claims.

In obedience, however, to our well-known determination never to furnish under our label any product the usefulness of which in the minds of the medical profession is not absolutely ascertained, we cannot undertake the manufacture of Mr. Semerak's remedy, notwithstanding all the evidence which he has placed before us in support of his claims, unless the remedy is approved by unquestionable American authority.

Mr. Semerak now informs us that his remedy has been used for several weeks past, and is used to-day, under your personal direction in the New York Skin and Cancer Hospital; that you intend to soon make a full report of the results obtained by you with the remedy.

Under these circumstances we deem it our duty to communicate to you our attitude in this matter, and hope that you will let us have, at your convenience and when you feel ready, such advices as will guide us toward a correct decision. We are, of course, ready to serve you and the medical profession in general if in your judgment such service is required.

The above letter will prove, better than anything else we can say to-day, our attitude in this matter.

E. R. Squibb & Sons,
Theodore Weicker, Vice-President.

[Comment: See Editorial Department.—Ed.]

### Hare-Lip and Eugenics

*To the Editor:*—The undersigned are engaged in a study of heredity of hare-lip, cleft palate and associated malformations of the oral cavity, and solicit correspondence with physicians who can supply histories of families, more than one member of which has an oral defect. Such data will be held as strictly confidential and will be used solely to aid in the solution of a problem which is not only of scientific but also of humanitarian interest.

C. B. Davenport,
W. F. Blades,
Eugenics Record Office, Cold Spring Harbor, Long Island, N. Y.

### Triplets Living at Seventy

*To the Editor:*—For such professional interest as it may have, I desire to make record in The Journal of the fact that triplets, all surviving in good health, celebrated their seventieth birthday at Chester, Pa., Feb. 24, 1912. They are the children of William West and Martha (Dutton) West, born at Shepherds' Plain, Chester Township, Delaware County, Pa., Feb. 24, 1842. Their names are Elias H. West (married, one daughter), still an active farmer; Kate D. West (unmarried), an active member of the Society of Friends; and Rachel P. (West) Leys (widowed, one son, the present writer), for thirty years a teacher of mathematics in the Friends' Schools of Philadelphia. The father of these triplets died in 1885 at the age of 87. Their mother died in 1894 at the age of 83, the triplets being at that time 52 years of age.

It would be a matter of considerable interest to this family to learn if any instance of similar longevity in triplets is known to any physician in the United States or elsewhere.

James F. Leys, U.S.N., Newport, R. I.

## Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### RELATIONS OF CONSULTANT TO PATIENT AND ATTENDING PHYSICIAN

*To the Editor:*—In answer to W. L. M. ("Method of Procedure When Supplanted by Consultant," The Journal, March 2, p. 649), you say that the attending physician can be discharged and that the consultant can take the case after the discharge of the regular attendant. I most emphatically dissent. Such conduct would strike at the very root of medical ethics. It would be a death-blow to consultations. Unless it were absolutely unavoidable no man would risk a consultation if he thought he might be supplanted by the consultant. I have thought sometimes that I was called in consultation for the very purpose of eliminating me from the case.

A few months ago I was called to see a case in consultation. I advised an operation at some future date. A couple of months later the patient walked into my hospital and said that she was ready for the operation. I explained to her that she was Dr. E's patient; that the only way I could operate on her would be for her to come to me from him. She of course demurred, but I absolutely refused to operate unless she brought me a note from her physician. Her physician called me on the telephone, differed with me as to certain steps of the operation, and the next I heard was that he had taken her to another hospital. This he had a perfect right to do.

Let me repeat that the consultant has no right whatever to have any dealings with the patient during the sickness for which he was called as consultant. If at some future time the patient desires the consultant to become his regular attendant he could do so, but it always looks bad. You speak of the interests of the patient being paramount. Let the consultant stick to the attending physician first, last and all the time, and the interests of the patient will not suffer.

A. P. Butt, M.D., Davis, W. Va.

Answer.—Reference to the comment criticized by our correspondent will show that he bases his argument on conditions differing both from the instance of A and B and from that of C and D. When the patient presented herself at his hospital, our correspondent was right in regarding himself as still the consultant in the case and in insisting on the consent of the attendant before he took charge as the surgeon. A consultation over a telephone has many disadvantages, especially when there is a question concerning which there may be disagreement. When the attendant and the consultant fail to agree, it is proper that the consultant withdraw from the case as our correspondent did. He should assure himself, however, that the patient, or the friends of the patient, know his views concerning the case, for the consultant was employed that his opinion might be obtained. In justice to the patient and himself, he should in the presence of the attendant state the results of his investigation and his conclusions in the case. This can be done without comment on the position held by the attendant and without reference to any disagreement existing between the physicians. The attendant and the patient were within their province when they called another consultant or employed a surgeon to do what the attendant considered to be the operation to be elected.

We understand that our correspondent dissents from our statement, "The right of the patient to choose her physician must be recognized," yet this right belongs to the patient and must be acknowledged. But in the exercise of the privilege of selecting her medical attendant, the patient should not give cause for unpleasant feelings between the physicians interested. Unfortunately, physicians sometimes do fail to respect rights of patients. Occasionally they present courses of procedure, perfectly adapted to meet the ethical requirements of the case, in so tactless a manner that the patient receives the impression that "medical ethics" is merely a mutual understanding among physicians, shrewdly misnamed, for depriving those outside the medical profession of freedom of choice in dealing with physicians—a sort of most reprehensible trade-union domineering over the sick. If a patient feels that medical ethics permits his "case" to be treated as a "property right" of a physician, he is naturally offended, and, feeling that his personal liberty has been infringed on, he is apt to show antagonism toward the medical profession and whatever he thinks the profession stands for. Moreover, while it must be acknowledged that a sick person and even the friends, over-anxious because of their affection for the patient, may act unwisely—even may be unreasonable—the physicians interested in the case can always freely, but dispassionately, discuss the conditions under which they find themselves in their relations to each other and to the patient. If each physician both merits from and accords to his confrères the perfect trust they all expect from the patient, such a discussion will lead to a mutual understanding concerning the course of conduct that will both meet the reasonable wishes of the patient and protect the interests of each of the physicians. It can seldom be possible to satisfy all parties completely; but it is possible for the consultants to preserve their own self-respect and the esteem of each other and of the patient even when the course chosen is the result of mutual compromise.

While we failed previously to announce in explicit terms the principle attributed to us by our correspondent, namely, that in consultations and at all times the interests of the patient should be paramount, we now hasten to repair this oversight. No consultation should be held that does not have as its first object the protection and promotion of the patient's interests. In a word, the actions of all parties to a consultation should be controlled by that principle of ethics which requires each to treat the other as he would be treated were he in that other's place. To follow this principle honestly will modify the conduct of the attendant and of the consultant as conditions vary. At all times, it forbids either doing an injustice to the other; yet the interests of the patient constantly remain paramount.

### A SHOTGUN PRESCRIPTION FOR A MOUTH WASH

*To the Editor:*—I am sending you a copy of a prescription I have produced for use as a gargle and mouth wash in inflammatory diseases of the mouth and fauces. I have been led to believe that it possesses excellent antiseptic properties from the favorable results I have had with it on board ship. I shall very much appreciate your opinion in regard to its therapeutic use.

| ℞ | Gm. |
|---|---|
| Boric acid | 10.0 |
| Sodium borate | 10.0 |
| Glycerin | 25.0 |
| Phenol | 3.0 |
| Benzoic acid | 1.0 |
| Thymol | 1.0 |
| Menthol | 1.0 |
| Eucalyptol | 1.0 |
| Oil of peppermint | 1.0 |
| Alcohol | 150.0 |
| Purified talc | 10.0 |
| Water to make | 500.0 |

M. Ft. Sol. Sig.—Use as a gargle or mouth wash.

Dissolve the boric acid, sodium borate, glycerin and phenol in 350 c.c. of water and the benzoic acid in 100 c.c. of alcohol and pour the aqueous solution into the alcoholic solution. Now dissolve by trituration in a mortar the thymol and the menthol in the eucalyptol and oil of peppermint. With this thoroughly incorporate the purified talc and add, with constant trituration, the solution first prepared; then allow to stand, with occasional agitation, forty-eight hours, filter, add 50 c.c. of alcohol to clear filtrate and then enough water to make the finished product measure 500 c.c.

R. O. N., Hospital Apprentice, U. S. Navy.

Answer.—This mouth wash resembles the numerous preparations which have been devised for the purpose of exerting an antiseptic action in the oral cavity. If one will go through the catalogues of pharmaceutical houses, he will find a long list of such preparations, varying slightly in their ingredients but having the same general composition. They undoubtedly spring from the Dobell solution, liquor sodii boratis compositus, N. F., which has been in use for a long time. The modifications of this solution have been largely made with the idea of making the preparation more pleasant and to achieve this purpose, the principal ingredients of the original, that is, the sodium bicarbonate and borax, which are responsible for the alkalinity have largely been left out. For the treatment of the mouth an alkaline solution is very useful for the purpose of dissolving mucus and thus mechanically removing much of the fermenting mass, which consists frequently of food particles enclosed in a tenacious mucus. The introduction of numerous ingredients into these mixtures for the purpose of giving them a pleasant taste or with the claim of rendering them antiseptic has led to a considerable degree of confusion and mysticism in the mind of the practitioner, a condition of which the nostrum maker has been prompt to take advantage. It is time to call a halt in the making of these mixtures which exemplify the tendency to polypharmacy and to ask ourselves what is the object of such a confusing association of ingredients.

Presumably for the purpose of antisepsis, the author of the formula which we have under consideration introduced at least eight different so-called antiseptics. It may be questioned, in the first place, what need there is of antisepsis in a mouth wash. The antiseptic action is of value only where the antiseptic is to act for some time on the mucous membrane or the contents of a cavity. A mouth wash is used for the temporary cleansing of the mouth and is not to be supposed that its antiseptic ingredients will remain in the mouth in an efficient concentration for any length of time, and this limits its value. But there is no need of applying an antiseptic to material that is to be removed from the mouth and which can, if necessary, be destroyed or rendered sterile by an efficient germicide. It is just as well to cleanse the mouth mechanically or by means of the solvent properties of the mouth wash without especial reference to any antiseptic action; but if an antiseptic is needed why is not one such ingredient sufficient? Thymol in a solution of 1 to 1,000 is an efficient antiseptic; why not therefore be content with the antiseptic action of the thymol which is present in this prescription in double antiseptic strength; that is, 1 to 500?

### ROUTE OF ENTRANCE OF HOOKWORM DISEASE

*To the Editor:*—Is it believed that the skin is the only route of entrance of hookworm disease? F. M. Teas, Denison, Tex.

Answer.—That is not the universal belief. The possibility of the disease being caused by the ingestion of the worms or larvæ by the mouth cannot be denied but the occurrence of this mode of infection in man has been neither satisfactorily proved nor disproved.

The general opinion, however, seems to be that infection by the mouth is extremely rare and that the usual mode of infection is through the skin. George Dock and Charles C. Bass, in "Hookworm Disease," say: "We believe that we are justified in concluding that the real source of hookworm infection is always the feces of infected persons, and, further, that the only practical mode of infection is by the skin. Walking barefoot in infected mud and water is the chief way in which infection gets to the skin. Probably next in importance is infection through leaky and wet shoes. Other modes of infection are possible, and no doubt do occasionally occur, but comparatively they are of little importance."

Dr. Hiram Byrd, in "Hookworm Disease," a pamphlet prepared under the direction of the state board of health of Florida, says: "The most, then, that can be said of mouth infection in human beings at the present time is that it is still unsettled, but the preponderance of evidence would indicate that if it occurs at all, it is very rare. It is true that the earlier writers considered the mouth the only avenue of entrance; but in 1902, Looss showed that infection takes place through the skin. Then for a time the mouth was considered one of the sources of infection. But now, mouth infection is coming to be considered more and more as negligibly rare or absent altogether.

### LIMITED POWER OF GLYCERIN TO COUNTERACT PHENOL

*To the Editor:*—My druggist informs me that he sells a large amount of equal parts of glycerin and phenol (carbolic acid), which is used for poisoning from poison oak. Cloths are saturated with it and spread freely over large surfaces. In thinking of the danger that attends this practice it occurred to me that the glycerin might neutralize the poisonous nature of the acid. Can you furnish any information? W. C.

Answer.—Glycerin, like alcohol, will lessen the caustic local action of phenol on the skin, but experience shows that it will not prevent the production of gangrene, which has frequently occurred when a finger or other part was completely surrounded by a dressing wet with a solution of phenol. This gangrene does not so readily occur, however, when dressings are applied to large surfaces of the body, probably because the poison is rapidly carried away by the free circulation.

### HAARLEM OIL POISONING

*To the Editor:*—I recently had a case of suspected Haarlem oil poisoning and I am unable to find out what Haarlem oil is or what its action is. Please give me this information.

I will take this opportunity to congratulate you on your campaign against the nostrum evil and its supporters, and, although my congratulations do not help much, a word of praise from an unexpected quarter often helps to lighten the load and makes a person think the work does more good than can ever be found out.

A. W. Patterson, Linden, Iowa.

Answer.—Preparations sold under the name of Haarlem oil are of an indefinite composition and probably frequently contain ingredients which would be more poisonous than those of the published formula. The formula is given by Richter (Hager: "Handbuch der Pharmaceutischen Praxis," ii, 299) as follows: Balsam of sulphur (oleum lini sulfuratum, prepared by combining dry sulphur with linseed oil, by means of heat) 1,000 parts, poppy-seed oil 125 parts, olive oil 60 parts, juniper oil 8 parts and oil of rosemary, oil of cinnamon, and oil of cloves, each 2 parts. If the mixture is taken internally poisoning might arise from the sulphur or from the oils of juniper, cinnamon and cloves. Oil of juniper would be likely to produce irritation of the kidneys. From our knowledge of the pharmacologic action of sulphur compounds we would expect intestinal irritation and flatulence to follow an overdose. Since, however, the composition is so uncertain and the dose is not definitely known, we are unable to state positively what symptoms would follow an overdose. The methods employed years ago by the exploiters of Haarlem oil were discussed in The Journal, May 23, 1908, p. 1714. A case of misbranding under the federal Food and Drugs Act of Haarlem oil capsules was reported in The Journal, Oct. 28, 1911, p. 1472. Some of the synonyms for Haarlem oil are: Dutch drops (guttæ Hollandicæ), Tilly's drops and empyreumaticum Batavicum.

### NOT A SQUARE DEAL FOR THE PHYSICIAN?

*To the Editor:*—Speaking as a physician just beginning the practice of medicine (a supposition contrary to fact), I am moved to inquire: Of what interest to me is your note of March 16, p. 787, "Not a Square Deal for the Physician"?

Does it teach me, when I want acetphenetidin, to buy it as such and not as phenacetin? Perhaps; but why should I buy either, since my advisers in paths medical so uniformly discourage dispensing? (Although, being a dispenser in spite of advice, I have long acted as here suggested.)

Does it teach me to regard my patients' pocketbooks in prescribing? Perhaps, but druggists charge for the filling of prescriptions according to the number of doses rather more than the cost of the drugs used. (While probably not true as to all druggists or in every case, I believe the above statement to be substantially accurate.)

Does it teach me always to consider the profits of the druggist? Most certainly it does. (He does, however, so much counter prescribing that, at times of irritation, I might be tempted to say, "I don't care a hang about his profits.")

Seriously now, I am glad to learn from the report of the Association Laboratory, March 16, p. 801, that my confidence in the identity of phenacetin and acetphenetidin has been well placed.

G. W. M., Heber, Cal.

Comment.—We wonder how many others, after reading the comment referred to, did even a small fraction of as much hard thinking as did our correspondent.

### BOOKS FOR LIFE-INSURANCE EXAMINERS

*To the Editor:*—Please give a list of books likely to be of use to a chief medical examiner of an old-line life-insurance company.

X. Y. Z.

Answer.—The following are considered some of the best books along the lines referred to:

Hall: Medical Examination for Life-Insurance, Simpkin, Marshall, Hamilton, Kent and Co., London, price, $1.50.
Ramsay: Medical Examination for Life Insurance, J. B. Lippincott & Co., Philadelphia, price, $1.25.
Symonds: Medical Examination for Life Insurance, Putnam's Sons, New York, price, $1.
Green: Medical Examination for Life Insurance, Blakiston's Son & Co., Philadelphia, price, $4.

## *The Public Service*

Journal Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

## *Medical Economics*

This Department Embodies the Subjects of Post-Graduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

### NEWSPAPERS ON PUBLIC HEALTH

Perhaps the most hopeful sign in the present public health situation is the vastly increased and constantly increasing interest being taken in public health questions by our leading newspapers. From a large number of comments on public health topics recently received, ten leading editorials were selected as noteworthy on account of the advanced position on health questions taken by the writers. The papers in which these editorials appeared were the New York *Sun*, the Chicago *Journal*, the New Orleans *Democrat*, the Syracuse *Post-Standard*, the Battle Creek *Enquirer*, the Fresno (Cal.) *Republican*, the Grand Rapids *News*, the Greenville (Ohio) *Democrat*, the Rochester *Post-Express* and the Minneapolis *Tribune*. The wide distribution of these newspapers is sufficient evidence of the general interest in public health topics. Unfortunately, lack of space makes it impossible to present quotations from all these excellent editorials in the present issue, but a few extracts will be of interest to our readers.

The Syracuse *Post-Standard* starts the ball rolling with an excellent editorial on "Criticizing the Doctor."

"Medical orthodoxy has not been much more immune to criticism than religious orthodoxy has. If on the one hand men have been burned at the stake for reading the Bible or stoned to death for preaching Christianity, on the other hand the loss of life from the practice of medicine according to the school that has from time to time been orthodox, has not been small. The practice of medicine has spent a great deal of time in groping toward the light, and there are not many who believe that it has yet reached full and perfect illumination.

"Honest criticism and competition, therefore, should be welcomed by members of the prevailing body of opinion in the profession of healing. It is exasperating to them and to all sensible folks to see the number of persons who choose to trust their lives and the lives of their children to methods of healing that are frankly and obviously unscientific, but the law, no matter how urgently appealed to, cannot go beyond a very moderate limit in forcing people to shun any method that may appeal to them.

"The law can, should and does say something about fake remedies for disease, and guaranteeing the cure of consumption, cancer and the like, and the American Medical Association has rendered notable aid to the cause of square dealing by its agitation against quacks and nostrums. Against its efficiency in that respect its most violent critics can have nothing to say. These critics, and in particular the small but excitable periodical called *Medical Freedom*, are in particularly poor business when they make jokes on such subjects as the campaign against yellow fever in the tropics and against inoculation against typhoid. The American Medical Association deserves more dignified and sensible opposition than can be furnished by a periodical which hasn't yet learned that the war against the mosquito is what made possible the building of the Panama canal."

A neighbor, the Rochester *Post-Express*, discusses "Medical Progress" in the light of Dr. Welch's recent New York address. It says:

"It is not unusual for persons who take pessimistic views to belittle the work of the great medical profession. But facts, which are stubborn things, proclaim the marvelous achievements of the doctors in no ambiguous fashion. Dr. William H. Welch in his address at the forty-third anniversary of the Presbyterian Hospital in New York cited statistics which prove that during the past half-century twelve years have been added to the period of human existence. Since the first records were taken in New York City in the sixties, the rate of mortality has been reduced from 35 deaths in each thousand to 15 in each thousand."

After commenting on Dr. Welch's discussion of the duty of a university to aid medical research, it continues:

"The welfare of mankind is the aim of the physician. As civilization advances it will be more clearly realized by even the most conservative members of the medical profession that prevention is better than cure. The preservation of the public health must really promote the interests of the profession generally, for we need the doctor to prevent us from contracting disease as much as to conquer it when we have contracted it."

The Minneapolis *Tribune*, in an editorial on "The Pursuit of Quackery," comments with discrimination on the efforts of the Hennepin County Medical Society to suppress medical frauds. This editorial is worthy of being reprinted in full, but space will permit only a few paragraphs. The editor says:

"No wonder the Hennepin County Medical Society has gotten into a mess, with the best intentions in the world of high public service. It is trying, like many other American societies, to perform a duty that should not be put on any profession, least of all that sworn to the noblest human service.

"The medical profession has enough to do without being put on the defensive against those who would degrade it. The pursuit of quackery is not its proper function, but the duty of the state. The profession should be so licensed and regulated that the very fact of ability to practice would be a guaranty of competence and integrity.

"The profession has no superior body like the courts to aid it in self-purification by a process like disbarment. It cannot undertake self-censorship without evoking the merely human sentiments of jealousy, envy of success and bare personal dislike to corrupt its evidence and pervert its judgments. It should be purified from without and above."

After discussing German methods for securing efficiency, and the effect of economic pressure on the reputable physician, the editor continues:

"The neglect of the state has degraded the highest service to humanity to a struggle for existence. They have families to support, like the rest of us. The fittest to survive will get patients, by Nature's rude standard of strength and persistence in pursuit, as often as by the more refined standard of science.

"High-minded doctors so compelled do penance by unselfish service to humanity. They give more of the free service to the poor than the rare masters who can pick and choose patients. They draw sustenance from them who have it to spare, and perhaps save them from worse things. The doctor habit is ineradicable. It is something for those who can afford it to indulge it without suffering real harm.

"Of course every sham bears fruit of evil, at some degree of distance. Probably this harmless humbug has done more than anything else to breed in the American public that distrust of the highest achievements of science in surgery and vital chemistry we find in men who should know better.

"Gibes at mining for gold in the human abdomen and at leg-pulling to pension surplus doctors in original research laboratories are not heard in countries that protect science from the temptation and opportunity for money chasing.

"It is the state that exposes its noblest servants to inevitable debasement of service by fostering illegitimate competition that makes illegitimate gain for some the pure alternative of starvation."

## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

### Eighth Month—Fourth Weekly Meeting

### ACUTE ILEOCOLITIS

Etiology: Age, season, diet, etc. Secondary to infection.

Bacteriology: Researches of Booker, Shiga, Flexner.

Pathology:[1] Gross and microscopic changes in following forms, viz., acute catarrhal, catarrhal ulceration, follicular ulceration, acute membranous.

Associated Pathology: Bronchopneumonia, bronchitis, nephritic changes.

### SYMPTOMS

Catarrhal: Cases of moderate severity, sudden onset, vomiting, pain, fever, diarrhea. Characteristic discharges later, blood and mucus, tenesmus. Usual course and duration. Tendency to relapse.

Severe Catarrhal Form: Symptoms more marked, high fever, frequently bloody stools, prostration, nervous symptoms, toxic symptoms, usual terminations. Gradual recovery, slow convalescence.

Follicular Ulceration: Usually a terminal process of gastro-enteric infection. Sudden or gradual onset. Continued temperature, mucus in discharges, little blood, slight vomiting, loss of weight. Tendency to remissions and relapses. Slow recovery and convalescence.

Membranous: Severe onset, high fever, vomiting, large bloody stools, prostration, nervous symptoms. Pain, rectal prolapse, tenesmus. Characteristic shreds of pseudomembrane. Usual termination, influence of age.

Treatment:[2] Diet. Medicinal. Local.

### CHRONIC ILEOCOLITIS

Symptoms: Differentiation between acute and chronic stages. Absence of pain, tenderness and temperature. General condition, loss of weight progressive, loss of superficial fat, condition of skin. Stomatitis, gastric disturbance slight. Stools: number, character. Nervous symptoms. Course and duration, tendency to relapses.

Diagnosis: Differentiate superficial catarrhal inflammation from follicular ulceration. Differentiate from general tuberculosis.

### Monthly Meeting

The Principles of Artificial Feeding of Infants.[3]

Treatment of Acute Entercolitis.

Relation of Gastro-Intestinal Diseases to Infant Mortality.

REFERENCE BOOKS FOR THE EIGHTH MONTH

Holt: Diseases of Infancy and Childhood.
Rotch: Pediatrics.
Koplik: Diseases of Infancy and Childhood.
Starr: American Text-Book of Diseases of Children.
Chapin and Pisek: Diseases of Children.
Taylor and Wells: Diseases of Children.
Pfaundler and Schlossman: Diseases of Children.

# Medical Education and State Boards of Registration

## COMING EXAMINATIONS

Arkansas: Regular, Little Rock, May 14. Sec., Dr. F. T. Murphy, Brinkley.

Florida: Regular, Jacksonville, May 7-8. Sec., Dr. J. D. Fernandez; Eclectic, Jacksonville, May 6-8. Sec., Dr. Hiram J. Hampton, Tampa.

Georgia: Homeopathic, Atlanta, May 8. Sec., Dr. R. E. Hinman, 106½ Whitehall Street, Atlanta.

Illinois: Coliseum Annex, Chicago, April 30. Sec., Dr. James A. Egan, Springfield.

Louisiana: Regular, Tulane University, New Orleans, May 30 to June 1. Sec., Dr. A. B. Brown, 108 Baronne Street; Homeopathic, New Orleans, May 6. Sec., Dr. Edward Harper, 702 Macheca Bldg.

Massachusetts: State House, Boston, May 14-16. Sec., Dr. Edwin B. Harvey, State House.

Mississippi: State Capitol, Jackson, May 14. Sec., Dr. W. W. Smithson.

Nebraska: Senate Chamber, State House, Lincoln, May 22-23. Sec., Dr. C. P. Fall, Beatrice.

Nevada: Carson City, May 6. Sec., Dr. S. L. Lee.

New York: May 14-17. Chief of Examinations Division, Mr. Harlan H. Horner, Department of Education, Albany.

Tennessee: Memphis, Nashville and Knoxville, May 1-2. Sec., C. A. Abernathy, Pulaski.

Wisconsin: Milwaukee, May 28-30. Sec., Dr. J. M. Beffel, 3200 Clybourn Street.

### Medical School Wins Suit

The University of Nebraska College of Medicine is now in position to make use of the $100,000 appropriated by the legislature for the erection of new medical buildings in Omaha. The Supreme Court of Nebraska has refused to confirm an injunction granted in the court of Lancaster County. The objections stated in the suit for injunction were that the appropriation was special legislation providing state aid for a particular school of medicine and that the erection of university buildings in Omaha was in conflict with a law passed in 1869 providing that all buildings of the state university should be located within four miles of the state capitol. In reply to the first of these objections, according to report, the Supreme Court replied there was nothing in the bill which specified what kind of instruction was to be given. To the second the answer was that the act of 1869 does not prevent the legislature from providing later by subsequent acts that certain buildings should be located elsewhere, as was clearly done in this case. Hence the way is now clear for the University of Nebraska to proceed with the development of its medical school in Omaha.

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[1] Archives of Pediatrics, November, 1903.

[2] Kerley: New York Medical Journal, June 6, 1903. Nicoll: International Clinics, vol. ii, Thirteenth Series. Progressive Medicine, March, 1907. The Journal A. M. A., Sept. 28, 1907.

[3] Chapin: Archives of Pediatrics, July, 1903, and August, 1904. Rotch: The Journal A. M. A., Aug. 15, 1903. Pisek: Medical Record, Sept. 9, 1905. Southworth: The Journal A. M. A., Oct. 6, 1906. Southworth: Archives of Pediatrics, February, 1907, and October, 1907. Archives of Pediatrics, March, 1908. Chapin: The Journal A. M. A., Sept. 18, 1909.

### Nebraska February Report

Dr. C. P. Fall, secretary of the Nebraska State Board of Health, reports the written examination held at Lincoln, Feb. 14-15, 1912. The number of subjects examined in was 10; total number of questions asked, 100; percentages required to pass, 75. The total number of candidates examined was 9 of whom 7 passed and 2 failed. Five candidates were licensed through reciprocity. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Georgetown University | (1906) | 79.7 |
| Northwestern University Medical School | (1910) | 84.5 |
| Hahnemann Medical College and Hospital, Chicago | (1911) | 81.7 |
| Rush Medical College | (1911) | 83.4 |
| St. Louis University | (1911) | 78.5 |
| Creighton Medical College | (1911) | 81.5, 81.7 |
| FAILED | | |
| St. Louis College of Physicians and Surgeons | (1911) | 72.1 |
| Ensworth Medical College | (1909) | 68.2 |

LICENSED THROUGH RECIPROCITY

| College. | Year Grad. | Reciprocity with |
|---|---|---|
| Atlanta College of Physicians and Surgeons | (1901) | Iowa |
| Northwestern University Medical School | (1904) | Iowa |
| State University of Iowa, College of Medicine | (1904) | Iowa |
| Western Eclectic College of Med. and Surgery | (1907) | Kansas |
| Louisville Medical College | (1905) | Kentucky |

### Wisconsin January Report

Dr. John M. Beffel, secretary of the Wisconsin State Board of Medical Examiners, reports the written and oral examination held at Milwaukee, Jan. 9-11, 1912. The number of subjects examined in was 20; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 22 of whom 9 passed and 13 failed, including 1 osteopath. Twenty-two candidates were licensed through reciprocity, including 6 osteopaths. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Rush Medical College | (1910) | 85 |
| Northwestern University Med. School | (1909) 84; (1911) | 79 |
| Eclectic Medical Institute, Cincinnati | (1888) | 75 |
| University of Pennsylvania | (1909) 84; (1911) | 82 |
| Woman's Medical College of Pennsylvania | (1910) | 81 |
| University of Christiania, Norway | (1910) | 82 |
| National University, Athens, Greece | (1903) | 81 |
| FAILED | | |
| Northwestern University | (1910) | *75 |
| Bennett Med. College | (1911) 63, 64, 64, 66, 69, 72; (1912) | 55 |
| Sioux City College of Medicine | (1906) | 57 |
| University of Louisville | (1911) | 57 |
| Marquette University, Milwaukee | (1910) 57; (1911) | 69 |

LICENSED THROUGH RECIPROCITY

| College. | Year Grad. | Reciprocity with |
|---|---|---|
| Northwestern Univ. Med. School | (1889) (1905) (1910) | Illinois |
| Hahnemann Med. College and Hospital, Chicago | (1910) | Illinois |
| Illinois Medical College | (1900) | Illinois |
| College of Physicians and Surgeons, Chicago | (1903)<br>(1911) | North Dakota;<br>Illinois. |
| Atlantic Medical College | (1910) | Maryland |
| University of Michigan, Dept. of Med. and Surg. | (1909) | Michigan |
| University of Minnesota College of Med. | (1890) (1909) | Minnesota |
| University of Minnesota, Homeopathic College | (1903) | Minnesota |
| Kansas City Hahnemann Medical College | (1910) | Arkansas |
| University Medical College, Kansas City | (1904) | Oklahoma |
| Syracuse University | (1908) | Minnesota |
| University of Pennsylvania | (1910) | Maryland |

* Conditioned in pathology.

## Book Notices

The Mechanical Factors of Digestion. By Walter B. Cannon, A.M., M.D., George Higginson Professor of Physiology, Harvard University. Cloth. Price, $3 net. Pp. 227, with 37 illustrations. New York: Longmans, Green & Co., 1911.

The progress of gastro-enterology is shown by an increasing emphasis on the mechanical factors in digestion and on motor disorders rather than disorders of secretion. Our knowledge of the latter was placed on a sure basis by the investigation of Pawlow; it remained for an American physiologist to apply the experimental method made possible by discovery of the Roentgen ray to the motions of the stomach and intestines. The fruits of fifteen years of research on this problem are summed up by Professor Cannon in the book before us. They constitute a body of facts from which a clear idea of the nice adjustments and complicated movements by which food is propelled along the digestive canal is obtained. The basis of the book is the method of examining the progress of food mixed with a salt of bismuth (with the fluoroscope) through the stomach and intestine. The adaptation of movement to the character of the food is as remarkable as the adaptation of secretion shown by the experiments of Pawlow. Carbohydrates needing no stomach digestion leave the stomach quickly, while proteins like meat are retained for more complete preparation for intestinal digestion. Fats, on the other hand, by checking the formation of hydrochloric acid, delay the opening of the pylorus, and are therefore discharged slowly and at a rate such as to prevent a great accumulation of the fat in the duodenum, where it is mixed with its special digestive secretion. The movements of the intestine furnish a chapter as absorbing in interest as those dealing with the movements of the stomach. The process of defecation and its innervation is described; the investigations throw some light on the nature of constipation and may afford some valuable suggestions as to the treatment of that condition. Two very interesting chapters are devoted to the innervation of the intestinal canal. Another is occupied with the description of the results of the author's investigations of the sounds elicited by auscultation of the abdomen. So far, these investigations have been made on normal individuals only; it remains for clinicians to pursue the subject further. Perhaps a fertile field of diagnosis may thus be developed. The importance of this monograph is not to be estimated by its size, but it is one which every medical practitioner can well afford to make his own, not only as a part of his library, but as a foundation for his further studies and practice.

Truth's Cautionary List for 1912. Cloth. Price, 1 shilling, 2 pence (post-paid, 30 cents). Pp. 140. London: Truth Publishing Co., Ltd., 10 Bolt Court, Fleet Street, E. C.

The readers of The Journal need no introduction to London *Truth*. Time and again reference has been made to the exposures which this great English weekly has made of medical frauds that are flourishing in Great Britain. Not that *Truth* confines its campaign against fraud to those of a medical nature. Frauds of any kind, swindlers in any line of endeavor, humbugs in any capacity are ruthlessly exposed. The result is that at the end of each year *Truth* has accumulated a large amount of information concerning fakes of all kinds that is of vital interest to the public. In order to put this material in easily accessible form, it is boiled down into terse paragraphs, classified, indexed and cross-indexed and issued in a small annual volume known as "Truth's Cautionary List." The 1912 edition is now before us. To indicate briefly the scope of this work, it is but necessary to quote the headings of a few of the twenty and more chapters making up the book. These comprise such subjects as "Begging-Letter Writers," "Medical Quacks," "Bucket-Shops," "Money Lenders and Their Touts," "Trick Advertising," "Biography, Journalism and Advertising" and many others.

The chapter dealing with "Miscellaneous Practitioners" is, next to that dealing with medical quacks, of special interest, there being described several frauds that are indigenous to the United States. But it is in the chapter devoted to "Quacks" that one realizes what the more stringent laws and rigid post-office rulings in the United States have done for British quackery. There are sixty-six different medical fakes listed in this chapter. Of this number, more than one-half are of American origin. This means, as has been repeatedly stated in THE JOURNAL, that American quacks and nostrum venders, finding the home market less favorable to their business, have opened branches in Great Britain where restrictive laws are conspicuous by their absence.

To sum up: "Truth's Cautionary List" is the encyclopedia of fakes *par excellence*. While published by a British firm and particularly for British readers, it is a book that any American can read with interest and instruction; this not only because many of the frauds described have their headquarters in America, but also because there are many swindlers dealt with which, while in themselves English, are identical in their *modus operandi* with frauds conducted in this country.

A MANUAL OF MATERIA MEDICA FOR MEDICAL STUDENTS. By E. Quin Thornton, M.D., Assistant Professor of Materia Medica in the Jefferson Medical College, Philadelphia. Cloth. Price, $3.50 net. Pp. 525. Philadelphia: Lea & Febiger, 1911.

As indicated by the title, this is a manual of materia medica. The allied subjects of pharmacology and therapeutics are almost wholly ignored, the subject of materia medica being regarded as a preliminary one which is to serve as a foundation for the course in therapeutics. As, at the period when the student is supposed to undertake the study of materia medica, he is not far enough advanced in physiology to understand the normal actions of the organism, the physiologic action of drugs is omitted to a large extent, only the simpler actions being described in order that the study may not become too dry. There may be some room for doubt whether this is really the best way to teach materia medica, since it thus becomes almost a pure matter of memory and of detail without close application to the ultimate object of the physician's studies, viz., therapeutics.

Much attention is given to the theory of prescription-writing and especially to Latin. More than a score of pages are devoted to a summary of Latin grammar. Let us hope that these statements which are given without illustrations or exercises may be of benefit, but it seems a strange commentary on the preparation of our medical students that not nly must teachers in medical schools teach the Latin of rescription-writing, but also the pages of medical text-books must be encumbered with the details of Latin grammar.

A rather extensive discussion of the administration of medcines is given, but nothing is said of intravenous administraion. This already established method of administering remdies seems deserving of an extended notice in an up-to-date ext-book.

In the body of the book official substances and preparations re described. The descriptions are clear and concise. An ppendix gives a list of all official preparations with their ose in both the ordinary and the metric system.

ORTHOPEDIC SURGERY. By Edward H. Bradford, M.D., Surgeon to he Boston Children's Hospital, and Robert W. Lovett, M.D., Assoiate Surgeon to the Boston Children's Hospital. Cloth. Price, 3.50 net. Pp. 410, with 364 illustrations. New York: William Vood & Co., 1911.

This book is a condensation of the third edition of the reatise on orthopedic surgery, by the same authors, issued even years ago, the present edition being about two-thirds he size of the third edition. Some sections are partly rewrit-n, as the sections on arthritis deformans and on lateral urvature, but the outline and, in the main, the text of the ook are unchanged, except for the omissions. The work of ese authors has long been standard, and in this smaller volme will be more available.

CASE HISTORIES IN MEDICINE, ILLUSTRATING THE DIAGNOSIS, OGNOSIS AND TREATMENT OF DISEASE. By Richard C. Cabot, M.D. cond Edition. Cloth. Price, $3. Pp. 295. Boston: W. M. onard, 1911.

Cabot here presents the histories of a series of cases, selected illustrate difficulties which confront the physician at the dside. This second edition includes one hundred cases, hich are arranged in groups, such as infectious diseases, diseases of the heart, the nervous system, the ductless glands, etc. The history of each case is stated as it was obtained from the patient, and the physical and laboratory findings, so far as they were available, are given. It frequently happens that the crucial laboratory examination is lacking, or the history is misleading, and as a result the correct diagnosis cannot be made. Cabot discusses these possibilities, and after supplying the necessary data arrives at the diagnosis and prognosis and outlines the treatment. He makes good use of the opportunity to teach rational therapy, and while we may not always agree with him in the acceptance or discarding of certain drugs, we believe that the discussions here presented will do much toward the prevention of indiscriminate drugging, on the one hand, and therapeutic nihilism on the other. The book is in no sense a text-book, but rather a volume of short stories in medicine, in which general diagnostic and therapeutic principles are considered in their relation to the individual case.

LEHRBUCH KLINISCHER UNTERSUCHUNGSMETHODEN FÜR STUDIERENDE UND AERZTE. Von Dr. Theodor Brugsch, Universitätsprofessor, und Dr. Alfr. Schittenhelm, Professor der klinischen Propadeutik und Geschichte der Medizin in Erlangen. Second Edition. Paper. Price, $4.25. Pp. 712, with 341 illustrations. New York: Rebman Co., 1911.

This is the second edition of this work, the first having appeared three years ago. Many chapters have been entirely rewritten; an indication of the great changes which have taken place since the first edition is the fact that in some of the chapters not a sentence of the previous edition remains. In order not to have this volume too large the authors have eliminated from it those methods of examination which require specially equipped laboratories and experts to carry out, and those highly technical methods are to form a second volume which will appear the end of this year.

In the present volume will be found practically everything relating to clinical methods of examination. What should be found normally is first described, then the deviations from the normal and finally the significance of the abnormal. The latter is a very important feature of the work and one which is too frequently slighted in works of this kind. For instance, it is not sufficient to know how to detect a lymphocytosis in the blood; it is also necessary to know what its significance is when found.

THE LUTE OF LIFE. By James Newton Matthews. Edited by Walter Hurt. Cloth. Price, $1.50. Pp. 348. Cincinnati: Horton & Co., Publishers, 1911.

This book consists of a collection of the poems written by the late Dr. James Newton Matthews, with a foreword by James Whitcomb Riley, Matthews' close personal friend.

Dr. Matthews was the son of one of the prominent early medical men of Illinois and was himself a busy country practitioner up to his death, in 1910, subsequent to long and exhausting rides over country roads, caring for the sick. His poems breathe of the country and the sky, the woods and the flowers, of rivers and prairies. They also bear witness to a deep insight into and sympathy with human feelings and suffering, such as comes from the experience of a general practitioner of medicine. Some of the poems have direct medical interest, and all will appeal to those who care for the finer things in literature. The merit in Dr. Matthews' writings has been appreciated by the literary world, and this collection of poems should find a place in the library of every doctor.

It may also be a satisfaction to purchasers of this book to know that aid is being extended to the widow of a doctor who, like many another, was too busy caring for the sick to make adequate provision for those he loved the most.

HYMN TO HYGIEA. English and German Text. Words and Music by John C. Hemmeter, M.D., Phil.D., LL.D., Professor of Physiology, University of Maryland, Baltimore. Dedicated to Prof. William Henry Welch of the Johns Hopkins University. Paper. Price for Score, $1 net. New York: Carl Fischer, 1911.

This hymn, with both English and German text, is a serious production for solo work with chorus. It is a well-arranged, dignified hymn, worthy of production. Medical men ought to do more of this sort of work, not only in composition, but in rendition.

# Medicolegal

### Liability for Malpractice of Furnisher of Gratuitous Medical Treatment

(*Ballard vs. Chesapeake & Ohio Railway Co. (Ky.), 139 S. W. R. 771*)

The Court of Appeals of Kentucky affirms a judgment in favor of the defendant railway company, which was sued for malpractice after the plaintiff had been treated gratuitously by a physician in its employ. A foot of the plaintiff's had been crushed at a time when, the evidence gave the impression, it was his purpose to steal a ride on a moving train. However, whether he was trespassing or not was not material, as he based his case entirely on the ground that the company was responsible for the malpractice of the physician employed by it, who by its direction rendered to him the gratuitous service. If an action for malpractice had been brought against the physician, there was evidence sufficient, the court says, to take the case to the jury; but, as it was sought to hold the company liable, an entirely different question was presented.

In cases like this the settled rule is that the person or company employing a physician, who by its direction renders gratuitous service, is not liable for his specific acts of negligence or malpractice, if reasonable care in his selection was exercised to secure the services of a competent and skilful physician, unless, after his incompetency or unfitness becomes known, or in the exercise of reasonable care should have been known, he is retained. Therefore, before liability attaches to the person furnishing a physician to render gratuitous service, there must be some evidence showing the existence of two things: First, negligence or malpractice on the part of the physician in the treatment of the case under his control; and, second, that the person furnishing the physician failed to exercise reasonable care to select a competent and skilful physician, or after he knew, or could by the exercise of reasonable care have known, of his unfitness or incompetency, retained him. If there is a failure of proof on either of these propositions, the person seeking a recovery of damages against the person furnishing the physician must fail.

It was argued that the rule of law stated is only applicable to employers who, being under a duty to do so, furnish medical assistance to injured employees, and should not be extended to embrace a case like this, in which there was no duty to furnish medical attention. But it seems to the court that there is less reason for holding a person who voluntarily and gratuitously, and without being under any duty to do so, responsible for the negligence or malpractice of a physician secured by him to give treatment to an injured person than there would be when the person furnishing the physician was under a duty to do so.

### Liability for Giving of Free Samples of Medicine to Children in Violation of Statute

(*State vs. Cray (Vt.), 81 Atl. R. 450*)

The Supreme Court of Vermont affirms a judgment of conviction of violating the statute of that state which provides that "a person, firm or corporation that distributes or causes to be distributed a free or trial sample of a medicine, drug, chemical or chemical compound, by leaving the same exposed on the ground, sidewalks, porch, doorway, letter box, or in any other manner, that children may become possessed of the same, shall be fined," etc. In this case a free sample of kidney and bladder pills was given to a child 4 years old. It was not done by the defendant in person, but the court holds that, notwithstanding the distribution was by his agent, and contrary to his general instruction against delivering to children, yet, as it was done by the agent in distributing samples furnished him by the defendant for that purpose, acting under the defendant's orders, and in the prosecution of the defendant's business, for which he was employed, the distribution was caused by the defendant within the meaning of the statute, and he was answerable therefor. The court says that the statute quoted is in exercise of the police power, for the general protection by the state, as parens patriæ (parent of the country), of children within its domain; they being incapable of protecting themselves. It pertains to their physical well-being, and hence to the interest of the state. The action given for its violation, though criminal in form, is in substance more particularly civil in nature, designed to prevent the recurrence of that which constitutes a public nuisance. The statute looks at and punishes the act constituting the offense, without regard to the intention of the person by or for whom the distribution is made. A person may lawfully distribute such articles as are named in the statute, if he observes its provisions. If he employs an agent for that purpose, it is his duty to know that the law regulating the manner of distribution is not violated.

### Liability for Negligence of Driver of Hospital Ambulance

(*Kellogg vs. Church Charity Foundation of Long Island (N. Y.), 96 N. E. R. 406*)

The Court of Appeals of New York reverses a judgment which held the defendant liable for damages for injuries sustained by the plaintiff through the alleged negligence of a driver of an ambulance of the hospital maintained by the defendant, a charitable corporation. The court says that it must now be regarded as settled that a charitable corporation is not exempt from liability for a tort or wrongful act against a stranger, because of the fact that it holds its property in trust to be applied to purposes of charity. But the court does not consider that the defendant was liable in this instance for the negligence of the driver, the ambulance, though owned by the defendant and bearing the name of its hospital, being kept at a livery stable, the proprietor of which furnished a horse to draw the ambulance and a man to drive it on such occasions as the defendant might indicate, the driver being hired and paid by the livery stable keeper, who alone had the power to discharge him. The case was analogous to the hiring of a team with a driver from a liveryman, where the liveryman remains liable for any injury to third persons due to the negligence of the driver, notwithstanding the fact that the person hiring the team may direct the driver where to go and at what speed. Such a contract does not make the driver the servant of the hirer, or render his negligence imputable to the latter. Nor does the court agree with the contention that the defendant was rendered liable because ordinances had been passed permitting ambulances to travel along the streets at a rate of speed prohibited in respect to other vehicles. The ordinance specially relied on in no manner authorized the driving of such vehicles at a dangerous rate of speed. It did not prescribe a high rate of speed, or any rate whatever, but was merely equivalent to a command or direction that other vehicles should give way to ambulances in the public streets. There was no foundation, therefore, for the doctrine that an ambulance was necessarily a dangerous instrumentality.

### Communication of Gonorrhea Not an Indictable Offense

(*Austin vs. State (Miss.), 56 So. R. 345*)

The Supreme Court of Mississippi reverses a judgment of conviction for spreading a contagious disease, with instructions that the case be dismissed. The indictment was framed under section 1085 of the Mississippi Code of 1906, which makes it a punishable offense if any person shall wilfully and knowingly import or bring into the state, or into any county thereof from another county, small-pox, or any other contagious or infectious disease or matter thereof, with the design to spread the same by inoculation or otherwise, or shall inoculate, or procure inoculation, for said diseases, or any or either of them, after the disease may have been introduced, except as provided by law. The court holds that the indictment charged no offense known to the law in charging that the defendant had and induced in the county, and wilfully, knowingly and unlawfully inoculated a named minor with an infectious disease, known as gonorrhea, by having and causing sexual intercourse with him, and thereby causing him to contract and have the disease.

# Society Proceedings

## COMING MEETINGS

American Medical Association, Atlantic City, N. J., June 4-7.

Alabama State Medical Association, Birmingham, April 16.
American Academy of Medicine, Atlantic City, May 30-June 2.
American Dermatological Association, St. Louis, May 23-25.
American Gynecological Society, Baltimore, May 28-30.
American Laryngological Association, Atlantic City, May 9-11.
American Medico-Psychological Association, Atlantic City, May 28-31.
American Neurological Association, Boston, May 30-June 1.
American Orthopedic Association, Atlantic City, May 30-June 1.
American Pediatric Society, Hot Springs, Va., May 29-31.
American Surgical Association, Montreal, May 29-31.
American Therapeutic Society, Montreal, May 31-June 1.
Arizona Medical Association, Bisbee, May 7.
Arkansas Medical Society, Hot Springs, May 13-16.
Association of American Physicians, Atlantic City, May 7-8.
California State Medical Society, Del Monte, April 16-18.
Connecticut State Medical Society, New Haven, May 22.
Florida Medical Association, Tampa, May 8-10.
Georgia Medical Association, Augusta, April 17-19.
Illinois State Medical Society, Springfield, May 21-23.
Iowa State Medical Society, Burlington, May 8-10.
Louisiana State Medical Society, New Orleans, April 23-25.
Maryland Medical and Chirurgical Faculty, Baltimore, April 23-25.
Montana State Medical Association, Helena, May 8.
Nat. Assn. for Study and Prev. Tuberculosis, Washington, May 30-31.
Nebraska State Medical Association, Lincoln, May 7-9.
New Hampshire Medical Society, Concord, May 8-9.
New York State Medical Society, Albany, April 16-18.
North Dakota State Medical Association, Valley City, May 8-9.
Ohio State Medical Association, Dayton, May 7-9.
Oklahoma State Medical Association, Shawnee, May 7-9.
South Carolina Medical Association, Columbia, April 16-18.
South Dakota State Medical Association, Mitchell, May 22-24.
Texas State Medical Association, Waco, May 7-9.
Wisconsin State Medical Society, Wausau, May 22-24.

## NATIONAL CONFEDERATION OF STATE MEDICAL EXAMINING AND LICENSING BOARDS

*Twenty-Second Annual Meeting, held at Chicago, Feb. 29, 1912*

Dr. Charles A. Tuttle, New Haven, Conn., in the Chair

### Officers

The following officers were elected: president, Dr. A. B. Brown, New Orleans; vice-presidents, Dr. Charles H. Cook, Natick, Mass., and Dr. Pearl Tatman, Arkansas; secretary-treasurer, Dr. George H. Matson, Columbus, O.

### What a National Confederation of State Boards Can Do

Dr. A. B. Brown, New Orleans, La.: One of the main purposes for the creation of state boards of medical examiners has been to make it the duty of certain state functionaries, competent to perform that duty, to see that the violators of the laws in regard to the qualification of physicians were punished. Through cooperation a national federation of state boards could, by the interchange of information concerning the prosecution of violators of the medical laws, prevent those violators from continuing the violation by the mere change of location from one state to another. A uniform requirement of the qualifications for the practice of medicine would result in a uniform exclusion of unqualified persons. A national federation can speak with a much louder voice and higher authority than any one local board. Legislators would be more likely to listen to a demand of so universal a character, and which would be deprived of all appearance of individual interest, than they would to the request of a few physicians constituting the local board. In this way uniformity of legislation might be obtained from the different states defining what constitutes the practice of medicine, naming the character of examinations to be held and giving the remedies for the violaion of the statute. As it stands to-day each one of the forty-seven states of the Union seems to have a different definition of the practice of medicine. While the courts have, as a general rule, construed them as prohibiting, in general erms, the treatment of disease through any means whatsoever by unqualified persons, yet these definitions have served as excuses for a few courts to distinguish between the different methods of curing people, so as to allow unqualified persons o practice the healing art.

One of the powers of such a federation would be to fix, and raise, perhaps, the standard of examination to which the several state boards should adhere in passing on the qualifications of applicants for the practice of medicine. At present these examinations are not uniform. When we realize that not only the methods of examining, but the subjects for examination and the thoroughness of detail with which the examination is held, are different in different states, it is easy to see how unsatisfactory in one state a certificate issued by a board of medical examiners from another state might be.

#### DISCUSSION

Dr. Lee H. Smith, Buffalo, N. Y.: In the State of New York we have depended on the Regent's office for the enforcement of all details as regards entrance examination, bringing all recalcitrant practitioners before the board for proper adjudication, as it were, of their improper methods. The medical examining board is called on only as a final penalizing organization.

Dr. W. T. Gott, Indianapolis: In order to establish uniformity in the matter of medical qualifications and to enlarge the scope of the medical license, it is necessary to establish some sort of rule or regulation by somebody, some organization, looking toward the uniformity of medical licensure. A national body is the one which should undertake such work. If the states would adopt the uniform recommendations of the national body and establish reciprocity along such lines, all states would almost be compelled in time to adopt the same standard in order that their licentiates might be able to practice anywhere in the United States instead of in a single state.

### Methods That May Be Used in Conducting Licensing Examinations

Dr. George H. Matson, Columbus, O.: State examinations of a practical nature are now necessary and must continue until poor schools cease to exist. The term "practical" is used as implying laboratory and clinical demonstrations as well as oral and written work. An examination should consist of written discussions on subjects in practice and therapeutics; oral and written work in anatomy, physiology and obstetrics, with laboratory material and the manikin; practical demonstrations in minor surgery both on the living subject and the cadaver; laboratory and written work in histology, pathology, bacteriology and chemistry, and actual clinical demonstrations with diseased patients in diagnosis. Since the medical board is the only barrier between the public, which needs protection on one side, and the applicant, backed by his college on the other, members of medical boards should be selected or appointed, not for political reasons, but for their peculiar fitness. Funds for the employment of competent assistants should be made available.

An examination of the various state medical practice acts reveals the fact that in a very large majority of states the boards have the regulating power and the adoption of methods for examination lies entirely in their hands. Nine states have undertaken these rational methods. Practical examinations in Minnesota have been a decided success. The Ohio board has been well pleased with the results since their inauguration in 1908. Not one member would return to the old method. Six other boards have expressed their intention of adopting practical tests. The outlook is good.

#### DISCUSSION

Dr. Charles H. Cook, Natick, Mass.: There are states that cannot conduct practical examinations to any degree until they change their laws, because they require examinations to be written. In Massachusetts we are obliged to examine everybody who applies. The examination is required to be sufficient to test the qualifications of the applicant to practice medicine, so that we are not compelled to give those who come from other states a complete examination. We can register a man quickly if we find he is competent.

Dr. Walter P. Bowers, Clinton, Mass.: Practical examinations are now recognized as a vital part of the work of state boards. We are tremendously handicapped in that none of us have at our disposal the amount of money necessary to carry on this work. The only solution of this problem is to secure the cooperation of the medical schools and the hospitals, and this cooperation can be secured without any great expense.

Dr. B. D. Harison, Detroit, Mich.: In the case of a distinguished practitioner of medicine, we would not have to ask him any question. He could obtain a license without taking an examination. Our law permits us to register men of that character and standing without any examination whatever, or without even their appearance before the board.

Dr. Warren B. Hill, Milwaukee, Wis.: If we could have practical examinations it would be the greatest stimulus to the medical colleges to do good work, and it would promote a helpful spirit between the college and the state board—a spirit of cooperation that would tend to better practical medical education. In our school we have practical examinations all along the line. We have practical examinations in internal medicine for final examination, but no doubt if these same students came before another examining board we would find, perhaps, that there were flaws in our system of practical education. It might be found that we were emphasizing one part of the curriculum to the disadvantage of another, and by the practical tests we can very soon find out wherein we are weak in our teaching arrangements, and with the cooperation of the state board, provided the board would cooperate with us, we could find out our weaknesses and much could be done by means of this cooperation to strengthen in detail the general work of the medical college.

Dr. J. W. Cobb, U. S. P. H. and M.-H. S.: State examining boards, as they are now constituted, must comply with the state laws, but if you can have a body like this, whose object is good, its action will in itself be a law. Everybody will be glad to comply with the regulations of this body. There is one other point about state laws: too many state laws specify as to what the examination should be, and how it shall be conducted, and there is where this body would be confronted by a hard problem. A state law should be passed giving the examining board the power to make regulations for the conduct of these examinations. If a state board can make its own rules and regulations for examinations, that state board can join with you.

Dr. W. A. Spurgeon, Muncie, Ind.: We are striving for a degree of perfection that it will take a long time to reach. The real important function of an examination is, first, to determine the qualifications of the applicant to practice medicine; second, to determine the educational value of the institution from which the applicant came. These two things are the heart and soul of the essential functions of the medical examination. A practical examination can only be approximated. You cannot get the time, and you have not the facilities to make a practical examination, except that it will of necessity be crippled by inefficiency or it will be too superficial. This much can be done by a practical examination: it can be used as a means of supplementing the written examination.

Dr. W. Ed. Grant, Louisville: The principal thing in all state board examinations is to find out whether the applicants for licenses know how to practice medicine, and practical examinations will aid in determining this very materially.

Dr. Herbert Harlan, Baltimore: Our state laws will not allow many of us to hold these practical examinations, though it would be very desirable to have them.

Dr. William F. Snow, Sacramento, Cal.: The practical examination is a most vital thing in connection with state board examinations. Some of us have advocated these examinations in California, but we have been told by members of the board of examiners they have no facilities for conducting them. It seems to me, it is a question of appropriation and modification of the law, and I think every legislature is willing to consider modifications of any law.

### What Should Be the Requirements for Membership in a National Confederation of State Boards?

Dr. John M. Dodson, Chicago: The object of such an organization should be, first, to unify the laws and pave the way for reciprocity; second, to improve the methods of examination by providing practical tests. I have no patience with those who think practical tests are not feasible, and hold that written examinations stand in the way of progress. The membership might be active, including only state boards with high standards; associate membership of state boards with low standards, and affiliated membership, which includes all those interested in medical education.

Dr. N. P. Colwell, Chicago, outlined what should be required by the laws and the boards in each state. He urged reasonable requirements, so that the country generally might be represented in the new federation. He thinks that where the laws are bad, and the boards good, there is every hope of a favorable outcome. If the boards take the proper methods of safeguarding the public that is what is needed.

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## PHILADELPHIA ACADEMY OF NATURAL SCIENCES

*Centenary Meeting, held March 19-21, 1912*

In a three-day meeting covering a long program of scientific and other papers and addresses, the Academy of Natural Sciences of Philadelphia celebrated the centennial of its foundation, March 19, 20 and 21.

### Historical Statement

The academy was organized March 21, 1812. The title of the new organization was suggested by Dr. Samuel Jackson of the University of Pennsylvania, but he did not associate himself with it on account of religious and social prejudices against the study of the natural sciences in those days, which he feared would militate against his success as a rising young practitioner. However, the academy had the earnest support of medical men and drew into its membership those who were connected with the University of Pennsylvania and the American Philosophical Society. This support of the medical profession has continued and the president, in its centennial year, is Dr. Samuel G. Dixon, Commissioner of Health of Pennsylvania, which position he has occupied since 1895. Under him the academy has made much progress and at present has almost completed new buildings at Nineteenth and Race streets, which will house one of the greatest scientific museums in the world, being equaled by only one or two others in Europe and America. The library of the academy is also one of the most valuable scientific libraries to be found anywhere.

The meeting culminated in a banquet on Thursday evening, at which Mayor Blankenburg addressed the scientists, largely concerning matters of interest to Philadelphia, calling attention to the new city library which is to be erected on the park-way opposite the new buildings of the Academy of Science and suggesting that the Philadelphia library, which is to be one of the greatest in the country, should not duplicate the great library of the academy, nor the other important reference libraries of the city. He also said that science should be applied to municipal government and the effort was being made in the Quaker City to make that application. He said that if we had honest and scientific municipal administration in all the cities of our country, the future of the nation would be assured.

### President Dixon's Address on Prophylaxis

The president, Dr. Dixon, spoke at the banquet on the importance of scientific investigation in securing health to the community through prevention.

In the address delivered Tuesday evening, in his general review of the work of the academy and of the men who have made its name famous, Dr. Dixon pointed out that from the very first the earnest lovers of science who were its founders had mapped out the lines of work which practically were the basis of the methods which the academy had pursued in work for a full century, exploration, the securing of collections, laboratory work with study collections, the building up of a library, and the exchanging of publications with other learned societies, which brought the academy in reciprocal touch with the whole world of science without its walls. More than most people imagined the academy has been connected with a long line of explorations which began with the early expeditions to the Rocky Mountains and the far west, in which Thomas Say, one of the founders, took a prominent part as a member of the Long expedition to the Rocky Mountains in 1820; and in view of the interest in Antarctic research and of the discovery of the Antarctic pole, Dr. Dixon noted that two members of the academy, at the request of the United States Government, accompanied the Wilks expedition in 1838; while it is fresh in the minds of most people not only how the first Peary expedition and the Peary relief expedition of 1891-1892 were financed by the academy, although only academy members know that the famous Dr. Elisha Kent Kane was supplied with scientific outfit by the academy in 1853 for his Arctic trip, which for many years eclipsed all other experiences in the Arctics and gave Kane an imperishable fame. The further winning of the West through the Hayden expeditions, the scientific opening up of Africa by du Chaillu, and the work of the pioneers, Rogers and Leslie, in the Pennsylvania Geological Survey, Dr. Dixon mentioned as examples of explorations near and far by which the academy not only added to its superb collections, but increased the sum total of human knowledge.

In touching on the special laboratory features of the working specialists, Dr. Dixon mentioned the work of Cope and Leidy, the latter of whom he called the Cuvier of America, and not only referred to his early work in revealing the far west to the world, but in discussing Leidy as a bacteriologist in connection with the bacteriological department of the academy, the speaker went on to point out the enormous value to man of a study of the abstract sciences and their practical application, especially in the case of the microscopic and sub-microscopic organisms and organic matter, which played their part in disease and which the bacteriologists and students of entomology were busily engaged in studying and isolating. Dr. Dixon quickly ran over the facts now known to science, showing how the terrible scourges of mankind are now more or less under control through the quiet researches of the bacteriologists; how malaria and yellow fever are transmitted to man by the mosquito, the plague by the rat flea, the sleeping sickness by the tsetse fly, the leprosy parasite by house vermin; and the part played by flies in carrying typhoid; while not only the great gain to the world through the protection and saving of human life by reason of our new knowledge was brought out, but also the fact that the quiet laboratory workers in botany and entomology and allied natural history sciences, who are now engaged in investigations looking to the protection of the world from the enormous losses to plant and animal life through various plant and animal pests. Some of the figures which Dr. Dixon quoted were of almost unbelievable magniude, losses to cereals alone through preventable causes being nnually put down to three hundred million dollars, and nimal products suffering a like amount, with losses to cotton lone through plant enemies running up to as high as eighty-ive million dollars. Dr. Dixon mentioned these things as howing the immense debt that the world owed to the patient workers in these sciences which bear heavily on the relations of man to men.

In this connection Dr. Dixon quoted a telling paragraph from Washington, showing his early appreciation of the necessary elation of state and science in a republic. Said the President n his first message to Congress: "Nor am I less persuaded hat you will agree with me in the opinion that there is othing more deserving your patronage than the promotion of cience and laboratories, knowing that in every country it is he surest basis of public happiness, and in one in which the easures of the government receive their impressions so immeiately from the sense of the community as ours it is proortionately essential."

In calling attention to the reputation of the academy during s long history, Dr. Dixon quoted a letter from Emerson ritten in 1854, and read two letters from Darwin written in 860, as showing the way in which the great thinkers of the orld viewed the academy and its collections. Dr. Dixon xpressed the thought that this occasion was a very happy one, since he was able through the generosity of the state, which had appropriated money for building purposes, to turn over a fireproof building in which after one hundred years of risk the great collections would now be safely housed. Dr. Dixon explained that no money of the state had ever been used for the maintenance of the academy, and that the academy was an institution supported by a small endowment, which enabled it to carry on this great work through the sacrifice of those associated with it.

In connection with the centennial, the academy received a number of congratulatory letters and resolutions from scientific institutions here and abroad—in all some three hundred. Among them were those of the Royal Fredrik's University of Christiania, Norway; the University of Lyons; the Royal Academy of Literature, Science and Arts of Belgium, and from the Prorector of the Royal Albertus University of Koenigsberg, Prussia, and one from the Buffalo Academy of Natural Sciences.

## THE TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA

*Meeting held at Columbia, S. C., Feb. 21 and 22, 1912*

The President, D. J. HOWELL WAY, Waynesville, N. C., in the Chair

### The New Officers Elected

The following were elected to the offices named: President, Dr. A. E. Baker, Charleston, S. C.; vice-presidents, Drs. A. B. Knowlton, Columbia, S. C., A. J. Crowell, Charlotte, N. C., and A. L. Gray, Richmond, Va.; secretary-treasurer, Dr. Rolfe E. Hughes, Laurens, S. C.

Norfolk, Va., was selected for the next meeting place, Feb. 19 and 20, 1913.

### Some Clinical and Experimental Observations Concerning Proctoclysis

DR. HUGH H. TROUT, Roanoke, Va., whose article will be published in full in a later issue of THE JOURNAL, discussed the relative value of fresh water and normal salt solution in proctoclysis. He concludes that fresh water is as effective as normal salt solution in proctoclysis, and is freer from several of the inconveniences of the latter.

DR. C. L. MINOR, Asheville, N. C.: I have obtained excellent results in many conditions from colonic lavage, using a normal salt solution which is retained for half an hour, and of which about 30 per cent. only will be absorbed in that time. I use normal salt solution because, being isotonic, it will be less irritating to the wall of the bowel and less damaging to its epithelium, and because I believe that a larger quantity will be absorbed. I have had no injury to the kidney.

### Bilateral Cancrum Oris Complicating Typhoid

DRS. JOHN S. CLIFFORD and BAXTER S. MOORE, Charlotte, N. C.: This complication of typhoid is exceedingly rare. Of the nine cases taken from the literature by Keen, five were fatal, and in one the final result was not recorded; the only case of bilateral involvement terminated in death. Our case was sent in to the hospital with a well-defined gangrenous area about 1¼ inches in diameter on the right cheek, and the superior maxilla was invaded well into the antrum. The child, aged 8, had had typhoid for four weeks previously and no attention had been paid to hygiene. The cheek was treated with the actual cautery extending well into the surrounding healthy tissues, seemingly without any regard for the cosmetic results. Five days later the left side became involved and the tissues were divided down to and through the orbicularis muscle. The cautery was applied on three different occasions, whenever indicated. The convalescence was slow and tedious. The inferior maxilla was limited in motion, it being possible for the child to open her mouth, leaving a space of about ⅜ inch between the teeth. A plastic operation was recommended, but refused by the parents. The child recovered

### Safeguarding and Lessening the Disagreeable Features of Surgical Operations

Dr. Southgate Leigh, Norfolk, Va.: I have used nitrous oxid-oxygen anesthesia in about 900 cases with no fatalities. It is by far the safest, pleasantest and most satisfactory form of anesthesia yet devised. The chief drawback is that a skilled manipulator is required. The adverse reports appearing recently are the outcome of erroneous methods or lack of experience.

DISCUSSION

Dr. Stuart McGuire, Richmond, Va.: About a month ago I investigated this method of anesthesia. I found in many hospitals the practice was to first give the patient a dose of morphin and scopolamin, then administer nitrous oxid-gas and oxygen, then infiltrate the line of incision with cocain, and finally to give enough ether to keep the patient quiet. The method, as I observed it, ought not to be called "oxygen and gas anesthesia," but "the combination anesthesia." Many of the patients were blue, most of them struggled, and the majority vomited afterward. It is true they waked up quickly when the anesthetic was withdrawn, but it is equally true they often waken before it is desired that they shall do so. In Richmond many surgeons have experimented with this method, and I am told that in one hospital three patients died on the table under its influence, in the past six months.

Dr. C. L. Minor, Asheville, N. C.: There is at least one class of cases in which I have had the opportunity to satisfy myself of the superiority of nitrous oxid as an anesthetic. I refer to cases of pulmonary tuberculosis needing operation. In such cases the results after nitrous oxid are much better than with ether or chloroform, the action of these two latter on a tuberculous respiratory tract being often very disastrous.

### Hypertrophied Thymus and the Status Lymphaticus

Dr. J. H. Taylor, Columbia, S. C.: In my first case death occurred from violent excitement in a child, 5½ years of age. While some cases of status lymphaticus present little or no enlargement of the thymus, and thymic deaths occur where no other lymphoid changes are found, except the enlarged gland, yet, often there is an apparent relationship between the two conditions that has as yet not been satisfactorily explained. Whether the hypertrophied thymus is a coincident lesion, a cause or merely an effect of the status lymphaticus, is still a matter of conjecture. My second case was one of enlarged thymus complicating cretinism in which appeared at the second month a constant expiratory and inspiratory stridor affected by neither position nor sleep, together with frequent and severe attacks of dyspnea and engorgement of the superficial veins of the neck during crying. Roentgen therapy, within ten days, produced a striking alleviation of the symptoms associated with enlarged thymus. The stridor became much less severe and the asthmatic attacks gradually diminished both in severity and frequency until, at the present time, they have entirely disappeared, as has the stridor also. The alleviation of the symptoms antedated the giving of thyroid extract, but, following the latter, the progress in every respect was surprisingly rapid.

### The Recognition and Treatment of Thyroid Disease

Dr. John Rogers, New York, N. Y.: The chief distinguishing marks of hypothyroidism are the dry skin, anemia, puffiness about the eyelids and supraclavicular regions, edema of the tibial regions, headache, mental sluggishness, subnormal temperature and constipation; of hyperthyroidism, the vasomotor irritability with its characteristic tachycardia, moist skin, subjective and objective nervousness, and slightly elevated temperature. In both conditions there is a very definite "fatigability." Goiter is about equally common in either state, and, likewise, it is not necessarily present. If present, it is very useful for determining the diagnosis in an otherwise often indefinite symptomatology. Exopthalmos frequently coexists with a marked degree of hypothyroidism. The thyroid probably has a universal "activating" function. Its secretion varies in quantity and quality, according to the bodily needs. This secretion contains at least two iodized proteins; one of these, a nucleoprotein, stimulates or "activates" specifically the chromaffin system; and another, a globulin, activates all other organs and tissues. All cases of hyper- or hypothyroidism are, then, an expression of glandular fatigue in which the epithelium in its attempt to metabolize iodin either disintegrates and forms an excess of nucleoprotein, as in Graves' disease, or it atrophies and causes myxedema. Both conditions often coexist. Cases of simple goiter, without constitutional disturbance, represent a compensatory hypertrophy, and the gland should be helped by feeding with the normal thyroid secretion or combined nucleoprotein and globulin, and should not have its efforts injured by operation. Degenerative changes which, by pressure on the gland itself, interfere with the nutrition and function of the sound parts, or by pressure on the surrounding structures, damage the general nutrition, should be removed, but all the sound glandular tissue possible should be saved.

Acute toxemic thyroidism can best be treated by antithyroid serum. Chronic hyperthyroidism, represented by the average case of exophthalmic goiter, can generally be helped by the antithyroid serum, which cuts down the excess of nucleoprotein and globulin and so checks auto-activation, but it is more logical to enforce rest for the gland by cutting off more or less of the blood and nerve-supply and, later, by thyroid feeding. In this disorder the assumed excess of nucleoprotein in the secretion stimulates specifically the sympathetic and so the secretory nerve-supply of the thyroid, and so continues the fatigue of the gland. Partial thyroidectomy is only indicated in this disorder when one part of the gland is manifestly more diseased than another. This appears to be the case in some "leaking retention cysts" in which the altered secretion of a damaged portion of the gland intermittently or constantly damages the rest of the organ by stimulation of the sympathetic and so induces a general thyroid fatigue. The localized disease should be excised. Cases of hyperthyroidism with symmetrically enlarged and evenly damaged glands cannot be permanently cured by partial thyroidectomy, and the damaged portion of the gland which remains is generally insufficient. Cases of hypothyroidism when existing in combination with hyperthyroidism cannot be benefited until the hyperthyroidism is relieved by section of more or less of the blood- and nerve-supply, or by antiserum. Pure hypothyroidism or myxedema is much more difficult to cure than is ordinarily supposed. The active thyroid ingredients are far better than the commercial thyroid tablets; but these often have to be combined with adrenal or with pancreas feeding. Extracts of human thyroid, given subcutaneously, are sometimes necessary. A temporary hypothyroidism is exceedingly common, especially in pregnancy, and is not unusual in young children and often accompanies fatigue in "nervous" individuals.

DISCUSSION

Dr. Stuart McGuire, Richmond, Va.: As to the frequency of malignant degeneration developing in these cases, in the last hundred cases that have come under my observation, there have been three cases of cancer.

Dr. J. W. Jervey, Greenville, S. C.: In a certain proportion of cases the lymph tissues of the throat are involved, and there seems to be a distinct reason to believe that there is some condition simulating the so-called status lymphaticus. While in many cases we feel that operative interference is absolutely necessary, yet we must be very cautious how we use a general anesthetic for operation on the lymph structures of children. We must keep in mind the dangers of the general anesthetic in cases of status lymphaticus. Many fatalities have been reported.

Dr. A. L. Gray, Richmond, Va.: An infant, 9 days old, had the characteristic croupy breathing, paroxysmal attacks of dyspnea and died before morning. Another patient, a child one year of age, following the bromid treatment, lived for six months, and then died from bronchopneumonia. I am satisfied both these cases were thymus enlargement or status lymphaticus.

Dr. E. W. Carpenter, Greenville, S. C.: I saw a case in which all symptoms pointed to laryngeal diphtheria. An intubation was done, with no relief of the respiratory embarrassment. Several hours later the child died, without warning, from cardiac failure. Autopsy showed a normal larynx. I was forced to the conclusion that a rupture of the normal balance of the ductless glands, manifesting itself as an acute thymus intoxication with obstruction was the cause of death.

Dr. Philip Roy, Washington, D. C.: Sometimes hyperthyroidism seems to be Nature's effort to protect the system against intestinal auto-intoxication and probably other auto-intoxications. The intestinal auto-intoxication is an intoxication caused by some faulty metabolism of the protein molecule. Cases have been reported of hyperthyroidism occurring in gastric retention.

### Chronic Nasal Diphtheria

Dr. Clifton M. Miller, Richmond, Va.: Diphtheria of the nose, essentially chronic, has been recognized since 1858, but in spite of this, it has received but scant attention in standard text-books. Its symptomatology is almost entirely objective. Such symptoms are often attributed to some other cause. Occasionally slight rise of temperature is present in the beginning, but does not last more than twenty-four hours. After this, nasal obstruction with increased nasal discharge and usually excoriation of the upper lip are the only symptoms. It usually occurs in childhood, and is most frequent in the summer months or early fall; has no tendency to spread to any tissue adjacent to the nose and these children run about and mix with their associates. Foreign body in the nose is the most frequent diagnosis in these cases. The prognosis is good. Death is liable to occur in children under 3 years of age. The virulence to cause infection in others is as great as that of acute attacks, and its chronicity is due to a high resistance in the patient affected. I have seen a number of cases, all of which were confirmed by bacteriologic examination and in which antitoxin effected a cure.

### Diphtheria Carriers

Dr. Henry Page, Fort Moultrie, S. C.: The inability to control the yearly outbreaks of diphtheria that occur in every city is due to the fact that a large number of persons, in apparent good health, are constantly spreading infection. Carriers are not carefully sought for because no means of sterilizing these carriers has been found effective, and to keep such persons in quarantine indefinitely is an absurd proposition. Two cases were successfully treated by overriding the infected throats of the carriers with a culture of *Staphylococcus pyogenes aureus*. If this method is proved to be safe, effective and prompt in removing virulent bacilli from a carrier's throat, it will offer a possibility to sanitarians of removing diphtheria from the list of dreaded infections.

### Surgery of the Central Nervous System

Dr. Charles H. Frazier, Philadelphia, Pa.: An abstract of this paper was published in The Journal, March 30, p. 967.

### Clinical Value of the Polygraph

Dr. Philip Roy, Washington, D. C.: Tracings showing extra systoles, nodal rhythm, heart-block and pulsus irregularis perpetuus, without doubt all point to organic disease in the primitive cardiac tissue. Polygraph tracings help to determine the rest power and the work power of the heart. I doubt whether pulsus alternans should be called an irregularity of the heart. It points to a more grave condition than that of rregularity, namely, a want of contractile power in the muscle of the heart—one of the fundamental qualities of the heart muscle. In treating diseases of the heart the three cardinal points are rest, diet and digitalis. The assayed tincture of digitalis is, without doubt, the most reliable preparation of digitalis. Digitalis often causes temporary heart-block, and this is the reason, probably, why some of the older therapeutists cautioned against the use of digitalis after the age of 60. Heart-block is most apt to occur after that age, and probably the primitive cardiac tissue is especially sensitive to he action of digitalis.

# Current Medical Literature

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### Journal of Indiana State Medical Association, Fort Wayne

*March, V, No. 3, pp. 111-152*

1 *Diet, with Special Reference to Meat Question. C. N. Howard, Warsaw.
2 Conservation of Hearing. J. F. Barnhill, Indianapolis.
3 *Incidental Rôle of Streptococcus Infection in Pernicious Anemia. G. W. McCaskey, Fort Wayne.

1. **Diet.**—It is suggested by Howard that from the present trend of thought it would seem unlikely that meat will come to be finally classed in the same general category with tea, coffee, alcohol and tobacco: that is, with things which are not taken for the purpose of bettering the physical, mental or spiritual condition, but taken simply and only because their taste is good and they temporarily produce a comforting sense of stimulation and well-being.

3. **Streptococcus Infection.**—In seven cases of pernicious anemia, streptococci were the only organisms found. The relationship of the streptococci found in these cases to the real pathology of the disease raises some very interesting questions. McCaskey thinks it is probably accidental. But even if this is true, its importance is very great. The toxins produced by certain strains of streptococci have been shown to be distinctly hemolytic. If this is true, increased hemolysis becomes an important auxiliary etiologic factor. Furthermore, if the view which apparently prevails, viz., that excessive hemolysis from an unknown cause constitutes the essential basis of pernicious anemia, the possibility of an obscure streptococcal nidus gradually pouring the toxins into the circulation and playing a conspicuous rôle in the etiology of the disease, McCaskey regards as a suggestion well worth serious consideration. The streptococcemia is sometimes amenable to treatment by autogenous vaccines derived from cultures made from the patient's blood. Blood cultures should, therefore, be made in all cases of pernicious anemia in which elevation of temperature, even though slight, occurs.

### St. Paul Medical Journal, Minn.

*March, XIV, No. 3, pp. 131-135*

4 Impressions of a Visit to the International Hygiene Exposition, Dresden, 1911. J. Knott.
5 Relation of Nasal Disease to Eye Symptoms. E. W. Benham, Mankato, Minn.
6 Plea for Thorough and Systematic Study of Materia Medica and Therapeutics. F. Ellingwood, Chicago.
7 Letters to Physicians: Neurasthenia Is Neurosthenia. G. M. Gould, Ithaca, N. Y.

### Southern Medical Journal, Nashville, Tenn.

*March, V, No. 2, pp. 69-142*

8 *Pellagra in Tennessee. J. A. Albright, Nashville, Tenn.
9 *Etiology of Pellagra. J. L. Jelks, Memphis, Tenn.
10 Pathology of Pellagra. H. F. Harris, Atlanta, Ga.
11 *Pseudopellagra. C. H. Lavinder, U. S. P. H. and M.-H. S.
12 *Cursory Study of Skin Manifestation of Pellagra, with Reference to Its Special Importance from Diagnostic Standpoint. H. E. Menage, New Orleans.
13 Symptom-Complex Called Pellagra. J. S. Tuberville, Century, Fla.
14 Treatment of Pellagra. J. A. Kimbrough, Thomasville, Ala.
15 *Idem. L. Leroy, Memphis, Tenn.
16 *Prognosis of Pellagra. C. C. Bass, New Orleans.
17 Pellagra in Italy. H. P. Cole, Mobile, Ala.
18 *Wherein Diagnosis of Pellagra Is of Surgical Importance. L. Guerry, Columbia, S. C.
19 Pellagra: Sociologic and Therapeutic Study. G. M. Niles, Atlanta, Ga.
20 Are the Jews Immune to Pellagra? B. Wolff, Atlanta, Ga.
21 Pellagra. W. C. Brownson, Asheville, N. C.

8, 9, 12, 15 and 16. Abstracted in The Journal, Dec. 2, 1911, pp. 1940 and 1941.

11. **Pseudo-Pellagra.**—Lavinder emphasizes the need of more extensive and more exact clinical observations on pellagra in the United States; to determine more clearly the value of data regarding the existence of symptom-complexes or diseases similar to pellagra; to appreciate at its true value what is meant by pseudo-pellagra; and to urge the need of careful studies on pellagra as seen in public institutions, especially in insane asylums. Such observations and studies would, he says, be of particular value in the United States, where the influence of the corn theory of the disease has no such weight, as it has especially in Italy, and where consequently individual observa-

tions can be made unprejudiced by the veneration of any particular etiologic school. Why, he asks, create a pseudopellagra? We may, with equal right, it would seem, create a pseudo-measles or pseudo-erysipelas or a pseudo-beriberi.

18. **Diagnosis of Pellagra Is of Surgical Importance.**—It is most important in Guerry's opinion to keep in mind that there are both acute and chronic cases; cases with and without eruption; that the onset frequently is most insidious and atypical; that the disease is a malady as protean as malarial fever, tuberculosis or hysteria. We must, he says, reckon with pellagra as a causative factor in intestinal hemorrhage of obscure origin. We also have to look at these cases from the standpoint not only of diagnosis, but it is important to remember that these cases are living on a very narrow margin of safety, and that even when surgery is imperative for other conditions that may arise they are extremely poor surgical risks, and the mental symptoms can be and have been greatly exaggerated by anesthesia and operation, occasionally being followed by acute insanity, from which they never relapse, but die.

### Virginia Medical Semi-Monthly, Richmond

*March 22, XVI, No. 24, pp. 601-632*

22 Failure of Physicians to Diagnose Uncinariasis. W. A. Plecker, South Hill.
23 Diseases and Degenerations Due Directly to Alcohol. T. D. Crothers, Hartford, Conn.
24 Physician and His Influence. I. M. Hardy, Washington, N. C.
25 School Inspection, Norfolk, Va. C. L. Harrell, Norfolk.
26 Subnormal Child in School. M. P. Doyle, Norfolk.

### American Journal of Public Health, New York

*February, II, No. 2, pp. 67-134*

27 Prevention of Infant Mortality by Breast Feeding. W. H. Davis, Boston.
28 Chemical Disinfection of Sewage. E. B. Phelps, Boston.
29 Sanitary Regulation of Oyster Industry. F. P. Gorham.
30 Public Health Renaissance. A. J. Douglas, Winnipeg.
31 *Mosquito Larvacide-Disinfectant and Methods of Its Standardization. S. T. Darling, Ancon, C. Z.
32 Relation of Putrescibility of Settling and Non-Settling Suspended Matter in Sewage. A. Lederer, Chicago.
33 *Preservation of Water Samples by Salting. M. P. Ravenel and K. W. Smith, Madison, Wis.
34 Some Legal and Practical Aspects of Bottled Milk Regulation. J. O. Jordan, Boston.
35 Thirty-Five Strains of Streptococci Isolated from Samples of Milk. G. F. Ruediger, Grand Forks, N. Dak.
36 Laboratory as Prophylactic Measure. J. F. Arteaga, Havana, Cuba.
37 New Method of Sewage Sludge Treatment. R. Hering. ?
38 *Municipal Inspection of Food-Supplies. J. O. Jordan, Boston.

31. **Mosquito Larvacide-Disinfectant.**—For the destruction of mosquito larvæ, the Sanitary Department in the Canal Zone has a larvacide prepared from crude carbolic acid, the details of manufacture of which were worked out by J. E. Jacob, chemist, Board of Health Laboratory. The special features of the product are its cheapness, high larvacidal and germicidal powers, miscibility with water, relative uniform composition and the methods used to determine its larvacidal and algacidal value. The larvacide is prepared from crude carbolic acid, a substance which as usually supplied contains from 5 per cent. to 30 per cent. tar acids, together with a large amount of inert neutral oils. The crude acid is immiscible with water, and is a very inefficient disinfectant on account of its inability to come into intimate contact with micro-organisms. When, however, the crude carbolic acid is made into a liquid soap with resin and alkali by means of heat, a product results which emulsifies on the addition of a large amount of water. If the germicidal value of the emulsion is determined by the method of Rideal and Walker, it will be found to be greatly enhanced, frequently being from two to five times greater than that of pure carbolic acid. The product is not only a most effective destructive agent for mosquito larvæ, but is a valuable cheap disinfectant.

Method of manufacture: To insure the manufacture of a uniform product requisitions call for crude carbolic acid of a specific gravity not greater than 0.97 and to contain not less than 30 per cent. tar acids. One hundred and fifty gallons of crude carbolic acid are heated in an iron tank having a steam coil with steam at 50 pounds pressure. Two hundred pounds of finely crushed and sifted common resin are dissolved in the heated acid, and then 30 pounds of caustic soda dissolved in 6 gallons of water are added. There is a mechanical stirring rod attached to the tank. The product is ready in a few minutes, yielding about 3½ barrels. Cost per gallon, $0.1413. The germicidal value when tested with *B. typhosus* in an aqueous emulsion of the larvacide has an R-D coefficient of from 2 to 5. As a mosquito larvacide it is used by spraying an aqueous emulsion (one part larvacide to five of water) over the surface and along the margins of pools and ponds or other mosquito-breeding places, so that the resulting dilution of the larvacide has a thin milky opalescence representing approximately a dilution of 1 to 5,000.

33. **Preservation of Water Samples by Salting.**—Ravenel and Smith conclude that neither the salting method proposed by Remlinger, nor the preservation by means of caffein or resorcin, has any practical value whatever. We are, he says, forced for the present, to rely on refrigeration for preventing changes in the samples of water.

38. **Municipal Inspection of Food Supplies.**—As an outcome of Boston's experiences in municipal food inspection, the following conclusions and comments are submitted by Jordan for the more efficient handling of those problems over which boards of health are ordinarily supposed to have supreme control. It is suggested that all restaurants, ice-cream plants, sausage factories, egg-breaking, preserving, fish-smoking and lobster-boiling establishments be licensed by boards of health, with authority to frame rules for the government of the above places, as well as to revoke said licenses. That boards of health have authority to prohibit the exposure of certain foods; to require that all stores where foods are sold shall have proper lavatory facilities; and that no store where articles of food are sold or prepared shall be used for domestic purposes, or open directly into living rooms, and that the water-closets in such stores shall be located properly.

### Journal of Medical Association of Georgia, Augusta

*March, I, No. 8, pp. 277-311*

39 Vincent's Angina. T. E. Oertel, Augusta.
40 Cystic Colloid Goiter. W. S. Goldsmith, Atlanta.
41 Pneumonia and Its Treatment. J. B. Camp, Carrollton.
42 Salvarsan. W. L. Champion, Atlanta.
43 Excision of External Organs of Generation for Obstinate Pruritis. R. C. Franklin, Graymont.
44 Abdominal Surgical Complications of Typhoid. J. R. B. Branch, Macon.
45 Preoperative and Postoperative Treatment of Appendicitis. H. S. Munroe, Columbus.
46 The Nervous Woman. L. M. Gaines, Atlanta.

### Archives of Pediatrics, New York

*March, XXIX, No. 3, pp. 161-240*

47 Analytic Study of Twenty Cases of Infantile Paralysis. A. Sophian, New York.
48 *Quick Macroscopic Agglutination Test (Bass-Watkins). J. Ruhräh, Baltimore.
49 Bass-Watkins Typhoid Agglutination Test. L. J. Menville, Houma, La.
50 *Subcutaneous Injection of Small Quantities of Human Blood in Spontaneous Hemorrhage of New-Born. A. W. Myers, Milwaukee, Wis.
51 *Bacterial Counts and Acidity Determinations of Different Grades of Milk as Delivered to Consumer. E. H. Schorer, Boston.
52 Edema in Infants. P. A. Potter, East Orange, N. J.
53 Mineral Salts and Their Relation to Dietary of Infants and Children. B. R. Hoobler, New York.

48. This test was described by Bass and Watkins in the *Archives of Internal Medicine*, December, 1910, p. 717, and abstracted in The Journal, Jan. 14, 1911, p. 156.

50. **Spontaneous Hemorrhage of New-Born.**—In Myers' case, when the child was 32 hours old (June 20, 12 M.), a large stool was expelled, composed entirely of tarry blood clots. This was repeated at 2, 3, 4, 5, 6 and 8 p. m. At 4, 6 and 8 p. m. the expulsion of the bloody stools was accompanied by vomiting of considerable quantities of clotted blood. During the night the child slept quietly until 4 a. m., when there was a bloody stool with vomiting of blood. This was repeated at 7 a. m., and at 10 and 11:30 a. m. there were bloody stools without vomiting. When seen for the first time at noon of June 21 the child's condition seemed almost hopeless. The weight had fallen to 4 pounds 8 ounces; the mucous membranes were very pale. The skin was colorless. The cord was normal, no bleeding occurred at this point, and there were no hemorrhages into the skin or the visible mucous membranes. Three cubic centimeters of blood were drawn from a vein of the mother's arm and quickly injected into the subcutaneous tissues of the baby's buttock before there was time for the blood to coagulate

in the syringe. This was done at 12 M. At 2:30 p. m. a stool was passed containing rather, old-looking clots and a small amount of fresh blood.

At 4:30 p. m. a second injection of maternal blood was given into the other buttock. This time an attempt was made to obtain a larger amount of blood. Ten cubic centimeters were drawn into the syringe, but it took a little longer to obtain it and a longer time to inject it, the result being that coagulation occurred in the syringe when only 5 c.c. had been injected. The amount proved to be quite sufficient. There was absolutely no more bleeding. The child was put to breast and nursed well after the first few times. There was no vomiting and the following stools presented the typical meconium character, gradually changing to the milk-stool appearance in a few days. The blood injected was quickly absorbed, and a few hours afterward the site of the injection could be recognized only by the needle puncture in the skin. The subsequent history of the child was uneventful.

51. **Bacterial Counts and Acidity Determinations.**—Based on observations, both at the places of production and distribution and on the relatively small numbers of bacteria found at times in all of the milk supplies examined during the year, Schorer says it is evident that it is comparatively easy generally to produce milk of low bacterial count, but that the greatest care must be constantly exercised to prevent occasional high counts even in certified milk. While certifying boards must certainly consider such occasional increases in bacterial content, revocation of the license to certify is apparently warranted only when proper conditions are not obtainable, either through refusal to comply with suggestions or through incompetency. If certifying commissions will take this into consideration, Shorer believes the supply of certified milk will be much increased. As conditions are at present, a considerable part of milk of the certified grade is not certified because producers of such milk are unwilling to risk the reputation of their milk without being given a fair chance to rectify errors leading to counts above 10,000 bacteria per cubic centimeter. A supply composed of the product of a considerable number of good producers is more constant because of dilution. After all, bacterial counts are only circumstantial evidence, and milk with the lowest counts may at times be the means of disseminating a communicable disease.

### Pennsylvania Medical Journal, Athens

*March, XV, No. 6, pp. 423-514*

54 Aids to Diagnosis in Otology and Their Clinical Significance. J. F. McKernon, New York.
55 Cancer Problem. C. B. Longnecker, Philadelphia.
56 Diagnostic Evidence Obtained by Means of Roentgen Rays in Carcinoma of Stomach. G. E. Pfahler, Philadelphia.
57 *New Sign in Diagnosis and Treatment of Ulcer and Carcinoma of Stomach. E. Zugsmith, Pittsburgh.
58 *Treatment of Backward Displacements of Uterus. X. O. Werder, Pittsburgh.
59 Intussusception in Children. A. R. Matheny, Pittsburgh.
60 Meeting Needs of the Cripple in the Community. D. C. McMurthrie, New York.
61 Physician's Duty Toward Conserving Public Health. T. P. Cole, Greensburg.

57. Abstracted in The Journal, Oct. 21, 1911, p 1480.

58. Abstracted in The Journal, Nov. 4, 1911, p. 1558.

### Journal of Pharmacology and Experimental Therapeutics, Baltimore

*March, III, No. 4, pp. 387-475*

62 *Effect of Nicotin Injection on Adrenal Secretion. W. B. Cannon, J. C. Aub and C. A. L. Binger.
63 Quantitative Studies on Gastro-Intestinal Absorption of Drugs: II. Absorption of Sodium Iodid. P. J. Hanzlik, Cleveland.
64 Action of Various Diuretics in Uranium Nephritis. W. de B. MacNider, Chapel Hill, N. C.
65 Isocalycanthin and Its Quaternary Base. H. McGuigan and C. L. von Hess.

62. **Effect of Nicotin Injection on Adrenal Secretion.**—This investigation was undertaken to learn whether nicotin can, in fact, increase the discharge of epinephrin into the blood. It was found that nicotin, as used in these experiments, does not produce inhibition of the pulsating intestinal strip. Blood taken from near the openings of the adrenal veins after nicotin injection differs from blood removed from the same region before the injection, in producing inhibition of a pulsating strip of intestinal muscle. This difference does not appear if nicotin is injected after the adrenal glands have been removed. The conclusion is, therefore, reached by the authors that injection of nicotin in small amounts (0.0035 to 0.0075 gram in cats) results in augmented adrenal secretion.

### Albany Medical Annals, N. Y.

*March, XXXIII, No. 3, pp. 129-190*

66 Progress in Syphilology. H. S. Bernstein, Albany, N. Y.
67 Malignant Renal Tumors of Congenital Origin in Childhood; Report of Two Cases. J. L. Bendell, Albany.

### Vermont Medical Monthly, Burlington

*March 15, XVIII, No. 3, pp. 53-78*

68 Treatment for Alcoholics and Drug Habitués. W. L. Wasson, Waterbury.
69 Disease of Criminality. G. G. Marshall, Rutland.
70 Cell; Its Relation to Pharmacodynamics. D. Marvin, Essex Junction.

### Journal of Infectious Diseases, Chicago

*March, X, No. 2, pp. 129-256*

71 *Rapid Filtration of Agar and Gelatin. W. L. Holman, Pittsburgh.
72 Cholera. C. Krumwiede, Jr., J. S. Pratt and M. Grund, New York.
73 *Plasma Cells in Tonsils. D. J. Davis, Chicago.
74 *Bacteriology and Pathology of Tonsils, with Special Reference to Chronic Articular, Renal and Cardiac Lesions. D. J. Davis, Chicago.
75 *Amebacidal Action of Emetin. W. B. Wherry, Cincinnati.
76 *Numbers and Types of Bacteria Carried by City Flies. J. C. Torrey, New York.
77 Complement Fixation Reaction in Diagnosis of Contagious Abortion of Cattle. W. P. Larson, Madison, Wis.
78 Studies on Pellagra Based on Occurrence in 1910 in Cook County Institutions at Dunning, Ill. F. B. Clarke, R. C. Hamill, L. J. Pollock, A. H. Curtis and G. F. Dick.
79 Bactericidal and Hemolytic Powers of Paraffin Plasma and of Serum. T. Addis, Edinburgh.
80 Bacillus Mesentericus and Allied Organisms. O. C. Gruner and J. R. Fraser, Montreal, Canada.
81 Parturient Paresis (Milk Fever) and Eclampsia. D. J. Healy and J. H. Kastle, Lexington, Ky.
82 Toxic Character of Colostrum in Parturient Paresis. J. H. Kastle and D. J. Healy, Lexington, Ky.
83 *Internal Secretion of Mammæ as Factor in Onset of Labor. D. J. Healy and J. H. Kastle, Lexington, Ky.
84 Rideal-Walker Test and Rideal-Walker Method. S. Rideal and E. K. Rideal.

71. **Rapid Filtration of Agar and Gelatin.**—The filtering apparatus used by Holman consists of: An enameled pot 8.5 inches high by 8 inches in diameter, with a cover; four ordinary bottles 7 inches high by 2½ inches wide, with a neck 1½ to 2 inches in diameter (not wider); canton flannel cut in convenient sizes to cover mouths of bottles; a wooden appliance to steady the bottles when in position; small glass rods. The canton flannel is tied firmly over the necks of the glass bottles. The wooden apparatus is placed in the enameled pot containing the prepared nutrient agar. The bottles are put in position with the covered necks downward resting on the glass rods. The cover is put on the pot and the whole placed in the steam sterilizer, heated to 120 C. for a few minutes, to permit a firm coagulation of the egg, and then allowed to cool slowly. The principle of this filtering method depends on the expansion of the air in the inverted bottles which, bubbling out during the heating, leaves a vacuum on subsequent cooling, and thus exerts a strong suction on the medium, which is slowly drawn into the bottles. The glass rods prevent the bottles from being drawn tightly to the bottom of the container, which would of course stop entirely all further filtration. The agar prepared and filtered as above is perfectly clear, much whiter than ordinary agar, and there is no clouding on subsequent sterilization.

73. **Plasma Cells in Tonsils.**—In the tonsils of the fetus and the new-born, Davis says plasma cells are not present. They first appear about the second or third week, and thereafter are constantly found in the tonsils. This is about the time, or shortly after the time, that bacteria invade the tonsillar crypts. In hypertrophied tonsils they are more numerous than in apparently normal tonsils. Their presence may be interpreted as indicating the existence in the tonsils of a chronic infectious process or the absorption of toxic or irritating products.

74. Abstracted in The Journal, Dec. 30, 1911, p. 2169.

75. **Amebacidal Action of Emetin.**—Emetin in 1-20,000, 1-100,000 and 1-200,000, dilutions killed the amebas in one of the five series of experiments conducted by Wherry after twenty-three and one-half hours' exposure, at 36 to 38 C. None of these dilutions was amebacidal in an hour. Wherry thinks it seems fair to presume that when amebacidal action was manifested the emetin acted on the trophozoits alone, and that fail-

ure to kill may be attributed to the presence of cysts. While emetin in 1-20,000 dilution was found to kill the symbiotic bacterium in forty-eight hours, it did not exert such an action in twenty-four hours in the amebæ-bacteria mixtures. Exposure to body temperature for twenty-four hours did not kill this saprophytic ameba.

76. **Bacteria Carried by City Flies.**—Flies examined by Torrey up to the latter part of June were free from fecal bacteria and carried a homogeneous flora of coccal forms. During July and August there occurred periods in which the flies examined carried several millions of bacteria, alternating with periods in which the number of bacteria were reduced to hundreds. The scanty flora probably indicated the advent of swarms of recently hatched flies. Fecal bacteria of the colon type were first encountered in abundance the early part of July. The bacteria in the intestines of the flies were 8.6 times as numerous as on the surface of the insects. On the surface of the flies the colon-group bacteria constituted 13.1 per cent. of the total; and within the intestine 37.5 per cent. of the total. Of the lactose fermenters, isolated and identified, 79.5 per cent. belonged in the colon-aerogens group and 20.5 per cent. in the acidi lactici group. Fifteen cultures of streptococci, isolated and identified, were distributed among the equinus, fecalis and salivarius groups. There were none of the pyogenes type. The most important isolation were three cultures of *B. paratyphosus.* Type A. Bacteria of the paracolon type causing a final intense alkaline reaction in litmus milk and fermenting only certain monosaccharids were frequently encountered during August.

83. **Internal Secretion of Mammæ in Onset of Labor.**—It is evident from Healy and Kastle's results of an experimental study that the colostrum of the normal cow, as well as that of the cow suffering from parturient paresis, contains a substance, or substances, capable of bringing about abortion in pregnant guinea-pigs. Whether this substance causing the abortion is a hormone or a toxin can only be determined by further experiment, which they hope to undertake as soon as the necessary material can be obtained. The substance, or substances, in the fresh colostrum of the normal cow which excite the pregnant guinea-pigs to premature labor, withstands heating to boiling for a short time. In this respect it is similar to the hormones and differs from the soluble ferments and many toxins. It is evident from these experiments that the internal secretions of the mammary gland stimulate the mother to labor and the birth of the offspring.

### Journal of Arkansas Medical Society, Little Rock

*February, VIII, No. 9, pp. 241-262*

85 Repair of Injuries to Parturient Canal Sustained During Delivery. J. P. Runyan, Little Rock.
86 Treatment of Typhoid and Its Most Frequent Complications. O. O. Hammonds, De Queen.
87 Curettage; Its Indications and Technic. R. L. Saxon, Little Rock.
88 Neurasthenia and Psychasthenia—a Difference. S. T. Rucker, Memphis, Tenn.

### Journal of Biological Chemistry, Baltimore

*March, XI, No. 2, pp. 97-167*

89 Hydantoins; Action of Potassium Thiocyanate on Alanin. T. B. Johnson.
90 *Fasting Studies; Distribution of Nitrogen During Fast of 117 Days. P. E. Howe, H. A. Mattill and O. B. Hawk, Urbana, Ill.
91 *Studies on Water Drinking; Hydrogen Ion Concentration of Feces. P. E. Howe and P. B. Hawk, Urbana, Ill.
92 Carbohydrate Esters of Higher Fatty Acids; Manite Esters of Stearic Acid. W. R. Bloor, St. Louis.
93 Protein Metabolism from Standpoint of Blood and Tissue Analysis; Origin and Significance of Ammonia in Portal Blood. O. Folin and W. Denis, Boston.

90. **Elimination of Nitrogen During Fasting.**—The subject of the fast reported by the authors was a Scotch collie dog weighing 26.33 kg. at the opening of the fast. The fast was 117 days in length, thus constituting by many days the longest fast on record. The dog gave evidence of being possessed of wonderful vigor and stamina. This was indicated by the fact that he was able to jump out of his cage so late as the one hundred and first fasting day. At the end of the fast of 117 days the animal was carefully fed and ultimately brought back to his original body weight and subjected to a second fast. The data from this second fast will soon be published. The urine of the animal was examined quantitatively for total nitrogen, urea, ammonia, creatinin, creatin, allantoin and purin-nitrogen. The total nitrogen content of the feces was also determined. During the prefasting interval, the dog was fed a diet containing 3.75 grams of protein per kilogram body weight. He also received 700 c.c. of water per day during the feeding interval as well as during the fast. The body weight loss aggregated about 63 per cent. for the 117-day fast, the actual weight being 26.33 kg. before the fast and 9.76 kg. on the one hundred and seventeenth day. There was no indication of a premortal rise in the nitrogen excretion.

The "creatin crossing," i. e., the point in a fast at which the output of nitrogen in the form of creatin exceeds that in the form of creatinin, was not in evidence. This fact is interpreted as indicating that the dog would probably have been able to fast a total of at least 130 days if he had not been fed on the one hundred and seventeenth day. At the end of the fifty-ninth fasting day, the water ingestion of the dog was raised to 2,100 c.c. per day for an interval of four days. This caused an increase of 77.5 per cent. in the total nitrogen output for the first day, urea, ammonia, creatinin, creatin and allantoin being simultaneously increased, whereas purin was decreased in quantity. The creatinin coefficient was 15.6 for the period of normal feeding preceding the fast, 12.0 at the opening of the fast and 4.7 on the one hundred and seventeenth fasting day. The percentage nitrogen distribution was in general similar to that reported in connection with the shorter fasts on dogs.

91. **Hydrogen Ion Concentration of Feces.**—The hydrogen *ion* concentration of the feces of three men was determined by Howe and Hawk, two in a series of water-drinking experiments and the third in a fasting test, with the accompanying preliminary and final periods. The same type of diet was employed in the water experiments and in the preliminary postfasting periods of the fasting test. The hydrogen electrode (Salm type) was used to determine the actual hydrogen *ion* concentration, and indicator papers were used to determine the approximate hydrogen *ion* concentration. The reaction of the feces was uniformly alkaline, the hydrogen *ion* concentration varying between $0.15 \times 10^{-8}$ and $9.8 \times 10^{-8}$. As the result of water drinking with meals, there was a tendency for the hydrogen *ion* concentration to increase. Pronounced changes in the dietary régime, such as high protein, low protein and fasting, did not affect the hydrogen *ion* concentration of the feces sufficiently to cause other than small variations in the uniformly alkaline reaction. As the result of fasting, the stools were alkaline in reaction (hydrogen *ion* concentrations of $1.4 \times 10^{-8}$ and $0.94 \times 10^{-8}$), as opposed to the acid stools reported by previous investigators. The hydrogen *ion* concentration differs for the feces of different individuals living on the same diet.

### Northwest Medicine, Seattle, Wash.

*March, IV, No. 3, pp. 69-100*

94 Paranoia. D. H. Calder, Provo, Utah.
95 Cholecystectomy; Experimental Study. J. E. Else, Pullman, Wash.
96 Cholelithiasis; Report of Cases. G. N. Pease, Portland, Ore.
97 Basic Principles in Treatment of Specific Urethritis. A. C. Crookall, Seattle, Wash.
98 Infantile Pernicious Vomiting and Rectal Hemorrhage; Report of Case. A. Ries-Finley, Ogden, Utah.
99 Open Treatment of Fractures. W. C. Woodward, Seattle, Wash.
100 Congenital Idiopathic Dilatation of Colon: Hirschsprung's Disease. J. F. Critchlow, Salt Lake City, Utah.
101 Ophthalmologic Study in Paris. F. A. Kiehle, Portland, Ore.

### Chicago Medical Recorder

*March, XXXIV, No. 3, pp. 115-174*

102 *Milk as Food for Infants. I. A. Abt, Chicago.
103 Relation of Community to Midwife. W. H. Allport, Chicago.
104 Condition of Surgery of Head at Cook County Hospital in Ninth Decade of Nineteenth Century. B. Holmes, Chicago.
105 Orthopedic Treatment of Non-Tuberculous Chronic Joint Diseases. J. Ridlon, Chicago.
106 Mental Therapeutics. O. J. Price, Chicago.
107 Vaginal Douche Therapy. F. A. Brockmyre, Canandaigua, N. Y.
108 Red Cross Work in Hankow, China. W. W. Peters.

102. **Milk as Food for Infants.**—Abt sums up his views as follows: In order to feed an infant successfully one must have a definite knowledge as to the status of the infant, his digestive function and his constitutional state. A knowledge of the physiology of food, the injuries produced by food and the tolerance for food is requisite. Overfeeding is as disastrous as

underfeeding. An excess of fat or sugar is capable of producing toxic symptoms. Simple milk mixtures, that is, milk diluted with water or cereal decoction, with the addition of 1 to 5 per cent. of sugar, will in most cases give satisfactory results. Elaborate and complicated milk formulæ are not ordinarily required. The technic of feeding consists of careful preparation and proper administration of the food. These are not the least important elements in successful feeding. In feeding sick infants it is frequently possible to ascertain which element of food in the milk mixture is producing harm, and the proper modification may be made. Some children have an idiosyncrasy against cow's milk, as evidenced by the production of toxic symptoms. In such cases breast milk or a suitable adaptation of cow's milk should be instituted. Every baby, especially every abnormal baby, is a law unto himself, and he should be studied as an individual. No one's dictum or rule or recent discovery is as important as a knowledge of general principles of feeding and the physiology of food and digestion. Prolonged starvation lowers resistance and predisposes to disease and death. Prolonged and excessive use of laxative drugs does not assist in the digestion or assimilation of food. Scalded or boiled milk sometimes agrees when raw milk causes indigestion and diarrhea. An infant may be difficult to feed because he is suffering from an inherited disease, an anatomic malformation, a constitutional vice or an infectious disease. Fresh air, intelligent care, good housing conditions, frequent bathing and cleanliness, proper clothing for summer and winter, are powerful adjuvants in all that pertains to normal digestion and the upbuilding processes of infants.

### Delaware State Medical Journal, Wilmington

*March, III, No. 4, pp. 1-26*

109 Hysteria. T. H. Davies, Farnhurst.
110 Typho-Bacterin. W. Marshall, Milford.

### Journal of Ophthalmology and Oto-Laryngology, Chicago

*March, VI, No. 3, pp. 70-104*

111 Intra-Orbital Lesions Secondary to Disease of Accessory Sinuses of Nose. J. W. Walters, Lynchburg, Va.
112 Non-Suppurative Sinusitis. A. H. Andrews, Chicago.

### New York Medical Journal

*March 23, XCV, No. 12, pp. 573-624*

113 Personal Experience with Diseases of Pancreas. J. B. Deaver, Philadelphia.
114 Progress in Sanitary and Moral Prophylaxis. P. A. Morrow, New York.
115 Some Reasons Why Incipient Pulmonary Tuberculosis Is Not Diagnosticated. J. H. Pryor, Buffalo.
116 *Plastic Roentgenography. W. H. Diefenbach, New York.
117 Case of Quadruple Infestation and Ameba in Stools of Apparently Healthy Individuals. R. C. Rosenberger, Philadelphia.
118 *Preparation and Use of Thrombokinase. L. W. Strong, New York.
119 Secret Division of Fees. R. E. Coughlin, New York.
120 Extension of Registration Area. H. A. Brown, Washington, D. C.
121 Dowd Phosphatic Index in Relation to Disease of Eye. J. C. Clemesha, Buffalo.

116. **Plastic Roentgenography.**—In Diefenbach's method the plate is developed, fixed, washed and dried in the usual manner, excess of contrast in development being avoided. A positive is next made from the negative plate, using a slow plate and exposing carefully. Fogging is avoided and the attempt is always made to secure equal density. Both plates, when dry, have their glass surfaces carefully cleaned and these are then placed together, making the outlines register accurately by holding them up to a good north light. When good approximation has been secured, the plates are firmly bound together with lantern-slide binders. These joined plates are now placed in the printing frame, using the positive side to print from, and employing a slow bromid glossy paper (carbo and portrait argo). Exposure is regulated according to the character of the light, the frame being placed at an angle of 45 degrees in a north light. The paper is next developed in an antifriction developer, rinsed, fixed in a fresh hypo bath, and when washed is ready for mounting. The prints are said to demonstrate the existence of calculi and to show details of shape and structure better than can be seen stereoscopically or otherwise, and they make diagnosis of these lesions easier, particularly for such physicians as have not had much training or experience in the interpretation of Roentgen shadows.

118. **Thrombokinase.**—The idea that the tissue juices might furnish a body which would hasten clotting, and that this might be of more service than fresh blood serum in the control of hemorrhage, led Strong to follow the method of Batelli, leaving the question of its nature as a ferment for later consideration. The technic as modified by him is as follows:

Sheep's lungs are taken direct into sterile towels, and the larger bronchi are removed to avoid as many bacteria as possible. The lungs are then ground in a meat grinder and soaked in twice their volume of sterile water for an hour; 1.5 c.c. glacial acetic acid for every litre of extract is then added, drop by drop, with constant stirring. A white flocculent precipitate results, which is immediately collected by centrifuging. The free acetic acid is removed by washing thoroughly with salt solution. The centrifuge tubes are then filled with alcohol and the mixture is again centrifuged thoroughly, when the alcohol may be decanted and the nearly dry precipitate may be spread on crystallizing dishes and rapidly evaporated at a low temperature in vacuo. Dryness will be secured within twelve hours. Scrape off the resultant brownish powder and seal in sterile tubes. Test sterility by several plants in bouillon for forty-eight hours. Several preliminary tests showed that rabbit's blood in test tubes containing a few flakes of the powder, clotted more rapidly than blood alone. Tests show that the powder contains a body which in the moist state is inactivated at 70 C. for thirty minutes.

It is this evidence of a ferment body which leads to the use of the term thrombokinase for the powder.

Similar preparations were made from spleen, liver, bone marrow, endocardium and aorta. Parenchymatous organs, however, have too much nucleoproteid for practical uses. Experimentally, these did not work as well as preparations from the lung. Acetone was also used as a dehydrating agent, but it appears to injure the ferment. The powder is said to have been used clinically with success by many operators in nose and throat work.

### Ohio State Medical Journal, Columbus

*March, VIII, No. 3, pp. 109-170*

122 Kidney Function in Surgery, with Particular Reference to Kidney Surgery. L. E. Schmidt, Chicago.
123 Some Experiences in Kidney Surgery. C. A. Hamann, Cleveland.
124 Interstitial Nephritis as It Concerns Urologist. M. B. McGonigle, Toledo.
125 Value of Drugs in Heart Diseases. H. B. Blakey, Columbus.
126 Eclampsia Without Convulsions (?); Post Mortem Cesarean Section. E. W. Mitchell, Cincinnati.
127 Heredo or Congenital Syphilis. J. J. Thomas, Cleveland.
128 Pregnancy at Seventh Month Complicated by Obstruction of Bowels. M. A. Tate, Cincinnati.
129 Heart Syphilis. A. S. Warthin, Ann Arbor, Mich.

### Medical Record, New York

*March 30, LXXXI, No. 13, pp. 601-650*

130 General Practitioner in Development of Appendicitis Management. S. Baruch, New York.
131 *So-Called Parasite of Yellow Fever (Seidelin). A. Agramonte, Havana, Cuba.
132 Karell Kur. F. F. Ward, New York.
133 Gonorrhea: Its Prevention and Cure by Autotherapy. C. H. Duncan, New York.
134 Some Individualized Aspects of Preventive Medicine. H. W. Wright, New York.
135 When Cystitis Is Not Cystitis. J. B. Clark, New York.
136 Abortive Typhoid, with Report of Case. H. W. Lincoln, Brooklyn.

131. **Parasite of Yellow Fever.**—The supposed value of Seidelin's findings and the correctness of his observations is very seriously doubted by Agramonte. He states concisely his reasons why the bodies described by Seidelin were not at all convincing to him of their parasitic nature. The preparations stained by the Giemsa stain, had been very poorly treated. So much so, that the leukocytes had not taken their due coloring, many eosinophilic cells remaining unstained while others were intensely so, showing evidently a faulty technic and therefore unreliable results. Seidelin's supposed parasite is present in very limited numbers in each blood drop, not more than three or four, all unlike, in each preparation, and we know that infective blood, in yellow fever, must contain a great number of parasites if the amount necessary for infection is to be a criterion. Experiments have demonstrated that yellow fever blood is not infective after the third or fourth day, while Seidelin's bodies have not been observed by him except from the fourth to the eighth. There is no reason to believe that the parasite of any infectious disease may be demonstrated in

the blood at any period when this blood is not infective. If the bodies shown by Seidelin were evolution forms of an animal parasite, as he claims, we would find several of them at least in the same period of their evolution in the same smear, and they would therefore present the same morphological characters, while as it is, it is not possible to find two bodies alike in the same preparation, except in the liver section, in which they are all four inside a cell. There is no analogy, as Seidelin admits, between the supposed parasites and other organisms found in the blood of man or animals. Finally, Agramonte finds it impossible to form an opinion that will carry weight founded on smears stained in such imperfect manner and with such an unstable reagent as the Giemsa stain, and less so when the various characters of form and size presented by the Seidelin bodies are such that they ought to be readily observed in fresh preparations of blood in which it would be easier to differentiate them from platelets and protoplasmic and nuclear cell fragments.

### Yale Medical Journal, New Haven, Conn.

*February, XVIII, No. 6, pp. 249-288*

137 Diverticulitis of Colon. J. F. Erdmann, New York.
138 Treatment of Eclampsia. H. K. Thoms, New London, Conn.
139 Treatment of Epilepsy. D. L. Ross, Mansfield Depot, Conn.

### Journal of Kansas Medical Society, Kansas City

*March, XII, No. 3, pp. 81-120*

140 Acute Pancreatitis and Subacute Pancreatitis. G. M. Gray, Kansas City.
141 Treatment of Typhoid. C. F. Cronk, Anthony.
142 Fissure in Ano. W. W. Yates, Topeka.
143 Hyperchlorhydria; Diagnosis and Treatment. W. C. Lathrop, Norton.

### Boston Medical and Surgical Journal

*March 28, CLXVI, No. 13, pp. 475-510*

144 *Masquerades of Chronic Cholelithiasis. A. E. Austin, New York.
145 Geographic Distribution of Insanity in Massachusetts, 1901-1910. E. E. Southard, Cambridge, Mass.
146 Suturing as Substitute for Splints After Submucous Resection of Nasal Septum. O. A. Lothrop, Boston.
147 Psychopathic Nursing. B. T. Ring, Arlington Heights, Mass.
148 Warning in Regard to Intratracheal Insufflation Anesthesia; Necessity of Safety Valve. F. J. Cotton and W. M. Boothby, Boston.
149 *Method for Detecting Bile in Stomach Contents. H. W. Goodall, Boston.

144. **Masquerades of Chronic Cholelithiasis.**—Apart from the fact that cholelithiasis often simulates a gastric or intestinal disease Austin points out the gall-stones produce certain reflex activities on the part of the stomach which may be so prominent that they obscure the actual disease; in other words, the symptoms on the part of the stomach are functional while those on the part of the gall-bladder and ducts are real; that is, due to the stone or septic invasion from the intestine. Thus the physician is liable to fall into two errors; he may accept cholelithiasis as the cause of the difficulties from which the patient suffers, and from the frequency of gall-stones at any age beyond forty an operation will prove their presence, but after their removal the patient does not fully recover; in other words, the stones were quiescent and there was some other cause for his patient's symptoms, or he may regard these erratic manifestations of gall-stone disease as due to something else and treatment directed to overcome that mistaken condition will be futile.

149. **Detecting Bile in Stomach Contents.**—The following method, based on the oxidization of bilirubin with nitric acid, forming green biliverdin, is recommended by Goodall as being delicate and easy of application. Half a test-tube of the fluid portion of the stomach content is taken. If this amount cannot be obtained, or if the contents consist largely of solid material, it should be diluted with water thoroughly mixed and the fluid portion poured off or filtered. The fluid is then saturated by shaking one or two minutes with ammonium sulphate crystals, or, better, crystals which have been ground into a fine powder. About an inch in the bottom of the test-tube is usually sufficient. Then from 1 to 3 c.c. of acetone (about a quarter of an inch in the test-tube) is added, and the whole thoroughly mixed by inverting the test-tube five or six times. It is best not to shake. After standing a minute or two the acetone rises to the surface of the fluid, carrying bile pigment up with it. A drop of yellow nitric acid is allowed to run down the side of the test-tube and the green reaction occurs in the acetone layer. Goodall urges that care should be taken in adding the acid, as too large quantities produce too rapid an oxidization and the green quickly passes over into a purple or reddish color. If the acetone does not promptly rise to the surface the liquid has not been thoroughly saturated with ammonium sulphate. If too much acetone is added, the bile may be diluted to such a degree that the reaction is not distinct. This procedure is said to be delicate enough to demonstrate bile in contents which microscopically do not suggest its presence.

### Lancet-Clinic, Cincinnati

*March 16, CVII, No. 11, pp. 289-314*

150 Relation of Medical Colleges Toward Each Other and Medical Education in General. W. J. Means, Columbus, Ohio.
151 Experimental Obstruction and Hormone-Therapy. L. K. Hirshberg, Baltimore.
152 Concerning Digitalis. F. Tice, Chicago.
153 Test for Renal Function. W. S. Ehrich, Evansville, Ind.
154 Prevention of Venereal Disease. W. F. Waugh, Chicago.

*March 23, CVII, No. 12, pp. 315-342*

155 Pathologic Physiology of Tuberculosis. C. S. Rockhill, Cincinnati.
156 Importance of Analysis of Symptoms in Pulmonary Tuberculosis. S. von Ruck, Asheville, N. C.
157 Conservative Treatment of Surgical Tuberculosis. J. V. Reed, Indianapolis, Ind.
158 Present Status of Antisyphilitic Treatment. P. F. Shaffner, Chicago.

### Journal of Iowa State Medical Society, Clinton

*March, I, No. 9, pp. 461-524*

159 Classification, Management, Education and Medical Treatment of Feeble-Minded. M. Bannister, Ottumwa.
160 Symptomatology and Treatment of Early Tubal Pregnancy. M. Emmert, Atlantic.
161 Medicolegal Aspect of Traumatic Neuroses. F. A. Ely, Des Moines.
162 Salvarsan as Drug. R. A. Weston, Des Moines.
163 Conservative Nasal Surgery. F. W. Bailey, Cedar Rapids.
164 Diagnosis in Obstetrics. H. R. Reynolds, Clinton.
165 Surgical Treatment of Acute Articular Rheumatism. A. M. Pond, Dubuque.
166 Small-Pox Epidemic in Jefferson County, Iowa. P. J. Sherlock, Lockridge.

## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### Lancet, London

*March 16, I, No. 4620, pp. 705-770*

1 Paratyphoid Fever and Meat Poisoning. F. A. Bainbridge.
2 Derangements of Knee Following Strains and Blows. A. E. Barker.
3 Hypersensitiveness: Parallelism in Phenomenon of Hypersensitiveness and Certain Clinical Manifestations of Obscure Nature. H. B. Shaw.
4 Bed Isolation of Cases of Infectious Disease. C. Rundle and A. H. G. Burton.
5 *Case of Surgical Emphysema During Labor. M. Stocks.
6 *Case of Meningitis in Which Bacillus Coli Communis Was Obtained from Cerebrospinal Fluid. G. H. Pearson.

5. **Surgical Emphysema During Labor.**—The emphysema in Stocks' case occurred in the face during the first stage of labor. This swelling increased and was accompanied by cyanosis during the pains. The crackling sensation of subcutaneous emphysema was found present over the swollen area, extending over the neck and right side of the face; the right palpebral fissure was reduced to a slit. Forceps were applied and the patient was delivered of a living child. Within about seven hours the emphysema was found present over an area including both sides of the neck, both sides of the face up to the orbital ridges, the whole of the right side of the thorax limited by the costal margin below, the spine behind and the sternum in front; the right upper arm to the extent of a third, and the left shoulder. Apart from some pain in the chest and at the back of the neck, of which complaint was made, the patient appeared to be little the worse. She made a good recovery, the whole of the swelling having disappeared at the end of eight days.

6. **Case of Meningitis.**—In Pearson's case lumbar puncture was performed on a girl, 3 months old, under strict aseptic precautions and a turbid fluid, not under tension, was withdrawn. On examination four hours later the fluid showed

numerous bacilli, extra- and intracellular and a large number of polynuclear neutrophils. A white count the same day as the puncture was done showed the number to be 16,000 per cubic millimeter. The child died six days after admission, and at the post-mortem examination the diagnosis of septic meningitis was proved to be correct. The brain was entirely covered, more especially the anterior two-thirds, with purulent and offensive pus. There was no localization of pus at any point. The ventricles were dilated and full of pus, which also surrounded the cord, especially between the cervical and lumbar enlargements. The left middle ear was full of pus, while the right was healthy and dry. No thrombosed vein or caries of bone was found. During life no symptoms of middle-ear mischief had been present. The bacillus, which was remarkably plentiful in the cerebrospinal fluid, had all the morphologic and cultural characteristics typical of the colon bacillus.

## British Medical Journal, London

*March 16, I, No. 2672, pp. 589-652*

7 *Serum and Vaccine Therapy in Connection with Diseases of Eye. C. W. G. Bryan.
8 Cases Illustrating Some Intracranial Conditions. S. Lodge.
9 Experiences with Spinal Analgesia in 2,354 Cases. A. E. Barker.
10 Subdural Abscess, Thrombosis of Lateral Sinus and Diffuse Osteomyelitis of Skull Bones Treated with Vaccines; Recovery. T. H. Butler.
11 Nasal Obstruction Due to Osteomata of Posterior Nares. F. P. Sturm.
12 *Arthritis. J. R. Collins.
13 Case of Vegetable (Cocoanut Hairs) Gastrolith. P. S. Hichens and N. B. Odgers.
14 *Boracic Acid Poisoning. J. H. Sanders.

7. **Serum and Vaccine Therapy in Eye Diseases.**—In internal tuberculosis of the eye, Bryan says the results of treatment by vaccine are good, especially where the iris is the diseased tissue. The iris is favorable for treatment because it has a good blood-supply. In tuberculosis of the fundus, where the blood and lymph-supply are poor, treatment has to be prolonged, and is less certainly successful. It is mentioned that in disease of the iris it is necessary to use mydriatics to prevent the formation of synechiæ, and, the blood-supply in this way being diminished, treatment rather tends to be prolonged, owing to the difficulty of getting sufficient opsonins into the diseased tissues.

12. **Arthritis.**—Collins' view is that the vast majority of all cases of arthritis are due to the action of a microorganism, that different microorganisms are capable of producing lesions which are clinically identical, and that, regarding the body as a tube, the infection is caused by an entry being effected through some part of the surface of the tube by a microorganism not necessarily dissimilar to the ordinary bacterial flora of that region of the body. Diathesis he does not ignore, but interprets that term, prolific in faction, as meaning the constitutional proneness of an individual for a particular infection, in other words, his suitability as a culture medium is fully appreciated by workers in bacteriology. An abnormal deficiency in bacteriotropic substances would also as a constitutional peculiarity be included under diathesis. Collins is firmly convinced that every case of "rheumatoid" arthritis is due to a microbic infection; and, he says the more closely early cases of so-called rheumatoid arthritis are investigated the larger will be found the proportion of those in which a definite infection can be traced. If no local site of infection can be detected, the blood ought to be cultured. Such patients if treated with sodium salicylate, guaiacol carbonate, or hydrotherapy in all its branches, degenerate into the forms of joint deformity, which have for years been the subject of treatises on acute rheumatism, chronic rheumatism, rheumatoid arthritis, osteo-arthritis, arthritis deformans, etc.

14. **Boracic Acid Poisoning.**—A man, aged 23 years, had been ill with dysentery on and off for ten months. Sanders frequently searched for amebas, but could not find any. On admission (July 5) he was put on a mixture of magnesium and sodium sulphate, ½ ounce every four hours. After two days he had a single rectal wash of boric acid and warm water to ease the straining. At this time he was passing ten to thirteen stools daily, consisting of almost pure blood-stained mucus. On July 8 he was put on tinctura opii, ♏ xxx, pulvis ipecacuanhæ, gr. xxx, diminishing the dose each day. On July 16 (the tenth day) as he had not improved he was put back on the magnesium and sodium sulphate solution, and in addition a rectal wash of boric acid (saturated solution) and water, ½ pint each, was given night and morning. This immediately lessened the number of stools, and the wash was continued as long as Sanders found mucus. This treatment was continued for over three weeks, and the patient was rapidly improving, taking his food well, and up and about; on the day before the onset of the symptoms of poisoning he only passed two stools in addition to the rectal washes.

August 9 the patient was up and about, was taking his food well, and there was no elevation of temperature. On the morning of August 10, Sanders found him in bed with a rash covering the whole body, very like a bromid rash, generally scattered, but on the extensor surfaces the papules were gathered more thickly, erythematous in character, disappearing on pressure, not at first hard, although each papule could be distinguished. He at once recognized it as a drug rash, and ordered the rectal injections to be discontinued and only plain water to be used. In the afternoon of the same day he became very restless and inclined to be noisy, so much so that later in the day he was put into a separate ward. On the next day he was more thickly covered, especially on the extensor surfaces and the face, and the spots were more shotty and hard, with a tendency to become purpuric. He was quite delirious, and the pulse very feeble; he could not sleep, and a dose of paraldehyd had no effect. On the morning of August 12 the rash was quite purpuric with hard, shotty papules; he was quieter through weakness. He slept after a dose of chloral and later took some food. Next day the spots were becoming clearer, but still hard and shotty. His mind was quite clear and he was taking food well. He continued to improve, but on the morning of August 14 the eyelids were very puffy. There was no albumin in the urine. On August 18 the spots were scaling, but still hard generally; in a few places a little serum escaped and in others pus, evidently due to infection by scratching with his nails. By August 20 the color of the rash had faded considerably, but the papules were still hard and shotty. The general health of the patient was better. After a few days' rest at home he was able to return to his work.

This case illustrates the sudden onset of symptoms without any warning. It shows also the long duration of the rash after all drugs had been stopped, the delirium that accompanied the poisoning, the weakness of the pulse and danger to life if not recognized at once and stopped.

## Edinburgh Medical Journal

*March, VIII, No. 3, pp. 193-288*

15 Numan, the Veterinarian and Comparative Anatomist of Utrecht. D. B. Hart.
16 Amebic Dysentery in Man Who Has Never Been Out of Scotland. D. G. Marshall.
17 Trauma as Factor in Disease. A. James.

## Journal of Obstetrics and Gynecology of British Empire, London

*January, XXI, No. 1, pp. 1-64*

18 *Relative Size of Uterus in Cases of Hydatid Mole. H. Briggs.
19 Fat and Fat Crystals in Ovary. J. S. Young.
20 Pyosalpinx Successfully Removed by Abdominal Section During Puerperium. J. H. Ferguson.
21 *Lipectomy as Cure for Adiposity and Menstrual Irregularity. G. A. Casalis.

18. **Size of Uterus in Hydatid Mole.**—Briggs asserts that undersize, and not oversize, of the uterus is the more prevalent disproportion in cases of hydatid mole and cites twenty-three cases. In seventeen cases the uterus was undersize; in five oversize and in one case it was of normal size.

21. **Adiposity and Menstrual Irregularity.**—Lipectomy is regarded by Casalis as being indicated in young women whenever an excessive deposit of fat on the abdomen interferes with the menstrual function and leads to amenorrhea, especially when the latter condition is not amenable to other therapeutic agents. From a purely esthetic point of view, it is a highly satisfactory operation. It is devoid of danger, and would appear in some well-defined cases to increase tissue metabolism and restore ovarian activity

### Clinical Journal, London

*February 28, XXXIX, No. 21, pp. 321-336*

22 *Hypothyroidism. H. French.
23 Extraperitoneal Rupture of Bladder Without Fracture of Pelvis. H. B. Robinson.

*March 6, XXXIX, No. 22, pp. 337-352*

24 Syphilis of Brain. W. P. Herringham.
25 Unusual Hemorrhages at Puberty and Menopause. T. G Stevens.
26 Retrograde Enteric Intussusception. L. A. Dunn.

*March 13, XXXIX, No. 23, pp. 353-368*

27 Pulmonary Tuberculosis and Notification. H. B. Shaw.
28 Syphilitic Disease of Spinal Cord. W. P. Herringham.

22. **Hypothyroidism.**—It is held by French that there is clinical if not experimental evidence to show that between normal people, on the one hand, and myxedematous or cretinoid persons on the other, there is a wide field within which come cases in which more or less severe symptoms may be attributed to what he calls hypothyroidism; that is to say, deficient activity of the thyroid gland, but not complete absence of its secretion. Of the many groups into which these cases might be divided, in all of which some at least of the patients are materially benefited by the administration of suitable doses of thyroid extract are the following: (1) The infantile idiot type: (2) Children backward in walking or in talking. (3) Backward boys or girls, especially some suffering from nocturnal enuresis. (4) Stout sterile women of child-bearing age. (5) Women who tend to become very stout at or about menopause. (6) Certain sufferers from functional nerve symptoms, notably exaggerated subjective sensations of acroparesthesia and the like after the menopause, and most particularly one type of that little understood but very severe malady, tic douloureux.

### Medical Press and Circular, London

*February 28, XCIII, No. 3799, pp. 211-236*

29 *Treatment of Injured and Displaced Semilunar Cartilages in Knee. R. H. A. Whitelocke.
30 Methods of Operation in Tumors of Urinary Bladder. A. Fullerton.
31 Palpitation. J. M. Cowan.
32 Rôle and Methods of Psychotherapy in Psychasthenia Predisposing to Inebriety. T. A. Williams.

*March 6, XCIII, No. 3800, pp. 237-264*

33 Mode of Thought in Insane. T. C. Shaw.
34 Important Phases in Evolution of Man. A. Keith.
35 Ranula. A. Kermisson.
36 Unrecognized Diphtheria. S. Taylor.

*March 13, XCIII, No. 3801, pp. 265-290*

37 Diagnosis and Treatment of Cerebral Hemorrhage. F. X. Callaghan.
38 Important Phases in Evolution of Man. A. Keith.
39 Leprosy and Public. P. S. Abraham.
40 Nervous Disorders and Neurologist in Relation to Profession and Public. T. A. Williams.

29. **Injured and Displaced Semilunar Cartilages in Knee.**—A method of reposition of the cartilage practiced by Whitelocke based on anatomic principles, is suitable for long-standing as well as recent cases, and he says seldom fails when properly executed. The patient's clothing having been sufficiently removed, let him lie flat on his back. Standing on the outer side of the affected limb, flex the leg on the thigh and the thigh on the trunk as much as possible; at the same time adduct the limb until the flexed knee comes to lie across the middle line of the body at the navel. With the limb in this position all the ligaments and tendons are slackened. Take hold of the ankle with one hand and grasp the knee with the other to steady it. With the hand on the ankle, abduct the tibia from the femoral condyle, so as to open the space as widely as possible, then with the leg used as the long arm of a lever work it to and fro with slight movements of rotation until the cartilage is felt to slip back, the patient experiences relief, and the knee becomes capable of full extension. When the external cartilage is at fault, the abduction of the tibia must be from the external femoral condyle and the rotation in the opposite direction.

Whitelocke has never known the maneuver to fail in a recent case, and has succeeded with cases of many months' standing without an anesthetic. When inflammatory changes have supervened an anesthetic is useful, as it allows of a more thorough examination and differential diagnosis. When it is impossible to replace the cartilage by manipulation with an anesthetic, and this is rare, it is safest to open the joint, for it will usually be found that a loose body or hypertrophied fringe, or some such complication, exists in addition. As soon as the cartilage is replaced, steps should be taken to limit the effusion into the joint. The patient is best confined to bed or sofa, and prevented from walking. With intermittent pressure the effusion should all disappear in a week or less time. Massage and passive movements are not recommended until the fluid is gone.

### Annals of Tropical Medicine and Parasitology, Liverpool

*February 26, V, No. 4, pp. 501-543*

41 Some Blood-Parasites in Man and Mammals. H. Seidelin.
42 Genus Pristirhynchomyia, Brunetti, 1910. W. S. Patton and F. W. Cragg.
43 Life History of Philaematomyia Insignis, Austen. W. S. Patton and F. W. Cragg.
44 Measurements of a Thousand Examples of Trypanosoma Vivax. B. Blacklock.
45 Enumerative Studies on T. Brucei in Rats and Guinea-Pigs; Comparison with T. Rhodesiense and T. Gambiense. J. G. Thomson.
46 Measurements of Trypanosoma Vivax in Rabbits and White Rats. B. Blacklock.
47 *Case of Malarial Fever, Showing True Parasitic Relapse, During Vigorous and Continuous Quinin Treatment. R. Ross and D. Thomson.

47. **Malaria Fever.**—The author's patient, a sailor, had a slight attack of malarial fever in 1905, but it did not trouble him much. In June, 1911, he got an attack of fever and was very ill. He was getting quinin thrice daily all the time. After this he remained well for two months, during which period he had quinin only once in awhile. He had a second attack of fever in September, but this attack was not quite so severe. October, 1911, he had fever, and the blood examination revealed a mixed infection of benign and malignant tertian malaria. A few crescents were present (about 16 per c.mm.). The blood showed marked auto-agglutination of the red cells and nucleated and stippled basic red cells were numerous. The hemoglobin was only 40 per cent. There was no appreciable enlargement of the liver or spleen. The patient was very weak and somewhat emaciated, and had a tendency to be slightly delirious and incoherent in his speech. Quinin hydrobromid, in liquid form, was administered in doses of 10 grains, thrice daily, by mouth. This reduced the asexual parasites to below the detectable limit in thin films, in five days; that is, about two days longer than usual. This dosage of quinin was continued for seventeen days, during which period the temperature remained normal.

On November 10, a rise of temperature having been noticed, the blood was examined rapidly and no parasites were observed. Thinking that the temperature was one of those pseudorelapses noticed to occur before, during quinin treatment, they stopped the administration of quinin for a few days. As the temperature, however, persisted and showed a true malarial type, the blood was again examined carefully. Asexual parasites, malignant and benign, were found, and, moreover, crescents began to appear. Quinin was again given, as before, and the patient by this time was very ill and slightly delirious, and seemed to have difficulty in articulation. He commenced to pass his urine involuntarily. On November 21, the fever showed no signs of abating, and on the 22d, therefore, 30 grains of quinin bihydrochlorid were injected intramuscularly, in addition to the usual 30 grains of quinin hydrobromid given by mouth. In addition to this, 12 grains of methylene-blue were given daily in pill form. This combined treatment reduced the asexual parasites below the detectable limit in three days, and the crescents were reduced to twenty per c.mm. in fourteen days. The patient improved very rapidly, and was no longer confined to bed after December 10. On December 12 the methylene-blue was stopped and the quinin reduced to 20 grains daily. He left the hospital on December 20.

On the supposition that the quinin may not have been properly absorbed from the digestive tract, a twenty-four-hour specimen of the urine was examined to estimate the quantity of quinin excreted. It was found to contain 16 grains. The patient was, therefore, excreting 13 grains daily out of the 30 grains administered daily by the mouth. This is about the usual amount and showed that the quinin administered was being efficiently absorbed. Therefore this case of malaria (mixed infection) showed a most unusual resistance to thorough and continuous quinin treatment.

### Malaya Medical Journal, Singapore

*January, X, No. 1, pp. 1-49*

48 Ankylostomiasis Among Tamil Coolies. T. S. Macaulay.
49 Muride and Spalacide.
50 Parasites of Rat. A. E. Shipley.
51 Examination of Rats for Plague. H. B. Newham.

### Archives Générales de Chirurgie, Paris

*February, VI, No. 2, pp. 125-248*

52 *Congenital Dislocation of the Hip-Joint. (La luxation congénitale de la hanche.) P. Le Damany.
53 *Hypertrophy of the Thymus. (Le traitement chirurgical de l'hypertrophie du thymus. Ses avantages, sa technique, ses résultats.) E. Olivier.
54 *Section of Posterior Spinal Nerve Roots. (L'opération de Foerster.) L. Delrez.
55 *Acute Cholecystitis in Course of Typhoid. G. Worms and A. Hamant.

52. **Congenital Dislocation of the Hip Joint.**—Le Damany explains the anthropologic factors which induce this deformity, a knowledge of which is essential for successful treatment.

53. **Hypertrophy of the Thymus.**—Olivier has been making a special study of hypertrophy of the thymus during the last three years, and the results confirm anew, he says, that operative treatment is the only reliable preventive and curative measure that can be applied in these cases. Thymectomy is safer and gives better results than roentgenotherapy, resection of the manubrium or fixation of the thymus to relieve disturbances from it. The organ can be easily shelled out from its capsule; any attempts to remove the latter are liable to fail. General anesthesia is particularly useful, but also particularly dangerous, and precautions should be redoubled in these cases. In his eleven cases the children bore the subtotal subcapsular thymectomy without trouble, but there are fifteen deaths recorded among the forty-two thymectomies that have been published. In seven cases the operation had nothing to do with the fatality, but in the other eight cases death was the result of a secondary tracheotomy. To do a tracheotomy after thymectomy invites infection, and Olivier refuses to do it as a rule, although Rehn, König and Jackson were each able to save a patient by this means. Children are so restless that infection is certain also, he thinks, if the wound is drained. In four of the fifteen fatal cases there were diseased tracheobronchial glands; this evidently enhances the danger of operative measures. Sifting the cases, therefore, demonstrates that the thymectomy itself was not responsible for any of the deaths. On the other hand, it put an end at once to the tendency to suffocation in all but two cases and to the stridor in 75 per cent. All the children began to thrive at once.

54. **Section of the Posterior Spinal Roots.**—Delrez modified Foerster's technic in a recent case of spastic paraplegia in a man of 39, severing only the nerve fibers involved instead of the whole root. The operation put an end at once to all the contracture, and the patient slowly regained the use of his limbs. In the fifty-two cases of spastic affections in which the method has been applied to date, in twenty-three of the thirty-one cases of Little's disease the results were excellent; four of the group died and in four others there was no benefit or it was only transient. He tabulates the details of these fifty-two cases, and reviews also the cases of tabetic gastric crises in which the method has been applied with complete success in ten cases, no benefit in eight, and death in two cases.

55. **Typhoid Cholecystitis.**—In one of the two cases reported the cholecystitis was almost the first symptom of the typhoid. The history of this complication is reviewed, and the better results extolled as surgical treatment has been more frequently applied. Mere incision of the gall-bladder and suturing it to the skin is generally sufficient. A fistula may be left, but this can be corrected later when the patient is able to stand further intervention.

### Archives Générales de Médecine, Paris

*February, XCI, No. 2, pp. 101-188*

56 Regional Tuberculosis Responsible for Tuberculosis Later in the Army. (Influence du pays d'origine des recrues sur le développement de la tuberculose dans l'armée.) G. H. Lemoine.
57 Intratracheal Injections in Treatment of Pulmonary Disease. (L'injection intratrachéale transglottique.) G. Rosenthal.
58 *Autoserotherapy. (Recherches expérimentales sur l'autosérothérapie.) A. Jousset.

58. **Autoserotherapy.**—Jousset has been experimenting with this method (Gilbert) of reinjecting some of the patient's own effusion, and has learned that it is effectual only under certain conditions. His experience with a hundred injections has demonstrated that the effusion in case of secondary pleurisy is more virulent than with primary or quiescent pleurisy, and this virulence persists with a certain fixity; in the other cases the virulence gradually grows less and less. These facts show the necessity for discrimination in the application of autoserotherapy; it is liable to do harm in the virulent secondary cases. The auto-injections are liable also to induce anaphylaxis; the original effusion may be shut off from the rest of the system by the lack of absorbing power of the inflamed pleura. The immediate and remarkable diuresis that follows the auto-injection seems to be an effort of the organism to get rid of the toxic substance that has been injected. On the whole, Jousset thinks that autoserotherapy as at present practiced should be abandoned, but that the principle is a valuable one and of great therapeutic efficiency if the technic is modified to make it a heteroserotherapy instead of an autoserotherapy. The effusion to be injected should be drawn from another patient, young and vigorous, the pleurisy in a quiescent stage, the effusion copious and containing from 0.5 to 1 gm. of fibrin per liter, and the effusion very toxic. The serum after coagulation should be heated to 55 C. for an hour on three successive days. Of this fluid from 20 to 30 gm. should be used for the therapeutic injection in another patient in case a pleuritic effusion is dragging on indefinitely.

### Bulletin de l'Académie de Médecine, Paris

*February 27, LXXVI, No. 9, pp. 149-171*

59 *Morbid Lack of Thirst. (L'hypodipsie et les oligoptotes.) P. Fabre.
60 Biology of the Ascaris. (Notes et observations sur la vie des Ascarides.) Perroncito.

59. **Persistent Lack of Thirst.**—Fabre had his attention called to the subject of a morbid lack of thirst by the case of a man of 55, who, after the death of his son, did not drink any fluids for twenty-seven days. Since then Fabre has collected and tabulated twenty-three unpublished cases of total or very pronounced abstention from fluids, and cites a number from the literature. The individuals did not seem to suffer from their abnormally small intake of fluids, and he draws the conclusion that as a rule we drink more at meals than the system really needs. Drinking at meals is a custom rather than a necessity.

### Journal d'Urologie Méd. et Chirurgicale, Paris

*January, XXX, No. 1*

61 Lithiasis Through the Ages. (L'affection calculeuse à travers les âges.) A. Pousson.
62 Urine Findings in Case of Orthostatic Albuminuria. (Etude des échanges urinaires et particulièrement de l'excrétion urique dans un cas d'albuminurie orthostatique.) F. Widal, A. Lemierre and Ambard.
63 Urinary Disturbances from Fibroma of Uterine Cervix. (Des troubles urinaires provoqués par les fibromes du col utérin.) F. Leguen.

### Lyon Chirurgical, Lyons

*March, VIII, No. 3, pp. 241-364*

64 Improved Rapid Serodiagnosis of Tuberculosis of Urinary Organs. (Réaction de l'antigène—Debré and Paraf.) M. Heitz-Boyer.
65 Perforation of Duodenal Ulcer. (Des perforations brusques de l'ulcère duodénal en péritoine libre.) M. Lagoutte. Commenced in No. 2.
66 Toxic Appendicitis. (De l'appendicite toxique.) L. Bérard and P. Vignard.
67 *Operative Treatment in Paralysis Agitans. (De l'intervention chirurgicale dans la maladie de Parkinson.) R. Leriche.

67. **Operative Treatment in Paralysis Agitans.**—According to Leriche's view of the factors causing paralysis agitans, section of the posterior spinal roots should have a curative influence. He regards the affection as the result of a sensory excitation, ignored but incessant, keeping the muscles constantly on the strain. If the peripheral excitation could be reduced, the rigidity and tremor would subside. On these premises he recently performed the Foerster operation, severing the fifth, sixth and eighth cervical roots on each side by the Guleke extradural technic in an extremely severe case of paralysis agitans of many years' standing. The patient was a man of 53, and for eight years his muscles had been rigid. He walked with head thrown back, the neck stretched, and the incessant tremor and cramps had driven him to morphin. The operation was difficult on account of the rigidity, but the benefit from it was unmistakable, the tremor and cramps being much modified, but the rigidity was not influenced. In another case Leriche would section the lumbar rather than the cervical roots; such patients suffer more from their legs than their arms. Van Gehuchten has called attention to possibility of benefit in Parkinson's disease from some modification of the Foerster technic, but has not reported any application of it in practice.

### Lyon Médical, Lyons

*March 3, XLIV, No. 9, pp. 465-528*

68 Graft of Sciatic Nerve in Dog to Replace Stretch of Cervical Pneumogastric Nerve on Both Sides. Survival of Dog. (Greffes de nerfs pneumogastriques. Résection bilatérale des pneumogastriques chez le chien dans leur portion cervicale. Application dans la même séance de deux greffes de nerfs sciatiques.) E. Duroux.

### Presse Médicale, Paris

*March 2, XX, No. 18, pp. 181-192*

69 *Tardy Nervous Symptoms in Syphilis After Salvarsan Treatment. (Les réactions nerveuses tardives observés chez certains syphilitiques traités par le salvarsan, et la méningo-vascularite syphilitique.) P. Ravaut.

70 Postoperative Air Cyst. (Pneumatose kystique post-opératoire consécutive à la réduction sans drainage d'un kyste hydatique du foie.) A. Cerné.

*March 6, No. 19, pp. 193-200*

71 Visual Disturbances Induced by Electricity. (Des troubles visuels provoqués par l'électricité.) F. Terrien.

69. **Tardy Manifestations in the Nervous System After Administration of Salvarsan.**—Ravaut examined the cerebrospinal fluid from one to fourteen months after injection of salvarsan, and he found that nearly every patient who had been injected during the second phase of the disease showed signs of considerable disturbance in the fluid, from simple excessive tension to large proportions of albumin and an intense reaction characterized by numbers of lymphocytes, polynuclears, plasma cells and a positive Wassermann reaction. He calls these reactions histologic meningorecurrences. He has previously published the conclusions of preceding research on the inflammation of the meninges and vessels in syphilis, all his data confirming the assumption that during the first phase of the syphilis the nervous system is not affected, but that when the patient enters the second stage the nervous system becomes much involved, generally in proportion to the extent and severity of the cutaneous manifestations. This involvement of the nervous system may remain latent, but it can be watched by examination of the cerebrospinal fluid. It usually has entirely subsided by the time the third stage enters on the scene unless there is some serious nervous affection. Ravaut gives a table showing the tardy findings in the fluid in thirty-three syphilitics treated with the salvarsan during the second stage, nearly every one showing evidences of a pronounced reaction, while other syphilitics in the first and third stage present no signs of a reaction. This is not the Herxheimer early reaction; it is rather an exacerbation of preexisting trouble. The arsenic alone is unable to induce it, but when it encounters the spirochetes in the nervous system, the struggle that ensues between the drug and and the parasite stirs up these changes in the fluid. The practical conclusion is, therefore, that the cerebrospinal fluid should be tested in patients in the second stage of the disease, and if it already shows signs of disturbance, salvarsan should be given with extreme caution. Given too forcibly, it reactivates lesions, which left alone would remain latent and heal in time spontaneously or under the ordinary measures. Among the thirty-three patients in the second stage he found traces of arsenic in the fluid in two cases three and eleven months after injection of the salvarsan. Nine patients had intense headache or tinnitus, one facial paralysis and one optic neuritis, none of which existed before the injection of salvarsan.

### Revue de Gynécologie, Paris

*February, XVIII, No. 2, pp. 129-256*

72 *Ossification of Ovaries or Fallopian Tubes. (Recherches sur quelques cas d'ossification de l'ovaire et de la trompe.) S. Pozzi and X. Bender.

73 *Case of "White Bile" in Cancer of Ampulla of Vater. (L'hydropisie de la voie biliaire principale.) C. Leuormant.

72. **Ossification of Uterine Adnexa.**—This profusely illustrated article compares with two personal cases, seven from the literature, in which the ossification occurred in one or both ovaries, and two personal cases of ossification in an oviduct with two others on record. The osteoid concrement or actual ossification had nothing suggesting a teratoma in any instance. The ossification was always circumscribed and limited and had been preceded by calcification, and it always started in connective tissue.

73. **Hydrops of the Bile Passages.**—Lenormant reports a case in which the bile passages were found filled with a colorless fluid when the abdomen was opened to relieve progressive jaundice. The patient was a woman of 68 and a small cancer in the ampulla of Vater was the primary trouble. He has compiled thirty cases of hydrops of the bile passages from the literature, and in all but six cases the obstruction was the result of a neoplasm or of constriction from a fibrous band. In only three was there obstruction from gall-stones. The prognosis depends on the nature of the obstacle. The finding of a colorless fluid in the gall-bladder does not alone justify cholecystectomy; the rest of the biliary passages may be permeable. The gall-bladder should never be removed without thorough examination of the bile ducts and search for the possible primary neoplasm.

### Revue Médicale de la Suisse Romande, Geneva

*February, XXXII, No. 2, pp. 109-204*

74 Two Unusual Cases of Hare-Lip. (2 cas de bec- de- lièvre pseudo-médian dont l'un compliqué d'anencéphalie.) A. Matthey.

75 Relations Between Chemical Composition and Pharmacodynamic Action of Narcotics. (Des rapports entre la constitution chemique et l'action pharmacodynamique des anesthésiques généraux et des somnifères de la série grasse.) B. Wiki.

76 *Experiences with Puerperal Fever. (Etude de cas de fièvre puerpérale 1903-1910.) C. Thélin.

76. **Puerperal Fever.**—Thélin concludes from the experiences with 441 cases of puerperal fever at the Lausanne maternity from 1902 to 1911. that puerperal infection occurs in about the same proportions after abortions as after deliveries at term, but that the post-abortion infection is far more liable to be severe. The number of preceding childbirths did not seem to influence the frequency of infection, but premature rupture of the fetal membranes and obstetrical operations had an unmistakable action in favoring infection. He urges statistics compiled by comparing the total puerperal morbidity including that commencing during or after abortion or delivery with that occurring exclusively after delivery and with that occurring exclusively after delivery in women who entered the maternity free from infection. For the Lausanne maternity these three figures were: total morbidity, 13.85 per cent.; real morbidity, 12.06 per cent., and the institutional morbidity, 7.75 per cent. The total puerperal mortality was 0.75 per cent., and the institutional mortality (women free from infection on entering), 0.03 per cent. The entire 441 cases are classified and compared from various standpoints in sixteen tables; one shows that in nearly 79 per cent. of the febrile cases it had been supposed that the placenta and membranes had been entirely expelled. In only 0.96 per cent. was it known that part of the placenta had been retained, and parts of the membranes in 6.73 per cent.

### Revue Mens. de Gyn. d'Obstétrique et de Pédiatrie, Paris

*February, VII, No. 2, pp. 81-160*

77 *Puerperal Infection. (Encore l'infection puerpérale.) L. Demelin.
78 Uterine Hemorrhage Compelling Hysterectomy. (A propos de 3 cas de métrorragies ayant nécessité l'hystérectomie.) G. Deverre and R. Vaudeseal.
79 Repose Before and After Childbirth. (De la mobilisation précoce des accouchées et, en particulier, de son influence sur l'involution et sur la statique de l'utérus.) L. Pierra. Commenced in No. 1. (Influence du repos des femmes enceintes sur le poids des nouveau-nés.) Magniaux.

77. **Prevention of Puerperal Infection.**—Demelin discusses the general principles for management of the third stage of labor, emphasizing the necessity for removing placental or other débris without violence to the uterine wall or even disturbing the protecting layer of mucus in the deeper layers of the mucosa. This mucous shield protects the walls against infection and may answer this purpose even against moderate infection in the uterus for a week. If in removing débris a hole is made in this lymph barrier, the door is thrown open to general infection. He advises removal of débris liable to putrefy when the presence of such is certain or suspected, but the exploration of the uterus should be done with extremest delicacy and caution. If nothing is found, he gives an intra-uterine injection, then a vaginal douche and, if necessary, counteracts a tendency to anteflexion by applying a tampon above the pubis. In case of phlebitis, especially in the uterus region, he is careful to refrain from anything tending to mobilize the uterus, avoiding all vaginal douches, enemas or other measures liable to jar the uterus and dislodge clots and set up embolism.

### Semaine Médicale, Paris

*March 6, XXXII, No. 10, pp. 109-120*

80 Technic for Determining Presence of Spirochetes in Syphilitic Lesions. (Des différents moyens de prélever le matériel pour la recherche du tréponème pale dans les lésions syphilitiques.) D. Wladissavliévitch.

### Berliner klinische Wochenschrift

*March 4, XLIX, No. 10, pp. 433-484*

81 *"Altruistic Diseases." (Ueber altruistische Erkrankungen.) D. v. Hansemann.
82 *Septic Endocarditis. G. Jochmann.
83 Vaccination Against Cholera. (Erwiderung auf die Einwände Metschnikoff's gegenüber der Wirksamkeit der Choleraschutzimpfung.) J. Ferran (Barcelona).
84 Salvarsan in Syphilitic Disease of the Nervous System. (Erfahrungen über Salvarsanbehandlung syphilitischer und metasyphilitischer Erkrankungen des Nervensystems.) O. L. Klieneberger.
85 The Normal Location for the Lung Apex. (Die normale Lungenspitzenhöhe.) K. Takata.
86 Dislocation of the Cervical Vertebræ. (Luxation der Halswirbelsäule.) E. J. Rommel.

81. **Altruistic Disturbances.**—Hansemann applies this term to conditions in which the relations between a certain organ and the whole system have become deranged, as in diabetes, cretinism, exophthalmic goiter, Addison's disease, etc. His reasoning is that every organ is of vital importance for the organism as a whole, in so far as we understand by "organ" a certain class of cells. The only organ which seems to form an exception to this rule is the spleen; the pulp of the spleen seems to have no altruistic importance and to act merely as a mechanical filter or destroyer of waste. No disturbances of any kind have been detected in the organism after the removal of the spleen, confirming this lack of altruistic action. All other organs are vital organs, that is, their loss leads to speedy death or gradual chronic disease. The conception of a diathesis, a dyscrasia, is merely one form of the altruism of cellular functioning. This altruistic action and influence of the cells has been described in the literature under many names and syndromes, but, regarded from this single standpoint, they are all seen to be merely the manifestation of the one phenomenon, namely, that the cells of the body give off metabolic products of a specific nature, and that the different classes of cells are not able to substitute each other, each having its own specific work.

82. **Septic Endocarditis.**—Jochmann has been able to find the causal germs in the blood in nearly every one of his twenty-eight cases of ulcerative endocarditis. Staphylococcus endocarditis can generally be traced to some skin affection, furuncles or felon, or some injury of the mucosa as in catheterizing the bladder; he found evidences of septic endocarditis in five of his seven cases of fatal "catheter fever." Multiple suppurative metastases are common in the staphylococcus type, while they are rare with streptococcus endocarditis; the former is almost inevitably fatal, as also pneumococcus endocarditis. Gonorrheal arthritis is liable to be accompanied by endocarditis, the latter manifesting its presence a few days later with intermittent fever and murmurs. There are usually other symptoms of the sepsis, retinal hemorrhage, enlargement of the spleen and albuminuria, and occasionally epididymitis and pleurisy. The prognosis is grave, but not hopeless; Jochmann had one of his three patients in this class recover. The most frequent form of the septic endocarditis is that induced by streptococci; some affection of some mucosa is generally the forerunner of the endocarditis; the acute form is the work of hemolytic streptococci, but the green-colony forming, non-hemolytic viridans is responsible for the chronic type which Schottmüller has described under the name of "endocarditis lenta." [His description was summarized in The Journal, May 14, 1910, page 1658.] Jochmann's experience with seven cases of this insidious chronic form of endocarditis has confirmed Schottmüller's statements, especially the insidious onset, the history of acute articular rheumatism, the shortness of breath on exertion, depression, dry cough, pallor and "bilious" complexion, enlargement of the spleen, sometimes of the liver and embolic processes may develop; he noted a hemorrhagic nephritis in three of his seven cases. The temperature ranged from 38 to 39 C. and on some days it was normal; chills are scarcely ever observed in this form of endocarditis. Bacteriologic examination of the blood points the way to treatment. While Schottmüller in 1910 said that treatment can be only symptomatic, the progress realized with serotherapy and vaccines suggests their use in the gonococcus and streptococcus forms; the others are too brief and stormy to permit much hope from any treatment. Jochmann has witnessed brilliant results, he says, in two cases from vaccine treatment with a vaccine made from the patient's own gonococci, injecting every fifth day 5.000.000 and upward of killed gonococci. In the *Streptococcus viridans* form he advises both serotherapy and vaccines, the protracted course of the affection giving opportunity for causal treatment. The results are not brilliant, but he thus saved one of his three patients.

### Deutsche medizinische Wochenschrift

*March 7, XXXVIII, No. 10, pp. 441-488*

87 *Carbohydrates in the Diet of Diabetics. (Kohlehydratkuren bei Diabetikern.) H. Strauss.
88 Suture or Drain After Laparotomy for Diffuse Peritonitis? (Naht oder Drainage der Bauchhöhle bei der freier Peritonitis.) E. Sonneuburg.
89 *Indications for Treatment of Stomach Disease. (Indikationen zur chirurgischen und internen Behandlung der Magenerkrankungen und deren operative Dauererfolge.) H. Kümmell. Commenced in No. 9.
90 Serotherapy of Dysentery. (Erfolge der Behandlung der bazillären Dysenterie — Shiga-Kruse — mit antitoxischem Serum.) R. Kraus.
91 *Motor Insufficiency of the Stomach. (Motilitätsstörungen des Magens.) A. Borgbjärg.
92 *Simple and Reliable Test for Motor Functioning of the Stomach. (Motilitätsbestimmung des Magens.) I. Boas.
93 Retention of Water During Oatmeal Cures in Diabetes. (Ueber Wasserretention bei den Haferkuren der Diabetiker.) M. Mirowsky.
94 Various Forms of Myxedema. (Zur Einteilung der Myxödemformen.) E. Thomas.
95 Test for Resisting Power of Red Corpuscles. (Ueber Resistenz der Erythrozyten bei gesunden und kranken Menschen, nebst einer einfachen Methode zu ihrer Bestimmung.) L. v. Liebermann and F. v. Fillinger.
96 Schultze's Swinging to Revive the Newly Born, a Two-Edged Sword. (Zur Kritik der Schultzeschen Schwingungen als Mittel zur Wiederbelebung asphyktischer Neugeborner.) M. Hirsch.
97 Movable Colon. (Spontane Verschieblichkeit des Colons, ihre Ursachen und ihr palpatorisches Erkennen.) T. Hausmann.
98 Sound-Deadening Devices in Buildings. (Wohnung und Lärm.) H. Haenel.

87. **"Carbohydrate Cures" in Diabetes.**—Strauss remarks in the course of this general lecture on the dietetic treatment of diabetes, that milk cures may be very useful in certain cases, but that their value depends on the individual tolerance for milk, which must be determined in each case. The oatmeal cure frequently fails to benefit. Recent research indicates that oatmeal has no special advantage over wheat flour except

possibly in isolated cases. Strauss has derived great benefit from an occasional fluid day in severe diabetes, permitting the patient on that day nothing but tea, coffee, bouillon, mineral waters, wine or brandy. He sometimes permits oranges with this "drink day," and says the advantages of this combination and of the occasional day of restriction to fluids are not generally appreciated as they should be. He remarks that a proportion of albumin less than 60 gm. a day is too low for the permanent ration, so that the oatmeal and wheat flour cures—which contain less albumin than this—cannot be kept up long at a time. These and similar diets owe their effect to the absence of meat and their low caloric value in general. Their comparative indigestibility is another valuable factor, as the slowness with which the granules of starch are assimilated aids in preventing glycosuria from them. Carbohydrates in general should be taken very little at a time. An amount of sugar which would induce alimentary glycosuria in the predisposed, does not produce this effect if fractioned and distributed through the different hours of the day. Strauss reports that in his research and experience inulin was better tolerated than any other form of starch, and he urges its use in severe diabetes, especially for diabetics with acidosis. Comparatively small amounts are passed unutilized through the bowels, and he does not hesitate to urge its more general use on the transient course principle. As inulin is still so expensive, the best way is to order vegetables rich in inulin, such as artichokes and viper's grass (similar to salsify). He regards the progress of the last few years as mainly in the better appreciation of an exclusive or modified flour-soup cure with which vegetables can be combined. The restriction to a single form of carbohydrate is the main point in these cures. This is readily understood, as we know that when drugs with somewhat similar action are given together their effects are not only superposed, but have a direct cumulative action.

89. **Remote Results of Operations on the Stomach.**—Kümmell discusses the indications for internal and operative treatment of stomach affections, and states that of eighty patients with a non-malignant stomach trouble, requiring operative measures, generally gastro-enterostomy, seventy were found a year or so later to be completely cured, ten still had subjective disturbances, including six with objective findings. In the latter group is one patient whose gastric ulcer had been resected; cancer developed at another point in the stomach. Of the 519 cancer patients, four are still living from nine to sixteen years after the resection; twelve from two to five; thirteen, three years; eighteen, two years, and thirty-five, one year. The cancer was already inoperable in the majority, but resection was deemed promising in 124 cases and 30 per cent. of these patients were living three years later.

91. **Motor Insufficiency of the Stomach.**—Borgbjærg has been studying the conditions in regard to motor functioning of the stomach in nearly all his patients for many years, and he found abnormal conditions in this respect far more frequent than is generally accepted. He classifies the findings as five, six, eight and twelve hours' retention, when after these intervals 10 c.c. is left in the stomach from a preceding test-meal. The five- and six-hour retention is usually observed with an organic stomach affection, but sometimes with mere dyspepsia with or without hypersecretion, and occasionally with an uncomplicated internal affection. It may also be encountered with asthenia. The finding of 2 or 5 c.c. remains of the test-meal on rinsing out the fasting stomach twelve hours later, is generally a sign of cancer, ulcer or gastritis. The motor functioning is often restored to normal in undernourished patients with forced feeding. When there is much constipation with five- or six-hour retention, dieting to cure the constipation may restore normal motor conditions in the stomach.

The test-meal he has found most instructive is the Bourget-Faber meal of 250 c.c. oatmeal gruel, 50 gm. chopped boiled beef, 50 gm. white bread with butter, eight stewed prunes and a tablespoonful of cranberry sauce.

92. **Improved Convenient Test for Motor Functioning of the Stomach.**—Boas, on the other hand, prefers the Leube test-meal, although he remarks that he knows of no extensive research on its application to the sick and the well. He says that the addition of prunes and cranberry sauce (as above) makes extra demands on the stomach beyond what is needed, and may overtax the diseased stomach. He has found that water alone is a sufficiently instructive test-meal, while it does not stimulate gastric secretion, and thus has no reflex action on the pylorus; the balance remaining in the stomach after a given interval can be readily determined and there is no sedimentation to interfere with the findings. If 400 c.c. of water is ingested fasting only 50 or 60 c.c. are left after thirty minutes in a normal stomach. If more than this is found, motor insufficiency can be assumed. To aid in estimating the remaining quantity, Boas adds 20 drops of water-soluble chlorophyl to the 400 c.c. of water, the patient drinking it from a green glass, so as not to be disturbed by the color of the water. After thirty minutes the remaining water is aspirated or expressed from the stomach; if the patient bends over forward, it is possible to force out nearly all the fluid in the stomach. In case of doubt, the stomach can be rinsed out and the tint of the rinsing water will show the quantity that had been left. While the fluid is in the stomach the patients must be told not to swallow any mucus or saliva, as the chlorophyl is liable to collect on it. Comparative tests with this technic and the Leube test-meal have confirmed the reliability of the chlorophyl technic, and demonstrated that it surpasses all others in delicacy and instructiveness. Boas has applied it in 130 cases in the last two years. In fifty healthy individuals there was less than 50 c.c. thirty minutes later; in four other persons not a trace of green fluid could be discovered in the stomach. With severe stenosis of the pylorus or duodenum, the entire 400 c.c. was refound after thirty minutes, showing at once that relief was possible only from operative measures. In the cases with 200 or 300 c.c. remaining in the stomach, dieting and lavage may restore practically normal conditions, and the chlorophyl test repeatedly applied will show whether conditions are improving under them or not. The motor disturbances with cancer seem to depend on its location; a gradual increase in the amounts of the residual content testifies to a tumor encroaching on the pylorus. He found retarded evacuation of the stomach in 26 per cent. of his achylia cases and in 50 per cent. of the cases of gastric ulcer, while motor functioning was normal in the other 50 per cent., as also in nineteen of twenty-two patients with hyperacidity. His experience on the whole shows that secondary atony is far more frequent than the idiopathic.

### Medizinische Klinik, Berlin

*March 10, VIII, No. 10, pp. 385-428*

99 *Laryngeal Tuberculosis. (Therapie der Kehlkopftuberkulose.) M. Hajek.
100 *Hypertrophy of the Prostate. (Ueber Prostatahypertrophie.) M. Lissauer.
101 Olfactory Hallucinations. (Geruchshalluzinationen.) A. Kutzinski.
102 *Kidney Calculi in Children. (Nierensteine im Kindesalter.) O. Ebert.
103 Salvarsan Fever. (Zur Frage des Salvarsanfiebers.) H. Hecht.
104 * Camphor in Pneumonia. (Zur Frage der Pneumoniebehandlung von Walter Löwenstein.) A. Wachter.
105 The Negative Wassermann Reaction. E. Kromayer and Trinchese.

99. **Treatment of Laryngeal Tuberculosis.**—Hajek remarks in the course of this sketch of the history and present status of the treatment of laryngeal tuberculosis, that it not infrequently happens that any operative measures applied to the throat of very sensitive patients induce fever and disturb the general health to such a degree that this far outbalances any benefit derived. Individualization is the *sine qua non* for any prospect of success in laryngeal tuberculosis. Such patients require institutional supervision and care even more than those with pulmonary tuberculosis. Even in the individual case, conditions differ from week to week. But when such care is possible the finest results are attainable in some cases. He has had many patients permanently cured for five to ten and eighteen years. One such patient was recently reexamined and the scar left from curetting eighteen years before had persisted apparently unmodified without any tendency to recurrence of the tuberculosis. The general health had always been good in this case. He has found that injection of alcohol to block the superior laryngeal nerve is an effectual means

to arrest the pain and difficulty in swallowing in the advanced cases. The patients are able to get along for months or years in fair comfort afterward. He regards the actual cautery as an adjuvant to, not a substitute for, surgery. He adds that light, superficial application of the cautery is liable to induce more of a reaction than a deep thorough cauterization. He has treated with tracheotomy three patients with stenosis from laryngeal tuberculosis, and states that a permanent cure was effected in each case. He ascribes this to the complete rest of the diseased larynx after the tracheotomy. The lesion is made up of a small tuberculous infiltration and extensive chronic edema. Under total rest of the parts the edema subsides and nothing is left but the insignificant tuberculous infiltration, causing no disturbances. In two other cases he did the tracheotomy solely as a therapeutic measure from the above considerations, and both patients were soon permanently cured. These experiences compel him to advocate early tracheotomy for serious tuberculous disease of the larynx if the lungs and general health are in a relatively good condition.

100. **Hypertrophy of the Prostate.**—Lissauer reports the histologic findings in the prostate from twenty unselected cadavers. The findings fail to sustain the assumption that preceding inflammation has much to do with the hypertrophy. Arteriosclerosis was a frequent finding. He found no suggestion of myoma in any case, although such was evident twice in a previous series of seventeen cases. In his extensive research on animals he never found any indications suggesting hypertrophy of the prostate; in sheep the prostate was frequently atrophied.

102. **Kidney Calculi in Children.**—Ebert reports the case of a boy of 6 who had typical kidney colics, coming on with a chill and vomiting, the pains more severe than those of ordinary pyelitis. The microscope showed numerous red corpuscles in the urine and a calculous sediment, and roentgenoscopy disclosed a concrement in the kidney which was readily removed. There was no history of gout in the family, and the child had never had scarlet fever or nephritis, merely measles and whooping-cough before the age of 3 and erythema nodosum at 5. Ebert reviews the literature on the subject of nephrolithiasis in children. Neupauer has reported from Budapest 192 cases and Mousseaux seventy-seven in France. Certain regions seem to predispose to nephrolithiasis in children; it is particularly frequent in Hungary, Turkey and Silesia. Lime in the water, coarse, indigestible food, kidney and cardiovascular derangement and prolonged illness and convalescence seem to be predisposing factors.

104. **Camphorated Oil in Pneumonia.**—Wachter has been treating his pneumonia patients during the last three years with one or two daily subcutaneous injections of 3 or 5 c.c. of camphorated oil. He has found it effectual in stimulating and strengthening the heart, while it seems to have a direct action on the lungs and soothes the brain. The crisis occurred in from one to nine days in his thirty cases. The pain was arrested and the agitation subsided; even the delirious patients quieted down.

### Münchener medizinische Wochenschrift

*March 5, LIX, No. 10, pp. 513-568*

106 Diagnostic Puncture of the Brain in General Paralysis. (Zur histologischen Diagnose der progressiven Paralyse mittels Hirnpunktion.) B. Pfeifer.

107 *Effects of Hypophysectomy. (Folgen der Exstirpation der Hypophyse.) G. Ascoli and T. Legnani.

108 Diversion of Lymph Stream in Treatment of Chronic Edema Following Contusion. (Die Lymphableitung, als Heilmittel bei chronischen Oedemen nach Quetschung.) E. Kondoleon.

109 Abortive Treatment of Syphilis. (Zur Abortivebehandlung der primären Lues.) M. Voss.

110 Action of Salvarsan on Cancer Cells. (Ueber einen mit Salvarsan behandelten Fall von malignem Gehirntumor.) Noehte.

111 Syphilitic Meningomyelitis or Tabes? (Zur Aetiologie der Metasyphilis.) A. Villinger.

112 *Painting the Peritoneum with Tincture of Iodin in Tuberculous Peritonitis. (Pinselung des Bauchfells mit Jodtinktur bei der tuberkulösen Peritonitis.) A. Hofmann.

113 *Treatment of Tuberculose Bone Lesions in the Hands with Pyrogallol Salve. (Behandlung der Spina ventosa mit Pyrogallolsalbe.) K. Kennerknecht.

114 Action of Organ Extracts. (Wirkung der Organextrakte und die Theorie der Hormone.) L. Popielski.

115 Primary Manifestations of Lupus. (Primäreffloreszenz des Lupus und Primäraffekt.) H. Vörner.

107. **Depressing Influence of Removal of the Hypophysis on Growth.**—Ascoli and Legnani give a series of photographs showing two puppies of the same size from the same litter. The hypophysis of one was then removed and the puppy ceased to grow, while his brother grew to be a large dog, as shown in the photographs up to eight months. The skeleton of the dog operated on showed defective ossification and dentition and the dog did not attain sexual maturity. Both the internal and external sexual organs persisted in an infantile condition. The difference in structure in the spleen and thymus was also striking, but the thyroid more nearly approached normal. These experiments were conducted during the last three years on dozens of animals, but few survived the removal of the hypophysis. The best technic was by access through the temporal-parietal bone, turning back a broad flap and pushing the temporal lobe out of the way. The trauma from the operation is surprisingly slight, strange as may it seem, scarcely noticeable, but the hypophysis seems to be a vital organ, as so many of the dogs died within two or three days after its removal.

112. **Painting the Peritoneum with Iodin in Tuberculous Peritonitis.**—Hofmann painted with tincture of iodin a portion of omentum which protruded from the abdomen through a stab wound and was surprised at the powerful reaction to it, the profuse exudation and sticking together of serosa surfaces. Fully 0.5 c.c. of effusion a minute oozed from the wound. This observation suggested systematic application of the same measure in treatment of tuberculous peritonitis, and he reports four cases in which this was done. He was impressed in all with the regular reaction and the prompt cure. The patients have been reexamined again recently and the cure found permanent; no untoward by-effects were noticed in any instance. The patients were women of 23 and 30, a girl of 15 and a child of 6. In the first case the laparotomy was done for suspected chronic appendicitis and the peritoneum and intestines were found studded with miliary tubercles. The parietal peritoneum, the intestines and the omentum were painted with 10 per cent. tincture of iodin. As many of the loops of intestine were painted as could conveniently be reached; after the tincture had been applied to the intestine it was wiped off with gauze. The painting was carried down into the pouch of Douglas and through the hypochondrium on both sides. The abdominal wound was then sutured. By the end of twenty-four hours the abdomen was distended with ascites and tender, but the subjective disturbance was slight and there was no fever or vomiting. By the end of the second week there was no further trace of ascites, the general condition was good, the abdomen no longer tender. The patient was allowed to get up the third week and was discharged cured by the end of the fourth week. There have been no further symptoms during the eighteen months to date. In the second case a child of 6 had just recovered from a right pleurisy with effusion, and râles were audible over both lower lobes, but no dulness, the abdomen was distended with fluid and slightly tender; temperature 38 C. A median laparotomy showed numerous cheesy tubercles, the loops of intestine adherent and bathed in fluid. After the toilet of the peritoneum, the entire abdominal space was painted with the iodin. The child vomited several times and the abdomen was tender the first day or so, but the meteorism and ascites gradually subsided and in three weeks the child was permitted to get up, the râles had vanished, and during the year since the child has been apparently perfectly well and lively. The rapid subsidence of the pulmonary symptoms in this case suggest a specific action from the iodin. No signs of the slightest intoxication were evident in either case. In the two other cases the fallopian tubes were found so thickly studded with tubercles that they were removed, in addition to the iodin painting. Both patients were dismissed cured in less than a month.

113. **Treatment of Tuberculous Ostitis with Pyrogallol.**—Kennerknecht has been treating tuberculous lesions of the shorter long bones in children for the last four years with a pyrogallol salve, and states that by this means it has been pos-

sible to cure without mutilation. The lesions in the eight cases reported were in the hands and they were first soaked for half an hour in soapy water and then dressed with a 10 per cent. pyrogallol salve, or a 5 per cent. salve if the skin showed signs of irritation, and later substituting a 2 per cent. salve. The tuberculous processes healed completely in from two to nine months.

### St. Petersburg medizinische Zeitschrift

*February 28, XXXVII, No. 4, pp. 47-62*

116 The Neurologic Aspect of the Period Including Puberty. (Das Entwicklungsalter von neurologischem Standpunkt.) W. v. Holst.
117 Radium Therapy of Chronic Articular Rheumatism, Gout and Sciatica. (Ueber chronischen Gelenkrheumatismus, Gicht und Ischias.) Kemen.
118 General Principles of General Anesthesia. (Ueber Narkose.) G. Tiling. Commenced in No. 3.

### Therapie der Gegenwart, Berlin

*March, LIII, No. 3, pp. 97-144*

119 *Atropin in Treatment of Phosphaturia. F. Umber.
120 Acute Influenzal Bronchiolitis in Adults. (Die akute Influenzabronchiolitis der Erwachsenen.) L. Syllaba.
121 *Dietetic Treatment in Diabetes. (Einfluss verschiedener Nahrungsmittel und Kohlehydratentziehung auf die Glykosurie und die Acidose beim Diabetes mellitus.) R. Hartelust.
122 The Dioptrics of Gastroscopy. (Zur Dioptrik des Gastroskops.) M. Sussmann.
123 *Spinal Apoplexy. (Eine spontane Rückenmarksblutung.) A. Becker.

119. **Atropin in Treatment of Phosphaturia.**—Obstinate phosphaturia entails constant danger of concrement formation, and it is important to counteract this tendency by rendering the urine acid, which ensures the keeping of the phosphates in solution. Phosphaturia, Umber says, has been shown to be the result not of abnormal amounts of phosphoric acid in the urine, but of an excess of the earthy alkalies in proportion to the amount of phosphoric acid. Excessive secretion of hydrochloric acid deprives the urine of its due proportion of acid. During digestion the acid in the stomach is bound and thus withdrawn from the intermediate metabolism. In the majority of cases of phosphaturia the patients have hyperchlorhydria with general neurasthenia. For these and other reasons cited, atropin has a pronounced action in increasing the acidity of the urine and reducing the elimination of calcium. He supplements the atropin with food as free from lime as possible, restricting the amount of berries, potatoes and vegetables and forbidding entirely milk and eggs. He gives the atropin in small doses, not over 0.0005 gm. a day at first, increasing in a few days to 0.003 gm. a day. The dose is from 10 to 20 drops of a 1 per thousand aqueous solution of atropin sulphate after meals. He keeps up the maximum dose for two weeks and then gradually reduces it, the entire course requiring three or four weeks.

121. **Dietetic Treatment of Diabetes.**—Hartelust gives the detailed tabulated metabolic findings in six diabetics on different diets. They show that the conditions in respect to utilization of the diet vary widely in different diabetics; some tolerate and thrive on what others cannot stand; this applies particularly to fat. It is impossible to formulate any general rules applicable to all. He found that the dread of acidosis if carbohydrates are omitted from the diet is unfounded; in many cases the acidosis diminished under this.

123. **Spontaneous Spinal Apoplexy.**—Becker's patient was a previously healthy woman of 33 and nothing could be found to explain the spinal apoplexy. The resulting paralysis and sensory disturbances have improved somewhat during the six months to date, but the young woman is still unable to stand without assistance. Treatment was with morphin to reduce the fright and distress; water cushions were used to prevent decubitus. Mercury and iodid proved ineffectual.

### Wiener klinische Wochenschrift, Vienna

*February 29, XXV, No. 9, pp. 331-366*

124 *Anaphylaxis. (Ueber Anaphylaxie.) R. Doerr.
125 Roentgenoscopic Diagnosis of Intestinal Stenosis. (Zur radiologischen Diagnostik der Dünn- und Dickdarmstenose.) E. v. Czyhlarz and A. Selka.
126 *Associated Valvular Defects and Exophthalmic Goiter. (Ueber paradoxe Albuminurie und Urobilinurie, über die Entstehung kardialer Zirrhosen und "Herzkropf" bei organischen Trikuspidalerkrankungen.) K. Staunig
127 *Postoperative Ischemic Paralysis. (Weiterer Fall von Drucklähmung an der oberen Extremität nach kurzdauernder Anwendung der Esmarchschen Blutleere.) B. Burianek.

*March 7, No. 10, pp. 367-402*

128 Dermatitis with Atrophy. (Zur Klinik und Aetiologie der atrophisierenden Dermatitiden.) M. Oppenheim.
129 *Operative Treatment of Epilepsy. (Zur Technik und Kasuistik der Epilepsieoperationen.) Doberer.
130 Relations Between Pineal Gland and the Genital Organs. (Beziehungen der Zirbeldrüse zum Genitale.) P. Biach and E. Hulles.
131 The Aldehyd Reaction in the Urine and Deranged Circulation. (Klinische Beobachtungen über die Ehrlichsche Aldehydreaktion bei Kreislaufstörungen.) A. Jonass.

124. **Anaphylaxis.**—Doerr reports research which in connection with that of others suggests that changes in the coagulating property of the blood are the main factor in the phenomena of anaphylaxis, and that these changes are induced by the activation of coagulation ferments by absorption of antagonistic substances. The endothelium suffers first and foremost from the pathologic physical changes in the blood. The resulting abnormal permeability of the endothelium explains the edemas (serum sickness, local anaphylaxis) and the lymphagogue phenomena observed. From the endothelium the abnormal irritation is transmitted to the smooth muscles of the vessels which at once undergo a powerful contraction, but in the viscera soon dilate again.

126. **Associated Valvular Defects and Exophthalmic Goiter.** Staunig describes a case of paradoxic albuminuria and urobilinuria accompanying a mitral and tricuspid defect, cirrhosis of the liver, enlarged spleen and symptoms of exophthalmic goiter. He explains the syndrome as the result of the abnormal conditions in the circulation from the valvular defects. His assumptions were confirmed by the results of digitalis treatment both in this and in a second case. The venous engorgement had induced cirrhosis in the liver with resulting urobilinuria; in the kidneys it had induced albuminuria, and in the thyroid it had induced excessive functioning. The signs of the latter first developed as the valvular defect became manifest, at the age of 44, and the resulting symptoms of exophthalmic goiter rose and fell with the improvement in the circulation under the influence of the digitalis. As the heart action became stronger under the medication, the Basedow symptoms subsided. This tentative explanation of the case was confirmed by the benefit in the second case, the patient presenting the picture of cirrhosis of the liver except that pulsation was evident in the large, hard liver, and this pulsation was traced to moderate stenosis of the mitral and insufficiency of the tricuspid valves. Although there were no signs of failing compensation in this case and a heart tonic was not absolutely indicated at the time, he administered digitalis and at once the aldehyd reaction for urobilinogen in the urine appeared and increased to a 1 to 360 dilution, and albumin appeared in the urine up to 1.5 per thousand, both of these reactions then gradually subsiding again completely. There were no signs of exophthalmic goiter in this second case; the valves in the upper part of the vena cava and the thyroid veins were evidently still functionally capable. These cases teach that a jugular pulse is not a constant symptom of tricuspid insufficiency, while the pulsation in the liver is easily and unmistakably evident. The anatomic conditions in regard to the valves in the superior jugular vein vary in different persons.

127. **Postoperative Ischemic Paralysis.**—In Burianek's case, as in that recently reported by Wolff, the Wassermann reaction was positive although the patient strenuously denied syphilis. Under specific treatment some improvement was realized. Suspicion of syphilis should warn against the use of Esmarch's elastic constrictor for fear of a predisposition to resulting injury on the part of the vessels under the influence of the syphilis.

129. **Operative Treatment of Epilepsy.**—Doberer gives an illustrated description of a simple technic with which he operated in a case of severe epilepsy, the boy of 12 having from eight to fifteen seizures daily, some occurring in the night, and his mental condition was rapidly approaching idiocy. His parents pleaded for an operation in 1910, but Doberer could

find nothing on which to base an operation, but a year later he yielded and cut a five-sided flap in the right sensory-motor region, with a crucial incision in the dura. He then took up one of the right-angled flaps of the dura and, turning it over, worked the whole of it backward, flat, into the space between the dura and the intact skull. He did this with each of the four dura flaps. The fold where each flap was turned over formed a cushion on which the edges of the bone flap rested when it was replaced. He gave the bone flap a tap with the hammer to ensure its fitting tight in place. No ligature or foreign material was used and the wound healed promptly without apparent callus. The same day the child was rational and able to control micturition and defecation, which for long had not been the case, and except for bearable headache he felt quite well. A few seizures occurred during the week but of moderate intensity and since then there has been no recurrence. The child remained a month in the hospital and his parents scarcely recognized him when a lively and intelligent boy was returned to them. The seizures in this case had commenced with an extensor spasm in the left hand, gradually becoming general; there was no history of trauma or inherited taint except hysteria in the mother. Doberer has since applied the method in five other cases and a confrère in two more. In one case the improvement was only transient; in all the others it has been permanent to date, even in patients 16 or 20 years old with epilepsy of many years' standing. He commends this technic as the simplest possible for the purpose, comparatively harmless and with complete restoration of the integrity of the skull afterward. His first operation dates from October, 1911, so he does not venture to speak of a permanent cure; time alone will decide this. He calls it the *Umstülpungsmethode*, referring to the turning over backward of the dura flaps.

### Zentralblatt für Chirurgie, Leipsic

*March 2, XXXIX, No. 9, pp. 281-312*

132 *Laminectomy Under Local Anesthesia. L. Heidenhain.
133 Resection of Cervical Ribs from the Rear. (Neue Methode der Resektion der Halsrippen von rückwärts.) E. Streissler.
134 Perforated Gastric and Duodenal Ulcers. (Zur Operation des perforierten Magen- und Duodenalgeschwürs.) O. J. Lauper.

132. **Laminectomy Under Local Anesthesia.**—Heidenhain states that he has performed laminectomy under local anesthesia in four cases during the last two years and was very favorably impressed with the advantages of this technic for the purpose. From the first incision to the final suturing of the skin there was not the slightest pain although four vertebræ had the arch removed in some of the cases. The great drawback is that it is generally impossible to determine the exact site of the lesion, so that quite an extent of the spine has to be rendered anesthetic on account of the doubt. Braun has stated that 250 c.c. of a 0.5 per cent. solution of novocain can be injected without harm, and this will be enough, Heidenhain thinks, for the most extensive laminectomy. It is usually possible to anesthetize from one point the corresponding half of three vertebral arches.

### Zentralblatt für Gynäkologie, Leipsic

*March 2, XXXVI, No. 9, pp. 257-288*

135 *Absorption of Toxins and Anesthetics by Peritoneum. (Toxinresorption aus der Bauchhöhle und intraperitoneale Narkose.) O. Hoehne.
136 Possibility of Insanity of Genital Origin in Women. (Möglichkeit des Irrsinns genitalen Ursprungs beim Weibe.) L. M. Bossi.
137 Uterine Cancer. (Zur Frage der abdominalen Radikaloperation bei Uteruskarzinom.) L. A. Kriwsky.

135. **Absorption of Toxins and Anesthetics from Abdominal Cavity.**—Hoehne found in extensive animal experimentation that preliminary treatment to induce a slight aseptic irritation of the abdominal cavity effectually protected the animals against infection from even virulent germs, but that it did not check the absorption of toxins from the cavity. A mixture of ether and alcohol was absorbed just the same whether or not the animals had received the prophylactic injection of camphorated oil or other substance to induce the prophylactic irritation. The experiences related teach the importance for removing the exudate in peritonitis after it has answered its purpose, namely, to shut off the germs and their products from being absorbed. In the course of this task it has become saturated with toxins and in time thus becomes a source of intoxication and danger and should be removed without delay. The removal should be done, however, with the greatest care, bearing in mind that if sound tissue is incised to gain access to the exudate, there is liable to be rapid absorption of large amounts of bacteria and toxins through the fresh raw surface. It is obvious that the patient would be worse off after this than if no operation had been attempted. The anesthesia and the operation may cooperate, but the opening up of avenues for absorption by the areas of new raw surface and the consequent flooding of the organism with bacteria and their toxins is the main factor. He emphasizes the importance of making the prophylactic injection some time before the contemplated operation; in his successful experiments the interval was from three to nine days.

### Zentralblatt für innere Medizin, Leipsic

*March 2, XXXIII, No. 9, pp. 197-220*

138 Radium Emanations in the Blood. (Untersuchungen über Radiumwirkung.) J. Kemen.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*February 8, XXXIII, No. 17, pp. 169-176*

139 Indications for Operative Measures in Tuberculosis of the Testicles and Epididymis. (Circa le indicazioni della orchiectomia nella orchite e nella epididimite tubercolare.) N. Federici.

*February 25, No. 24, pp. 241-256*

140 *Improved Oil Method for Diagnosis of Cholelithiasis. (Il metodo del Petry nella diagnosi di colelitiasi.) F. Dematheis.

*February 27, No. 25, pp. 257-264*

141 *Vaccination Against and in Treatment of Tuberculosis. (Vaccinazione antitubercolare preventiva e curativa nell' uomo.) Duquaire.

*February 29, No. 26, pp. 265-272*

142 *Treatment of Emphysema. (Due casi di imponente enfisema sottocutaneo e relativa terapia.) E. Biondi.

140. **Diagnosis of Cholelithiasis.**—Dematheis describes five cases which confirm the value of the method of diagnosis of cholelithiasis by microscopic examination of the sediment of the stomach content siphoned out three-quarters of an hour after ingestion, fasting, of 150 or 200 c.c. of olive oil. Dematheis says, however, that the findings are rendered much more reliable if the passage of bile into the duodenum and its reflux thence into the stomach are promoted by massage of the liver and gall-bladder region and by the addition of a little glycerin to the oil, and by administration of the active principle of belladonna. These improvements in the technic much enhance the probabilities of finding the characteristic concrements in the stomach content.

141. **Vaccination Against and in Treatment of Tuberculosis.**—Duquaire has been at work for two years with Maragliano's vaccine and reports its use in five cases as a preventive and in forty others as a curative remedy, his conclusions being favorable. It acts like a tuberculin, but its mode of application is simpler, being a single application like vaccination against small-pox. There was never any febrile reaction but in about four months, he says, under its influence a condition of active immunity developed. The vaccine is made from human tubercle bacilli first rendered more virulent by passage through guinea-pigs, then killed by heat and triturated. Duquaire applied the vaccine at three points on the arm or leg, after scarifying, the same as for small-pox vaccination, scarifying at another point for control.

[Maragliano's premises on which this method of treatment is based, were described in THE JOURNAL Dec. 8, 1906, page 1965, with the results in his experience to that date.]

142. **Treatment of Emphysema.**—In the two cases reported by Biondi extensive emphysema developed from rupture of a cavity in the lung or wound of the lung from a fractured rib. The patients were intensely and dangerously incommoded by the general diffusion of air, threatening suffocation, until he introduced an ordinary puncture needle to which a rubber tube was fastened, the outer end of the tube resting in a vessel containing an antiseptic solution. The relief was immediate, the escaping air bubbling up through the fluid and the distended tissues subsiding into place; the patients succumbed to

the progress of their causal trouble but they were relieved from all disturbances from the emphysema during the few days they had to live.

### Policlinico, Rome

*February 25, XIX, No. 9. pp. 302-336*

143 Chronic Diarrhea. (Terapia delle diarree croniche.) P. Alessandrini.
144 Trendelenburg Position Cause of Rupture of Suppurated Ovarian Cyst. G. Dialti.

*February, Medical Section No. 2, pp. 49-96*

145 *Primary Cancer of the Lung. (Sul cancro primitivo del polmone.) P. Ciuffini.
146 Fibrolysin in Treatment of Delayed Resolution in Pneumonia. (Azione della fibrolisina nelle polmoniti con esito in induramento—polmonite produttiva.) A. Osti.

*February, Surgical Section No. 2, pp. 49-96*

147 Experimental Research on Cause of Death in Necrosis of the Pancreas. (Le cause della morte per necrosi pancreatica.) D. Maragliano.
148 Experimental Research on Treatment of Fracture of the Patella. (Sulla guarigione delle fratture trasversali della rotula.) A. Pignatti.

145. **Primary Cancer of the Lung.**—Ciuffini reports a case in a man of 42 and compares it with other cases on record. In his case pain gradually increasing in intensity was the first symptom, but in a few days this was followed by weakness, anorexia and cough, the pain spreading to the arm as the brachial plexus became compressed by the growth. It was in the upper lobe of the right lung and proved fatal in one year.

### Riforma Medica, Naples

*February 24, XXVIII, No. 8, pp. 197-224*

149 Myasthenia. (La fisiopatologie della miastenia bulbospinale e la teoria pluriglandulare.) R. Massalongo.
150 Resection of Cystic Pancreas. (Caso di doppia cisti del pancreas. Estirpazione totale delle due cisti mediante resezione del pancreas. Guarigione.) G. De Francisco.

### Brazil Medico, Rio de Janeiro

*February 15, XXVI, No. 7, pp. 61-70*

151 Brazilian Non-Pathogenic Form of Ameba. (Sobre uma nova entamoeba humana—Entamoeba brasiliensis n. sp.) H. de B. Aragão.
152 Albuminurias. (Albuminurias em geral.) L. M. V. Lima. Commenced in No. 5.

### Revista de Medicina y Cirugia, Havana

*March 10, XVII, No. 5, pp. 125-158*

153 Anomalies in the Arteries. (Bifurcacion primitiva de la arteria humeral, y disposicion anormal de las arterias de la mano.) R. Stincer.
154 Cholera at Marseilles, France, in 1911. (El colera morbo asiatico de Marsella en 1911.) L. M. Cowley.

### Semana Medica, Buenos Aires

*February 8, XIX, No. 6, pp. 241-292*

155 Tests of Kidney Functioning. (Semeiologia funcional del riñon. Consideraciones sobre la glicosuria floridsinica en la patologia medica renal.) C. B. Udaondo.
156 *Polyserositis. C. J. Pedemonte.
157 Sterilization of Drinking Water. (El problema del agua potable.) V. Delfino.
158 Heart Disease and Pregnancy. (Cardiopatias y embarazo.) S. Recasens.

156. **Polyserositis.**—Pedemonte discusses the symptoms, diagnosis, treatment and prognosis of polyserositis and reports three cases. The first patient was a girl of 8, who for six months had tired unusually easily and had been coughing for three months. The tuberculin reaction was positive but no tubercle bacilli could be cultivated from the pleural effusion or ascitic fluid. The other patients were young women; the pleural effusion and ascites were apparently reabsorbed, but one patient had a tuberculous affection of the right knee develop seven months later. Treatment has to be mainly symptomatic, with diuretics, hydrotherapy and restriction to a milk diet while there is fever, change of climate and tonics. Cod liver oil is also useful.

### Hospitalstidende, Copenhagen

*February 2, LV, No. 5, pp. 109-148*

159 Cooperation of Prostate in Emptying of the Bladder. (Om Prostatas Betydning ved Vandladningen og om Mekanismen ved prostatisk Vandladningsbesvær.) A. Lendorf.

*February 7, No. 6, pp. 149-172*

160 *Retarded Evacuation of Normal Stomach. (Forsinket Tømning ved normal Ventrikel.) K. Lunn.

160. **Delay in Evacuation of the Normal Stomach.**—Among the ten different causes which may induce delay in evacuation of the stomach when locally conditions are normal, reflex action from an intestinal affection, habitual constipation and ileus take the lead. In three of the five cases reported by Lunn these latter causes were manifest, the functional gastric disturbance being evidently secondary to more or less complete obstruction of the bowels. In another case a tumor could be palpated but it was impossible to determine whether it was in the stomach or pancreas or glands near by. Repeated tests of gastric functioning showed much retention after eight hours but the findings were otherwise normal, and a laparotomy revealed a bunch of tuberculous mesenteric glands.

### Hygiea, Stockholm

*February, LXXIV, No. 2, pp. 129-256*

161 Study of Pemphigus Vegetans. (Om pemphigus vegetans.) C. Cronquist.
162 Melanotic Tumor in Spinal Dura Mater. (Ett fall af Chromatophoroma duræ matris spinalis.) O. Lindbom.

### Norsk Magazin for Lægevidenskaben, Christiania

*March, LXXIII, No. 3, pp. 241-448*

163 *Operative Treatment of Detachment of the Retina and Extreme Myopia. (Ny operativ behandling av nethindeavløsning og av høiere myopi.—Trepanatió scleræ præ-æquatorialis.) S. Holth.
164 Direct Causes of Death from Anemia. (Om dødsmaater og dødsaarsaker ved blødning og anæmi.) O. Hanssen.
165 Direct Causes of Death from Brain Disease. (Fortsatte iagttagelser vedrørende den letale respirationsparalyse ved hjernelidelser.) O. Hanssen.
166 Clinical Pathology of Coagulation of the Blood. (Forsinket koagulation ved cholæmi og hæmofili. Fibrinolyse. Caillot irretractile.) O. Hanssen.
167 Accessory Thyroid in Base of Tongue and Branchial Cysts. (Tungestruma og mediane halscyster.) H. Schilling.
168 Experiences in Treatment of Fractures. (Extremitetsfrakturer behandlet paa Rikshospitalets Kirurg. avd. A 1908-1911.) C. Manthey.

163. **Operative Treatment of Detachment of the Retina and Extreme Myopia.**—The operation which Holth calls trepanatio scleræ pre-equatorialis was applied for glaucoma years ago, but Holth here extols its advantages for detachment of the retina and for extreme myopia. In three of his seven cases of the former the retina grew into place again after the operation and there has been no further trouble during the nine, thirteen and twenty months to date. After the operation patients with extreme myopia found their vision improved, so he has since been systematically applying the measure for extreme myopia without detachment of the retina, and found a change for the better of from 2 to 3 D; in one case vision improved from 17 to 6 D. No effect was apparent unless the myopia was 12 D to start with. He gives illustrations of the little trephine he uses and describes its application with the details of eight cases in which the method has been applied. The trephining is done in the lower outer quadrant, 12 mm. back of the limbus; he does not evacuate the subretinal fluid as a rule; if this is necessary he does it by scleral puncture far back of the trephining and at a later sitting.

### Ugeskrift for Læger, Copenhagen

*February 29, LXXIV, No. 9, pp. 323-370*

169 *Chronic Appendicitis. (Nogle Tilfælde af kronisk Appendicitis.) R. W. Kiær.

*March 7, No. 10, pp. 371-402*

170 Leg Ulcers. (Saarbehandling i poliklinisk Virksomhed.) C Wessel.

169. **Chronic Appendicitis.**—Kiær gives the details of eleve cases of chronic appendicitis which show that it is possible fo it to manifest itself in the form of merely stomach or bowe trouble with or without very slight focal symptoms. In som cases it is only by prolonged study of the cases, especiall repeated local examination and taking the temperature afte exercise, that it is possible to differentiate the true cause o the trouble. When appendicitis is suggested one may learn o disturbances suggesting previous abortive acute attacks.

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## *Books Received*

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Journal Announcements, Books Received, Knocks and Boosts an changes in the Public Service will be found in the advertising s tion, commencing on the second page following reading matter.

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# EXPERIMENTAL RESEARCH IN SYPHILIS

## WITH ESPECIAL REFERENCE TO SPIROCHÆTA PALLIDA (TREPONEMA PALLIDUM)

HIDEYO NOGUCHI, M.D.[*]
NEW YORK

According to history, syphilis was not known, or, at least, was not recognized in Europe, until toward the end of the fifteenth century. It is considered probable that it was first introduced into Europe from America by the sailors of Columbus. The epidemic form with which this disease ravaged Europe in those early days has suggested that it is caused by a transmissible virus. No definite search, however, for such an infectious agent was possible until the discovery of the microscope. The first one to describe an organism in syphilitic lesions was Donné, who, in 1837, found a spiral organism to which Müller gave the name of *Vibrio lineola*. As no sharp differentiation between the non-syphilitic and syphilitic lesions had been yet established at that time, the finding of a spiral organism was inadequate to prove that it had any etiologic relation to syphilis. Bassereau, in 1852, rendered a great service by separating definitely the venereal sore from the true chancre, thus giving the basis for accurate investigations.

Research in syphilis became henceforth increasingly active, and the discoveries of the causative organism were announced year after year from different quarters, only to be disproved after a shorter or longer period of refutation and controversy among the investigators at the time. Hallier, in 1869, found in the syphilitic blood his *Coniothecium syphiliticum* and held it as the cause. Lostorfers, in 1872, announced his discovery of minute sparkling granules in the syphilitic blood which was kept for a few days in a moist chamber, but his finding was discredited by Neumann, Biesiadecki, Vajda and others. Then came, in 1878-9, Klebs' discovery in chancre-juice of numerous actively mobile granules and rods which he called *Helicomonades*. In 1882, Birch-Hirschfeld stained in the tissues from gumma, papules and chancres, minute bacteria which others considered as mast-cell granules, while Martineau and Hamonic reported in the same year their alleged success in reproducing the syphilitic lesions in pigs and monkeys with their bouillon cultures of cocci and bacteria. In 1884, the well-known discovery of Lustgarten was heralded from Weigert's laboratory. He demonstrated the presence of a bacillus in certain syphilitic products which resembled the tubercle bacillus discovered by Koch in 1882. The finding was confirmed by a number of reputable bacteriologists, among whom were Doutrelepont, Schütze, Giletti, de Giacomi, Gottstein, Babes and Baumgarten. It soon met with severe criticism, however, by Alvarez, Tavel, Klemperer, Matterstock, Bitter and many others, who not only failed to find this bacillus in the sections of the syphilitic tissues, but found it in other diseases as well as in normal smegma. Thus the discovery of Lustgarten gradually passed from general interest. In spite of Lustgarten's mistake, a great many investigators went further on to find the real organism of syphilis. Most of them described the cocci-like granules in the blood or lesions of syphilitics and claimed to have obtained pure cultures of so-called syphilis bacillus or syphilis coccus from the blood or glands. Van Niessen still asserts that a polymorphous bacillus which he obtained from the syphilitic blood and named *syphilomyces* is the cause of syphilis. He maintains that *Spirochæta pallida* is only one of the life cycles of this bacillus, although Hoffmann points out that there is absolutely no resemblance between the *pallida* and Van Niessen's bacillus in any stage of development. Similar bacilli were reported to be present in the syphilitic blood, by de Lisle and Jullien, Paulsen, Joseph and Piorkowski, but they are now considered to be due to external contamination. There are also certain investigators who claim to have found protozoa in syphilitic products, but their findings were soon disproved as mostly due to the artefact or decomposition products.

### THE DISCOVERY OF SPIROCHÆTA PALLIDA

The new era in the experimental research in syphilis began with the successful transmission of syphilitic lesions to higher apes by Metchnikoff and Roux in 1903. This opened up the field by furnishing a means of studying the nature of the causative agent of syphilis outside of human subjects. Thus Klingmüller and Baermann determined that the virus of syphilis does not pass through filters and does not, therefore, belong to an ultramicroscopic organism. The finding was confirmed by Metchnikoff. These two findings, the transmissibility to certain animals, and non-filtrability through porcelain bougies of the syphilitic virus, have exerted a great influence in enticing competent microscopists and biologists to attempt anew a thorough search for the virus, for they have learned that the organism lies within the limit of visibility.

It was not, however, until 1905 that an organism which was destined to gain universal recognition as the long-sought virus of syphilis, was viewed for the first time by Fritz Schaudinn in a joint investigation with Erich Hoffmann. Schaudinn found in the aspirated juice from the swollen inguinal glands of a syphilitic a faintly visible, extremely delicate small spirochete in fresh preparations. The organism, stained faintly with Giemsa's solution, was paler than any spirochete known to him at that time; hence he gave it the name of *Spirochæta pallida*,* renaming it *Treponema pallidum* in the same year. Schaudinn and Hoffmann examined a series of syphilitic and non-syphilitic patients and found that the *pallida* was almost always present in syphilitic lesions, but never in other diseases. They have described at the same time another, quite larger, irregularly and less curved spirochete which was found in non-syphilitic as well as syphilitic lesions on genitals. The name of *Spirochæta refringens* was given to this form. The discovery was soon confirmed with amazing rapidity by different investigators who demonstrated the *pallida* in various lesions, blood-vessels, internal organs, blood, spermatozoa, ova, and other body-fluids of syphilitic patients. Through the investigations of Buschke, Fischer, Levaditi, Salmon, Hoffmann, Paschen, Bertarelli, Volpino, Babes, Panea, Flexner, and many others, the *pallida* was demonstrated in abundant number in different organs and tissues of syphilitic children and fetuses. The organism was also found by Metchnikoff and Roux in the lesions in monkeys produced directly with human virus or indirectly through transmission of the virus from animal to animal. Soon afterward Truffi, Bertarelli, E. Hoffmann, Uhlenhuth, Mulzer, Nichols and others succeeded in infecting rabbits, guinea-pigs and lower monkeys, and have constantly found the *pallida* in the lesions. The transmissions of the *pallida* from man to monkey, monkey to rabbit, and rabbit to monkey, for many generations, has been carried on by Hoffmann and Nichols. The testicles of rabbits were especially suitable for purifying the *pallida* from the associating organisms, as the latter disappear completely after passing one generation, through the rabbit's testicle. Uhlenhuth and Mulzer were able to produce generalized syphilis in young rabbits by the intracardial inoculation with testicular strains of the *pallida*.

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[*] From the Laboratory of The Rockefeller Institute for Medical Research.

[*] Fenger-Senn Memorial Address, delivered before the Chicago Medical Society, March 13, 1912.

Thus *Spirochæta pallida*, Schaudinn, fulfilled almost all the requirements laid down by Koch before being accepted as the causative agent of syphilis. The only missing link was that a pure culture of this organism should be able to produce the pathologic changes in experimental animals similar to those found in human syphilis.

### CULTIVATION OF SPIROCHÆTA PALLIDA

1. *Mixed Cultures.* — Many investigators failed to obtain any growth of the *pallida* outside of the animal body. In 1907, Levaditi, Yamanouchi and others, found that the *pallida* remain motile in a colloidin sac filled with monkey serum and kept for many weeks in the peritoneal cavity of a monkey. The impure cultures thus obtained were non-virulent for any animal. In 1909, Schereschewsky reported that an impure culture of *pallida* may be obtained by inserting a piece of chancre into a high-layer tube of gelatinized horse serum. The success was not uniform, and he says that when the original material contained a virulent strain for rabbits or monkeys no growth in his horse serum was observed. Inversely, an impure growth may take place when the material used was non-virulent. All his cultures were non-pathogenic for monkeys and rabbits. It is difficult to decide whether his impure cultures contained an avirulent *pallida* or a certain spirochete indistinguishable from the *pallida*, because in a culture, morphology alone is no criterion for identifying the *pallida*. In 1910, Bruckner and Galasesco reported a successful production of syphilitic orchitis in rabbits by means of an impure culture in gelatinized ascitic fluid in which the original syphilitic tissue was still present. Sowade, in 1911, reported a successful generalization of syphilis in a rabbit through the intracardiac inoculation of an impure culture in gelatinized horse serum. In this case the rabbit showed scattered lesions over the body in which the *pallida* were found.

2. *Pure Cultures.*—There are up to the present date three investigators who claim to have succeeded in cultivating *Spirochæta pallida* in pure state, Mühlens, W. H. Hoffmann, and myself. Mühlens published his first article in 1909 and the second in 1910, asserting that he obtained one strain of the *pallida* in pure culture. W. H. Hoffmann, who has assisted Mühlens, continued to work alone a little longer and reported, in 1911, that he was able to isolate five more strains of the same organism as Mühlens. The method of cultivation consisted of the use of Schereschewsky's horse serum for obtaining an impure culture and then purifying it in a horse-serum agar (deep layer). The claim of Mühlens that his spirochete was a *pallida* was based entirely on the similarity of the morphology between the cultivated organism and the *pallida*, because no pathogenicity whatever was possessed by his culture. In his first report, W. H. Hoffmann mentions, also, that none of the strains of the organism cultivated by him was pathogenic. Later, in a brief report, this investigator claims to have produced an orchitis in rabbit by means of one of his cultures. He ascribes his earlier failure to accomplish this to the use of an insufficient quantity of culture. The pathologic changes produced by his culture as described by him were by no means convincing as a syphilitic nature. He succeeded in cultivating back his spirochete which, like all the other cultures of these two workers, developed a penetrating putrefactive odor. In regard to the differentiation of the organism isolated by them, both authors make very little mention, saying that the general characteristics of the culture are indistinguishable from those of *Spirochæta dentium* cultivated by Mühlens in 1906. Like the *dentium*, the spirochete of Mühlens and W. H. Hoffmann grows in a horse-serum agar without the addition of any fresh tissue, and produces a strong putrefactive odor. The differences which their spirochete presents in contrast to the *pallida* isolated by me, as will be presently described, are striking. Furthermore, as will be seen later on, there is absolutely no difference between *Treponema microdentium* isolated by me and the so-called *pallida* of these two authors.

Since 1910 I have been working on the cultivation of *Spirochæta pallida* and have succeeded in isolating six different strains from the orchitis material of rabbits and seven directly from chancres, condylomata and skin papules of human subjects. The methods used are different, according to whether the *pallida* is to be cultivated from the orchitis of rabbits or directly from man. For the former, which contains the *pallida* in almost pure state, a fluid medium is preferred. A serum-water containing a piece of sterile fresh tissue is inoculated with the emulsion of the spirochete and cultivated under most strictly anaerobic conditions. After the first generation of the growth is obtained, it is more and more acclimated to the artificial cultural conditions by passing repeated subcultures in the fluid media. Then the *pallida* is transferred to a solid medium containing the suitable nutriments and fresh tissues. If the culture is impure, it can be purified in solid media by a special technic.

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* For the mere traditional reason I have employed this designation in the present article. When the subject is considered from the systematic or zoologic point of view, the term *Treponema pallidum* is preferred, as has been my custom in other papers.

On the other hand, a fluid medium is unsuitable for obtaining a growth of the spirochete when the human material is utilized, because the medium undergoes, through the growth of the accompanying bacteria, such changes that it renders the medium unfit for the growth of *pallida*. For this reason, I have resorted to the use of a solid medium consisting of one part of ascitic fluid and two parts of weakly alkaline agar with a piece of sterile fresh tissue at the bottom. The percentage of success depends on the suitableness of the medium which can vary considerably with different specimens of ascitic fluids used, and also on the adaptability on the part of the strains of the *pallida*. The method of purification and other minor technical points will be found in my previous papers.

The six orchitis strains and seven human strains of the *pallida* thus obtained are identical in morphologic and cultural characteristics. They grow slowly and steadily around the tissues and form very faint diffuse undefined colonies extending gradually. The spirochete is strictly anaerobic and requires the presence of a fresh sterile tissue for development. It does not attack the protein constituents of the tissue or serum, nor does it produce an odor in growth in any medium. The cultivated *pallida* is less actively motile, but the variety of the movements is characteristic. Under unfavorable cultural conditions its morphology becomes less typical. The growth continues for several weeks. It has been noticed that the *pallida* strains isolated from the rabbit's orchitis grow more luxuriantly in a medium containing rabbit serum, while those from human chancres prefer the ascitic fluid agar. It appears as if the passage of the *pallida* through the rabbit's body modified the biologic property of this organism.

In regard to the pathogenicity, I have succeeded in producing typical orchitis in several rabbits by means of pure cultures of the orchitis strains. With the human strains I was able to produce the initial lesions on the skin of *Macacus rhesus* and *Cercopithecus callitrichus*. The Wassermann reaction developed in these monkeys after the appearance of the induration, several weeks after the inoculation.

The above identification of my cultivated *pallida* strains seems to amply justify my assertion, but I am now in the position to offer further evidences of its identity by means of the immunity and allergic reactions. For a fuller discussion, I will return to this topic later, but a brief statement is made here.

Several series of experiments[1] on rabbits were conducted with the purpose of producing the specific antibodies for the cultivated *pallida* and the tissue *pallida* (rabbit's orchitis). After a prolonged immunization, the serums of these rabbits were tested for the antibodies by means of a specific complement fixation test using the spirochete extract as antigen. It was found that the immune serums prepared with the cultivated *pallida* fix the complement with the antigen derived from the *pallida* of rabbit's orchitis as well as from the culture. The immune serums prepared with the orchitis tissue *pallida* reacted also with both antigens. On the other hand, both sets of the immune serums gave negative reactions with the antigens made of the pure cultures of mouth spirochetes or *Spirochæta refringens*. The mutually interchangeable reaction between the cultivated *pallida* and the tissue *pallida* establishes completely the identity of the two. It is also found that the rabbits sensitized with the orchitis *pallida* by repeated inoculation show the allergic skin reaction to the cultivated *pallida* extract (luetin) as well as to the tissue *pallida* extract. They do not react to the extracts of the *dentium* or *refringens*. This phenomenon adds further evidence that the spirochete cultivated and claimed by me to be the *pallida* is identical with the *pallida* found in the syphilitic tissues.

### DIFFERENTIATION OF SPIROCHÆTA PALLIDA AND CERTAIN MORPHOLOGICALLY AND CULTURALLY ALLIED SPECIES

The identification of a microorganism depends on a series of characteristics possessed by each organism. As the deviation of one member from the closely related members of the same family is only gradual and partial, it becomes important to discover as many individual characteristics as possible of each of them. The differentiation may thus become possible by pointing out one or more differences between the two, in spite of the presence of numerous other properties in common. It may happen that two organisms possess almost indistinguishable morphology, but grow differently, while their morpohology may be quite different, yet present similar appearance in growth. Every pathologist knows that the morphologic variations can exist to a considerable extent among different strains of the same organism and offer confusion when one attempts to differentiate it from the morphologic side. Fortunately, we are now in possession of certain indirect methods of identification in such cases, and this often carries more conviction than the most of the other evidences. These indirect methods are the phenomena of immunity and anaphylaxis. While the immunity phenomena are liable to be deprived of their value of identification through occasional group reactions among allied species, yet when it occurs that there is none, it brings identification beyond any dispute. The same is true of the allergy. Another method of identification is applicable only when the organism is pathogenic for certain animals. By the nature of pathogenicity, an organism can be differentiated from the others. But, there is also a difficulty in utilizing this procedure for a definite differentiation, as certain strains of the same pathogenic organism may become attenuated or even avirulent during the cultivation. Hence the absence of pathogenicity in this instance constitutes no evidence that the organism is another species.

For the identification of the *pallida* cultivated by me, the above were taken into consideration.

It may be mentioned that I have succeeded in cultivating *Spirochæta macrodentium*, *Spirochæta microdentium* and *Spirochæta refringens* in pure state and employed them for comparative studies with *Spirochæta pallida*.

*Spirochæta pallida* is indistinguishable from *Spirochæta microdentium* by the morphologic characteristics, but is well differentiated from the latter by the requirement of tissue for growth, the absence of a putrefactive odor, the pathogenic property, the positive complement fixation with the antiserum produced in animals by immunizing them with pure *pallida* extract (such as the syphilitic orchitis of rabbit), and its capability of inciting an allergic reaction in syphilitic patients. The *macrodentium* and *refringens* can be easily differentiated from the *pallida* by their morphology alone, although they behave quite differently in other respects as well.

Now, turning our attention to the spirochetes cultivated and claimed by Mühlens and W. H. Hoffmann to be the *pallida*, it becomes clear that their spirochete corresponds with *Spirochæta microdentium* in every principal characteristic, and disagrees with the *pallida* obtained by me. It appears quite strange that neither Mühlens nor W. H. Hoffmann has isolated even once a spirochete identical with my strains of the *pallida*, while W. H. Hoffmann states that he obtained his variety, which doubtless belongs to the *microdentium*, from five different lesions. Mühlens, it may be recalled, obtained this variety only once out of nearly eighty different specimens of syphilitic tissues. Whether the *microdentium* is more frequently associated in syphilitic lesions in Germany, it is difficult to say, but so far as my personal experience with numerous chancres and condylomata is concerned, I have never isolated a single strain of the *microdentium* from a syphilitic lesion outside of the oral cavity. It was for the purpose of avoiding such a confusion between the *microdentium* and the *pallida* that I had taken the trouble to use the rabbit's orchitis for cultivation in my first series of work, and later when cultivating the *pallida* directly from human syphilitic tissues, I never utilized the lesions in the mouth.

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[1] Partly aided by Dr. J. Bronfenbrenner.

In identifying a cultivated spirochete with *Spirochæta pallida* the following points must be fulfilled:

1. The spirochete must be morphologically correct.
2. It must not produce a putrefactive odor.

TABLE 1.—POINTS OF DIFFERENTIATION OF SPIROCHETES

| Varieties of Spirochetes | Requirement for Tissue | Production of Putrefaction Odor | Appearance of Growth | Pathogenicity | Dimension (Av.) | Curves (Average) | Movements | Complement Fixation with the Pallida Immune Serum | Allergic Reaction on Syphilitic Patients |
|---|---|---|---|---|---|---|---|---|---|
| *Spirochæta* * *pallida*.............. | + | — | Diffuse, faint. | + | 0.2-0.3 μ x 6-18 μ | Regular, deep. 4-16 | Rotation..... | + | + |
| *Spirochæta* * *microdentium*........ | — | + | Denser, more discrete. | — | 0.2-0.25 μ x 5-18 μ | Regular, fairly deep. 4-20 | Rotation..... | — | — |
| *Spirochæta* * *macrodentium*....... | + | — | Diffuse, faint. | — | 0.25-0.4 μ x 6-18 μ | Less regular. 3-14 | Vibratory and rotation. | — | — |
| *Spirochæta* * *refringens*........... | — | — | Fairly well defined, faint. | — | 0.5-0.75 μ x 6-20 μ | Irregular. 3-8 | Wavy and serpentine. | — | — |

* They all belong to genus *Treponema*.

3. It requires the addition of fresh tissue for growth.
4. Its extractor emulsion must bind complement with the immune serum (rabbit is preferred) produced by means of repeated injections of the tissue *pallida* (to be obtained from syphilitic orchitis of rabbits).
5. Its extract or emulsion must give an allergic reaction in certain cases of syphilis.
6. It should be pathogenic. The last requirement is highly important, but one cannot exclude the possibility of the organism still being the *pallida*, even if it is avirulent, as long as it fulfils the other five points, because it is not impossible that a strain of *pallida* may become attenuated in cultivation.

### MORPHOLOGIC AND PATHOGENIC VARIATIONS IN SPIROCHÆTA PALLIDA

Hitherto but little attention has been paid to certain morphologic and pathogenic variations that exist among different strains of *Spirochæta pallida*. It is true that such variations can hardly be brought out through the usual microscopic examinations of different specimens of syphilitic material. It requires a careful comparative study on a large number of strains either carried through the animal body for many generations, or in pure cultures. I was fortunate in obtaining ten different strains of the *pallida* in the testicles of rabbits and in studying them side by side. During my observations, extending over a period of over one year, I was struck with certain variations in their morphology and pathogenicity. Seven out of ten strains had the typical morphologic features and produced the diffuse orchitis in rabbits within three to four weeks, and progressed for about six to seven weeks. Then the orchitis usually retrogressed. Two strains were somewhat heavier than the average, and produced very hard nodules of cartilaginous consistency within eight weeks. The lesions increased in size very slowly, and remained for many weeks. The lesions on section showed much mucin and were difficult to crush. One strain, derived from a case of malignant syphilis, was somewhat thinner and attained a greater length than the average. It produced a soft diffuse swelling of the testicle within ten to fourteen days, progressing for several weeks. These characteristics were maintained unchanged for the entire period of observation.

Among the pure cultures I have observed similar variations in morphology. Of thirteen strains, eight show the typical morphologic features, two thicker and three thinner forms. The morphology of the thinner type resembles that of *Spirochæta microdentium*, and it is almost impossible to differentiate under the microscope. Nevertheless, the other characteristics identify it as the *pallida*. It may be mentioned that different types of the *pallida* can be present together in one lesion, as I was able to obtain a thicker and a thinner form with the average strain.

The above seems to be a highly important distinction, and, if in the study of a still larger number of specimens of the *pallida*, it is maintained, it will throw light on certain important clinical features of the human syphilitic disease.

### ALLERGY IN SYPHILIS

The peculiar change of reactivity in the system of individuals infected for some time with certain pathogenic microorganisms, as characterized by a hypersensitiveness to the incorporation of the constituents of the latter in a specific sense, has been recognized for a long time. Thus Koch's tuberculin test, von Pirquet's cutaneous test, Calmette-Wolff-Eisner's ophthalmic test in tuberculosis, the malein test in glanders, and similar reactions in various chronic or acute infectious diseases, have been discovered and become useful aids in diagnosis. Recent studies on anaphylaxis with various proteids, as inaugurated by Theobald Smith and thoroughly investigated by Richet, Otto, Besredka, Rosenau, Anderson, von Pirquet, Shick, Friedberger, Kraus, Dörr, Auer, Lewis, Gay, Southard, Pfeiffer, Wells, and others, clearly established the specific nature of the phenomenon. The most interesting feature of the anaphylactic phenomenon lies in the fact that the hypersensitiveness to a foreign protein develops only when a certain period of cessation of the introduction of the substance is allowed to elapse before the next injection, which then produces the well-known symptoms. The continuation of inoculation at regular short intervals does not confer on the recipient of the foreign substance any anaphylaxis during this period. It is, therefore, more likely to develop an anaphylactic condition in those patients who are infected with certain organisms which remain in their body for a long period, during which their activity undergoes fluctuations either spontaneously, possibly partly owing to the production of certain antagonistic substances by the infected hosts, and partly owing to the nature of the infecting microorganism, or fluctuations through the usual therapeutic interference. The clinical course of syphilis indicates that the infecting agent, *Spirochæta pallida,* fulfils all the requirements that lead to the development of an anaphylactic condition in syphilitic patients. Theoretically one should not expect this condition to appear as long as the activity of the *pallida* is maintained at its maximum, as is the case with the early period of infection. But one can reasonably expect the appearance of this phenomenon when the activity of the organism is abated through the gradually acquired defensive power of the hosts, or under an effective therapeutic control. Thus we may find this condition to be present in later stages of the disease. Likewise, the cases of late hereditary syphilis would behave similarly. It will be seen later that the above theoretical points are well borne out by the practical results to be reported.

TABLE 2.—LUETIN REACTION IN VARIOUS SYPHILITIC CONDITIONS AND IN CONTROLS

| | Primary Syphilis | | Secondary Syphilis | | | | Tertiary Syphilis | | | | Congenital Syphilis | | | | Cerebrospinal Syphilis | | Latent Syphilis | | Controls | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symptoms Present | | Symptoms Present | | Symptoms Absent | | Symptoms Present | | Symptoms Absent | | Under 1 Year | | Late Cases | | Symptoms Present | | | | Normal Individuals | | Non-Syphilitic Cases | |
| Luetin reaction ....... | + | — | + | — | + | — | + | — | + | — | + | — | + | — | + | — | + | — | + | — | + | — |
| No antisyphilitic treatment. | .. | 13 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 24 | 6 | .. | 50 | .. | 200 |
| Slight mercurial treatment. | 1 | 12 | 2 | 25 | .. | .. | 12 | .. | .. | .. | 5 | 18 | .. | .. | .. | .. | .. | .. | .. | .. | .. | ... |
| Regular mercurial treatment. | .. | .. | .. | .. | 14 | 3 | 31 | .. | 29 | 1 | 1 | 3 | 15 | 1 | 5 | 5 | .. | .. | .. | ... | .. | ... |
| Salvarsan and mercurial treatment. | .. | .. | 1 | .. | 42 | 12 | .. | .. | 22 | 3 | .. | .. | 9 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 1 | 25 | 3 | 25 | 56 | 15 | 43 | 0 | 51 | 4 | 6 | 21 | 24 | 1 | 5 | 5 | 24 | 6 | 0 | 50 | 0 | 200 |
| | 26 | | 99 | | | | 98 | | | | 52 | | | | 10 | | 30 | | 250 | | | |
| | 315 | | | | | | | | | | | | | | | | | | | | | |

Syphilis is a chronic infectious disease, and presents many difficulties in diagnosis. During its very early period, it is principally a disease of dermatologic, genito-urinary, and laryngologic fields. There the clinical appearance, demonstration of *Spirochæta pallida* and the Wassermann reaction usually settle the diagnosis. On the other hand, as soon as it enters its chronic course, it manifests most diverse and often obscure symptoms. The direct demonstration of the *pallida* becomes laborious and often impossible, the serum reaction less frequent, and the clinical aspect less decisive. A great many cases of the disease at this period now pass into the fields of medicine, surgery, ophthalmology, neurology, and psychiatry. Here the detection of the allergic condition will doubtless aid in deciding the diagnosis of dubious cases.

Since the discovery of *Spirochæta pallida*, various investigators have attempted to introduce a specific cutaneous reaction based on the allergy in syphilis. Thus, Meirosky, Wolff-Eisner, Munk, Tedeschi, Nobl, Ciuffo, Nicolas-Favre-Gauthier, Neisser-Bruck, Jadassohn and Fontana carried out a series of experiments by means of an extract obtained from syphilitic tissues containing the *pallida*. They were much handicapped by not having a pure *pallida* extract for such purposes. One can imagine the way in which an extract containing various bacteria besides the *pallida* would react. With such an impure antigen, some of them obtained quite favorable results, while others were unable to come to any conclusive result.

After obtaining the pure cultures of several strains of the *pallida*, in 1910-11, I commenced my experimental work on rabbits with the purpose of ascertaining if these animals could not be made allergic to the extract of pure *pallida*. By repeated intravenous injections of the *pallida* antigen into the rabbits for several months and then giving them a month's rest, I tested them with the extract, which was termed "luetin," given intradermally. A proper control was provided. They all reacted to the luetin with marked inflammation, some leading to pustulation in several days. No normal rabbit reacted. While I was still working with the animals, Professor Welch suggested that I make the test on human subjects. Through his encouragement, I commenced the work at once at different dispensaries and hospitals with the cooperation of the physicians in charge.

My series comprised several hundred cases, including syphilis, parasyphilis, non-syphilitic diseases, and normal individuals.

In the series just referred to, the luetin was made from only two strains of pure cultures of the *pallida*. Since then, I have been preparing it with at least six different strains, thus securing a polyvalent antigen. The luetin has been recently distributed to certain hospitals in this country and Europe and their results are not reported as yet. The first report on this subject published is by Cohen, who is applying the test to the ophthalmologic conditions. His results show that the reaction is specific and offers much aid in diagnosis where either the seroreaction or the clinical symptoms are indecisive. The second report is by Orleman-Robinson, who applied the reaction to dermatologic conditions at several skin clinics in New York. The results of this investigator also confirm the specificity. The reaction was positive in all tertiary and hereditary cases, and absent in the primary and untreated secondary syphilis. It was not present in a large number of skin cases, including psoriasis, epithelioma, acne vulgaris, erythema multiformis, urticaria, alopecia areata, trichophytosis, erythema toxicum, bromid eruption, sycosis, scabies, pityriasis rosea, tinea versicolor, eczema, ulcus cruris, Darier's disease, eczema seborrheicum, and also pulmonary tuberculosis. Both investigators did their work at their clinics under the joint observations of their colleagues.

In certain cases of tertiary and hereditary syphilis, they have observed the so-called *Umstimmung* of Neisser, in which the control injection also reacted more or less markedly. This confirms my earlier observations.

Regarding the varieties of the luetin reaction, I have made the following types:

### DESCRIPTION OF THE REACTIONS

*Normal or Negative Reactions.*—After applying the emulsions, both luetin and control, to about fifty normal individuals, I was able to determine the variations and limitations of the reactions that follow intradermic administration in the normal skin of a man. In the majority of normal persons, there appears, after twenty-four hours, a small erythematous area at and around the point of injection. No pain or itching sensation is experienced. This reaction gradually recedes within forty-eight hours and leaves no induration. In certain individuals, the reaction may reach a stage of small papule formation after twenty-four to forty-eight hours, after which and within seventy-two hours it commences to subside. No induration is left behind, although occasionally slight yellowish pigmentation may result from mild ecchymosis.

*Positive Reactions.*—According to the manner and intensity with which the skin of syphilitics responds to the introduction of luetin, one may distinguish the following varieties of effects:

A. Papular Form: A large, raised, reddish, indurated papule, usually from 5 to 10 mm. in diameter, makes its appearance in twenty-four to forty-eight hours. The papule may be surrounded by a diffuse zone of redness and show marked telangiectasis. The dimensions and the degree of induration slowly increase during the following three or four days, after which the inflammatory processes begin to recede. The color of the papule gradually becomes dark bluish-red. The induration disappears within one week, except in certain instances in which a trace of the reaction may persist for a longer period. This latter effect is usually seen among patients with secondary syphilis under regular mercurial treatment in whom there are no manifest lesions at the time of making the skin test. Patients with congenital syphilis also show this reaction in early period of life.

B. Pustular Form: The beginning and course of this reaction resemble the papular form until about the fourth day, when the inflammatory processes commence to progress. The surface of the indurated, round papule becomes mildly edematous, and multiple miliary vesicles occasionally form. At the same time, a beginning central softening of the papule can be seen. Within the next twenty-four hours, the papule changes into a vesicle filled at first with a semi-opaque serum that later becomes definitely purulent. Soon after this, the pustule ruptures spontaneously or after slight friction or pressure. The margin of the broken pustule remains indurated, while the defect caused by the escape of the pustular content becomes quickly covered by a crust that falls off within a few days. About this time the induration usually disappears, leaving almost no scar after healing. There is a wide range of variation in the degree of intensity of the reaction described in different cases, as some show rather small pustules, while in others the pustule is much larger. This reaction was found almost constantly in patients with tertiary or late hereditary syphilis.

C. Torpid Form: In rare instances, the injection-sites fade away to almost invisible points within three or four days, so that they may be passed over as negative reactions. But sometimes these spots suddenly light up again after ten days, or even longer, and progress to small pustular formation. The course of this pustule is similar to that described for the preceding form.

This form of reaction has been observed in a case of primary syphilis, in one of hereditary syphilis, and in two cases of secondary syphilis, all being under mercurial treatment.

Neither in syphilitics nor in parasyphilitics did a marked constitutional effect follow the intradermic inoculation of the luetin. In most positive cases, a slight rise in temperature took place lasting for one day. In three tertiary cases and in one hereditary case, however, general malaise, loss of appetite and diarrhea were noted.

The final estimation of the luetin test awaits future investigations by a large number of observers. In the meanwhile, I consider it fairly accurate to state that in this reaction one has a specific test for syphilis. Its more constant presence in the late stage of syphilis than the serum reaction may be of special advantage to those who have to deal with this class of cases.

From my limited observations, it appears that the allergic condition of skin in syphilitic patients persists as long as the infecting agent still survives somewhere in the body, and it requires a most energetic treatment to remove it. Should the destruction of the *pallida* be complete, the allergy must also cease to exist beyond a certain length of time. In animal experiments the luetin reaction no longer appeared after a period of several months. In several instances of human syphilis, in which the symptoms and serum reaction had disappeared under the treatment with salvarsan, the subjects failed to respond to luetin reaction after from eight to twelve months, and the patients still remain in excellent health. It will be of great importance if the luetin reaction can be employed for determining a cure. I have, however, seen cases in which the disease persists in spite of the treatment, and the patients do not give a positive luetin reaction. This class of cases shows undoubtedly an unfavorable prognosis.

### SPIROCHÆTA PALLIDA AND THE WASSERMANN REACTION

Although the discovery of the Wassermann reaction was due to the assumption that a syphilitic serum containing the specific antibodies fixes the complement when mixed with an extract containing *Spirochæta pallida*, the real cause of this interesting phenomenon is now generally known not to be of the nature of a specific complement fixation brought about through the combination of the syphilitic antigen (*Spirochæta pallida*) and antibodies, in the strict sense of the term. The discovery of Landsteiner, Müller and Pötzl and Porges and Meier, that an alcoholic extract of syphilitic as well as normal tissues yields practically the same results as an aqueous extract of a syphilitic organ, originally recommended by Wassermann and Bruck, and the fact that the Wassermann reaction occurs also in non-syphilitic diseases (leprosy, frambesia, malaria, etc.) as observed and confirmed by later investigators, made the original antigen-antibody view untenable. Further, the extensive series of experiments of myself, later with Bronfenbrenner, conclusively proved that the active principles of the so-called antigens in the Wassermann reaction are present in the lipoidal substances of the tissues, irrespective of whether they are derived from syphilitic or non-syphilitic human subjects or animals.

TABLE 3.—THE ANTIGENS USED FOR THE FIXATION TESTS

| | Syphilitic and Non-Syphilitic Serums Used for the Complement Fixation Tests | I<br>Acetone-Insoluble Tissue Lipoids (Wassermann Reaction or Lipotropic Fixation)<br>("Antibody") | II<br>Pallida Emulsion from Rabbit's Syphilitic Orchitis | III<br>Control Emulsion from Normal Rabbits' Testicles. | IV<br>Pallida Emulsion from Pure Cultures | V<br>Control Emulsion from Uninoculated Culture Media | VI<br>No Antigen |
|---|---|---|---|---|---|---|---|
| Syphilitic Cases | Primary syphilis, untreated | + 1 unit | — | — | — | — | — |
| | Primary syphilis, untreated | + 3 units | — | — | — | — | — |
| | Primary syphilis, untreated | + 2 units | — | — | — | — | — |
| | Primary syphilis, untreated | + 1 unit | — | — | — | — | — |
| | Primary syphilis, untreated | + 5 units | + | + | — | — | — |
| | Secondary syphilis, slight treatment, general rash | + 2 units | { + | { + | — | — | — |
| | Secondary syphilis, slight treatment, general rash, fading | + 10 units | + | + | — | — | — |
| | Secondary syphilis, moderate treatment, manifest | + 3 units | — | — | — | — | — |
| | Secondary syphilis, moderate treatment, manifest | + 2 units | + | ± | + | — | — |
| | Secondary syphilis, salvarsan, no symptoms | + { 1 unit | ± | — | ± | — | — |
| | Secondary syphilis, salvarsan, no symptoms | ± { 0.5 unit | + | ± | + | — | — |
| | Tertiary syphilis, no recent treatment, manifest | + 4 units | + | ± | { + | — | — |
| | Tertiary syphilis, salvarsan and Hg, no symptoms | — | + | ± | + | — | — |
| | Tertiary syphilis, salvarsan and Hg, symptoms clearing | + 2 units | ± | — | { + | — | — |
| | Tertiary syphilis, Hg treatment, manifest | + 1 unit | — | — | — | — | — |
| | Tertiary syphilis, Hg treatment, manifest | ± { 0.5 unit | — | — | — | — | — |
| | Late hereditary syphilis, Hg treatment, manifest | + 2 units | ± | ± | { + | — | — |
| | Late hereditary syphilis, Hg treatment, manifest | ± | + | { + | { + | — | — |
| | Late hereditary syphilis, Hg treatment, manifest | + 8 units | + | + | — | — | — |
| | Late hereditary syphilis, Hg treatment, manifest | — | ± | — | ± | — | — |
| Non-Syphilitic Cases | Gonorrhea | — | — | — | — | — | — |
| | Tuberculosis | — | — | — | — | — | — |
| | Chancroid | — | — | — | — | — | — |
| | Carcinoma | — | — | — | — | — | — |
| | Dementia præcox | — | — | — | — | — | — |
| | Leprosy (tuberose type) | + 5 units | + | + | — | — | — |
| | Leprosy (mixed type) | + 3 units | + | + | — | — | — |
| Experimental Syphilis and Controls | Rabbit, syphilitic orchitis, six weeks' duration | + 1 unit | — | — | — | — | — |
| | Rabbit, syphilitic orchitis, six weeks' duration | + 1 unit | — | — | — | — | — |
| | Rabbit, syphilitic orchitis, six weeks' duration | + 2 units | { + | { + | — | — | — |
| | Rabbit, syphilitic orchitis, six weeks' duration | + 1 unit | — | — | — | — | — |
| | Rabbit, syphilitic orchitis, six weeks' duration | + 1 unit | — | — | — | — | — |
| | Rabbit, normal | — | — | — | — | — | — |
| | Rabbit, normal | — | — | — | — | — | — |
| | Rabbit, normal | — | — | — | — | — | — |
| | Rabbit, normal | — | — | — | — | — | — |
| | Rabbit, normal | — | — | — | — | — | — |

Explanation: + = positive; { + = weakly positive; ± = doubtful; — = negative reaction.

In spite of these facts, certain investigators still adhere to the original view without, however, any definite evidence in favor of such an assumption. Since the causative organism, *Spirochæta pallida*, has now been cultivated in pure state and identified through its pathogenicity and other biologic properties, such as the capability of inciting the Wassermann reaction in experimental animals, it is now possible to find out by exact experiments to what extent *Spirochæta pallida* plays the rôle of the so-called antigen in the Wassermann reaction.

In order to settle the above question, several series of experiments were carried out on repeated occasions in regard to the following points:

1. Can syphilitic serums giving the positive Wassermann reaction by means of the lipoidal "antigen" also bind complement when the lipoids are replaced by the extract or emulsion of *Spirochæta pallida?*
2. Is it possible to intensify the ordinary Wassermann reaction in syphilitic serums by adding the extract or emulsion of the *pallida?*

The second problem was set up through the supposition that certain syphilitic serums giving weak or negative reactions with the lipoidal "antigen," may nevertheless contain sufficient antibodies which, while on account of the absence or insufficiency of the *pallida* substance are only partially detected or remain unrevealed, may be brought into evidence by the addition of the real antigen. This assumption originates from the conception of Citron, who considers that the lipoidal "antigen" is merely an intermediator to bring about the combination of the antibody and real antigen in the syphilitic serums where they are supposed to be existing side by side without entering combination until the lipoids are added.

In deciding the first point, I have prepared the aqueous extract and emulsion of *Spirochæta pallida* derived from two different modes of cultivation, namely, one in the testicles of rabbits and the other in artificial culture media. Both materials were pure and contained an enormous quantity of *Spirochæta pallida*. In making up the extract I have employed several strains of the *pallida* in order to obtain a polyvalent antigen. In case of syphilitic orchitis of rabbits, the indurated testicles of each strain were removed from the animals (under usual aseptic precaution), and these different strains were put together in a sealable porcelain jar for grinding by means of marbles in a shaking-machine. An adequate quantity of sterile physiologic salt solution was added before the grinding. The disintegration of the *pallida* was almost complete after six hours. The emulsion thus obtained was then carefully transferred to a sterile bottle, heated to 60 C for thirty minutes and 0.4 per cent. phenol (carbolic acid) was added. This was used as the antigen. For the control a similar extract with normal rabbit's testicles was prepared.

For making the antigen from pure cultures of the *pallida*, the technic used was identical with the foregoing. The control extract was prepared with inoculated media. The culture medium consisted of one part of ascitic fluid and two parts of a weakly alkaline agar to which a piece of fresh sterile rabbit's kidney was added. For the antigen only the colonies of the *pallida* were employed, the tissue (kidney) being previously removed.

After determining the anticomplementary titer of each emulsion, I have tested a large number of syphilitic serums from human subjects and also from rabbits with syphilitic orchitis. Non-syphilitic serums both of man and rabbits were used as controls. Throughout the entire series of experiments, the antihuman hemolytic system (Noguchi) was used. The serums were inactivated at 55 C. for thirty minutes. This precaution is absolutely necessary as the antigens contain various proteids capable of causing a proteotropic fixation with unheated serums.

In order to know the relation quantitatively between the Wassermann reaction produced by the lipoidal "antigen" and the fixation by the *pallida* extract as antigen, I have titrated the positive serums for their fixing-power simultaneously with the lipoidal and *pallida* antigens.

The Wassermann reaction is present in most of the syphilitic cases here studied and also in two cases of tuberous and mixed type of leprosy. It is more pronounced in untreated early cases and in hereditary cases than in the treated cases. It is present in tertiary cases in a lower percentage. On the other hand, a positive reaction was obtained with the *pallida* extracts in certain cases with weak or negative Wassermann reactions. These occurred, however, only when the patients were under treatment or had been syphilized many years ago without being cured. It is also remarkable to notice that in many cases of tertiary syphilis and later hereditary cases, there was a partial fixation, irrespective of the absence or presence of fixation as indicated by the lipoidal antigen. No fixation was obtained with the *pallida* antigen made from pure culture in the case of leprosy, while the extract from syphilitic as well as normal rabbit's testicles gave a positive reaction, due, doubtless, to the lipoidal content of the latter.

These facts may be considered as deciding (1) that the Wassermann reaction is caused by the lipotropic substances, but not by the antibodies which combine specifically with the *pallida* antigen; (2) that the fixation produced by the culture *pallida* antigen with certain syphilitic serums is caused by the specific antibodies contained in the latter and may constitute a specific diagnostic method for syphilis; (3) that the fixation caused by the testicular extracts behaves like the culture *pallida* extract in the majority of cases, but when the serums (syphilitic or leprous) contain abundant lipotropic substances, it may give a Wassermann reaction as well, which is not the case with the culture *pallida* antigen; and finally (4), that in the serum of rabbits with active syphilitic orchitis there is no indication of the presence of a sufficient amount of the antibodies for the *pallida* antigen, although it gives a strong Wassermann reaction. It remains to be seen when and under what conditions the specific antibodies for the *pallida* will most abundantly be formed in syphilitic patients. At all events it is rather remarkable that the amount of the antibodies detectable by the *pallida* antigen in these cases was so small as compared with certain other infectious diseases, in this respect. It is not improbable that those who come under our care belong to a class of individuals with comparatively less resistance to the *pallida* and are incapable of producing sufficient antibodies, while there are many who respond to the infection with more vigorous formation of the antibodies and reduce the infection to a harmless latency or even destroy the *pallida* completely. This latter class of infected persons do not, of course, frequent our clinics. If this is the case, it would be of immense prognostic importance to check a patient from the beginning of infection by the complement fixation test with the *pallida* antigen, thereby determining the resistance of the patient against the disease.

We have in the Wassermann reaction a fair measure of activity of the infecting agent, and now we will have in the *pallida* fixation reaction a gauge for the defensive activity of the infected host.

### DEMONSTRATIONS

In order to illustrate the foregoing address with practical demonstrations, I have exhibited the macroscopic and microscopic (dark field) specimens of *Spirochæta pallida*, *microdentium*, *macrodentium* and *refringens* in pure cultures. For the assistance and necessary arrangements for the occasion, I express sincere thanks to Professor Zeit and his assistants.

For the demonstration of the luetin reaction, I am under deep obligation to Dr. W. L. Baum, Dr. B. C. Corbus, Dr. O. Stein and Dr. J. Grinker, who placed a series of syphilitic, parasyphilitic and non-syphilitic cases at my disposal. For the privilege of using the clinic of the Chicago Post-Graduate Medical School during the preparation for the demonstration, my thanks are due to its president, Dr. Emil Ries. It is my pleasant duty to express my gratitude to Dr. Corbus, who has also given me a series of syphilitic cases (private), for which he has been keeping all important data for a number of years. The most important feature of his private cases lies in the fact that the patients were treated by him according to a biologic measure, namely, in regard to the Wassermann reaction. The patients selected by him were those who had been or are still being treated with salvarsan and mercury, and had lost the Wassermann reaction a long or short time ago. As will be seen in the following records, some of the cases with negative Wassermann showed a positive luetin reaction, while others were negative. It seems to be highly important to keep track of the latter group of cases for many years to come, since, in my opinion, these patients with negative, clinical, serologic and allergic findings may belong among the cured patients. This assumption may not, however, apply to those patients who had been treated energetically before the allergic state of the skin was developed (such as cases of primary syphilis), because in these instances the luetin reaction may never be manifest. The prognostic value of the luetin reaction would, therefore, become obvious only in those who had had a generalized syphilis before the treatment.

Below I present brief records of the cases used for the demonstration. The Wassermann reaction in these cases was made by Dr. Corbus.

CASE 1.—N. M., American woman, aged 29, clinic patient of Drs. Baum and Corbus. Present condition: Early secondary lues. Treatment: Mercury rubbings. Wassermann reaction not taken. Luetin mild positive.

CASE 2.—F. B., white man, aged 44, clinic patient of Drs. Baum and Corbus. Present condition: Latent secondaries. Chancre in October, 1910. Treatment: Mercury rubbings and internal. Wassermann positive. Luetin papular distinct (positive).

CASE 3.—J. D., American man, aged 34, clinic patient of Drs. Baum and Corbus. Present condition: Latent secondaries. Infected two years ago. Treatment: Mercury rubbings. Salvarsan injected in oil suspension 0.6 gm. Wassermann positive. Luetin mild positive.

CASE 4.—S. B., American man, aged 26, clinic patient of Drs. Baum and Corbus. Present condition: Recurrent secondaries. Treatment: Mercury rubbings intermittent. Wassermann positive. Luetin distinct papular (positive).

CASE 5.—W. H. W., American man, aged 23, clinic patient of Drs. Baum and Corbus. Present condition: Marked secondaries. Treatment: Salvarsan in oil suspension, February, 1912. Mercury intermittent. Wassermann not made. Luetin distinct papular (positive).

CASE 6.—L. J., colored man, aged 23, clinic patient of Drs. Baum and Corbus. Present condition: Secondaries. Eighteen months since treatment. Treatment: Intravenous injection of salvarsan eight months ago. Mercury rubbings. Wassermann positive. Luetin suppuration on both arms. No difference between control and luetin (*Umstimmung?*).

CASE 7.—C. K., German man, aged 22, clinic patient of Drs. Baum and Corbus. Present condition: Secondary period. No symptoms. Chancre four years ago. Treatment: Mercury rubbings. Salvarsan—intravenous injection May 20, 1911; June 7, 1911; October, 1911; November, 1911. Wassermann not taken. Luetin papular reaction distinct (positive).

CASE 8.—H. K., American man, aged 46, clinic patient of Drs. Baum and Corbus. Present condition: Cerebral gumma. Treatment: Mercury intermittent. Wassermann positive. Luetin large full indurated papule. Typical positive reaction.

CASE 9.—J. S., colored man, aged 34, clinic patient of Drs. Baum and Corbus. Present condition: Probable tertiary. No history. Treatment: Internal about one year. Wassermann positive. Luetin secondary infection. All reactions, both control and luetin.

CASE 10.—A. M., American woman, aged 21, clinic patient of Dr. Stein. Present condition: Congenital lues. Treatment: None at any time. Wassermann negative. Luetin distinct papular (positive).

CASE 11.—C. H., American man, aged 16, clinic patient of Drs. Baum and Corbus. Present condition: Congenital lues. Treatment: Mercury intermittent. Wassermann positive. Luetin pustular reaction (positive). Slight *Umstimmung.*

CASE 12.—W. J. H., American man, aged 42, clinic patient of Dr. Grinker. Present condition: Paresis. Probably infected twenty years ago. Treatment: Neglected. Salvarsan injected intravenously by Dr. Corbus Dec. 1, 1911, and Feb. 5, 1912. Vigorous mercury rubbings between salvarsan injections. Wassermann positive, Nov. 28, 1911. Luetin distinct papular (positive).

CASE 13.—Control case. S. C., colored man, aged 37, clinic patient of Drs. Baum and Corbus. Present condition: No history of initial lesion. No secondaries. Believed to be infected twenty years ago. Treatment: Mercury intermittent. Wassermann negative. Luetin negative.

CASE 14.—C. D., American man, aged 26, private patient of Dr. Corbus, treated after the biologic method. Present condition: Probably cured. Tonsillar chancre, November, 1910. Treatment: Salvarsan injected intramuscularly, Nov. 7, 1910, and Dec. 15, 1910. Wassermann positive, Nov. 28, 1910; negative, Jan. 23, 1911; negative, May 9, 1911; negative, March 12, 1912. Luetin negative.

CASE 15.—F. S., American man, aged 22, private patient of Dr. Corbus, treated after the biologic method. Present condition: Early secondaries. Last symptoms, Sept. 4, 1911. Treatment: Injected salvarsan in oil suspension, Sept. 4, 1911; intravenously, Feb. 6, 1912. Vigorous mercury rubbings between salvarsan injections. Wassermann negative, Jan. 16, 1912. Luetin distinct papular (positive).

CASE 16.—C. L., American man, aged 38, private patient of Dr. Corbus, treated after the biologic method. Present condition: Incipient tabes. Infected eleven years ago. Treatment: Salvarsan injected intramuscularly, Jan. 9, 1911, and March 5, 1911; intravenously, Oct. 6, 1911, and Jan. 13, 1912. Vigorous mercury rubbings between injections. Wassermann positive, Nov. 28, 1910; positive, Feb. 23, 1911; negative, July 7, 1911; negative, Oct. 6, 1911; negative, Jan. 9, 1912. Luetin negative.

CASE 17.—M. A., American man, aged 36, private patient of Dr. Corbus, treated after the biologic method. Present condition: Secondaries. Last appearance of palmar syphilid, seven months ago. Treatment: Injected salvarsan intramuscularly, Jan. 28, 1911; intravenously, March 18, 1911; intramuscularly, August, 1911. Vigorous mercury rubbings between salvarsan injections. Wassermann negative, Aug. 22, 1911; negative, Jan. 16, 1912. Luetin distinct papular (positive).

CASE 18.—P. S., American man, aged 22, private patient of Dr. Corbus, treated after the biologic method. Present condition: Cured. Primary lesion, Jan. 21, 1909. Treatment: Vigorous mercury rubbings. Cure obtained before salvarsan was administered. Injected salvarsan intramuscularly, Jan. 17, 1911. Wassermann negative, Dec. 10, 1910; Feb. 15, 1911; April 15, 1911; Aug. 1, 1911, and Dec. 15, 1911. Luetin negative.

CASE 19.—O. J. G., American man, aged 31, private patient of Dr. Corbus, treated after the biologic method. Present condition: Latent secondaries. Chancre, September, 1905. Last symptoms, Oct. 20, 1910. Treatment: Neglected at first. Injected salvarsan intramuscularly, Oct. 20, 1910, and Dec. 11, 1910; intravenously, Sept. 2, 1911, and March 9, 1912. Vigorous mercury rubbings between salvarsan injections. Wassermann positive, Nov. 11, 1910; negative, Jan. 1, 1910; positive, March 8, 1912. Luetin distinct papular (positive).

CASE 20.—A. G., American man, aged 20, private patient of Dr. Corbus, treated after the biologic method. Present condition: Secondaries. Infected Jan. 1, 1911. Last symptoms May 6, 1911. Treatment: Internal. Salvarsan injected in oil suspension, 0.6 gm., May 6, 1911; intravenously, 0.4 gm., Feb. 24, 1911. Vigorous mercury rubbings between injections of salvarsan. Wassermann positive, April 20, 1911, and March 4, 1912. Luetin distinct papular (positive).

Two patients with acne vulgaris, both adults, were also tested with the luetin and gave a negative reaction.

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# THE PSEUDOMALARIAL TYPES OF PYELITIS*

DOUGLAS VANDERHOOF, A.M., M.D.
Consulting Physician to the Johnston-Willis Sanatorium and Attending Physician to the Memorial Hospital
RICHMOND, VA.

The diagnosis of pyelitis (non-calculous and non-tuberculous) appears forty-seven times in the histories of 2,500 private patients examined by me during the past five years, an incidence of approximately 2 per cent. Of these forty-seven patients, twenty-one had been treated for malaria.

In most cases of infection of the pelvis of the kidney, constitutional symptoms arise that may closely simulate malarial fever. About one-half of the cases present local signs on the part of the kidney or bladder, or urinary disturbances manifest themselves in such a way as to direct attention to the existing lesion. In the other 50 per cent. of the cases, however, neither the history of the illness nor a thorough physical examination reveal any clues suggestive of an infection of the genito-urinary tract. As a result, pyelitis may remain unrecognized for long periods of time. Furthermore, the insidious onset without pain or local symptoms, the characteristic intermittent or remittent temperature curve, and chills occurring with peculiar regularity, all suggest malaria very strongly. The rigors in such cases are probably associated with a temporary blocking of the ureter-drain with inflammatory products, as the urine during the fever may be clear and free from pus, while at the termination of the paroxysm turbid urine loaded with pus is voided. Pyelitis in early childhood is much more common than is usually supposed, and is the cause of many unexplained fevers. One such instance is included in the report of cases below (Case 2).

Instances of pyelitis of the pseudomalarial type can be divided roughly into two groups, acute and chronic. The acute cases may be of very short duration and subside with sudden alacrity (Cases 3 and 4), or may last for weeks while the patient continues to be dosed with quinin. The chronic cases are not so frankly septic, but give rise to lesser symptoms, such as periodic aching in the extremities, chilly feelings, night sweats, etc. In one such case, reported below (Case 6) these symptoms had recurred every summer for fifteen years. The urinary findings in these chronic cases may be almost insignificant, and in women it is absolutely necessary to secure a catheterized specimen for microscopic examination, in order to exclude contaminating cellular elements from the external genitalia. The real difficulty in these chronic cases of pyelitis does not lie in disproving the diagnosis of malaria, as that can be readily accomplished by careful search through a stained blood-smear, but consists in excluding pulmonary tuberculosis, as the clinical history always suggests this latter possibility.

The diagnosis of pyelitis depends on the interpretation of the microscopic cellular elements present in the urinary sediment, correlated with the constitutional symptoms. Urethritis and cystitis, in the absence of local disturbances, can only be excluded by endoscopic or cystoscopic examination. It is not the purpose of this article to discuss the differential diagnosis of pyelitis from other pyogenic infections of the genito-urinary tract, but simply to emphasize the close clinical resemblance of pyelitis to malarial fever. In acute pyelitis the paroxysms may be identical with those of malaria, presenting hot, cold and sweating stages, with fever-free intervals. Chronic pyelitis gives rise to general symptoms that are commonly attributed to chronic malaria, although, as a matter of fact, the malarial parasite is so susceptible to the action of quinin that actual chronic malaria is an extremely rare condition and only arises in individuals who harbor the parasite and remain untreated. A great number of conditions masquerade under the name of chronic malaria, and not the least of these is a chronic low-grade infection of the genito-urinary tract.

The following six cases are reported in brief abstract from my histories of patients suffering from pyelitis.

Case 1.—*Patient.*—A professional man, aged 53, who had always enjoyed excellent health, with the significant exception of an attack of acute prostatitis one year previously, developed chills and fever in September, 1906, while on a vacation at Hot Springs, Va.

*Clinical History.*—After having two shaking chills at an interval of forty-eight hours, he was told that he had malaria and returned to his home in Richmond. For over three weeks he continued to have hard chills followed by high fever and profuse sweating. The chills occurred every day, although on a few occasions he went two days without a rigor. After the chill his temperature often reached 104 F. Except for the chills, fever and sweats, he was free from symptoms, complained of no pain in any part of the body and had no symptoms on the part of the bladder or kidneys. Quinin was administered in full doses from the beginning of the illness and at the time this note was made he had been taking 40 grains of quinin daily for a week.

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*Examination.*—On Oct. 3, 1906, I was asked to see this patient. Physical examination was entirely negative. Examination of the blood was as follows: red blood-cells 4,472,000, white blood-cells 12,000, polymorphonuclears 75.2 per cent., small mononuclears 15.6 per cent., large mononuclears and transitionals 7.5 per cent., eosinophils 1.3 per cent., mast cells 0.4 per cent. Stained blood-smear: negative for malaria. Widal reaction: negative. A specimen of freshly voided urine was slightly turbid, acid, specific gravity 1.014, albumin good trace, no sugar, no bile. Microscopically, there were present many pus-cells, an occasional red blood-cell and a moderate number of hyaline and finely granular casts. Diagnosis: Acute pyelitis.

*Treatment.*—It was suggested that the quinin be discontinued at once. The patient was given hexamethylenamin (urotropin) and urged to drink large quantities of water. His recovery was remarkably rapid, and in one week he was out of the house. In the spring of 1908, he was examined for life-insurance and the urine was absolutely clear and his blood-pressure normal.

Case 2.—*Patient.*—A girl, aged 3½, was brought to me Aug. 10, 1909. She had been subject at irregular intervals to attacks of vomiting, fever and abdominal pain. Three months previously she was thought to have swallowed a safety pin. For two weeks previously she had been running an irregular temperature which had reached 103 F. There had been no periodicity in the temperature curve, and no chills. The appetite was poor and bowels constipated.

*Examination.*—Complete physical examination was negative, and there was no reaction in thirty-six hours from a tuberculin ointment test. The chest and abdomen were *x*-rayed to determine if the safety pin was within the body. There was no evidence of the pin, and the skiagraph of the lungs showed no areas suggestive of tuberculosis.

Blood: Polymorphonuclears 53 per cent., small mononuclears 28 per cent., large mononuclears and transitionals 16 per cent., eosinophils 3 per cent. Negative for malarial parasites.

Urine: Amber, clear, white mucoid sediment, acid, albumin a good trace, sugar negative. Microscopically it showed moderate number of epithelial cells, very many pus-cells, an occasional red blood-cell, mucus strands, one hyaline cast was seen, no crystals. Stool: Well digested, no ova or parasites present. Diagnosis: Acute pyelitis.

*Treatment.*—Bland diet, forced water consumption, free catharsis, and hexamethylenamin 2 grains three times a day.

Aug. 27, 1909: A letter from the patient's mother stated that the child has had only one spell of fever since leaving for her home in another city. A specimen of urine, forwarded by express, showed no albumin and only an occasional epithelial and pus-cell under the microscope.

This patient was last heard from in March, 1910, and at that time was said to be in perfect health.

Case 3.—*Patient.*—A medical student, aged 24, while apparently in the best of health, had a severe shaking chill on the afternoon of July 6, 1907. A second similar rigor occurred the next forenoon.

*Examination.*—That afternoon at 3:00 p. m., when I saw him, his temperature was 103.2 F. A specimen of blood was carefully examined for malaria but no parasites were present.

Urine: amber, slightly cloudy, slight white granular sediment, acid, albumin a distinct trace, sugar negative. Microscopically an occasional epithelial cell, a moderate number of pus-cells and about an equal number of blood-cells, no casts.

Diagnosis: Acute pyelitis.

*Treatment.*—He was sent to the hospital and his temperature on admission at 5:00 p. m. was 104 F. He then began to drink large quantities of water, and was given hexamethylenamin and his temperature steadily fell to normal by the following morning and remained so.

He returned for observation Oct. 3, 1907, and said he had had no recurrence of the symptoms, and an examination of the urine showed it to be perfectly normal. When last seen, during the summer of 1911, he said that he continued to remain in the best of health.

Case 4.—*Patient.*—A business man, aged 60, had a hard, shaking chill during the night of Feb. 11, 1909, and this was accompanied by diffuse pain in the abdomen. For several months he had had some difficulty in voiding at times and had frequently suffered with some abdominal pain after urination.

*Examination.*—He saw me the following afternoon and his temperature was 100 F. at 4 p. m. Physical examination revealed no abnormality to account for his fever, and his blood-pressure was 135 mm.

Blood: Polymorphonuclears 82 per cent., small mononuclears 8 per cent., large mononuclears and transitionals 9 per cent., eosinophils 1 per cent. Negative for malaria.

Urine showed a trace of albumin together with the presence of a moderate number of epithelial and pus-cells, otherwise negative.

Diagnosis: Acute pyelitis.

*Treatment.*—Patient was given hexamethylenamin and advised to consult a genito-urinary specialist, as his symptoms were regarded as an acute exacerbation of a chronic lesion secondary to hypertrophy of the prostate.

The following morning his temperature was 98.8 and he felt well. A letter from him three weeks later said that he had had no recurrence of his symptoms.

Case 5.—*Patient.*—A traveling salesman, aged 30, formerly a resident of Baltimore, had been treated for malaria every summer since he came to Virginia six years previously. He consulted me Sept. 4, 1907, and had been suffering since the middle of June in exactly the same way that he had been afflicted during the preceding five summers. The chief complaint was that of chilly feelings and night sweats which would occur every second or third day. He had had no shaking chills at any time, no cough, no increased frequency of urination, but had lost 15 pounds in weight in the past three months. Each summer he was told that he had an obstinate malaria, and was given quinin persistently and in large doses.

*Examination.*—Complete physical examination was negative. Temperature at 3 p. m. was 99.3 F.

Blood: white blood-cells 11,800, polymorphonuclears 77 per cent., small mononuclears 15 per cent., large mononuclears and transitionals 5 per cent., eosinophils 2 per cent., mast cells 1 per cent. Stained blood: negative for malaria. Urine: amber, clear, slight white mucoid sediment, acid, albumin a faint trace, sugar negative. Microscopically many strands of mucus, moderate number of epithelial cells, a few pus-cells, an occasional red blood-cell, no casts, no crystals. The following day a specimen of fresh urine was obtained after urethral irrigation, and carefully examined for tubercle bacilli with negative results. Diagnosis: Subacute pyelitis.

*Treatment.*—Sept. 14, 1907: Patient had been drinking large quantities of water and had been taking hexamethylenamin in full doses. The chilly feelings and night sweats had entirely left him, and he said he was feeling well.

Sept. 24, 1907: Remained well. Examination of urine showed no albumin, and no pus, blood or casts.

On June 23, 1908, patient had a slight recurrence of the pyelitis and complained of feeling tired and of an occasional chilly sensation. These symptoms entirely cleared up in about a week's time. When he was last seen, in the fall of 1911, he stated that there had been no further recurrence of his former symptoms and that he remained in the best of health.

Case 6.—*Patient.*—A railroad conductor, aged 56, was seen March 1, 1911, and complained of chilly feelings with aching in the extremities for the past fifteen summers. Gave a history of chills and fever thirty years ago, and had gonorrhea many years ago, otherwise his past history was unimportant. Every summer for the past fifteen years he had suffered with aching, at times over the whole body, but chiefly in the legs. This aching was accompanied by chilly feelings, followed by a burning and a feeling as if he had fever, but he had not taken his temperature. Bowels were always regular. He had had to void with increased frequency and generally had to rise four or five times at night. Occasionally had burning on urination. No loss of weight. He had been treated for the past fifteen years for malaria, had taken a great deal of medicine and had also tried homeopathy, osteopathy and kindred cults.

*Examination.*—Physical examination was negative except for slightly suspicious signs of pulmonary involvement in the left back. Blood-pressure was 126 mm.; temperature 98; rectal examination negative; prostate not enlarged.

Blood: polymorphonuclears 63 per cent., small mononuclears 24 per cent., large mononuclears and transitionals 11 per cent., eosinophils 2 per cent. Negative for malarial parasites.

Sputum: no blood, negative for acid-fast bacilli.

Urine: amber, clear, white flocculent sediment, acid, specific gravity 1.021, albumin, a trace, sugar negative. Microscopically occasional epithelial cell, many pus-cells, singly and in small clumps, no blood, no casts, calcium oxalate crystals.

Diagnosis: Subacute pyelitis.

*Course.*—Patient's symptoms did not respond to internal administration of hexamethylenamin, salol, creosote and other urinary antiseptics. The urine continued to show the presence of pus-cells. On three occasions the urinary sediment was stained for tubercle bacilli, but none could be demonstrated. On May 3 a percutaneous tuberculin test was applied and there was no reaction observed in twenty-four and forty-eight hours. The patient was then referred to Dr. L. T. Price, who found on cystoscopic examination an hypertrophy of the median bar of the prostate, with two ounces of residual urine. Local treatment was then instituted by Dr. Price, and when patient was last seen during the latter part of October, 1911, he said that he felt very well and had been free from all symptoms for the first summer in fifteen years.

### SUMMARY

Forty-seven patients with pyelitis have been seen during the past five years, of whom twenty-one had been treated for malaria. The clinical features of these two affections may be almost identical. The differentiation, however, is not difficult, but the confusion of the two conditions will continue until physicians realize that quinin is a specific in malaria, and that it is useless to continue this remedy if the febrile disturbance persists. Furthermore, quinin, even in moderate doses, is irritating to an infected kidney. The constitutional symptoms of a low-grade chronic infection of the genito-urinary tract simulate pulmonary tuberculosis, but in the absence of cough the condition is often regarded as a chronic malaria. The urinary findings in these cases may appear almost insignificant, but a urine that is apparently clear on gross inspection will show the presence of a few pus-cells, often accompanied by an occasional red blood-cell. Pyelitis is the cause of many unexplained fevers, and this is especially true in the case of young children.

603 East Grace Street.

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## THE GERMICIDAL ACTION OF BASIC FUCHSIN [*]

EUGENE S. MAY, M.D.
Clinical Instructor in Surgery in the Medical Department of the University of Cincinnati, and Curator to the Cincinnati Hospital
CINCINNATI

### GENERAL CONSIDERATIONS

"Fuchsin (rubin) is obtained by the oxidation of a mixture of anilin, ortho- and paratoluidin, by means of arsenious acid or nitrobenzol in the presence of iron chlorid, which acts as the means of carrying over the acid. . . . It is soluble in water, alcohol and amyl alcohol. Rubin is basic dyestuff and serves for the staining of cell-nuclei, fuchsinophil granulations and bacteria."[1]

A convenient classification of the anilin dyes, that of Krieger,[2] places the three salts of fuchsin in the rosanilin group. The members of this group, as given by Krieger, are:

Methyl violet 6 B. $C_{25} H_{30} N_3 Cl$.
Malachite green $C_{23} H_{25} N_2 Cl$.
Rosanilin acetate $C_{20} H_{20} N_3 C_2 H_3 O_2$
Rosanilin hydrochlorid $C_{20} H_{20} N_3 Cl$
Rosanilin sulphate $(C_{20} H_{20} N_3)_2 SO_4$

It is only with the last three members of this group, rosanilin acetate, hydrochlorid and sulphate, that I shall be concerned. These three salts are generally known as the fuchsins. The acetate is the most basic, and the sulphate most acid in reaction, and it is the acetate which is furnished us as basic fuchsin and the hydrochlorid and sulphate as acid, or ordinary fuchsin. This difference of chemical reaction in the salts is of importance, since Krieger[2] has shown that the greater the degree of basicity of the dye, the greater is its germicidal action. My experiments confirm these findings, with the exception that the results, when testing the germicidal action of the acid salts on bacteria, have been uniformly negative.

### METHODS

There are many technical difficulties in the handling of the problem and many observers have attempted to work out a technic which will not be open to criticism. Ainley Walker and Murry[3] added such dyestuffs as Grubler's methyl violet, fuchsin and methylene-blue, in 0.2 per cent. solution, to culture mediums (principally plain agar-agar), sterilizing the mediums in the ordinary way. They often noted the precipitation of the coloring matters to the bottom of the tubes. They then inoculated the tubes with the bacterium under investigation and their experiments proved that very interesting morphologic and biologic changes occur in bacteria which are grown on culture mediums so prepared. They found that the motility of the *Bacillus typhosus* was lost; that the bacillus was replaced by a thread-like organism, twenty to thirty times as long as the original bacillus. No segmentation was noted, though branching forms were frequently encountered. With the work of Walker and Murry as a basis, many observers accepted it as a proved fact that the bacilli were dead. This I believe to be an error, since the tubes were not under observation for a sufficient length of time. I have noted growth after seven or eight days in tubes, in which no growth had been observed after forty-eight and seventy-two hours. This phenomenon is readily explained by an inhibitory, rather than a germicidal, action of the dye (as proved by Geppert,[4] quoted by Krieger).

Further, I have noted a very great difference in the germicidal action of the dye, when the inoculations were made into warm or cold solutions, cold solutions being for the most part non-germicidal, while warm solutions are uniformly active. Again, I have noted many times that solutions from which all pigment had been precipitated by careless sterilization had completely lost their power to kill bacteria. Because of heat applied during the sterilization of solutions of the dye, chemical changes occur in the dyestuff itself, perhaps new and entirely different chemical compounds are produced, and these are apparently more active than the original dyestuff.

Koch used what is known as the silk-thread method. He placed sterile silk threads in emulsions of bacteria and then allowed them to dry for twenty-four hours. They were then introduced into sterile solutions of various dyes and tested. Krieger dismisses the technic of Koch as open to error and bases his technic on the work of Walker and Murry. Briefly, Krieger's own method of investigation is this: bacterial suspensions were prepared from cultures and emulsified in sterile physiologic salt solution. They were then filtered and drops of the filtrate carried over with the platinum loop to the sterile cover-slips; the cover-slips were placed in the incubator for one hour (till dry); then the cover-slips were transferred to the various dye solutions for variable periods of time, washed in water and afterward dropped into broth-tubes. If no growth resulted (length of time of observation not stated), it was taken for granted that the microorganism was dead. Many sources of error arose as Krieger himself notes; too long drying may weaken or kill the bacteria, or they may be mechanically washed off.

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[*] From the Pathological Laboratory of the Cincinnati Hospital.

[1] Rohrman: Biochemie, Berlin, 1908, p. 482.

[2] Krieger: Centralbl. f. Bakteriol., 1911, lix, No. 4, p. 481.

[3] Walker and Murry: Brit. Med. Jour., 1904, ii, 16.

[4] Geppert: Berl. klin. Wchnschr., 1889, No. 36, p. 37.

My own technic is as follows, and I believe that I have obviated nearly all sources of error: carefully weighed quantities of basic fuchsin (Grubler's) were made up into a stock solution of 1 per cent., with double distilled water, placed in sterile bottles and kept away from the action of light. From this 1 per cent. stock solution, higher dilutions were made, 0.75 per cent., 0.5 per cent., 0.25 per cent., 0.1 per cent., 0.075 per cent., 0.025 per cent., 0.01 per cent. and 0.001 per cent. Five c.c. of these solutions were run into thoroughly cleansed sterile test-tubes and sterilized in flowing steam in the Arnold sterilizer for fifteen minutes on three successive days. This was determined after many trials to be about the limit of sterilization. Greater heat or prolonged heating brought about a precipitation of the dye.

The germicidal action of these stock fuchsin solutions was tested in the following manner: three loopfulls of the water of condensation from twenty-four hours agar-slant cultures were thoroughly mixed with the standard basic fuchsin solution. The bacteria-fuchsin solution thus prepared was constantly kept at a temperature of about 40 F. during the whole of the experiment. Immediately, and at intervals of one, five, fifteen, thirty, forty-five and sixty minutes, three loopfulls of the warm bacteria-fuchsin mixture were inoculated in a culture medium known to be favorable for the growth of the microorganism under investigation. Controls were made and the tubes incubated at 37 F. for from seven to fourteen days. Careful note was made of the presence of growth from day to day to ascertain that the results were not due to an inhibitive action of the dye on the bacteria. In several instances the original bacteria-fuchsin solution was also incubated with the other tubes, and, at the end of two weeks, centrifugalized, the bacteria thoroughly washed with sterile physiologic salt solution and new subcultures made. No growth was noted in any instance. The dye was also first added to the culture mediums and then inoculations were made. These also served as controls for any inhibitory action of the dye. As a routine procedure all bacteria-fuchsin mixtures were incubated and at the end of fourteen days subcultures were made with negative results where the solutions had otherwise been proved active.

The germicidal action of the fuchsin solutions was tested on *B. coli*, *B. typhosus*, *B. paratyphosus*, *B. enteritidis* (Gaertner), *B. dysenteriæ*, *Staphylococcus pyogenes aureus*, a saprophytic strain of *B. tuberculosis*, *Oidium albicans* from the human throat, and *Oidia* from a case of generalized blastomycosis. The culture of *B. coli* was isolated from a case of chronic cystitis with persistent colinuria. It was with a view to combating this latter condition that this research was originally undertaken.

All of these stock cultures were furnished by Dr. W. B. Wherry, to whom I am much indebted for advice and assistance.

The accompanying table summarizes my bacteriologic investigations. In this table, results as given are *constant*. I have found repeatedly that fuchsin is germicidal in much higher dilutions than here shown (1 to 10,000 and 1 to 100,000), but it should be remembered that the action of these higher dilutions is variable.

TABLE SHOWING GERMICIDAL ACTION OF FUCHSIN *

| Microorganisms | Strength of Solution | Time of Contact Necessary to Kill Bacteria (Min.) | Warm Solution | Cold Solution | Oversterilized Solutions | Controls |
|---|---|---|---|---|---|---|
| B. typhosus ....<br>B. paratyphosus.<br>B. coli com.....<br>B. enteritidis....<br>B. dysenteriæ...<br>* | 1-1000 or 0.1 per cent. | 5 | — | +, ± | +, ± | + |
| | Less than 0.1 per cent. or 1-1000 | | +, ± | +, ± | +, ± | + |
| B. tuberculosis..<br>† | 1-100 or 1 per cent. | 5 | — | +, ± | +, ± | + |
| | Less than 1 per cent. or 1-100 | | +, ± | +, ± | +, ± | + |
| Staphylococcus ..<br>* | 1-1000 or 0.1 per cent. | 5 | — | +, ± | +, ± | + |
| | Less than 0.1 per cent. or 1-1000 | | +, ± | +, ± | +, ± | + |
| Blastomyces ....<br>† | 1-1000 or 0.1 per cent. | 15 | — | +, ± | +, ± | + |
| | Less than 0.1 per cent. or 1-1000 | | +, ± | +, ± | +, ± | + |
| Oidium albicans.<br>† | 1-100 or 1 per cent. | 5 | — | +, ± | +, ± | + |
| | Less than 1 per cent. or 1-100 | | +, ± | +, ± | +, ± | + |

* In this table + means growth; —, no growth; ±, variable; *, subcultures made into + 1 broth; †, subcultures made into + 1 (1 per cent. acid to phenolphthalein) glucose agar slants.

It will be noted that a warm 0.1 per cent. (1 to 1,000) solution was lethal in five minutes to *B. coli*, *B. typhosus*, *B. paratyphosus*, *B. enteritidis*, *B. dysenteriæ*, and the *Staphylococcus pyogenes aureus*, while the blastomyces was not killed in less than fifteen minutes. In the case of *B. tuberculosis* and *Oidium albicans* lethal action was not manifested by higher dilutions than warm 1 per cent. (1 to 100) solution acting for five minutes.

I have made several animal experiments to show the non-toxicity of the dye. With warm 1 per cent. solutions I have made repeated irrigations of the urinary bladders of rabbits. Repeated and careful examination of the urine and sections of the bladders showed no irritation or inflammatory changes. Basic fuchsin has also been injected into the lumbar subdural space of dogs in 1 per cent. and 0.1 per cent. solutions with like effect. In the last two experiments the great *diffusibility* of the dye was especially well known. This I believe to be of importance in the use of the dye as a general surgical antiseptic, since a very recent work of A. von Wassermann,[5] on the treatment of cancer, is based on the great diffusibility of a dye carrying the therapeutic agent to poorly vascularized cancer cells. It is of interest to note that in 1870, Stilling[6] advocated the use of anilin dye solutions in surgical dressings because of its great diffusibility, harmlessness and activity and because it coagulated no albumin.

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[5] Wassermann: Deutsch. med. Wchnschr., 1911, xxxvii, 2389.

### CONCLUSIONS

1. From the results of my investigations with basic fuchsin I conclude that I have a germicidal agent which is more powerful than phenol (carbolic acid) and one which has a greater diffusibility and is less toxic.

2. From my clinical observations I conclude that I have a germicidal agent which has a marked stimulative action on epithelial and granulation tissue growth.

I have had as yet no experience with the dye in the treatment of lupus and blastomycosis, but hope soon to be able to try basic fuchsin in these cases and in a later report will give the results of my investigations.

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## THE VALUE OF INULIN AS A FOODSTUFF [*]

HOWARD B. LEWIS, A.B.
NEW HAVEN, CONN.

For many years physicians have sought to replace the starch in the diet of diabetics by some other carbohydrate which is well tolerated by the organism and which can be eaten in sufficiently large amounts without discomfort. Prominent among these substitutes for starch stands inulin, a carbohydrate closely resembling starch in its physical properties.[1] Like starch it exists in the underground parts of many plants, as a reserve carbohydrate, but, unlike starch, it is a polysaccharid of levulose, the isomer of dextrose, which is the sugar yielded by starch on hydrolysis. Inulin occurs in the roots of many of the *Compositæ*, particularly in the tubers of the dahlia, the artichoke, elecampane, and other similar plants. Of these vegetables, the artichoke is the best known as an article of diet, and is most frequently recommended for diabetics.

Inulin is readily hydrolyzed to levulose by dilute acids, and inasmuch as this sugar is assumed to be well tolerated by most diabetics, inulin appears a likely source of energy for the organism. Mendel[2] has pointed out that not every carbohydrate by virtue of its chemical composition alone is a true nutrient for the human organism and that metabolism experiments with a study of the feces, i. e., a determination of alimentary digestibility, are necessary before accepting any carbohydrate as an available source of energy. With this point in view, the behavior of inulin has been studied in a healthy man.

As early as in 1874, Külz[3] reported that no sugar appeared in the urine of diabetics on an absolute flesh diet after feeding from 50 to 120 gm. of inulin. No inulin was found in the feces. Hence he concluded that inulin is completely assimilated in both mild and severe cases of diabetes. Von Mehring, in 1876,[4] reported that the use of inulin did not increase the sugar content of the urine. More recently Teyxeira[5] has recommended the addition of inulin to the gluten of wheat. Persia[6] stated that inulin was well digested and assimilated by diabetics in large doses and through long periods. He reported that the feces never contained large amounts of inulin. Strauss[7] reports the feeding of pure inulin with much benefit in two cases of diabetes. After administering from 40 to 100 gm. daily he found no sugar in the urine. Strauss recommends the use of vegetables rich in inulin, such as artichokes (14 per cent. inulin[8]), dandelions, etc. He also points out that the absorption of inulin naturally proceeds more slowly from vegetables than from the pure substance. Hale White[9] suggests that the tubers of the dahlia be cooked and eaten as a vegetable by diabetics.

The failure of sugar to appear in the urine of diabetics after inulin feeding may be ascribed to a tolerance for levulose formed in the organism by the conversion of inulin. But it is also possible that the beneficial effects, *judged from the standpoint of the failure of sugar to appear in the urine,* may be due to the fact that the inulin is not utilized and hence no carbohydrate is present to be excreted in the urine. Inulin may be decomposed in the intestinal tract or pass through it unchanged to be excreted in the feces. Miura[10] and Mendel and Nakaseko[11] have shown that even under the most favorable conditions, little glycogen is formed in rabbits after feeding inulin. Since the formation of glycogen takes place readily after levulose feeding, this strongly indicates a lack of assimilation of inulin. When inulin is introduced parenterally into the organism there is no inversion or utilization, the inulin being excreted in the urine.[12] Sandmeyer[13] recovered 46 gm. of inulin from the feces of a depancreatized dog to which 80 gm. had been fed.

The view that the favorable influence of inulin feeding on the sugar output in the urine is the result of non-utilization due to non-absorption is confirmed by the work of Neubauer.[14] In a case of levulosuria he found no increased levulose content of the urine after feeding 80 gm. of inulin. If inulin were converted in the body to levulose, then a large increase in the levulose content of the urine was to be expected. No inulin was found in the feces, but the patient observed a strong gas formation in the intestine during the period following the meal, indicating bacterial decomposition of the inulin. *B. coli communis*[15] and other intestinal bacteria decompose inulin without any production of sugar.

No enzymes found in the higher animals attack inulin,[16] nor do yeast invertin,[17] malt- or "Taka"-diastase.[18] That plants contain an inulase has been shown by Green,[19] Bourquelot,[20] Dean,[21] and others.

Very dilute acids (0.05 to 0.2 per cent. at 40 C., according to Chittenden[18]) hydrolyze inulin; so that the possibility of an inversion by the gastric juice, and subsequent utilization must be taken into account. Richaud[22] has shown that at 36 C. 0.1 per cent. hydrochloric acid inverts 86 per cent. of inulin in twenty-four hours. Bierry and Portier[23] found that in one and one-half hours at 38 C. a 1 per cent. solution of inulin was converted to levulose by a gastric juice of an acidity equivalent to 4.19 gm. sodium hydroxid per liter. In the present investigation a qualitative experiment to determine whether this inverting action of the gastric juice takes place *in vivo* was performed. Two hundred c.c. of a 5 per cent. solution of inulin were introduced by a sound into the stomach of a dog and removed after half an hour. The gastric contents contained free acid, but gave only a weak reduction with Fehling's solution. After boiling with hydrochloric acid a strong reduction was obtained, indicating that the inulin had not left the stomach, but was present uninverted. After allowing the gastric contents to stand two hours at 39 to 40 C., a marked reduction was obtained, showing that the acidity of the gastric juice was sufficient to convert inulin into levulose in this time.

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[6] Stilling, J.: Berl. klin. Wchnschr., 1870, No. 24, p. 531.

[*] From the Sheffield Laboratory of Physiological Chemistry, Yale University.

[1] Von Noorden: Von Leyden's Handbuch der Ernährungstherapie, 1904, ii, 227.

[2] Mendel: Zentralbl. ges. Physiol. u. Path. des Stoffwechsels, 1908, No. 17, p. 1.

[3] Külz: Beiträge zur Pathologie und Therapie des Diabetes Mellitus, Marburg, 1874, Jahresb. Tierchem., 1874, iv, 448.

[4] Von Mehring: Beil. Tagebl. 49 Versaml. deutsch. Naturforsch. u. Ärzte, 128; Jahresb. Tierchem., 1876, vi, 144.

[5] Teyxeira: Boll. chim. Farm., xliii, 605-6; Jahresb. Tierchem., 1905, xxxv, 822.

[6] Persia: Nuova Revista Clin.-Terapeut., 1905, viii; Jahresb. Tierchem., 1905, xxv, 822.

[7] Strauss: Therapie der Gegenwart, 1911, lii, 337.

[8] Allbutt and Rolleston: System of Medicine, iii, 200.

[9] Allbutt and Rolleston: System of Medicine, iii, 204.

[10] Miura: Ztschr. f. Biol., 1905, xxxii, 263.

[11] Mendel and Nakaseko: Am. Jour. Physiol., 1905, xiv, 245.

[12] Mendel and Mitchell: Am. Jour. Physiol., 1905, xiv, 239.

[13] Sandmeyer: Ztschr. Biol., 1895, xxxi, 32.

[14] Neubauer: München. med. Wchnschr., 1905, p. 1525.

[15] Ducamp: Jahresb. Thierchem., 1907, xxxvii, 952.

[16] Swartz: Tr. Connecticut Acad. Arts and Sc., 1911, xvi, 298; a tabulation of the literature on this subject

[17] Komanos: Jahresb. Thierchem., 1876, vi, 180.

[18] Chittenden: Am. Jour. Physiol, 1898, ii. 17.

[19] Green: Annals of Botany, 1888, i, 223.

[20] Bourquelot: Compt. rend., 1893, cxvi, 1143.

[21] Dean: Botanical Gazette, 1903, xxv, 69.

[22] Richaud: Compt. rend. Soc. de biol., 1900, lii, 416.

To determine whether inulin appears in the feces, feeding experiments on a healthy individual, 64.5 kg. in weight, were tried. In the first experiment the diet was not weighed, but all cellulose-containing foods were carefully avoided. The periods were divided as follows: Fore, two days; experimental, one day on which the inulin was taken at lunch and dinner; after, two days. The inulin was taken chiefly in soup or mixed with soft-boiled eggs. Although comparatively large amounts (40 and 60 gm.) were fed, the subject found no difficulty in eating the inulin, which was tasteless. The cellulose-free diet tended toward constipation, so that in the second experiment no attempt was made to secure a cellulose-free diet, but rather a diet approximately constant in its cellulose content. The periods were varied so that the fore- and inulin periods each were of three days' duration. In the inulin period a day before and a day after the eating of the inulin were included to insure against any of the carbohydrate being carried into the feces of the after-period.

FEEDING EXPERIMENTS

| Series | Period (Days) | Diet | Composition of Feces in Periods | | | |
|---|---|---|---|---|---|---|
| | | | Weight Moist (Gm.) | Weight Air Dry (Gm.) | Carbohydrates as Inulin (Gm.) | Carbohydrates (Per Cent.) |
| 1 | Fore = 2 | Cellulose-free ....... | 137 | 52 | 1.62 | 3.1 |
| | Mid = 1 | Same + 40 gm. inulin. | 182 | 56 | 1.52 | 2.7 |
| | After = 2 | Same as fore-period.. | 170 | 50 | 0.8 | 1.6 |
| 2 | Fore = 3 | Mixed; constant..... | 215 | 81 | 0.6 | 0.7 |
| | Mid = 3 | Same + 60 gm. inulin.* | 300 | 89 | 1.31 | 1.4 |
| | After = 1½ | Same as fore-period.. | ... | 40 | 0.2 | 0.5 |

* Taken in one meal on the second day of this period.

Separation of the feces into periods was accomplished vith charcoal or carmin capsules. The feces were veighed, rubbed to a paste with alcohol, dried on a vater-bath, weighed a second time, and ground. From he well-mixed sample from 1.5 to 4.5 gm. were heated n a water-bath with 75 c.c. water and 7.5 c.c. of 20 per ent. hydrochloric acid for from twenty to thirty minutes. he gummy materials were then precipitated with phoshotungstic acid, filtered off, and washed with hot water. he filtrate was neutralized, evaporated to 25 c.c., tered if necessary, and a sugar determination made by llihn's gravimetric method. Check determinations made on feces to which a known weight of inulin had been added before drying down showed that by the above method 85 to 90 per cent. of the inulin could be recovered.

No increased carbohydrate content of the feces was observed in the inulin period over the fore- or after-periods. In both experiments *the subject noted a marked gas formation* in the intestinal tract. This began in from two to three hours after the meal in which inulin was eaten and continued for from eight to ten hours. The gas formation was in harmony with the observations of Neubauer. In the experiments recorded, the tendency of the subject toward constipation, brought on by a cellulose-free diet, doubtless gave more opportunity for the action of the bacteria in the intestinal tract. In a subject without this tendency to constipation larger amounts of inulin might well be recovered in the feces.

## CONCLUSIONS

1. Inulin fed to a healthy man was not eliminated in the feces.

2. Marked intestinal fermentation was observed to follow the feeding of inulin.

3. The acidity of the gastric contents of a dog to which inulin was given by a stomach sound was sufficient to hydrolyze inulin partially to levulose in from one to two hours.

These facts would seem to indicate that any utilization of inulin can occur only after hydrolysis by the gastric juice. The extent of this hydrolysis must vary with conditions in the stomach. If the diet is of such a character that it leaves the stomach soon, the action of the acid gastric juice is checked by the intestinal reaction before the inversion of inulin can proceed far. The acidity of the gastric contents also must influence the rate of inversion. The character of the diet and individual peculiarities both play a rôle here. Hence the percentage utilization of inulin for any individual must vary and cannot be determined except by experiment. Any inulin which leaves the stomach unchanged is liable to escape utilization and undergo bacterial decomposition in the intestine, a decomposition which results in no formation of carbohydrates. Any inulin which escapes this bacterial action is probably eliminated unchanged in the feces.

In view of these facts, as well as the inability to administer more than comparatively small quantities, the value of inulin as a significant source of energy in human dietaries must be questioned.

I wish to acknowledge my indebtedness to Prof. Lafayette B. Mendel, at whose suggestion these experiments were undertaken.

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**Effect of Closing Schools During an Epidemic of Measles.**—A striking example of the effect of closing the schools with the consequent lessened opportunity for contact of the children is afforded by a recent extensive outbreak of measles in South Shields, England (*Lancet*, London, Feb. 3, 1912). There were in this epidemic 4,470 children exposed to infection, and of these 2,180 were susceptible to measles. Of these, 853 children were attacked, 638 cases occurring during the time that the children were at school and 140 during a period of fourteen days after the school was closed; that is, 778 cases which might have been infected either in school or in the home life. Thus, at the time of the removal of the possibility of the infection at school there were still more than 1,400 children who were susceptible to measles. Only seventy-five of these children actually contracted the disease. This shows the important part played by the school in the spread of the infection of measles and the value of school closure in this epidemic as a preventive measure.

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[23] Bierry and Portier: Compt. rend. Soc. de biol., 1900, iii, 423.

# CONTRIBUTION TO THE SURGERY OF BONES, JOINTS AND TENDONS

JOHN B. MURPHY, A.M., M.D., LL.D.
President of the American Medical Association
CHICAGO

*(Continued from page 1104)*

An encapsulated chondrosarcoma of the upper end of the tibia followed a trauma. It did not involve the articular end of the bone for its entire transverse diameter, but it did involve it fully at the internal tuberosity. All of the diseased tissue was removed, but the epiphyseal line and the portion of the epiphysis close to the fibula were retained.

### SARCOMA OF TIBIA

Case 8.—*Patient.*—N. M., a girl aged 14, was admitted to Mercy Hospital Nov. 2, 1911. Family history was negative. Patient had the ordinary diseases of childhood; no rheumatism; no typhoid; no scarlet fever; no diphtheria. She had an attack of tonsillitis three years ago; good recovery; no complications.

*Present Trouble.*—About three years ago she fell from a porch railing, a distance of about 5 feet, and injured her right leg just below the knee, but paid no attention to it. About three or four months later she noticed a slight pain at the same point when running or jumping. The pain was just below the right knee-joint. Some weeks later patient noticed that there was some swelling on the tibia just below the knee, but took no treatment and continued with her school work. About a year and a half ago, or eighteen months after the original injury, while playing, she twisted her right leg. The pain following this was so severe that she was forced to lie down for several minutes before she got up and walked to the house. From this time on the pain became more severe and swelling increased in the region of the head of the tibia just below the right knee. One week after this injury a physician was called, who put the limb in a mold and instructed the patient to walk on crutches. She continued in this way for seven months, with very little complaint, except when she would put weight on her leg. About one year ago the mold was taken off and patient walked by aid of crutches and continued this to the time of admission. She said that during the past year her leg had been considerably swollen just below the knee. It had tenderness to pressure at this point, and she had pain when she put her weight on the leg, but none at all when she was at rest in bed. During the entire course of the trouble she had never had chills, fever, nausea or vomiting. General health had been good.

*Examination.*—This showed a marked elliptical enlargement of the upper one-fifth of the tibia, most marked on the inner side. It was hard, encapsulated and free from attachment to the skin. It extended over three-fifths of the antero-internal side of the shaft-head portion; was painful to pressure; did not fluctuate, and there was no bruit. Diagnosis chondrosarcoma of upper end of tibia. The joint was not implicated. There were no glandular enlargements; no metastases demonstrable. The patient was very anemic.

*Operation.*—Under ether anesthesia incision was made on the inner side of the tuberosity of the tibia and extending down parallel to the tibial crest for a distance of 7 inches. A transverse incision was made inward, across the tuberosity of the tibia to its posterior internal border. Elevating the skin flaps gave a good exposure of the tumor. It was clearly encapsulated and encroached closely on the epiphysis at its internal angle. All of its muscular attachments were freed, leaving the periosteum and the tendinous portion of the muscles attached to the tibia. The tendo patellæ was divided one-fourth inch from its tubercle attachment. The tibia was divided transversely with the saw, 4½ inches below the intercondyloid tubercle, and cut off above obliquely downward and outward, just below the cartilage, at the inner tuberosity, and ending three-fourths inch below the cartilage at the external tuberosity, and evulsed. The joint was open. The joint capsule was now sutured to the margin of the cartilage overlapping its under side, so as to close the joint. A piece of bone one-half by three-quarters by three-eighths inch and 5 inches long was removed from the crest of the opposite tibia. This was accomplished with the chisel, mallet and saw, and is not difficult if the retractor is properly fixed to keep the soft parts out of the field and steady the chisel when the initial creases are made. The lower end of the transplant was inserted for one-half inch into the medulla of the tibia and a nail placed transversely in it to retard its further entrance. The upper end was placed in a depression one-half inch deep in the remnant of the head of the external tuberosity of the tibia with another nail inserted transversely to retard its further depression. The internal hamstring tendons were attached to the side of the transplant by an encircling suture and the end of the tendo patellæ was fixed to the anterior surface of the transplant in a similar way. The wound was closed by a deep layer of catgut and the skin with horsehair. Primary healing. Leg placed in long mold from trochanter to toe.

*Result.*—Patient was put to bed without extension. The leg was kept in a mold. Examination on November 28 showed complete primary union of the line of incision, with infiltration and apparent production of new callus around transplant; not the slightest evidence of inflammation. Leather mold applied Dec. 25, 1911. Examination March 10, 1912, showed the upper end of the tibia normal in size. There were voluntary extension and flexion of 10 per cent. The patella was perfectly movable. She could bear some weight on the leg but was not permitted to walk on it.

A fragment was taken from the opposite tibia and inserted at the lower end into the medulla for half an inch, and at the upper end into a pocket especially prepared for it. Close to the fibular attachment a nail was inserted transversely in order to prevent the fragment from burying itself too deeply into the cancellated tissue.

The joint was opened during the operation, but its capsule accurately approximated at the close of the operation. The ligamentum patellæ and internal hamstring were fixed close to the surface of the implant by phosphor-bronze wire and chromicized catgut. A Buck's extension was then applied to the limb and the latter placed in a wire gauze cast. Primary healing occurred.

The skiagram (Fig. 39) showed the upper end well imbedded in the remaining fragment of the tibia, the lower end in the medulla and osteal regeneration taking place at both ends. This patient was up and about on crutches in the fifth week. She was examined by me on March 1, when she had about ten degrees of flexion of the knee, voluntary and without pain. She also had power to extend the leg through the ligamentum patellæ attachment. By palpation the tibial end appeared to be of normal size. There was no evidence of return of the neoplasm. The skiagram shows that in the soft callus there is as yet but a small bony deposit.

The malignant disease had been present so long in these two cases that it is questionable whether there may not be a metastasis in some other portion of the body. I believe, however, that the disease will not recur locally, and we have obtained in both of these cases advantages which we could not have obtained by an amputation.

I believe that this line of work offers a fairly good field in that consent to its performance can be gained so very early in the disease, and in the giant-celled sarcomata good results can be obtained by excision of a portion of the bone without amputation.

### OLD POTT'S FRACTURE

Case 9.—*Patient.*—H. McK., a girl aged 15, was admitted to Mercy Hospital Jan. 5, 1912. Family and personal history were negative.

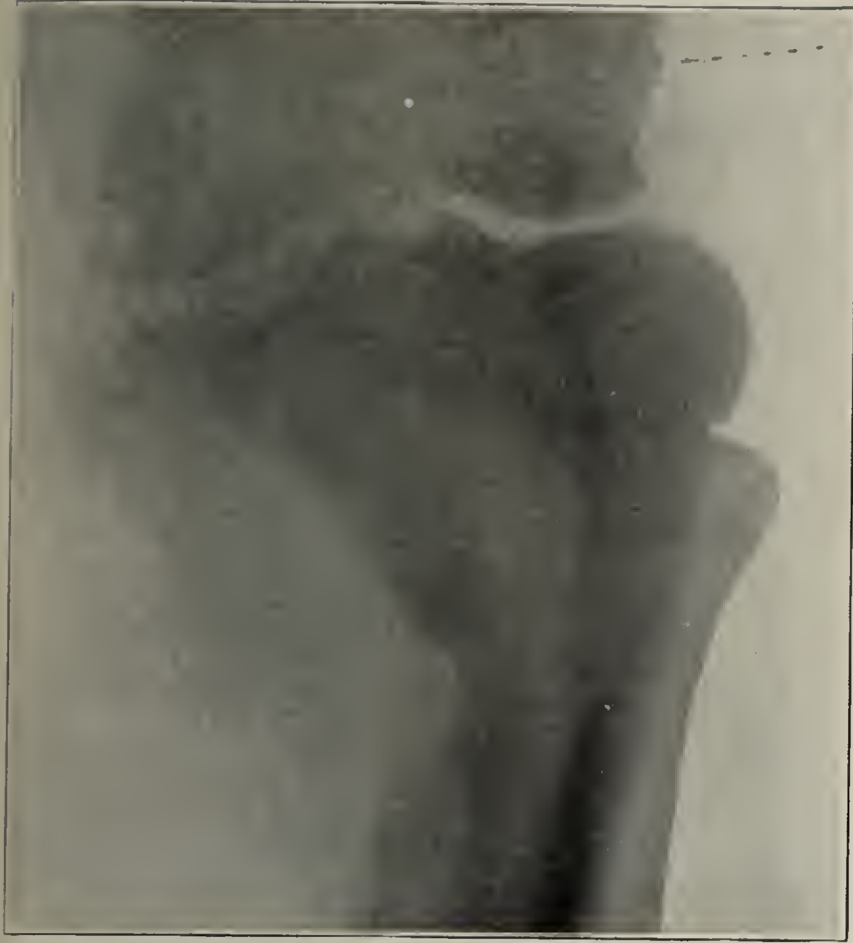


Fig. 38.—Sarcoma of upper extremity of tibia, not involving the joint, with destruction of inner aspect of tibia.

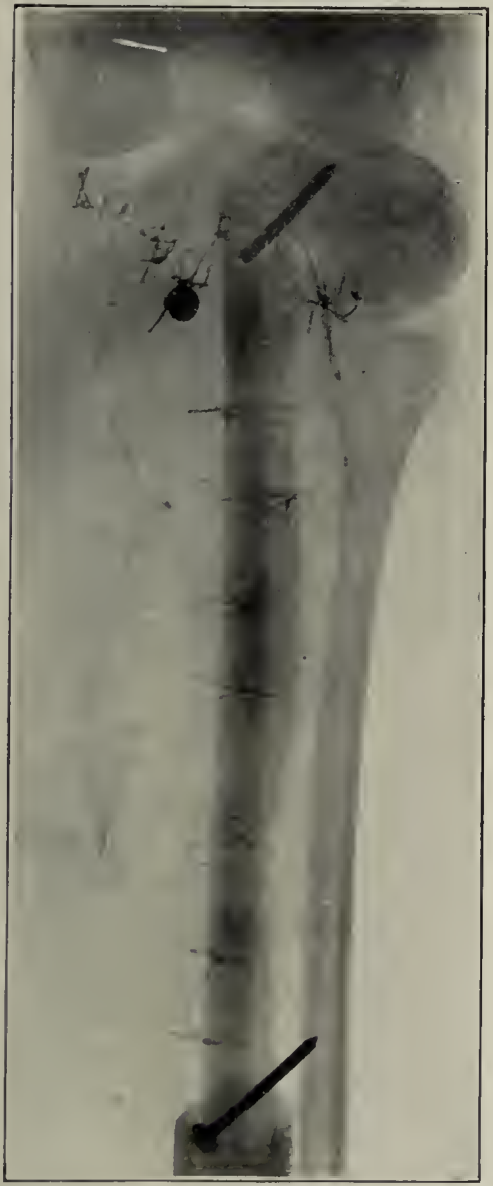


Fig. 39.—Five inches of tibia were removed, leaving the articular surface to which the upper end of the transplant was nailed as shown, the lower end being inserted into the medulla of the lower fragment and nailed in position. This picture was made two months after the operation and shows beginning regeneration of the tibial shaft.

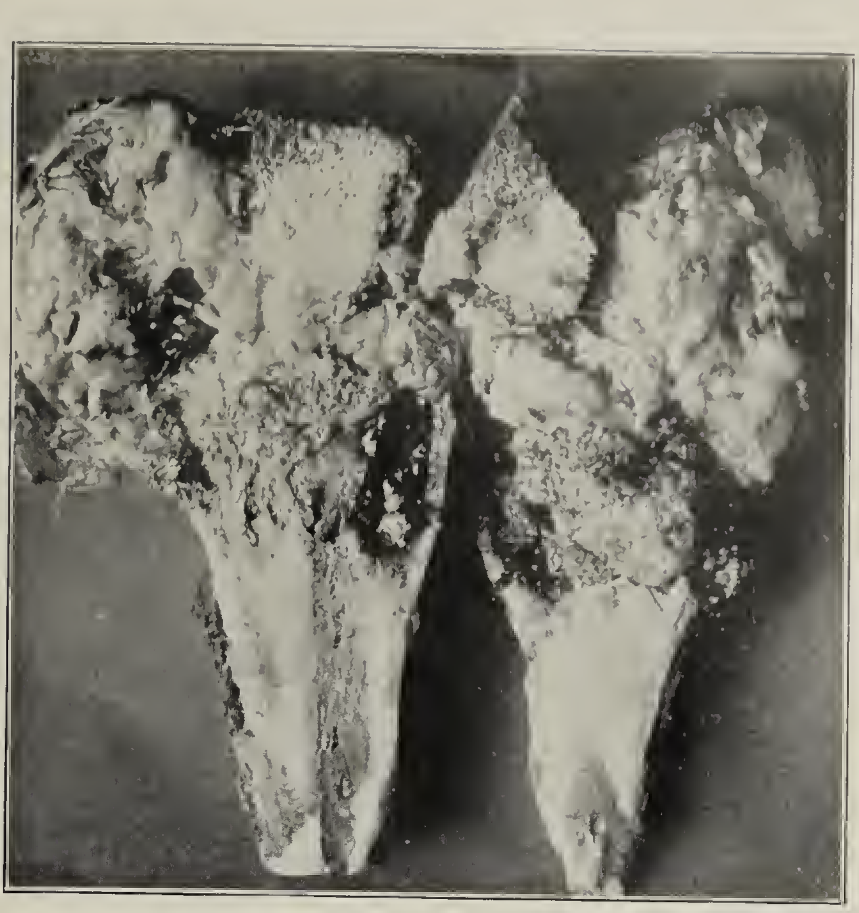


Fig. 40.—Tumor removed and bone split to show extent of growth which involved nearly all of the head of the bone, except the outer portion of the epiphysis, down to the tubercle.

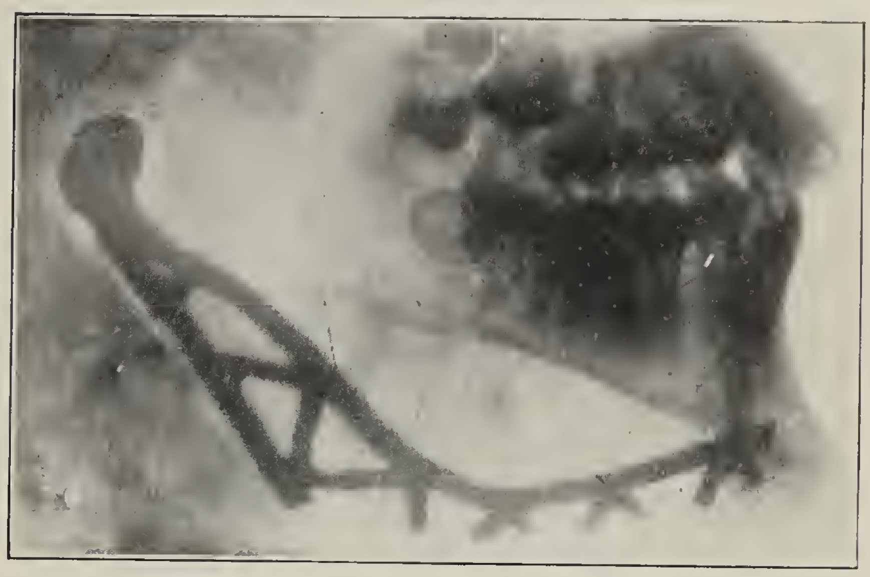


Fig. 41.—Metal jaw in position following resection of right inferior maxilla for neoplasm.

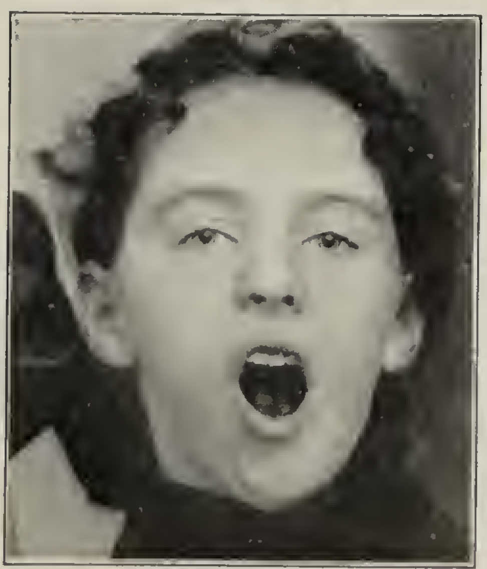


Fig. 42.—Showing freedom of motion of jaw with only slight flattening of cheek on right side. Picture taken three years after operation.

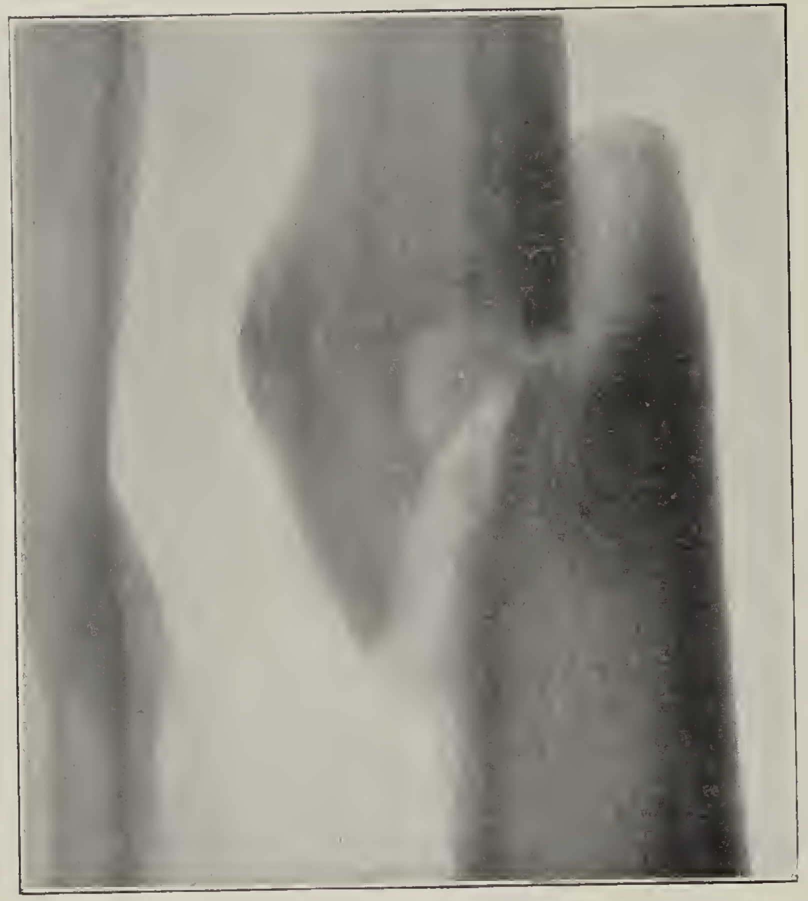


Fig. 43.—Non-union and deformity of old fracture of tibia.

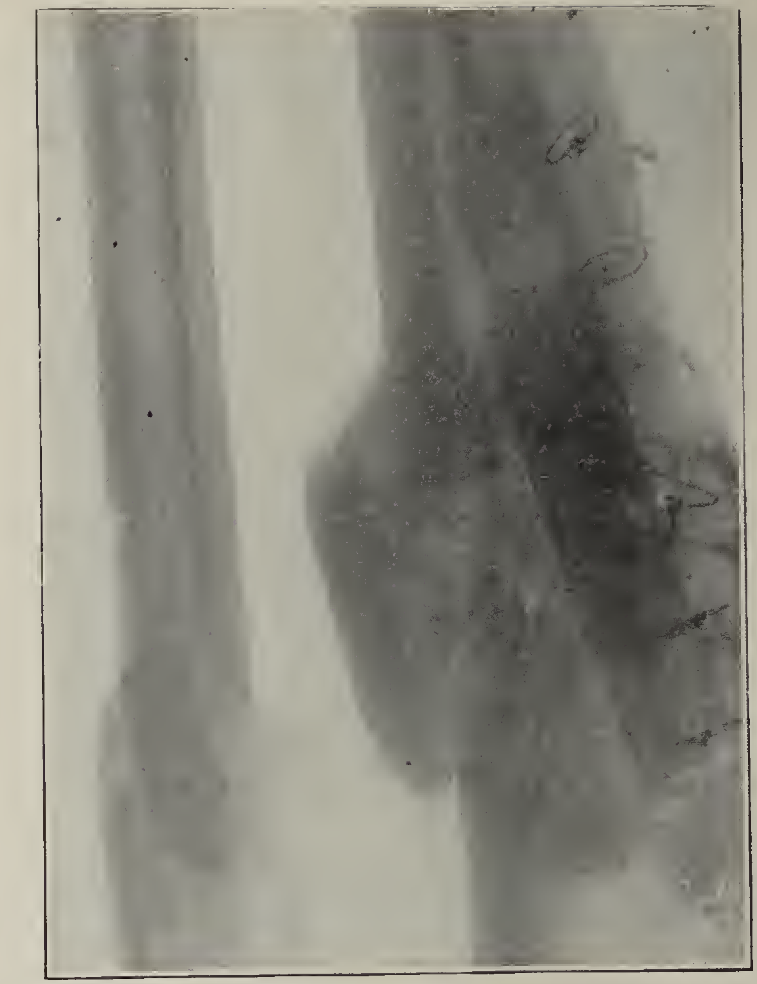


Fig. 45.—Implantation of fragment from tibia. Six weeks after operation. New bone forming with perfect union.

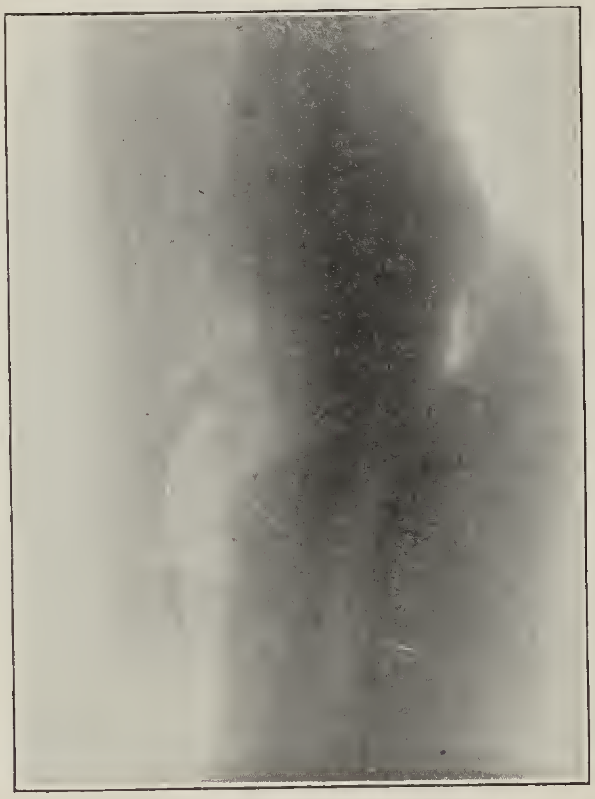


Fig. 44.—Apparent union of tibia.

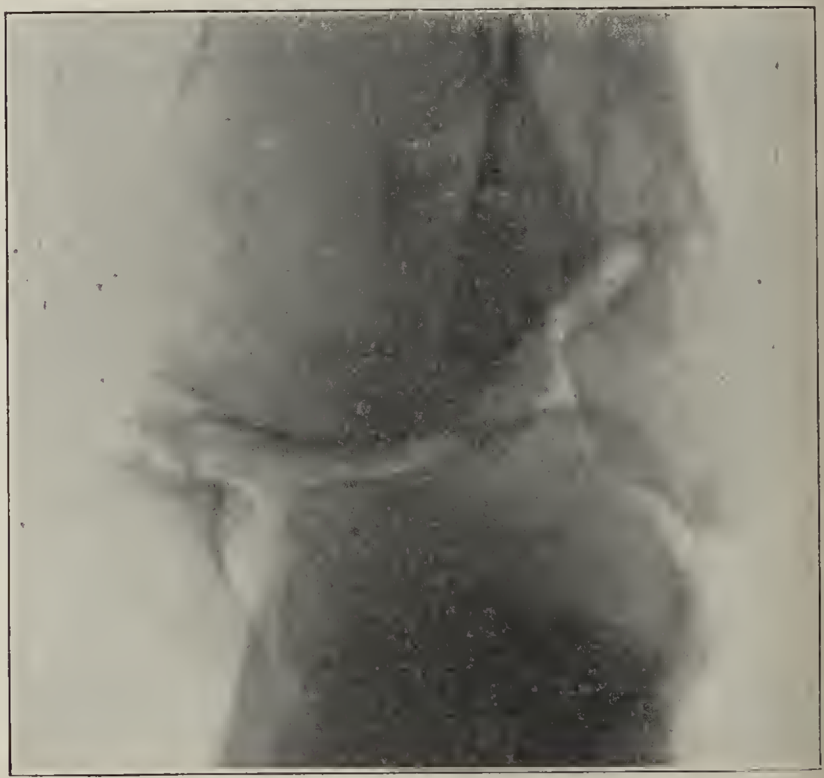


Fig. 46.—Deformity following old unreduced Pott's fracture, the fracture having occurred in both malleoli. The line of fracture still visible. External luxation of astragalus.

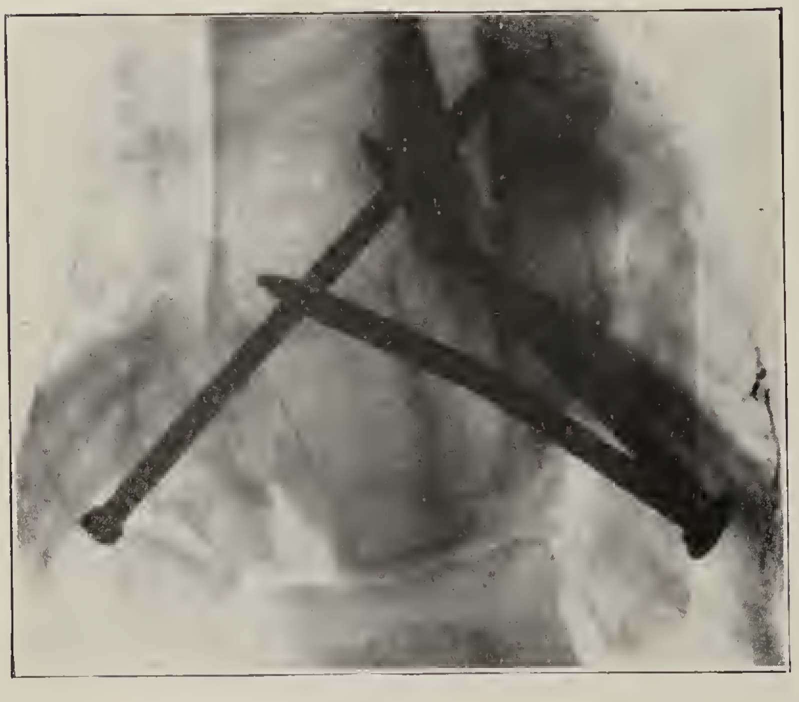


Fig. 47.—Reposition after operation, nails in position. Notice manner of refracture of internal malleolus, and, by comparison with Figure 1, the change in relationship between the astragalus and the tibia.

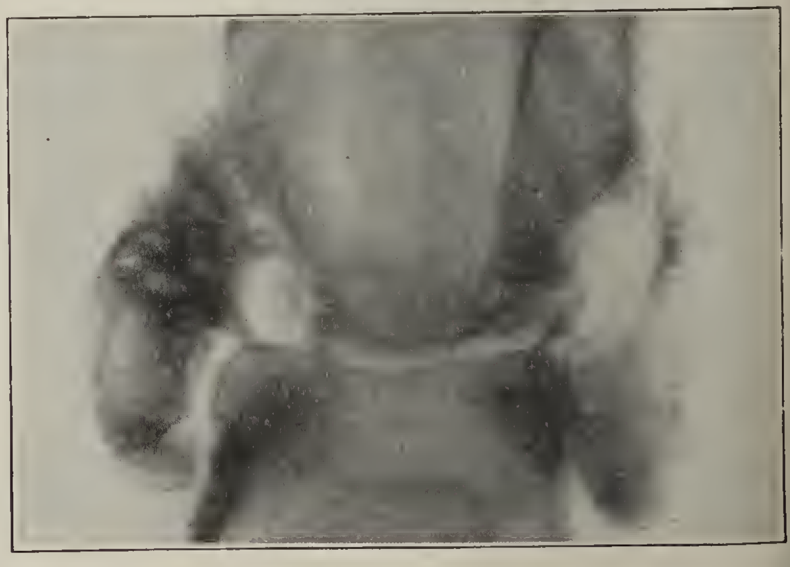


Fig. 48.—Two months after operation. Nails removed and bony union between each malleolus and its respective shaft. Astragalus in plumb line with articular surface of tibia.

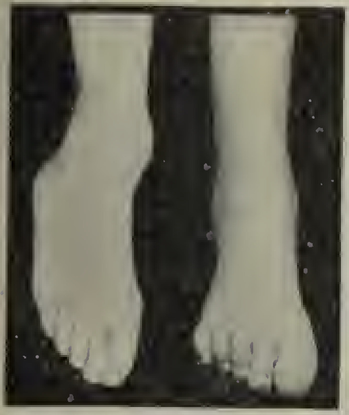


Fig. 49.—On the left is the foot before operation; on the right, after operation; symmetry restored.

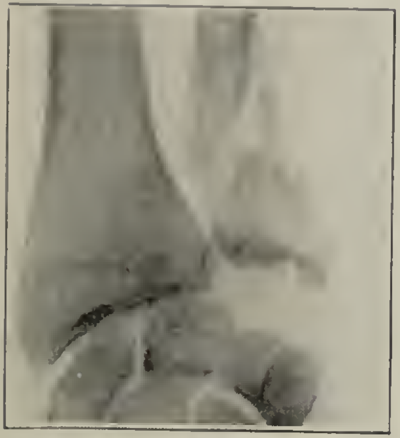


Fig. 51.—Fracture of left ulna.

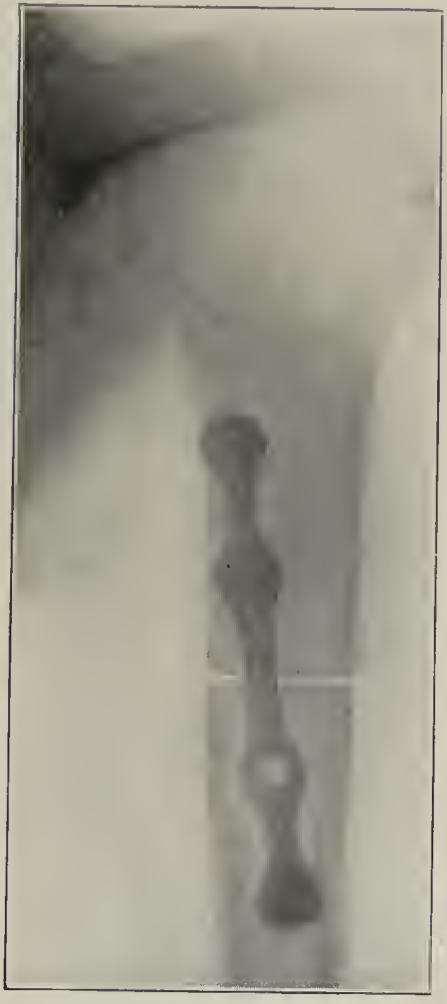


Fig. 54.—Showing non-union of humerus with perfect apposition of bone after use of Lane plate.

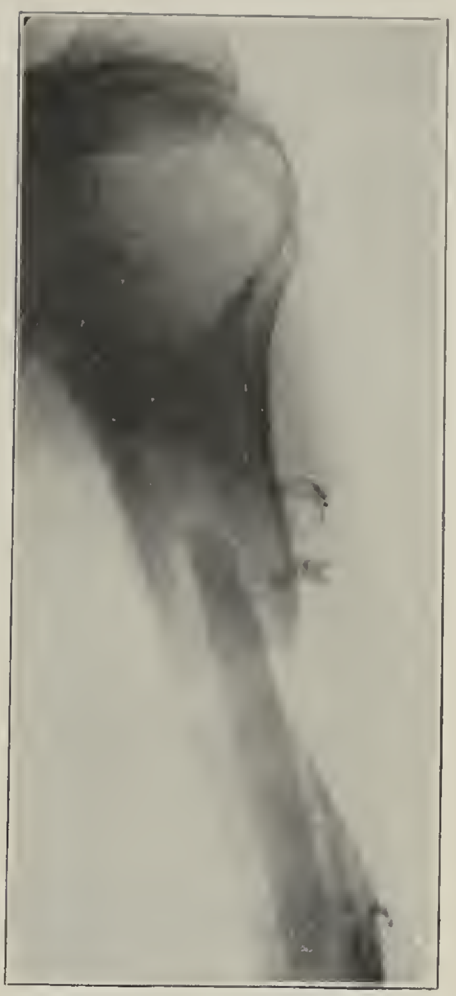


Fig. 55.—Showing bone transplant in position, four months after operation, with apparent bony union.

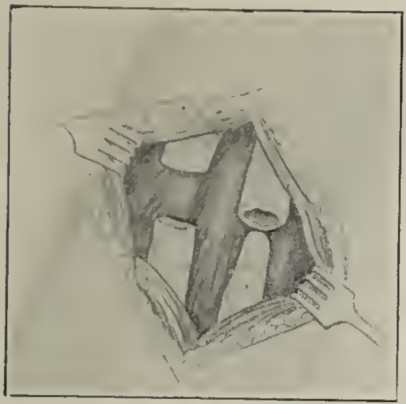


Fig. 52.—Ends of fragments prepared for approximation; upper fragment of radius to be impacted into lower fragment; fragments of ulna to be approximated only by phosphor bronze wire sutures.

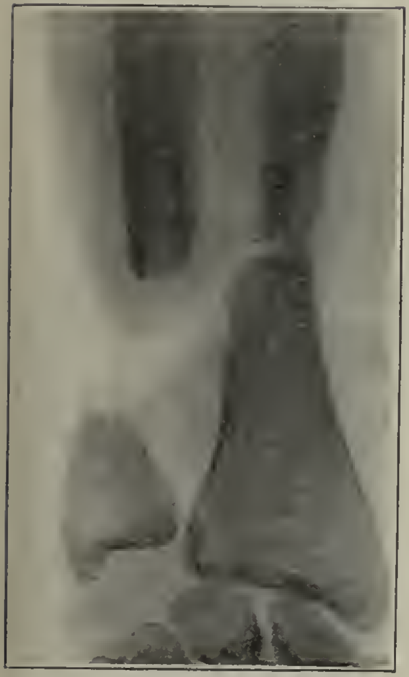


Fig. 50.—Fracture of right radius and ulna.

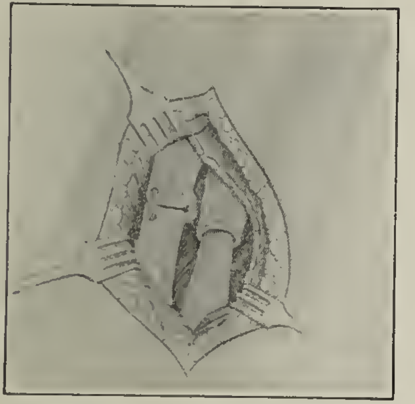


Fig. 53.—Operation on bones completed.

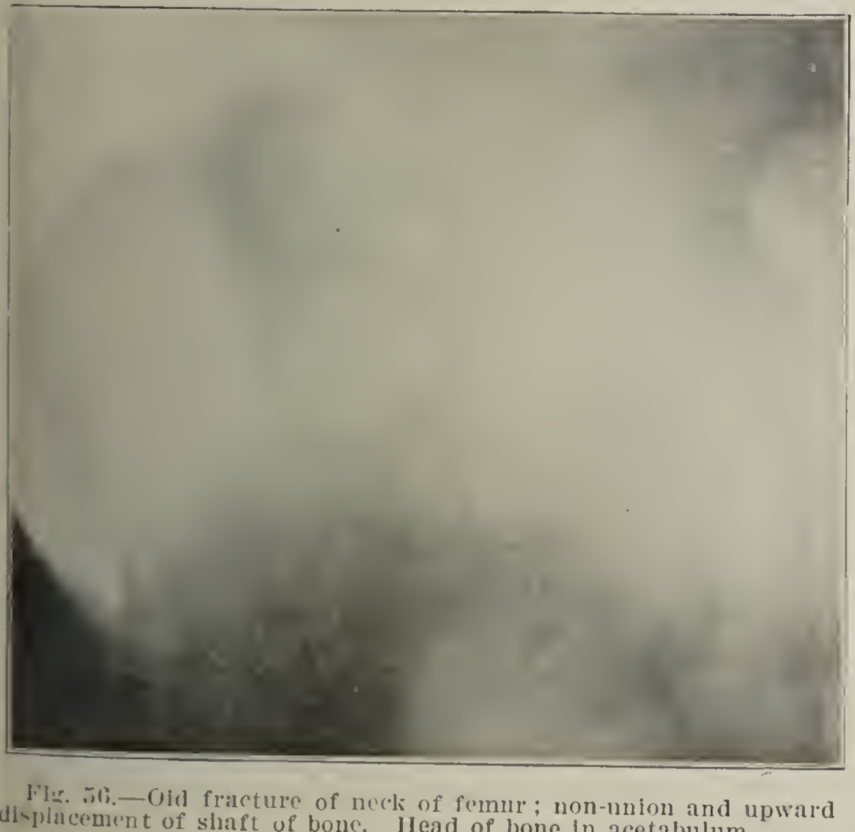


Fig. 56.—Old fracture of neck of femur; non-union and upward displacement of shaft of bone. Head of bone in acetabulum.

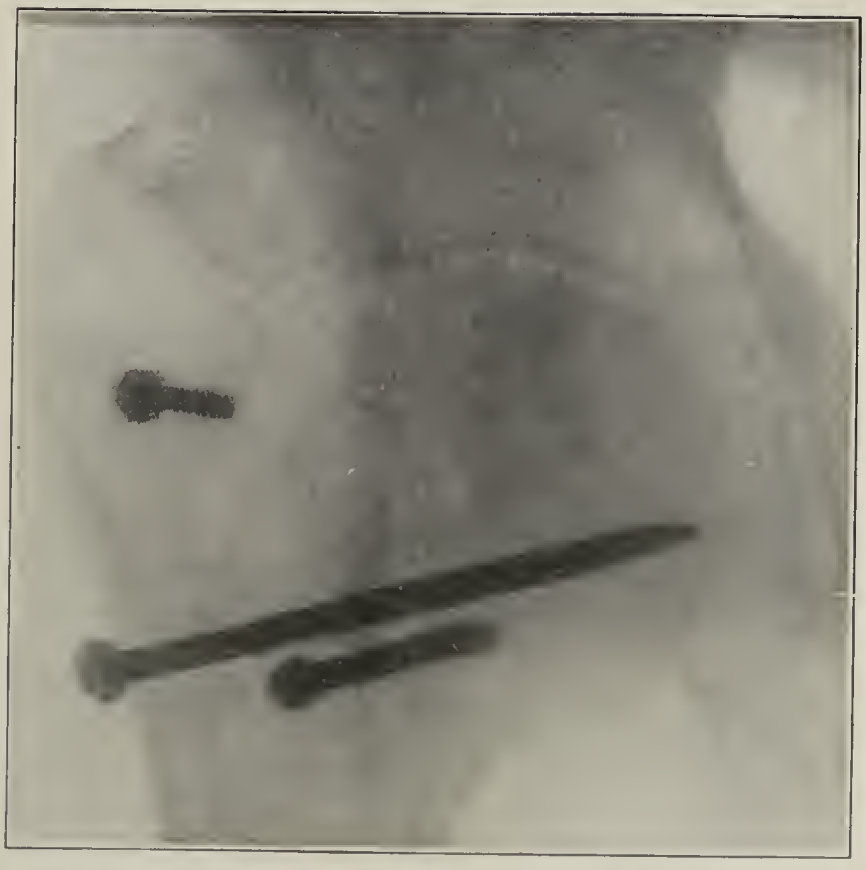


Fig. 57.—Ten weeks after operation, showing nails in position, with complete bony union. Motion somewhat limited.

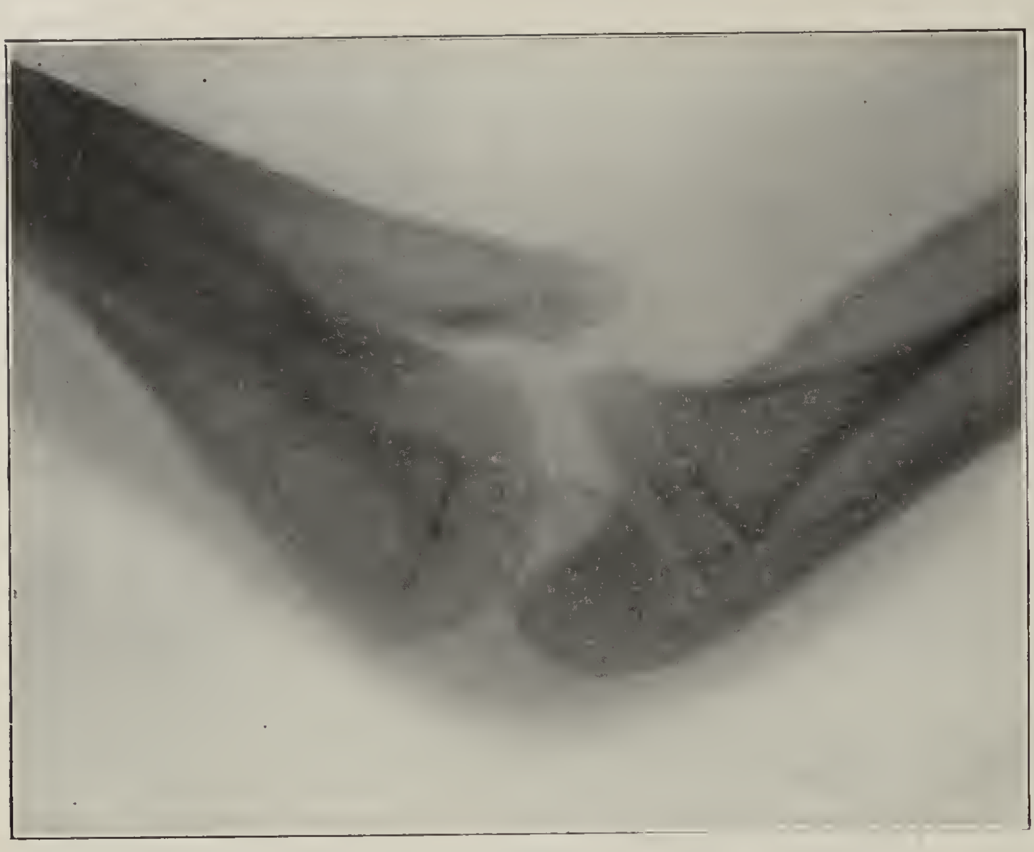


Fig. 58.—Fracture of lower end of humerus with displacement of fragments and deformity causing limitation of flexion.

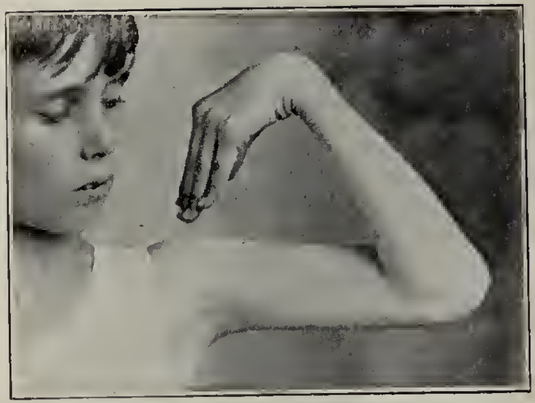


Fig. 60.—Eight weeks after operation with full flexion. Extension was likewise perfect.

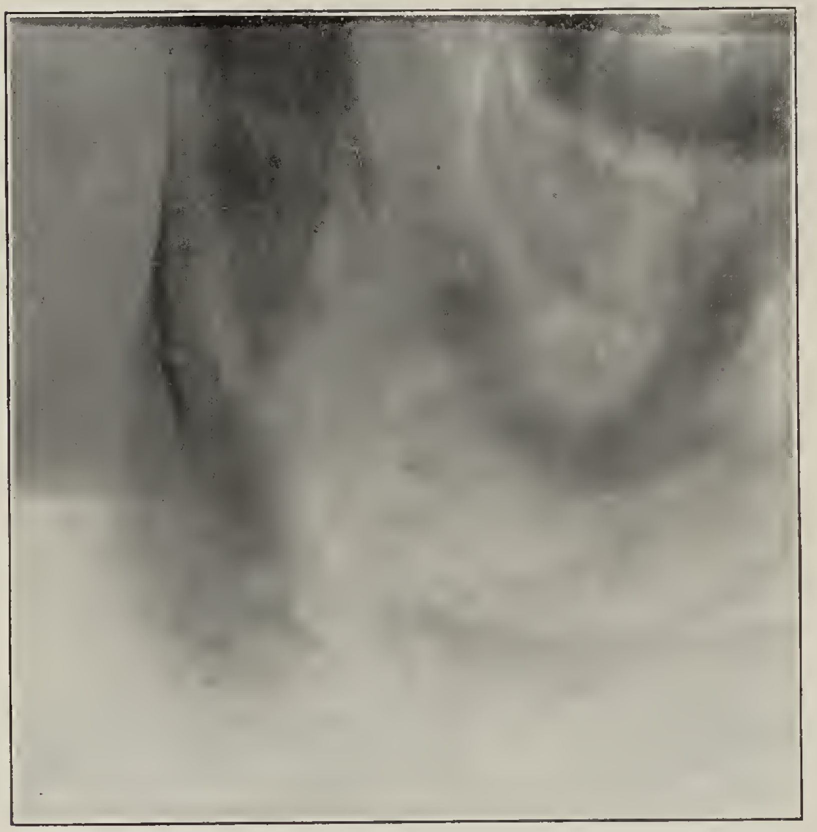


Fig. 59.—Immediately after operation, showing ability to flex arm. Picture taken through cast.

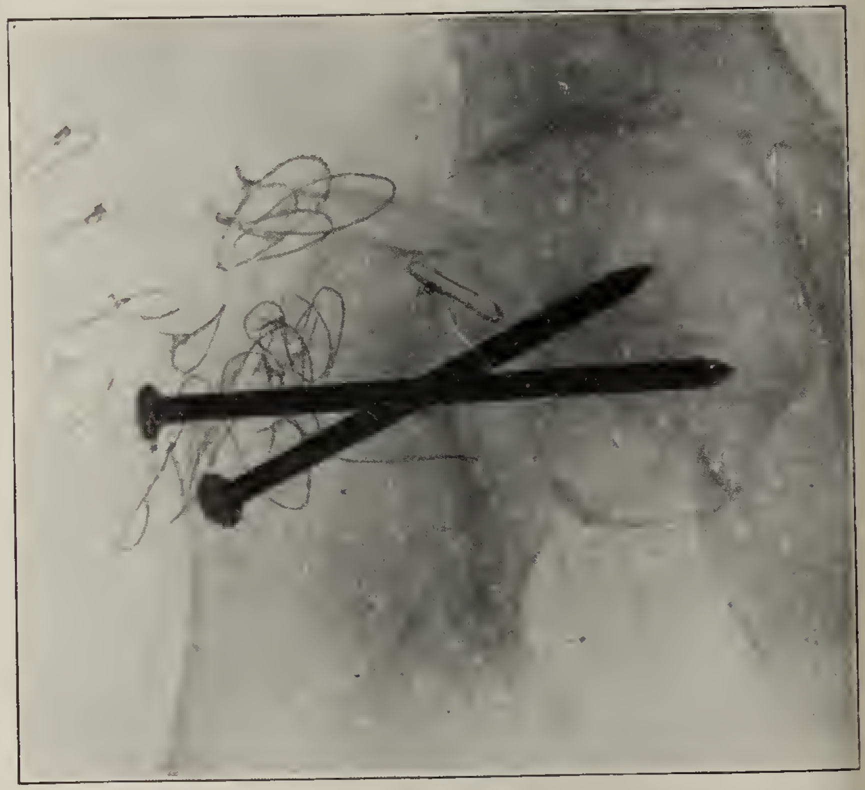


Fig. 62.—Six months after operation, showing nails still in position and bony union between head and shaft. Position normal; some limitation of motion yet. The phosphor bronze wire used in suturing is still in situ.

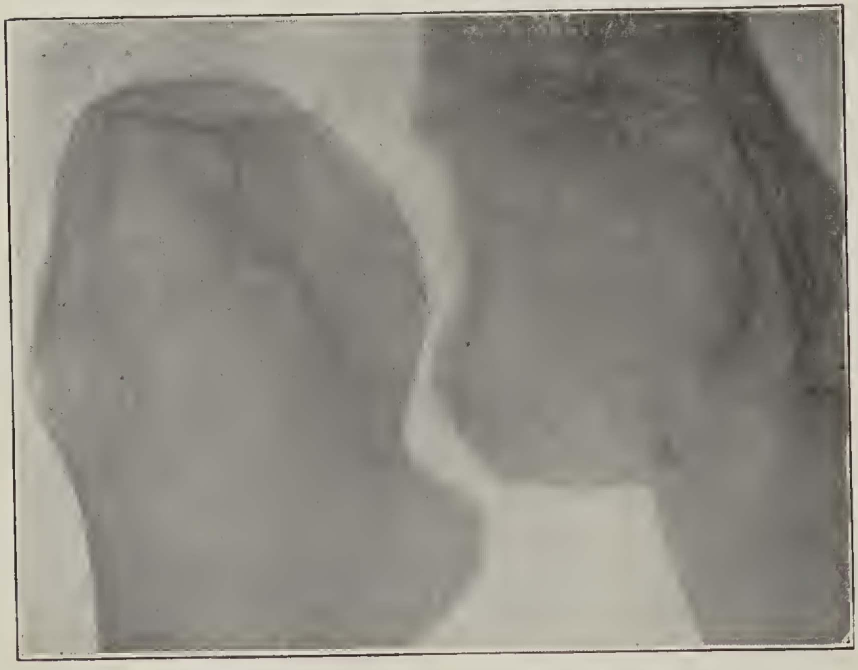


Fig. 61.—Fracture of neck of femur with wide separation, due to interposition of capsule, and some upward displacement.

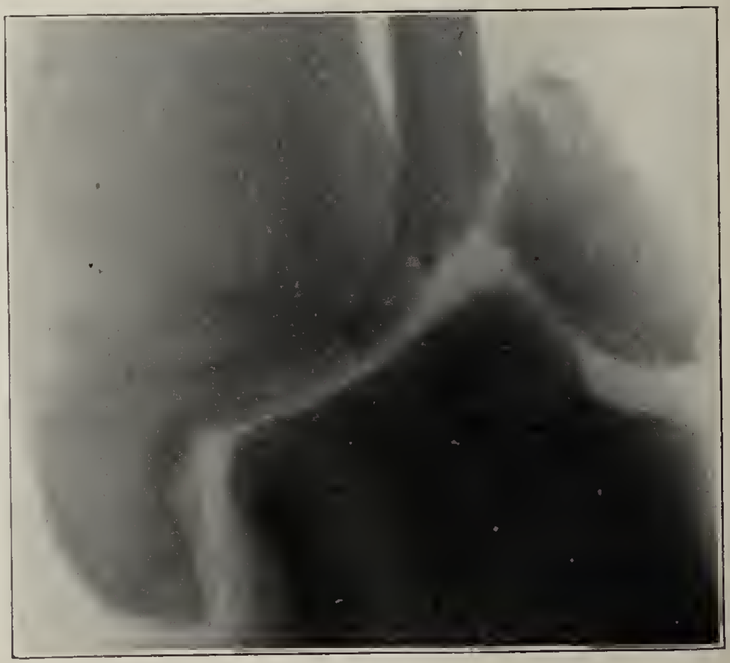


Fig. 63.—Deformity following Pott's fracture. Failure of union between external malleolus and fibula. Foot everted.

*Present Trouble.*—June 8, 1911, the patient stepped on a stone, her foot slipped, and was forcibly everted. She fell to the ground and could not rise. The ankle and leg were much swollen, red and intensely painful. The leg was placed in a fracture-box at once and twenty-four hours after the accident a mold was applied and left on for six weeks. When it was removed the ankle was deformed and the foot was everted. The patient had been able to walk since but limped. There was visible shortening of the leg. She could not hold the foot in a straight line with the leg.

*Examination.*—The proximal portion of the tibia was overriding internally the base of the internal malleolus, and the latter was directed downward and outward instead of backward and inward. The external malleolus was broken off and displaced outward and also upward on the outer surface of the fibula. A plumb line drawn through the middle of the tibia passed just to the inner side of the articular surface of the astragalus, showing the outward luxation of this bone. There was a pronounced abduction of the foot. It was a classical superlative deformity from a Pott's fracture.

*Operation.*—The internal malleolus was exposed by an incision to the inner side of and parallel with the tendon of the tibialis anticus. The line of fracture at the base of the malleolus was clearly demonstrated. It was refractured a little higher up and on a line directed upward and inward from the articular surface, so as to permit of sliding upward when the deformity was reduced. The external malleolus was then exposed and divided on a line more slanting upward and outward. The new-formed interosseous ligamentary attachments were freed, and the foot was displaced inward. The internal malleolus slid upward on the inner surface of the tibia and the external malleolus was slipped downward on the outer surface of the fibula. The internal malleolus was then fixed with one nail driven upward and outward, and the external malleolus was fixed with two nails, so that the midline of the articular surface of the astragalus was held a little to the inner side of the midline of the articular surface of the tibia. The foot was dressed in an adducted position and flexed on the tibia. Primary union resulted. The mold was removed at the end of four weeks, when motion in the ankle was perfect and painless. Seven weeks after the operation the nails were removed.

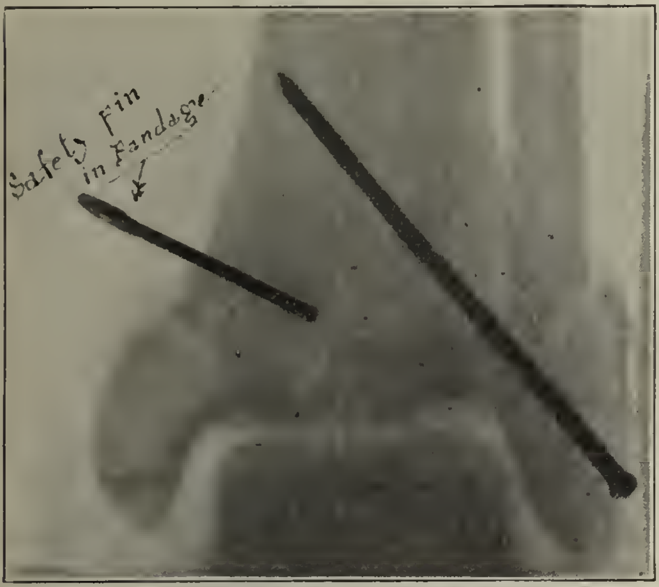


Fig. 64.—Same case as in Figure 63, after operation. External malleolus nailed to tibia and foot brought back to its normal position. Dressed in extreme adduction.

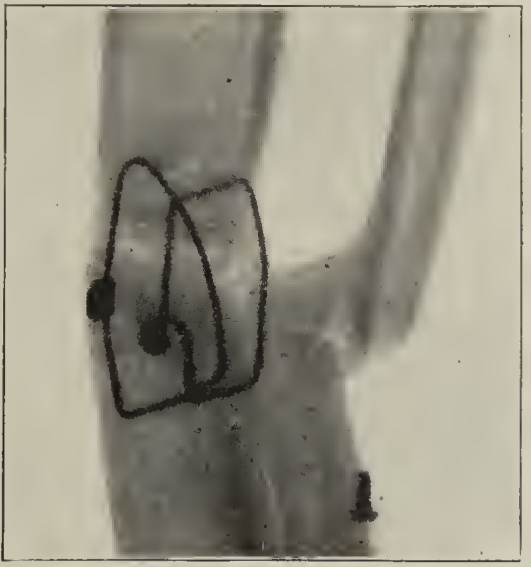


Fig. 65.—Fracture of tibia and fibula showing non-union after wiring.

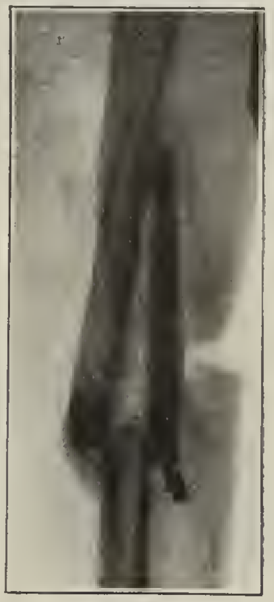


Fig. 66.—Showing the intramedullary bone splint in tibia five months after operation.

*Result.*—Complete bony union with a little thickening of both the external and internal malleoli, due to the callus round the large freshened bony surfaces made during the operation. The patient stands plumb on her foot, and has perfect motion on leaving the hospital, March 7, 1912. (Figs. 46-49).

### FRACTURE OF SURGICAL NECK OF HUMERUS WITH LUXATION FRACTURE OF NECK OF HUMERUS

Case 10.—*Patient.*—B. McG., a boy aged 17, was admitted to Mercy Hospital Jan. 30, 1911. Family history was negative. The patient had common diseases of childhood.

*Present Trouble.*—Jan. 14, 1911, the patient fell downstairs, falling sixteen steps. He thought he struck on his right shoulder, but was not positive.

*Examination.*—The skin of right elbow was abraded. After the injury the patient could not move his arm at the shoulder in any direction, nor could he flex the forearm on the arm at the elbow. He had a great deal of pain at the shoulder which was increased on movement of all kinds. He was immediately taken to a doctor, who dressed the arm flexed on the abdomen with adhesive tape, and left it alone until January 22, when it was redressed. Since the accident he had not gained any more use of the arm or shoulder. Any movement of the shoulder caused him some pain. Pressure in the axilla or on the shoulder caused severe pain. The right shoulder was lower than the left and was greatly increased in size. Fracture of surgical neck.

*Treatment.*—Under ether anesthesia the head of the right humerus was rotated and displaced inward; this was the upper fragment. The fracture was replaced with levers, and traction on forearm made and the humerus elongated sufficiently to permit the sliding of the upper and lower fragments outward, and they were put in proper position, accurately adjusting them. The arm was rotated at right angles and turned inward to chest and proper approximation made. A nail was driven from the outer and lower fragment upward connecting the lower and upper portions of the fragments, to prevent subsequent slipping of the head of the humerus outward. The soft parts were then closed with sutures. The right radial pulse was not disturbed and was felt by Drs. Murphy, Kreuscher and Quillan.

*Result.*—There was primary union of the soft parts and primary bone union. The result was perfect; free motion and full strength restored.

### FRACTURE OF SURGICAL NECK OF HUMERUS

Case 11.—*Patient.*—E. S., a girl aged 10, was admitted to Mercy Hospital Sept. 23, 1910. Family and personal history were not given.

*Present Trouble.*—Patient fell from a horse September 10, landing on her left shoulder. She got up and walked to the house. A doctor was called and by the time he came the shoulder was greatly swollen and a diagnosis was not made. Following the injury the patient did not move the arm much, but held it flexed on her abdomen. A bandage was applied and the arm kept at rest. Whenever the arm or shoulder was moved it caused her severe pain in the shoulder. The patient could move the arm forward and backward, but she could not abduct it.

*Operation.*—An incision was made over the joint and the fractured bones exposed. The lower fragment overrode the upper fragment about one-half inch, and it was necessary to remove about half an inch before it could be reduced. The epiphyseal line was not disturbed. After the bones were brought in apposition they were secured by a nail driven from the outer side of the upper end of shaft through it and into the head. The skin was sutured by horsehair and a mold applied.

*Result.*—Primary union of soft parts and bone. Perfect functional result.

### UNUNITED FRACTURE OF RADIUS AND ULNA

Case 12.—*Patient.*—Mrs. P., aged 28, was admitted to Mercy Hospital Nov. 2, 1911. Family history was negative. Patient had scarlet fever at 18, and occasional attacks of tonsillitis.

*Present Trouble.*—Aug. 29, 1911, she was injured in an automobile accident, being thrown into a barbed-wire fence. There was a cut across the left cheek and upper lip extending down into the antrum on the left side, and tearing out a large portion of the superior maxilla. Both bones in forearms were cut and all posterior tendons and muscles were divided about 4½ and 3½ inches respectively above the wrist-joint. There was also a division of the right triceps muscle down to the humerus and an inch of separation of the musculospiral nerve of the right arm. There was a considerable separation of the ends of the radius fragments in the right arm. All wounds became infected and discharged pus, especially the wounds in the right forearm. There was failure of union in both forearms and of both bones.

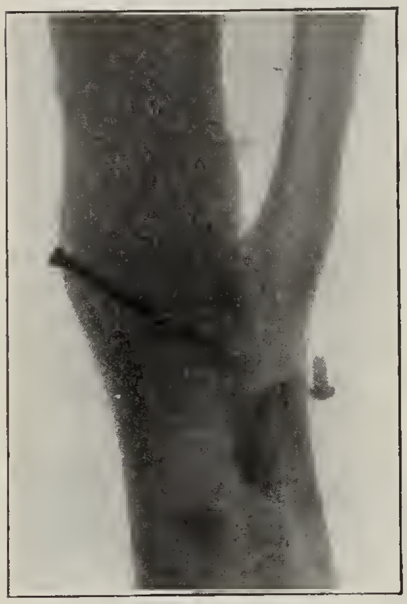


Fig. 67.—Showing final result twenty-six months after operation. Complete bony union.

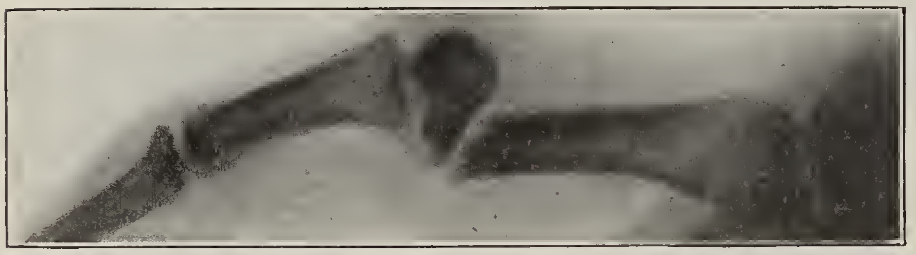


Fig. 68.—Fracture of first phalanx of index finger with deformity.

*Examination.* — When the patient was admitted to Mercy Hospital all of the wounds were still open except the one in the right forearm. There was inability to extend the wrist or fingers of both hands. On the right this was due to paralysis of musculospiral nerve and division of all extensor tendons, on the left to division of all the tendons and muscles in the forearm.

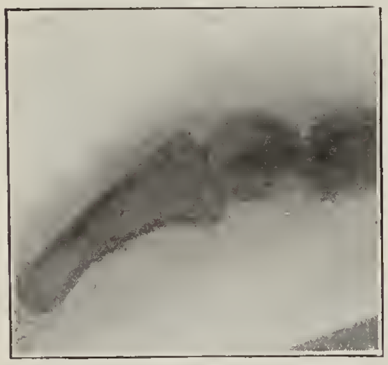


Fig. 69.—Deformity reduced and fragments held in place by ivory peg. Complete bony union.

*Treatment.*—The first operation consisted of curettement of the necrotic bony tissue and freshening of the bone ends of the ununited bones in both forearms. The left radius and ulna united and six weeks later the muscles and tendons were sutured with primary union. The sinus in the right forearm healed. This was the second operation. There was a separation of three-fourths inch between the ends of the radius in the right forearm. The ulna was contacted. With a spiral drill three-eighths inch in diameter a cavity was made three-fourths inch deep into the distal portion, and the conical tip of the proximal fragment was inserted into this, after removing its periosteum throughout the entire circumference of the invaginated portion. This permitted of contacting of the ends of the radius and of the approximation of the divided and separated muscles and tendons. These were accurately united with catgut. Primary union occurred except in a small area of the skin. There was no suppuration. Bony union of both bones followed.

Eight weeks after the operation a fourth operation was done to reunite the divided nerves of the right arm. A deep scar existed across the musculospiral nerve on the upper part of the middle third of the posterior surface of the arm. The skin was bound to the periosteum of the humerus. This was all freed. Much granulation tissue was found on the surface of the bone. The triceps was spread and after a very extensive dissection the proximal and distal ends of the musculospiral nerve were exposed. The upper end was split a distance of an inch and a half and a flap pulled downward across the gap and contacted end to end with the distal portion. The neuromata were removed from both ends of the nerve before the flap was made. By a 40-degree rotation the ends of the triceps were brought into position, and the same rotation permitted of apposition of the edges of the skin wound. There was much tension on the sutures. They cut the skin which separated for a considerable extent, as did also the muscle, exposing the nerve in the bottom of the wound. A secondary suture was made with fair result. Whether the nerve flap survived this exposure was not definitely determinable, as it was covered over with granulation, although it appeared to live. The patient had not been heard from since she left the hospital. It will be 15 to 18 months before it can be determined whether we have nerve union or not. (Figs. 50-53).

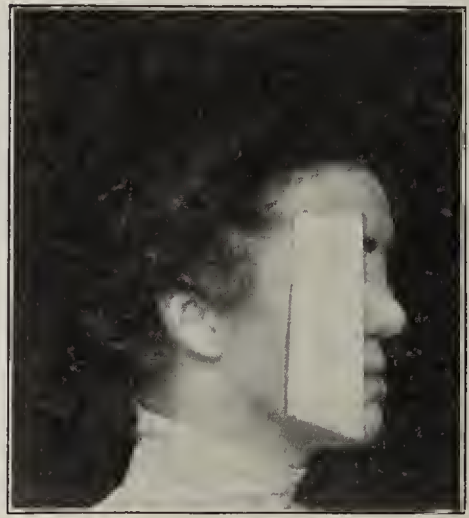


Fig. 70.—Result two years after transplantation into the nose of a phalanx taken from another patient, showing a return of the saddle nose. The transplantation was done because of a congenital aplasia of the nasal bones.

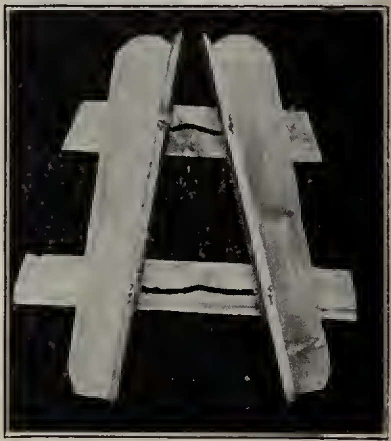


Fig. 71. — Travois splint (Rainey modification), a double trough placed on slotted supports used in hip cases. The troughs can be separated as desired by sliding laterally on the supports and are then held by thumb screws in the slots.

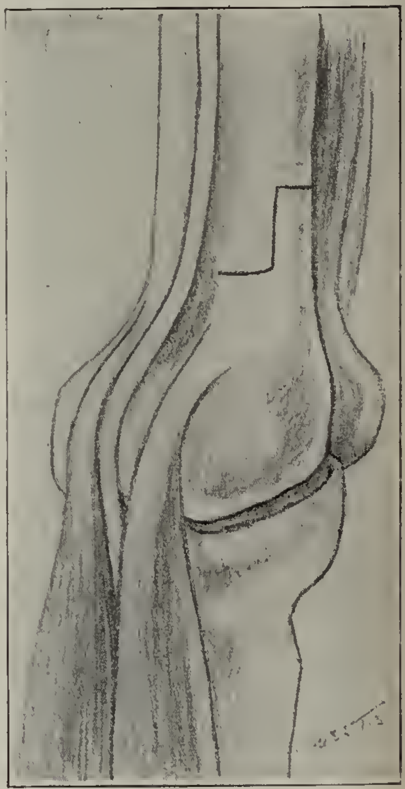
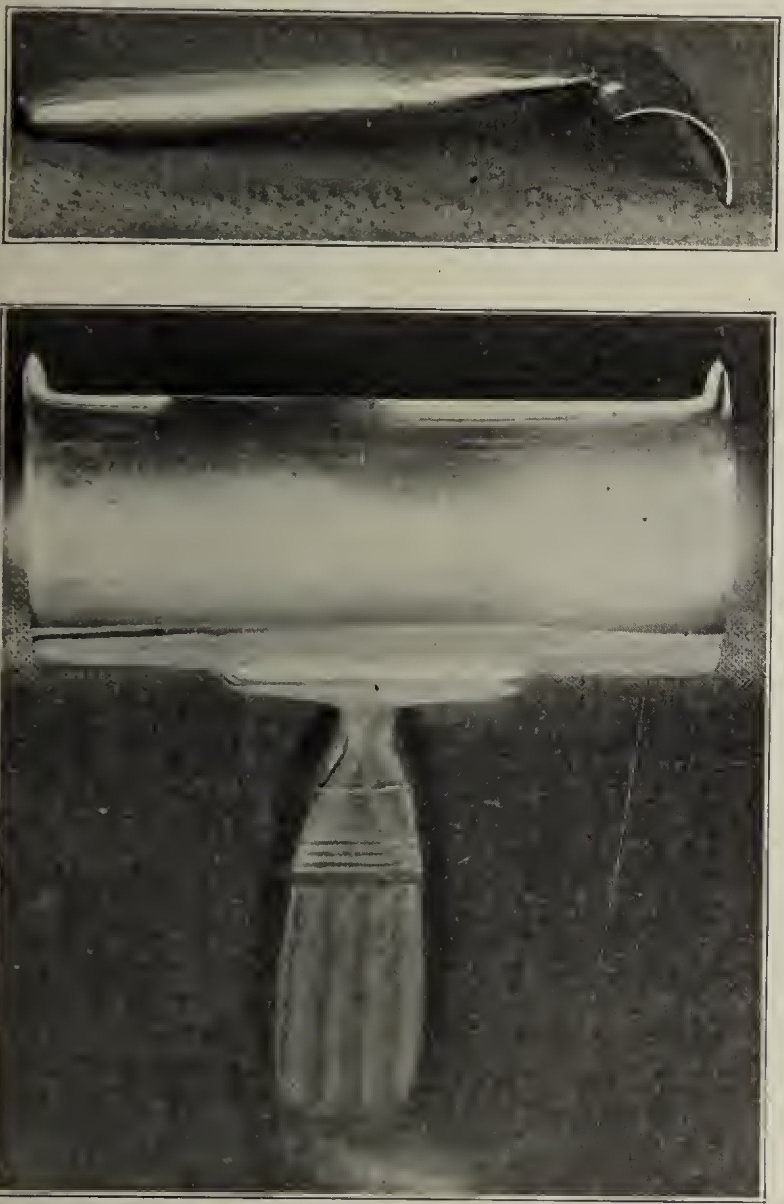


Fig 72.—Double right-angled division of lower end of femur after correcting deformities at the knee-joint. It prevents the backward luxation of the upper end of the lower fragment by the traction of the gastrocnemii.

### HETEROLOGOUS IMPLANTATION

The implantation of foreign material is confined to a few situations in the body, and only a few materials can be used. The field must be absolutely sterile and where osteogenetic elements are present magnesium plates, tubes or columns may be used to advantage. This metal eventually is absorbed. In positions where it is impossible to secure a primary sterile field, as in operations on the mandible, non-absorbable material may be used, particularly in the face, where the circulation is so rich and tissue resistance so great that the infection is overcome and the foreign material becomes encapsulated, without a sinus forming subsequently. After the removal of portions of the jaw, as for giant-cell sarcoma, an open cantilever silver wire support may be used and it becomes encapsulated, as is illustrated in the case of Miss S., operated on May, 1908 (Figs. 41 and 42).



Figs. 73 and 74.—Side and top view of author's retractor-guide used in removing a transplant from the crest of the tibia. The spikes at either end of the free edge of the curved plate are inserted into drill holes in the tibia, thus providing a straight edge by which the chisel is guided in removing the transplant. The curved plate retracts the soft tissues without bruising them.

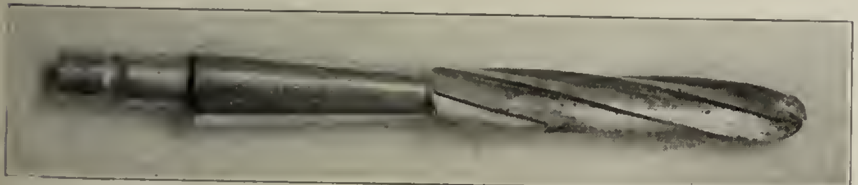


Fig. 75.—The author's medulla reamer. There are three lengths, all of the same shape and thickness. This reamer is used to ream out the medulla so that the cavity will be of the proper size to receive the transplant.

A sarcoma had attacked the angle of the right half of the mandible. The jaw was removed on that side up to the incisor teeth with evulsion of the head from the capsule. A silver wire model, with a metal head of normal size and shape of the mandible, was inserted in its place. The head was sutured into the capsule and the soft tissues were quilted through the wire framework and the mucosa of the mouth accurately approximated within and the skin accurately united on the outer surface.

The front end of the framework was inserted into the left half of the mandible for a distance of one-third inch and blocked to prevent its further entrance. The framework was a little longer than the normal conformation of the jaw, and was made so purposely because the jaw on the opposite side was still growing, and we felt that it would more nearly balance the normal side later. Suppuration occurred around the framework, as it communicated with the mouth a profuse discharge was present for six weeks, and then ceased entirely. The sinus healed and the framework became completely imbedded.

In a report received three years after the operation the patient's physician states that there is no sinus either in the mouth or on the cheek; that the girl's face is a little flattened on that side, but that there is perfect apposition of her teeth in the half of the jaw not excised; that she will now have bridgework done to fill in the alveolar process on the side from which the jaw was removed. There is no deflection of the remaining half of the jaw to the right side, either with the mouth closed or with it open.

This implanted framework is not so likely to heal in without fistula formation in less vascular and less resisting tissues of the body. The mouth and face offer the best field for its use.

Small wires or cables made up of a number of fine strands, such as phosphor-bronze wire, may be inserted for security in places where suppuration is present. These materials readily become encapsulated, notwithstanding their primary infectivity.

## *SURGERY OF JOINTS*

### ANATOMY AND EMBRYOLOGY OF THE JOINTS

A joint is made up of bones, capsule (a synovial membrane and fibrous layer), ligaments and cartilage. It is unnecessary to give an abstract description of the relation of bones to joints. Individual articular conformations will be mentioned in considering the special joints. The capsule of a joint is composed of (a) synovial membrane, and (b) the inelastic fibrous tissue in layers and bands external to the synovial layer.

The capsule limits the motion of the joint to its normal anatomic range as it is *fibrous* and *inelastic*. Therefore, in every operation on joints the condition, retention, incision or transplantation of the capsule must govern the subsequent limitation of motion in the joint. The capsule and capsular ligaments do not stretch—they break if forced beyond their normal limitations, and reunite under favorable conditions.

It is the inflammatory condition of the capsule and the subsequent pathologic contractions and fixations of this inelastic tissue that account for much of the limitation of motion following inflammatory lesions of joints. The capsule is attached to the bone on the articular side of the epiphyseal line, close to it. It is difficult or impossible to infect the fibrous layer of the capsule, and it is slow to yield to inflammatory destruction, on account of its low vascularity. It withstands a great intra-articular pressure and necrotizes slowly, even in the case of virulent infections.

To determine the intra-articular pressure-resistance of the joint capsule, the following experiments were made on the cadaver for me by Dr. Kellogg Speed.

Experiment 1.—An adult male cadaver. The point of injection for the hip-joint was selected at about three-quarters of an inch below the iliopectineal ridge from the pelvic side. The tissues about the hip-joint were carefully dissected away, and the joint capsule was exposed intact. A small hole was bored through the pubic bone at the point mentioned, and a cannula (No. 4, American scale) introduced through this opening into the joint. Care was taken that the opening was a trifle smaller than the cannula, which had to be forced in, producing a water-tight joint about it, and causing no weakening in any point of the joint capsule. By means of a connecting rubber hose, with screw and washer joint, on an especially prepared hand hydraulic pump, connection was made between the joint cavity and the pump, which permitted the joint to become filled with water and subjected to hydraulic pressure, as indicated on the gauge dial of the machine. Pressure was started slowly, allowing the joint to fill with water. As the amount of water injected increased, it was noticed that the leg was rotated slightly inward and was also semiflexed. Pressure was raised by the handle until rupture of the capsular ligament occurred at the lower anterior and outer aspect of the joint. Bursting pressure registered at 52 pounds to the square inch.

Experiment 2.—From the right knee-joint of an adult male cadaver, fresh and well injected, the skin and superficial fascia were removed with great care, from the middle of the thigh to the middle of the leg, to avoid weakening or opening the capsule of the joint. Through a point in the middle of the lower third of the patella a hole was drilled into the knee-joint as in the hip-joint experiment. The cannula was driven in and hydraulic connection completed. The joint was filled with water, and at a pressure of sixty pounds to the square inch a small point of leakage was established in the inner anterior aspect of the capsule where it joins the shaft of the tibia. Further pressure was exerted, and a final rupture of the capsule occurred at a 78-pound pressure to the square inch. There was no leakage around the cannula. The limb assumed a semiflexed position at the knee.

Experiment 3.—A cannula was introduced into the right knee-joint of a large adult male cadaver, as in the preceding experiment, and at 60 pounds pressure to the square inch a leakage was established in the lower border of the capsule, complete rupture not occurring until 90 pounds pressure had been exerted. The limb assumed a semiflexed position at the knee.

Experiment 4.—The left knee of the same cadaver was injected in the same manner as the right. The bursting-pressure was found to be 110 pounds to the square inch.

Experiment 5.—The same plan was followed as in Experiment 4 on the right knee-joint of a male cadaver. A small leakage occurred at 40 pounds pressure to the square inch. The bursting-pressure was 120 pounds.

### CONCLUSIONS

1. In the hip of an ordinary adult cadaver the capsule or capsular ligament can withstand an internal pressure of from 35 to 50 pounds to the square inch before rupturing.

2. The capsule and capsular ligaments of the average cadaver knee can withstand an internal pressure of from 60 to 120 pounds before rupturing. It was incidentally noted that as the intact hip-joint becomes subjected to severe internal pressure, the leg tends to become slightly rotated inward, adducted and flexed, exactly the position it most frequently assumes in the early stages of an acute infection with effusion as it is least painful in this position and accommodates the greatest quantity of fluid with the least intra-articular tension.

The synovial membrane is the most important structure to be considered in connection with diseases of joints. It is a closed pouch, and has many pockets and diverticulæ, depending on the degree and character of the motions of the individual joint. Not infrequently the synovial membrane communicates with the synovial sheath of the overlying tendons.

The synovial membrane is of endodermic origin, conconsisting of: (a) a covering of endothelial cells, with leaf-like projections or synovial villi in which the capillaries form terminal loops—the most important layer in the pathology of hematogenous infections; and (b) subserous tissue containing a large number of lymphatics, but the lymphatics have no stomata or openings on the free synovial surface, which accounts for the rarity of, and difficulty in producing infections on the joint surfaces without traumatization of the endothelial layer of cells. When the endothelial cells are disturbed, the infiltration of the connective tissue and lymph-spaces beneath takes place rapidly. Immediately underneath the endothelial cells there is a network of terminal capillaries. It is in this vascular subendothelial layer that practically all the hematogenous and rheumatic infections and microbic localizations take place. Primary infection of the surface of the endothelial layer rarely occurs, except in compound injuries.

The articular cartilage forms a thin incrustation on the joint surfaces of the bones, varying in thickness according to the articular surface on which it lies. It is a pearly-hued substance, in reality a modified connective tissue, but much harder than most connective tissues. It belongs to the hyaline variety and consists of an apparently homogeneous structureless material within which are so-called cartilage spaces containing the round or oval nucleated cartilage cells.

The interarticular fibrous cartilages are composed of white fibrous tissue and cartilage in varying proportions. The cells are fewer in number, but are possessed of more definite capsules than those of hyaline cartilage and they are usually arranged in groups surrounded by small islands of hyaline matrix. They cannot be infected and do not become the seat of inflammation. The investing membrane of the cartilage, the perichondrium, is composed of an outer fibrous layer, which contains blood-vessels, and an inner chondrogenetic layer which contains cartilage-forming cells. The articular cartilage appears to derive its nutriment partly from the vessels of the neighboring synovial membrane and partly from those of the bone on which it is implanted.

Important arterial anastomoses surround all the larger joints. From the larger vessels, smaller branches pass inward to the ends of the bones, to the periphery of the articular cartilages, and to the capsule. The margins of the cartilages are surrounded by vascular loops. The articular surfaces are, however, free from blood-vessels. The synovial membrane is usually well supplied with minute branches, a rich network being described as being present at the bases of the synovial fringes. *It is in the terminal loops of these that the infective micro-organisms find lodgment and from which they subsequently make their escape into the joint in hematogenous synovitis.*

The lymphatics are well developed directly beneath the inner surface of the synovial membrane, and while it is certain that they absorb from the joint, direct openings into the articular cavity have not been demonstrated.

The regeneration of cartilage, as of bone, depends on the return of the essential cellular structures to their embryonal form, their proliferation and subsequent differentiation into the type of the elements composing the tissue. The ligamentous cartilaginous redevelopments from connective tissue are beautifully illustrated in the ligaments and cartilages that develop around and in an ununited fracture of the tibia, humerus or femur.

From a practical point of view, the classification of joint conformations is as follows: synarthrosis, amphiarthrosis and diarthrosis. The latter is divided into:

- Ginglymus:
  - Elbow.
  - Ankle.
  - Wrist.
- Ginglymo-arthrodial:
  - Knee.
  - Temporo-mandibular.
- Enarthrodial:
  - Shoulder.
  - Hip.

The diarthrodial joints are the joints that most concern us in surgical work.

The conformation of bones at a joint has very important relations to its motion, pathologic processes, to the obliteration of motion after disease, and to the possibilities of its restoration by arthroplasty. The ligamentous portion of the capsules as altered by pathologic processes is much more important than was formerly believed.

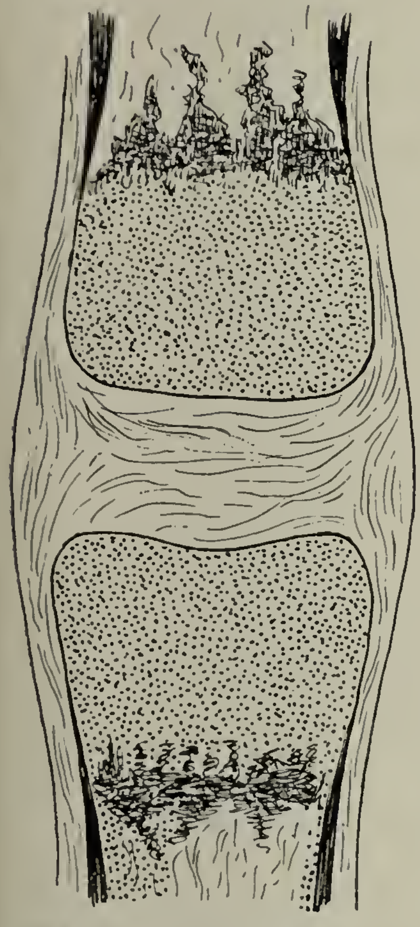


Fig. 76.—Bones are united by young connective tissue (Piersol).

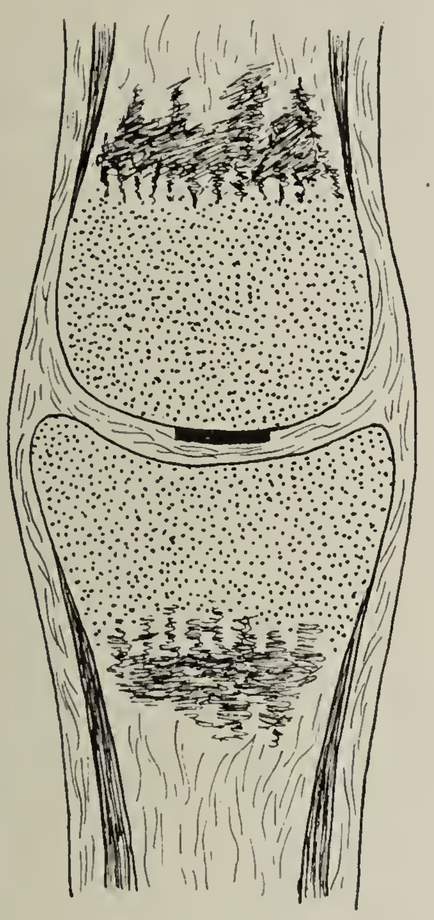


Fig. 77.—Appearance of joint cavity (Piersol).

The types of motion present in these joints are the hinge, ball and socket, which are the sliding and rotary motions of the forearm, shoulder and hip; the two latter are the most favorable for the restoration of motion after ankylosis, as the degree of sliding motion is extremely limited compared with that of the elbow and knee.

The embryology of joint formation is best illustrated by the works of Hertwig, Meyer and Gegenbaur, and may be summed up as follows:

Diarthrosis is a differentiation of primitive synarthrosis, of which it is a transformation. This mode of union exists almost exclusively between parts of the skeleton and is preceded by preformed cartilage during their development. When a joint is formed between two bones which are not developed from primordial cartilage, it is produced secondarily from cartilaginous tissue between the rudiments of these bones.

The origin of joints seems to be in connection with the differentiations and perfection of the cartilaginous parts of the skeleton. These are separated for a long time by interposed indifferent tissue (Fig. 76). At the same time that the cartilaginous elements of the skeleton increase, the interposed connective tissue which separated them at first, is itself transformed into cartilage and disappears. Figure 77 shows the beginning of this cartilage formation at the expense of the interposed connective tissue. Finally, the two terminal cartilaginous surfaces of the two skeletal organs are found in immediate contact or continuous; they each have a predetermined form, characteristic of each joint. The two contiguous extremities of the skeletal parts are found separated by a mass of cartilaginous tissue, formed at the expense of the primary intermediate tissue (Fig. 78).

A slit, at first very delicate, soon appears in this intermediate cartilage, and divides it into two layers, applied against the terminal surfaces of the cartilaginous skeletal parts. These layers constitute the articular cartilages (Fig. 79). At the same time, the slit has become more extensive—the joint cavity which separates the articular surfaces of the two bones.

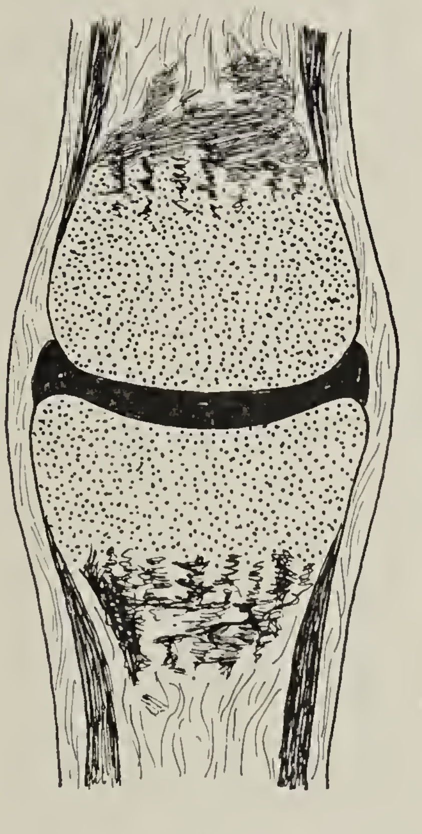


Fig. 78.—Differentiation of joint cavity and capsule (Piersol).

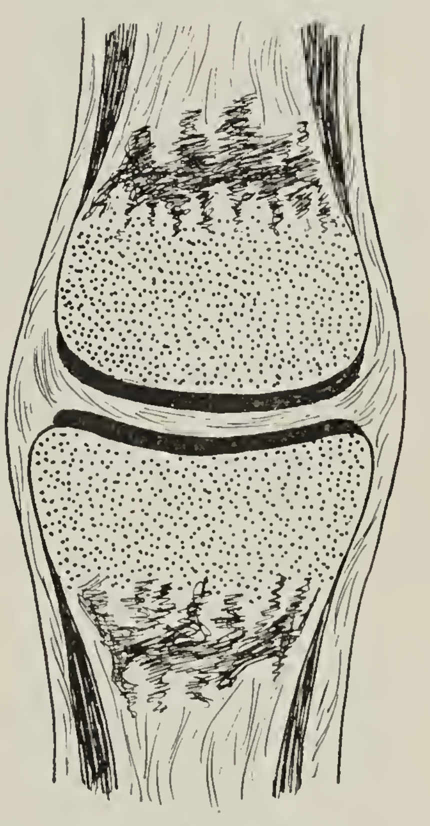


Fig. 79.—Development of two joint cavities separated by fibrous septum resulting in a compound joint (Piersol).

Externally the joint cavity is limited by connective tissue extending from one skeletal piece to the other. This connective tissue is continuous beyond the joint surfaces with the periosteum (perichondrium) of the two developing bones. It is this connective tissue surrounding the joint cavity which gives rise to the joint capsule (Fig. 80). The external layers of this tissue are differentiated into an outer fibrous membrane, generally tough, called the capsular ligament, and an inner softer layer turned toward the joint, which it lines. It is richly vascular and constitutes the synovial membrane.

The capsular ligament is not equally developed over its whole extent. It remains thin in certain places and thickens in others, so as to form bundles of more rigid fibers. These bundles develop in a given direction, acquire a variable freedom, and may even become completely separated from the capsular ligament, depending on the demands of support and tension placed on them. Thus are formed the accessory or auxiliary ligaments.

The intermediate interposed tissue, which existed in the rudimentary joint, is not always entirely appropriated in the increase of the articular ends of the bones. When the joint surfaces do not correspond closely to each other, remnants of this tissue persist at the periphery of the joint cavity, united to the synovial membrane of the capsule. These remnants project into the joint cavity and constitute prolongations or folds of the synovial membrane.

In other cases, the differentiation of the contiguous articular ends does not go so far. The two articular surfaces do not contact over their whole extent, but only a part of it; in this class of cases a larger part of the intermediate tissue persists in the joint capsule. The joint surfaces are thus more or less discordant. This intermediate tissue is then transformed into fibrocartilage, which on cross-section is semilunar in shape.

In some cases, a continuous joint cavity is not formed, the embryonic intermediate tissue being less utilized in the formation of the articular cartilages. Before the transformation of the contacting articular surfaces can take place, a slit appears between the joint surfaces and the intermediate tissue, which develops into a joint cavity. It follows, then, that each of the articular ends will be lodged in a special joint cavity, separated from the one containing the other bone by a layer of intermediate tissue. This latter tissue is finally transformed into an interarticular cartilage, separating the two articular cavities of the same joint, as in the temporomandibular articulation. These interarticular cartilages may be continuous or not. When they are not continuous, as is the case with the semilunar cartilages, the two special joint cavities are incompletely separated from each other. When they are continuous, on the contrary, the joint cavities are completely separated by them. In both cases, they are the remains of the primitive continuous intermediate tissue.

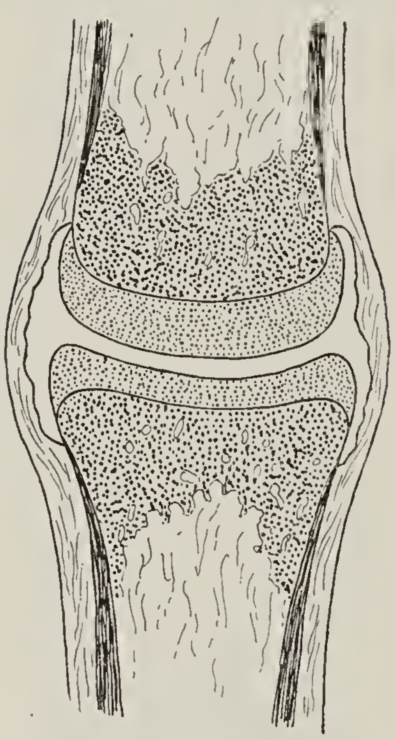


Fig. 80.—Diagram showing parts of a typical joint (Piersol).

The first stages of joint development occur during fetal life, when no muscular action is present. The characteristic feature and disposition of the joint surfaces are already formed before the joint can functionate. The final transformation, i. e., the extension of the joint cavity, etc., occurs only after the joint is put to use. It is determined by the skeletal movements and by muscular action.

### EMBRYOLOGY OF INDIVIDUAL JOINTS

The wrist and ankle have a purely endochondral ossification; the cells of connective tissue grow into the cartilage from the perichondrium, dissolve the matrix of cartilage and unite with one another in the center; there arises a network of medullary (marrow) cavities, in the vicinity of which there is a deposit of salts of lime (a provisional calcification). The medullary spaces extend farther and farther by destruction of the cartilaginous substance; then there are formed by the superficially located medullary cells, bone lamellæ, which gradually increase in thickness. The osseous nucleus thus formed slowly increases in size, until finally the cartilage is almost entirely replaced, only a thin layer of it remaining at the surface as a covering for the bone.

The question whether the extremities of bones, the articular surfaces, are subject, as far as their form is concerned, to mechanical laws only, has been much discussed. According to Bernays, the early and typical form of joints appears to be a matter of heredity. The muscles also have a decided influence on the later forms of articular surfaces.

According to His, the development of the body of vertebrates in the ovum is determined and controlled by mechanical laws, while Haeckel considers heredity a determinant factor.

L. Fick states that at the end of the second month, the joints show a tendency to shape; still "the greatest irregularity exists in the form of articular surfaces." Among the articular surfaces of phalanges there are no two joints alike at that period.

In regard to the question, what determines the form of articular surfaces, Fick has shown in his monograph that muscular activity is responsible for the peculiar form of the different articular surfaces. By experimenting on young dogs, he noticed that the section of muscles is followed by a change in the form of the corresponding articular surfaces and also of the interarticular space. This corresponds with the changes in conformation resulting from pathologic external limitations of motion occurring in early childhood. By experimental immobilization of the joints of growing dogs, the space and form of articular surfaces were changed; the interarticular line became irregular.

As to the question why one extremity of bone becomes a prominent surface, while the next extremity becomes an articular cavity, several explanations are given.

Fick says that besides the muscular activity, on account of more active circulation, the multiplication of cells is more marked in one end than in the other, so that it penetrates the latter and forces it to excavate.

Henke and Reyher explain this by the fact that the muscles force one bone, that on which the insertion is nearer to the articular surface, against the other bone, on which the insertion is further from the interarticular line, so that it determines the formation of a cavity by means of pressure in the former.

The essential phenomena, says E. Retorer, concerning the formation of the joint cavity, take place when the cartilaginous segments are nearly in contact and before there is any articular slit. We find that at this stage the superficial layers of the cartilaginous segments are not yet free; the flattened and crowded cells limiting these segments are succeeded by a much clearer connective tissue. This is made up of fusiform and stellate cells, whose numerous prolongations form meshes filled with Wharton's jelly. In other words, the embryonic connective tissue which is not transformed into cartilage has developed into mucous connective tissue, the interval between the cartilaginous segments where the future joint will be.

Little by little, these meshes become larger and larger, the prolongations of the cells more and more thinned, the cell body less and less clearly outlined, staining with difficulty. In short, the cells with their prolongations atrophy and, with the nuclei, disappear and, at the same time, the joint surfaces become free. By undergoing mucoid transformation in the interval between the cartilages, the embryonic connective tissue gives rise to the first synovial fluid.

On the inner side of the joint capsule, the connective tissue persists as closely packed elements and gives origin to the synovial membrane which is lined with many tiers of flat cells. Hence there are the following stages in the formation of a joint cavity.

1. Existence of an embryonic connective tissue with closely packed cells.
2. The production of fusiform and stellate cells whose prolongations anastomose.
3. Elaboration of mucoid substance in their meshes.
4. Atrophy of the cellular elements and their prolongations.

The joint cavity succeeds the evolution of this embryonal connective tissue, which in place of producing cartilage or bundles of areolar tissue, elaborates the mucoid substance giving rise to the first synovial fluid.

Every joint begins with a stage at which the segments present are bound together by a compact tissue, which establishes their continuity. While most joints remain thus, we see this connective tissue persisting in movable joints only at the capsules, ligaments, etc., which becomes fibrous, fibrocartilaginous, or even osseous tissue.

At the places where the skeletal segments come in contact, however, their continuity is changed into contiguity, because the thin layer of intervening connective tissue has disappeared by mucoid degeneration. In other words, every diarthrosis passes through a transition state which may be compared with an amphiarthrosis.

### HYGROMA—BURSA

While in the embryology of joint formation, always primarily formed without a cavity, a splitting or liquefaction of cartilaginous or connective tissue between the cartilages takes place, the superficial bursæ are made by the same splitting between fat capsules (subfascial) on aponeurotic mesoblastic tissue. Fat tissue rapidly or easily changes to connective tissue. Bursa formation is due to the absorption of fat from fatty tissue and the coalescence of the small fat capsules with an increase or hyperplasia of the connective tissue and its degeneration, with the development of collagen.

It is the solution or liquefaction of the collagen in the center that forms (fibrinoid—a degeneration product) the fluid in the cavity of the bursa. The fluid is a liquefied collagen, not a secretion from the surface of the cavity (serous), as Virchow taught. The "rice bodies" are dead proliferations of partially developed tissue or fibrin of the small villi or *Zotten*.

Hygroma is, then, the result of a degenerative or absorptive process in fatty tissue with hyperplasia of the connective tissue element, the conversion of the collagen into solution "fibrinoid," a liquefaction of hypertrophied connective tissue. The cells lining the newly developed cavity appear as flattened endothelial cells; these are really transformed connective tissue cells.

The hygroma has no vessels and, therefore, cannot become inflamed. It may be the seat of phlegmon and necrosis, but it is not itself a part of the process. (It cannot be cured by drainage unless necrosis takes place, but it can be cured by extirpation.) Hygromata and ganglia are the combined products of liquefaction of hypertrophied connective tissue.

In the development of artificial joints, it is the utilization of this transformation of fat and connective tissue into hygroma that gives us movable sliding endothelial-lined surfaces, which so closely resemble joints. The aponeurosis that is to be used in the construction of artificial joints should have in it a considerable quantity of fatty tissue, which when subjected to pressure forms the hygroma. This is not infrequently seen in the nonunion of fractures in the shafts of the long bones, forming what is known as "the false joint" or "interosseous sac." It is the recognition of this pathologic condition that has led me to its utilization in arthroplasty.

(*To be continued*)

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## MALIGNANT PNEUMOCOCCUS TONSILLITIS

LEONARD K. HIRSHBERG, A.B., M.D.
BALTIMORE

About the second week of January, 1912, it became evident in Baltimore that an unusual type of tonsillitis, with *adenitis,* peritonitis and septicemic complications was epidemic. Physicians practicing internal medicine could not fully differentiate the variety of tonsillar-pharyngeal infection prevailing from the common strepto-staphylococcic variety.

It was not until the end of February and March that the realization dawned on the Baltimore profession that they were dealing with a virulent manifestation of some microorganism that had taken on a new malignancy—that had assumed a new pathologic rôle.

Of forty-three cases studied clinically and by bacteriologic methods from January 23 to March 28, 1912, occurring in the practice of Drs. Sylvan Rosenheim, Claude Stoneifer, B. F. Phillips, Leo Cohen, my own and other physicians, the following complications occurred:

Thirty patients had cervical glands enlarged.

Ten had one or more submaxillary glands larger than a hen's egg (6 by 2 cm.).

Ten suffered with a remittent rise of temperature for two weeks or more.

One was operated on forty-eight hours after onset for appendicitis.

One died of peritonitis.

One died of septicemia.

Three were affected with arthritis in elbow, intercostal and shoulder joints.

Eight exhibited only pharyngeal injection with symptoms of general systemic infection and no tonsillar involvement.

Six had a bronchitis with abortive throat signs.

Four had otitis media.

One suffered a mastoid abscess.

One had meningeal symptoms, relieved by Dr. Sylvan Rosenheim by double paracentesis.

One had a peritonsillar abscess.

The most striking clinical picture in this Baltimore epidemic has been the sharp onset, with the invasion always in the throat, general adenitis, great virulence, fulminant type of death in forty-eight hours in the lethal cases, impossibility of proving milk, water or food responsible in the spread of the epidemic, and the constant presence of the pneumococcus as a possible causative organism.

In all of my cultures, obtained from abscesses, glands, ear discharges, infected tonsils and other secretions, besides a few contaminating streptococci and staphylococci, an encapsulated diplobacillus was isolated. This organism was also obtained by me in pure cultures from an epidemic fatal to white rats that occurred in one of the laboratories of the Johns Hopkins University.

Although Pasteur, Sternberg, Fraenkel and others long ago pointed out the fact easily verifiable, that the pneumococcus can be isolated from the saliva of healthy men, no actual throat disease was attributed to the pneumococcus until Sir Felix Semon reported two cases[1] due to this organism.

All of my cultures were made first on the blood-serum agar furnished by the Baltimore Health Department. From the transparent isolated colonies, transplantations were made to milk, and other media. From the milk, smears were fixed for twenty seconds with tannic acid of 10 per cent. strength. After washing and blotting, this was stained with a saturated alcohol solution of gentian-violet mixed with four times as much carbolated water (5 per cent.) for one minute, and then washed and stained with the Gram-iodin solution for a minute. This is decolorized with alcohol and restained with a 60 per cent. alcohol eosin solution.

The *Streptococcus mucosus* will not show so distinctly in this stain as the pneumococcus. Hence, when I found an encapsulated coccus, occurring in pairs and short chains, and colored brownish-black, in a capsule stained pink, fatal to mice in twenty-four hours, I felt more or less convinced that we were dealing with the pneumococcus.

Since this pneumococcus predominated even in the contaminated cultures, and killed white rats within twenty-four hours after infection, I do not consider it radical to hold that the pneumococcus in question is responsible for the outbreak at present endemic in Baltimore.

1937 Madison Avenue.

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## MULTIPLE DIVERTICULA OF ILEUM

F. E. WALKER, M.D., HOT SPRINGS, S. DAK.

*Patient.*—A girl, aged 11, was brought to the hospital Feb. 11, 1912, suffering from typhoid. Five days after admission she complained of pain in the appendiceal zone and within ten hours the pain was so marked as to signify an intense infection and inflammation having all the appearance of an oncoming rupture. The pulse and temperature rose steadily, the thermometer registering 106 F.; the pulse was 164. Vomiting set in and was profuse.

*Operation.*—An incision of liberal length was made along the outer border of the rectus muscles. A large amount of straw-colored fluid was released and a portion of the omentum, completely free from any adhesions, presented itself in the opening. The cecum was almost rigid and the appendix not visible. A large semisolid and irregular-shaped mass was felt about 2 inches from the ileocecal valve; it consisted of the appendix, greatly enlarged and inflamed and firmly adherent to the under-surface of the ileum and to one small and one large diverticulum of the ileum. A third diverticulum was in close proximity to the tip of the appendix but not attached in any manner thereto. The large diverticulum was filled with a fecal mass as large as a man's thumb. The tip of the appendix carried three small concretions. The base of the appendix was slightly gangrenous, the body and tip very much injected and blood-vessels stood out prominently. Appendix was removed and stump cauterized. The small diverticulum was pursed into the bowel, while the other two pouches were removed, inverted and sutured over as in an enterostomy.

*Postoperative History.*—All symptoms rapidly subsided after the operation; the wound healed nicely, although the typhoid condition ran its usual course, and the patient finally recovered sufficiently to return to her home. I have never seen in practice or in the literature a similar case. It is not uncommon to run across a diverticulum in abdominal work but I believe it unusual to see a multiple condition.

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## A CASE OF EXTENSIVE PIGMENTED AND HAIRY NEVUS

### OF THE "BATHING-TRUNK TYPE," PRESENTING GENITAL TUMORS

HOWARD FOX, M.D.

NEW YORK

It is fortunate that the extensive cases of pigmented and hairy nevus are infrequent, as the condition may be extremely disfiguring and is practically impossible to relieve. The majority of such lesions are seen on almost any portion of the body and do not present any particular configuration. In a certain number of cases, however, the lesions, for some unknown reason, are situated on the lower portion of the trunk and upper portions of the thighs and closely simulate in appearance a pair of bathing-trunks. This peculiar localization is well shown in Figures 1 and 2.

*Patient.*—Rose M., a girl 4½ years old, born in the United States, of Russian parents, is the second of four children all of whom are living and healthy. There is no tendency in any member of her family to suffer from any form of nevus. While the lesions were present at birth, the mother says that the pigmentation has gradually become darker, and the growth of hair somewhat longer and more profuse. The child is intelligent, strong and sturdy and has always enjoyed excellent health.

*General Description of Nevus.*—About one-half of her body is covered by pigmented and hairy lesions. The greater portion of the nevus consists of a solid symmetrical sheet, involving the lower two-thirds of the trunk and upper three-fourths of the thighs. The upper borders of this area extend anteriorly from the point midway between the umbilicus and xiphoid, upward and outward to meet posteriorly and include three-fourths of the surface of the back. The color of the pigmented area is brown. It is not uniform, however, but more or less mottled by the presence of small black spots scattered over the brownish surface. The pigmentation on the abdomen is somewhat less marked than it is on the back and legs. The greater portion of the area described is covered by an abundant growth of dark hair. This is most marked on the anterior surface of the thighs, where the long stiff hairs form a veritable coat of fur. The hair on the abdomen is soft and downy in character. On the legs are several rounded pigmented areas averaging 8 cm. in diameter and covered with long stiff hair. The soles present a few pigmented spots, the palms being free. The remaining portions of the body, including the face and scalp, present a large number of pigmented spots varying from a pin-head to a quarter in size. The smaller lesions are smooth while the larger ones are more or less covered with hair. On the right cheek there is a white scar, where a pigmented hairy lesion had previously been removed by the application of nitric acid.

*Tumors.*—The lower right aspect of the back presents a large, raised, flattened area of soft and elastic consistency. Bordering on this large area are two rounded soft tumors, the larger being the size of a large cherry. The right inguinal region presents an elongated soft elastic swelling about 3 inches long, simulating a hernia in appearance. It is, however, not reducible and gives no impulse on coughing. Arising from the labia majora are three globular, soft, elastic tumors. Their surface is smooth, and the skin covering them is normal in appearance and not adherent. Two of the tumors arise from the left side of the vulva, one above the other. The lower one is pedunculated and the size of an apricot. The upper one is as large as a hazel-nut and is sessile. The tumor on the right side is the size of a cherry and is pedunculated. The appearance of the child at first glance is that of a male, the little, genital tumors looking like testicles. With the exception of these tumor-masses of the labia the genital organs are perfectly normal in appearance.

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[1] Semon: Brit. Med. Jour., June 26, 1909.

In the literature I have been able to find reports of twenty-five cases of the peculiar "bathing-trunk" type of nevus. In a general discussion of pigmented nevus, Bircher[1] quotes the case recorded by an anonymous author in the *Lancet*,[2] and cases reported by Kostial,[3] Hebra and Kaposi,[4] Jablokoff and Klein,[5] Michelson,[6] Hyde,[7] Hardy,[8] von Planner,[9] Linke,[10] Joseph,[11] Eichoff,[12] Moller,[13] Ornstein,[14] Thienel[15] and Rossi.[16] Bircher also mentions the case of Ruggieri, quoted by Alibert,[17] but does not include it as one of the same type. That it was apparently a case of the "bathing-trunk" configuration would appear from the statement of Alibert, who wrote that the situation of the lesions was such that "one could have thought that she wore a waistcoat and a pair of drawers." In addition to these sixteen cases I have found six that had escaped the notice of Bircher, namely, those reported by de Amicis,[18] Scarenzio,[19] Variot,[20] Röhring[21] and Reinhart[22] (two cases). Since the report of Bircher, three cases have also been published by Rost,[23] Bonn[24] and Fasal,[25] making a total of twenty-six cases of this peculiar form of nevus.

Of these patients, twelve were females and thirteen males, the sex of one patient not being stated. The ages at which the patients were observed ranged from infancy to middle age. In three of the cases the lesions did not quite complete the contour of the bathing-trunk while in another case the nevus was unilateral. In the majority of the patients there were numerous other small pigmented, or pigmented and hairy lesions, scattered over various parts of the body. In ten of the cases mention was made of accompanying tumor masses, described as firm elastic or lipomatous tumors or as nevus mollusciformis. Indeed these tumors seemed to one author (Hyde[7]) such a prominent feature that his case was reported as nevus lipomatodes. In the case of Moller,[13] some of the tumors were found under the microscope to be sarcomatous, while in that of Thienel they became carcinomatous when the patient was 40 years old.

As a rule the patients did not complain of any physical discomfort from their lesions, although Röhring[21] states that his patient suffered great inconvenience from the presence of fleas. In my case there was a constant disagreeable odor from decomposition of urine and sweat about the genitals, which, however, was entirely relieved after the tumors had been excised by Dr. George H. Semken. In the case of the woman quoted by Alibert,[17] the nevus was responsible for a most pathetic occurrence. The patient married a man who was deeply in love with her, but who did not know of her affliction. He was so horrified on learning of her condition that he sued for and obtained a speedy divorce.

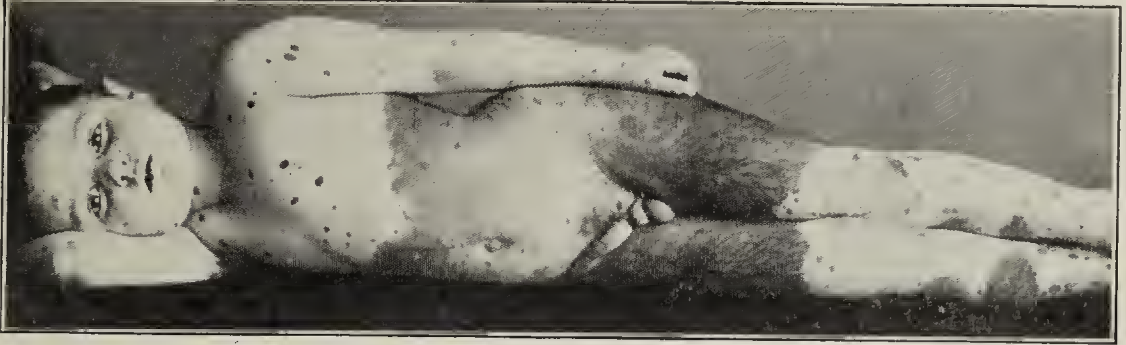

Fig. 1.—Extensive pigmented and hairy nevus of the "bathing-trunk type," presenting genital tumors, in a girl 4½ years old.

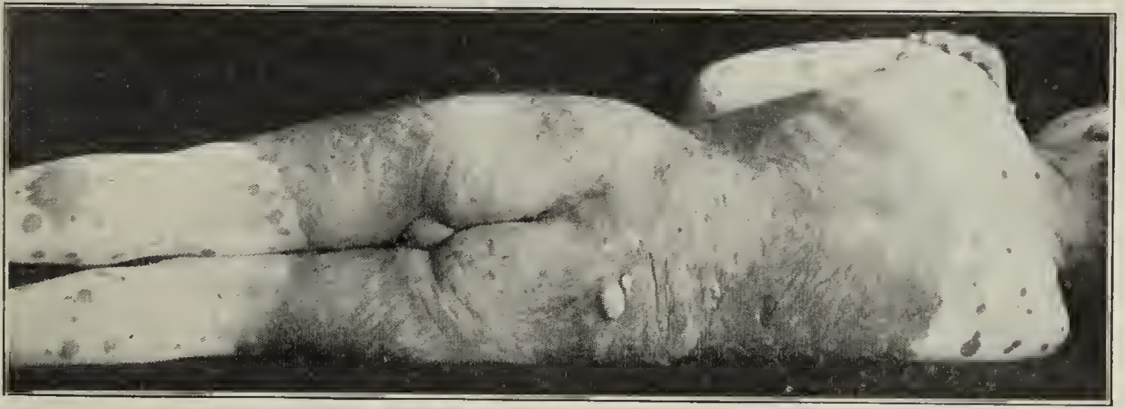

Fig. 2.—Posterior view of same patient as in Figure 1.

While any extensive treatment in my case has of course been impossible, some improvement has nevertheless been obtained in the lesions on the face and hands by applications of nitric acid, phenol (carbolic acid) and carbonic acid snow.

In conclusion I may add that my patient has previously been presented before several dermatologic societies, including the Sixth International Congress of Dermatology.

616 Madison Avenue.

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**Classification in Bacteriology.**—In other biologic sciences the classification into species, genera, families, orders, classes, etc., is not only of great convenience, but it also expresses for use something of the relationship of the different groups, something of their probable ancestry and line of evolution. I see no reason why the bacteria should not be classified in the same way.—Gorham in *Science*.

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[5] Jabolokoff and Klein: Vrtljhrschr. f. Dermat. und Syph., 1879, vi, 632.

[6] Michelson: von Ziemssen's Handbuch der Hautkrankheiten, 1884, 14-2, p. 98.

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[11] Joseph, M.: Ein Fall von schwimmhosenartigem thierähnlichem Naevus piliferus pigmentosus, Deutsch. med. Wchnschr., 1889, xv, 482.

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[15] Thienel, A.: Ein Fall von schwimmhosenartigem Naevus pigmentodes pilosus mit Carcinoma melanodes, Inaug. Dissert., Greifswald, 1892.

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[17] Alibert, J. L.: Monographie des dermatoses, 1832, p. 801.

[18] de Amicis, T.: Rara forma di neo pigmentario diffuso su tutta la superficie cutanea, Mov. Med. Chir., 1875, No. 29, p. 30.

[19] Scarenzio, A.: Di una singolare alterazione piamentaria verrucosa e lipomatosa congenita, Gior. ital. d. Malatt. vener. e. dell pelle, 1877, xii, 220.

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# A NEW TRACTION FRAME*

PERCY WILLARD ROBERTS, M.D.

NEW YORK

The traction frame illustrated was devised for a dispensary patient with acute hip-joint disease whose treatment it was necessary to conduct in a dirty and ill-ventilated home. The child needed traction and fresh air, and by use of the frame was enabled to have both. The effectiveness of the apparatus was so well demonstrated in this case that I have used it in several ward cases at the Post-Graduate Hospital with entire satisfaction and believe it to be more efficient than the ordinary form of bed traction, with the added advantage that patients may be carried into the fresh air when desired.

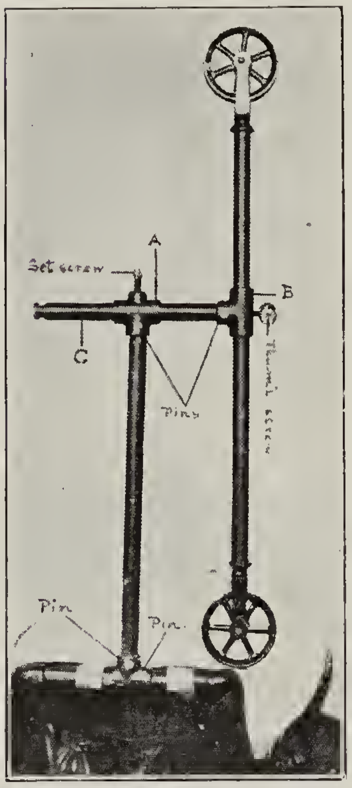

Fig 1.—Detail for new traction frame.

This traction device is added to the end of an ordinary gas-pipe frame (Fig. 1). It is made of stock fittings which are inexpensive and readily obtainable. In assembling the parts the only caution necessary is the insertion of pins (indicated by white points in Fig. 1) to prevent movement of certain pieces which should be stationary. Free motion at *A* and *B* permits of adjustment at any angle from 90° to 180° and abduction if desired by slipping outward rod *C*. *A* and *B* are reducing Ts with the large caliber big enough to take the pipe passing through without binding.

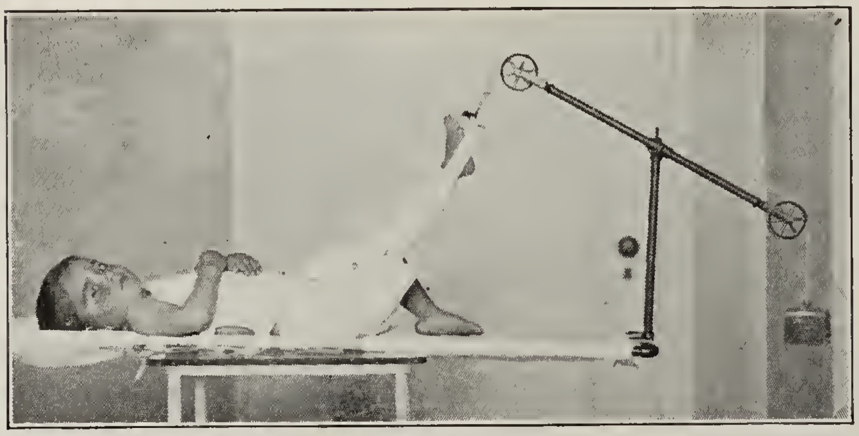

Fig. 2.—Traction frame, showing patient with acute right hip disease.

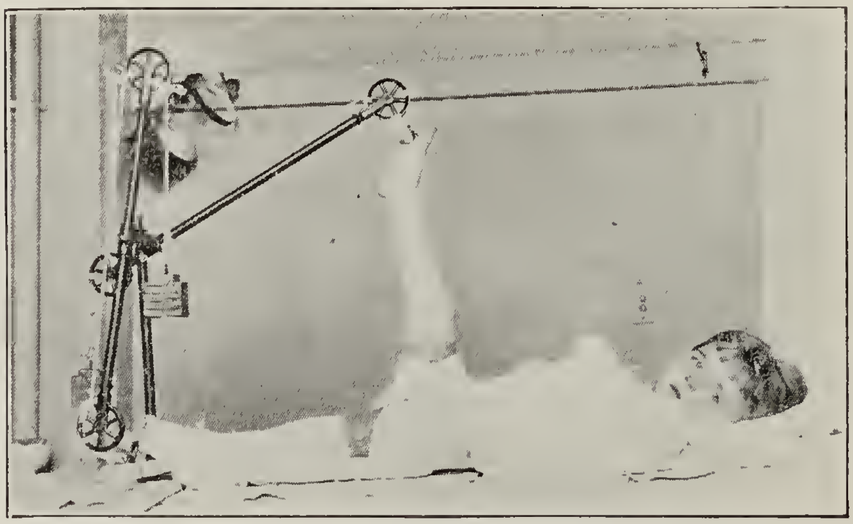

Fig. 3.—Case of bilateral hip disease—one side acute with extreme flexion—on traction frame. Note that cord from right leg goes over upper pulley and cord from left leg goes under lower pulley.

Figures 2 and 3 show the frame in use in acute hip-joint disease both unilateral and bilateral, and also the detail of construction.

40 East Forty-First Street.

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* Shown before the Orthopedic Section of the New York Academy

# ORCHITIS SECONDARY TO TONSILLITIS TREATED WITH HEXAMETHYLENAMIN

## REPORT OF A CASE

IRA HUMPHREY PROUTY, B.S., M.D.

BELLOWS FALLS, VT.

The therapeutic uses of hexamethylenamin have multiplied rapidly since its introduction into medicine by Nicolaier,[1] in 1894, and his demonstration of its excretion in the urine, in 1899. The well-known researches of Crowe,[2] in 1908 and 1909, showed that after administration of the drug by mouth it appeared in the bile, pancreatic juice, cerebrospinal fluid, synovial fluid, saliva, milk, pleural exudate and circulating blood. In 1910, Barton[3] reported that hexamethylenamin is eliminated by the mucous membrane of the middle ear. Following this announcement Brown[4] was quick to draw the inference that it should also be eliminated through the mucous membrane of the nasal sinuses, and Heitmuller[5] demonstrated that it is eliminated by the bronchial mucous membrane. A year later, Armstrong and Goodman[6] found that "hexamethylenamin, when given by mouth, is excreted in the sputum of tuberculosis, pneumonia, bronchitis and asthma." From these facts Nicolaier,[1] Crowe,[2] Richardson,[7] Churchman,[8] Barton,[3] Brown,[4] Heitmuller,[5] Armstrong and Goodman,[6] Bagby,[9] Miller,[10] Vanderhoof[11] and others have made many suggestions regarding the use of hexamethylenamin which have been applied therapeutically with the most gratifying results.

From a cursory glance through the literature I have been unable to find any mention of the use of the drug in the treatment of orchitis, and it is for this reason that I wish to report the following case, which is of further interest in that orchitis is only occasionally met with during tonsillitis.[12]

The patient, Mr. X., aged 20, unmarried, was a printer by occupation. His family and past history were unimportant.

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[1] Nicolaier: Centralbl. f. d. med. Wissensch., 1894, xxxii, 897; Deutsch. med. Wchnschr., 1895, xxi, 541; Deutsch. Arch. f. klin. Med., 1899, xxxviii.

[2] Crowe: The Excretion of Hexamethylenamin in the Bile and Pancreatic Juice, Bull. Johns Hopkins Hosp., 1908, xix, 109; The Excretion of Hexamethylenamin in the Cerebrospinal Fluid, Bull. Johns Hopkins Hosp., 1909, xx, 102.

[3] Barton: The Elimination of Hexamethylenamin by the Mucous Membrane of the Middle Ear, The Journal A. M. A., March 12, 1910, p. 871; Elimination of Hexamethylenamin by the Mucous Membrane of the Middle Ear and Nasal Sinuses, Boston Med. and Surg. Jour., June 30, 1910, p. 896.

[4] Brown: Hexamethylenamin in Suppuration of the Middle Ear and the Nasal Sinuses, The Journal A. M. A., April 16, 1910, p. 1308.

[5] Heitmuller: Excretion of Hexamethylenamin, The Journal A. M. A., April 9, 1910, p. 1222.

[6] Armstrong and Goodman: The Excretion of Salicylic Acid and Hexamethylenamin in the Sputum, The Journal A. M. A., May 27, 1911, p. 1553.

[7] Richardson: Jour. Exper. Med., 1899, iv, 19.

[8] Churchman: Johns Hopkins Hosp. Rep., 1906, xiii, 189.

[9] Bagby: Hexamethylenamin in Pellagra, The Journal A. M. A., Nov. 5, 1910, p. 1663; April 29, 1911, p. 1280.

[10] Miller: Hexamethylenamin: A Remedy for Common Colds, The Journal A. M. A., June 10, 1911, p. 1718.

[11] Vanderhoof: Hexamethylenamin in the Treatment of Bronchitis, The Journal A. M. A., Feb. 3, 1912, p. 331.

[12] Keyes: Diseases of the Genito-Urinary Organs, D. Appleton & Co., New York, 1910, p. 623.

He denied venereal disease; his habits were excellent. For one week previous to the time when I first saw him the patient had not been feeling well, although he was able to remain at work. He had felt extremely tired, had lost his appetite, could not sleep, and had had an almost constant headache and general pains over the body. He thinks he had had some fever. The day before I saw him he had the nose-bleed, which lasted for about one-half hour. The same day his throat began to be sore, and he noticed that his left testicle was swollen and tender.

*Examination.*—The patient was seen at 5 p. m., Dec. 24, 1911. His face was flushed, the lips dry, and the patient looked sick. The tongue was heavily furred and the breath was foul. No lead line could be made out. The tonsils were swollen and injected, and the pharynx was intensely reddened. The parotids were neither tender nor swollen. The heart and lungs were negative. The abdomen was negative except for slight tenderness in the lower left quadrant. Spleen was not felt. There were no rose spots. The left testicle was indurated and swollen. It was about one and one-half times the size of the right, and was very tender and painful. Pulse was 110; temperature, 102.8 F.; respirations, 30.

*Treatment and Course.*—The patient was given 5 grains of acetylsalicylic acid every two hours, and was told to spray the throat frequently with Dobell's solution. The testicles were supported and external cold applied to scrotum and neck.

December 25: The patient complained of severe and persistent pain in the head, back and extremities. The tonsils were greatly swollen and inflamed and the crypts contained a cheesy-looking exudate. The parotids were neither enlarged nor tender. The tenderness in the lower left quadrant of the abdomen had disappeared. Spleen was not felt. The left testicle was nearly twice the size of the right, was exquisitely tender, and the pain had been severe since the previous day. No effusion into the tunica vaginalis could be made out. Temperature, 102 F. Blood examination showed hemoglobin, 85 per cent.; leukocytes, 12,300; polynuclears, 67.3 per cent.; mononuclears, 25.3 per cent.; no abnormality of the red cells was noted. Widal test was negative; Diazo, negative. Acetylsalicylic acid was discontinued and the patient was given 15 grains of hexamethylenamin every six hours.

December 26: Patient still complained of some pain in the head, back and extremities. The local condition of the throat was much better. The parotids were not enlarged nor tender. The left testicle was still swollen and slightly tender but there was but little pain. Temperature was 101.3 F.; pulse, 104; respirations, 25. Widal and Diazo tests were negative.

December 27: The patient was decidedly better; had no pain. The tonsils remained a little swollen but were not injected and the crypts were practically clean. The left testicle, although still enlarged, had diminished considerably in size and was neither tender nor painful. Temperature was normal. The dose of hexamethylenamin was reduced from 15 to 5 grains every six hours.

December 30: The left testicle had markedly diminished in size but still remained slightly swollen. It was neither tender nor painful. The treatment was discontinued.

From a careful study of the case, and after excluding the ordinary causes of orchitis, I conclude that in this instance the orchitis was in all probability a metastatic infection derived from the primary foci in the tonsils. In view of the bactericidal properties of hexamethylenamin when decomposed within the body, it occurred o me that possibly the drug might favorably influence he course of the orchitis. What appeared at first to be a severe inflammation of the testicle very rapidly improved within forty-eight hours after the administraion of the drug was begun. It is, of course, impossible o draw conclusions from a single case, but the result obtained here would, it seems to me, justify a further rial of hexamethylenamin in similar non-venereal inflammations of the testicle.

21 School Street.

# A PRACTICAL OPHTHALMODYNAMOMETER FOR OFFICE USE

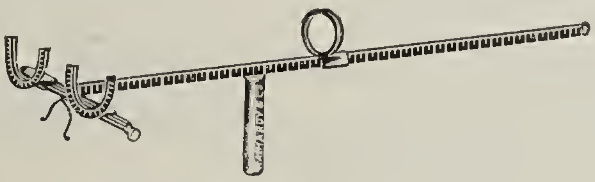
E. J. GARDINER, A.B., M.D.
CHICAGO

The measurement of the amplitude of accommodation and convergence, and of the relative range of accommodation and convergence, does not receive, in routine practice, the attention that its importance demands. This neglect is due, partly, to a lack of appreciation of the significance attached to the data furnished by such measurements, and, partly, to the fact that a low-priced practical ophthalmodynamometer is not to be found on the market.

The accurate measurement of the relative range of accommodation and convergence is a difficult and tedious laboratory process requiring an expensive apparatus, great precision and expertness on the part of the operator, and more than ordinary powers of observation on the part of the patient.

Fortunately, for ordinary office practice, such exact measurements are not necessary; but decidedly more accurate work is required than it is possible to accomplish with the usual test-card and tape measure.

The apparatus herewith presented was devised to meet the ordinary office requirements, and is commended as an inexpensive, easily operated appliance combining all the essential desiderata for measuring *accurately* the amplitude of accommodation and convergence, and *approximately*, the relative range of accommodation and convergence.



A practical ophthalmodynamometer for office use.

The median bar measures 50 cm. and carries three scales, one in centimeters and millimeters, a second in dioptries-meter angles, and a third, marked "Age in years" (Prince), on which the numbers at the divisions correspond to years. This scale in conjunction with the dioptrie scale indicates the amount of accommodation that is normal at different ages from 10 to 50 years. A convenient nose-rest is attached to the proximal end of this bar, and it is also provided with a handle, enabling the patient to hold the appliance in position during the examination. It also carries the object-holder which is so constructed that it can be easily slid back and forth.

The test-object furnished with the appliance is a Prince card, on the back of which a 2 mm. dot has been stamped for measuring the amplitude of convergence.

The lens-holders are mounted on a graduated cross-bar and can be adapted to the pupillary distance by means of a screw of double rotation. In order to bring the lenses to about 13 mm. from the cornea, the carriers are set back 10 mm., and the rings are pivot mounted so that the plane of the lenses can be adjusted to the visual axis.

For ordinary clinical work, the data furnished by this appliance in combination with the standard trial lenses will suffice without further computation, but if a more accurate measurement of the relative range of accommodation is desired, it may be readily obtained by calculating the exact strength of each lens at its distance from the eye.

For all practical purposes the measurement of the relative range of accommodation will be found sufficient without resorting to the use of prisms for measuring the relative range of convergence, for it is well known that the positive side of the relative range of accommodation represents the negative side of the relative range of convergence, and the negative side of the relative range of accommodation represents the positive side of the relative range of convergence.

15 East Washington Street.

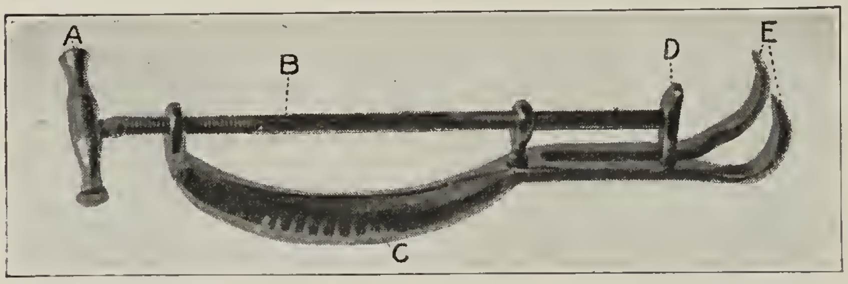
## A PRACTICAL BONE-CLAMP

Francis Reder, M.D., St. Louis

It is not often that the aid of a special instrument is needed to adjust the ends of a fractured bone properly. There are, however, some fractures of the long bones, particularly of the femur, in which the powerful muscles with their enormous leverage may so hold the displaced fragments that it would appear almost impossible to bring them into their proper apposition. It is absolutely necessary to obtain a good apposition, and it is equally necessary that the axial center be established as near normal as possible.

These are the weighty points of Lane's operation, which elicits such highly successful results. Unless these conditions can be satisfactorily demonstrated, the operation must be looked on as a failure and the whole object becomes one of defeat.

The clamp shown in the illustration is the outcome of considerable study. It was the object to create an instrument that was practical and simple in construction, and one that would not be too much in the way of the surgeon.



Bone-clamp for holding the bone-ends in apposition. A indicates cross-bar; B, screw part; C, handle; D, counter-prong; E, supporting prong.

The principal object borne in mind, however, was the construction of an instrument that could be insinuated under the fractured bone-ends with the least amount of traumatism possible. That this might be accomplished, the clamp is provided with a handle of sufficient strength to permit of a firm grasp, so that, whatever strength may be necessary for its insinuation, it can be exerted in a steady and fixed manner.

The clamp apparatus of the instrument is exceedingly simple, with no screws to complicate it. It is of sufficient strength to permit any force that may become necessary to be applied to maintain the fractured ends in apposition. To avoid misinterpretation of this instrument, however, I wish to emphasize that the purpose of this bone-clamp is not to force the fractured bone-ends into apposition, or to maintain them in apposition by force, but to hold the bone-ends in apposition after the surgeon has made the proper anatomic correction, and to permit the steel plate to be applied under the best possible advantage. A steel plate, applied while the ends of a fractured bone are being held in "position" by the force of a clamp—a faulty apposition and one not anatomically correct—could hardly be expected to compete with such a powerful instrument.

This instrument possesses commendable characteristics. It is a one-piece instrument. Its manipulation, on account of its construction, invites ease without rough handling of the tissues. The supporting prongs are so constructed that they cannot endanger any blood-vessels that might lie in the immediate vicinity of the broken bone; the counter-prong, attached to the screw part, will not impinge on any structures excepting those desired. It permits of the ready reception of the steel plate and holds it in place without interfering with the driving of screws. The cross-bar, should it be in the way, can be removed.

4629 Cook Avenue.

## SYPHILIS, DIABETES AND SALVARSAN

J. Rhodes Longley, B.Sc., M.D., Fond du Lac, Wis.

Unable to find any literature bearing on the salvarsan treatment for syphilis in a diabetic, I report the following case: The patient is a diabetic who has been under my treatment for the past two years. I mention this to dispel the idea that I had used salvarsan in a case wherein diabetes or glycosuria followed the syphilitic infection.

*Patient.*—Mr. M. called me Nov. 7, 1911, complaining of some peculiar cerebral seizures attended by dizziness, transitory aphasia and general weakness. Their exact nature was not clear. In the course of my examination there was revealed a sore on the penis which had ulcerated almost through the frenum. There was very little induration and in ten days with soaking in warm boric-acid solution it readily healed. December 5 the patient began complaining of slight sore throat, and a papular rash was present over the abdomen. On the 15th he returned with a general papular rash and other more marked symptoms of syphilis.

*Treatment.*—I prescribed a suitable diet for him and told him of the salvarsan treatment for syphilis. This he was anxious to try, for the two diseases were, he believed, too much for him to contend with mentally. Knowing that Ehrlich had advised that in complicated cases of syphilis salvarsan should be given with extreme caution, if at all, I hesitated about using it. After advising, however, with Dr. Herrick of Chicago, who stated that he believed it would not be dangerous, as arsenic often improved diabetics, I injected salvarsan intramuscularly on December 21, with the usual care as to asepsis.

Salvarsan, 0.6 gm., was suspended in 10 c.c. iodipin, and after painting the gluteal region with iodin I injected high up in the right gluteal muscle. The patient suffered practically no pain; he rested well that night. Pulse was slightly increased, and on December 23 he went home with rash almost gone.

*Course.*—December 26 he returned to my office with good color, increase in weight, no rash and throat in good condition. There was no induration in the gluteal region, nor had ulcerations and sloughs occurred. Immediately following the injection I placed him on inunctions of mercury.

The following was his percentage of sugar in urine:

| | |
|---|---|
| December 21, before injection | .2 |
| December 22 | .2 |
| December 23 | .3 |
| December 26 | .8 |
| January 4 | 1.3 |
| January 16 | .42 |

The salvarsan had very little effect on the sugar excreted, for this is about the percentage he had for the past two years. While its safety in all cases of syphilis occurring in diabetes is not proved by the experience with one patient, it is interesting to note that in this instance no harm followed its use.

40 South Main Street.

## A CASE OF ACETONEMIA

E. O. Houda, M.D., Centralia, Wash.

The patient, a boy, aged 15, had an acute attack of appendicitis on Jan. 17, 1912. He vomited a number of times and complained of being chilly; temperature was normal; pulse 80. There were colicky pains about the navel but very little over the appendix, even on deep pressure. The bowels were free. The next morning, after a restless night, the temperature was 101.5 F. and the pulse 90; there was pain over the appendix but that about the navel had disappeared. On the afternoon of the same day the temperature was 102; pulse

100. The boy was taken to the hospital and a gangrenous appendix removed under chloroform anesthesia. No pus or any evidence of peritonitis was found, and the wound closed without drainage. The operation lasted about thirty-five minutes. The patient, being rather restless when put to bed, was given ⅛ grain of morphin. He slept all night and on awakening in the morning said that he was feeling fine. There was very little postoperative nausea, but at the end of forty-eight hours, during which time there had been no alarming symptoms and the temperature and pulse had been normal, the patient became very restless. His skin was of an icteroid hue and his breath had an ethereal odor. The restlessness was periodic; the patient would be quiet for a few minutes, then toss about in bed for two or three minutes and then become quiet again. This restlessness lasted all night and bromids, and finally, a few doses of morphin did not quiet him to any marked degree. There were no apparent signs of infection about the wound and the patient would not answer questions; he seemed to be in a dazed condition mentally.

On the morning of the 21st the restlessness had ceased and the boy was in a stupor. His color was distinctly jaundiced and the odor of his breath was of a strong peculiar ethereal character, resembling that of a diabetic *in extremis*. This odor could be readily noticed on coming within four or five feet of the bed. The kidney function was normal but the urine had an acetone odor and acetone was demonstrated chemically; there was no sugar. Venesection was performed and about 500 c.c. of blood were withdrawn and 500 c.c. of normal salt solution with 10 gm. of sodium bicarbonate injected. The patient did not rally after the injection and six hours later another section was done with a second injection with no results for the better and the boy died in coma with a temperature of 103 and a pulse of 140. Only a partial postmortem was obtainable, that of the abdominal cavity. The peritoneum was normal throughout; the field of operation was free from all signs of infection, but the liver was quite large and of a pale color.

## New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

### BACILLUS COLI VACCINE.—(See N. N. R., 1912, p. 210).

Parke, Davis & Co., Detroit.

*Colon Vaccine.*—This product is marketed in four bulbs. Each bulb contains 200 million bacteria sterilized with heat and ready for use. The package is marked with the date up to which the product should retain its full labeled strength.

### GONOCOCCUS VACCINE.—(See N. N. R., 1912, p. 211).

Parke, Davis & Co., Detroit.

*Gonorrheal Vaccine (Combined).*—This product is marketed in four bulbs. Each bulb contains micrococcus gonorrheæ 500 million and staphylococcus albus, aureus and citreus 400 million bacteria, sterilized with heat and ready for use. The package is marked with the date up to which the product should retain its full labeled strength.

### TYPHOID VACCINE.—(See N. N. R., 1912, p. 214).

Parke, Davis & Co., Detroit.

*Typhoid Vaccine (Prophylactic).*—This product is marketed in four bulbs. Each bulb contains bacillus typhosus 1,000 million bacteria sterilized with heat and ready for use. The package is marked with the date up to which the product should retain its full labeled strength.

### STAPHYLOCOCCUS VACCINE.—(See N. N. R., 1912, p. 212).

Parke, Davis & Co., Detroit.

*Furunculosis Vaccine.*—This product is marketed in four bulbs. Each bulb contains staphylococcus pyogenes aureus 400 million bacteria sterilized with heat and ready for use. The package is marked with the date up to which the product should retain its full labeled strength.

### ACNE VACCINE.—(See N. N. R., 1912, p. 210).

Parke, Davis & Co., Detroit.

*Acne Vaccine.*—This product is marketed in four bulbs, each bulb containing 100 million bacteria sterilized with heat and ready for use. The package is marked with the date up to which the product should retain its full labeled strength.

### COMBINED BACTERIAL VACCINE.

Parke, Davis & Co., Detroit.

*Combined Bacterial Vaccine.*—This product is marketed in four bulbs. Each bulb contains 750 million bacteria of mixed streptococcus pyogenes, staphylococcus pyogenes aureus, staphylococcus pyogenes albus, staphylococcus pyogenes citreus, bacillus coli communis and diplococcus pneumonia, sterilized with heat and ready for use. The package is marked with the date up to which the product should retain its full labeled strength.

## Therapeutics

### HEXAMETHYLENAMINA, U. S. P.

#### DESCRIPTION

Hexamethylenamin is sold under various proprietary names; as for instance, urotropin, uratone, formin, aminoform, hexamin, cystamin, cystogen, etc. It is produced by the action of ammonia on formaldehyd, and occurs as colorless crystals which are without odor, and in watery solutions gives a slight alkaline reaction. It is very soluble in water (less than two parts) and quite soluble in alcohol (about ten parts).

Hexamethylenamin occurred as a chemical long before it was used as a drug by Professor Arthur Nicolaier, of Berlin, in 1894 and 1895, when he was chief of the medical clinic of the University of Göttingen. It was first used as an antiseptic in kidney and bladder infections; later to destroy typhoid bacteria in the urine, and still later it was found to be of value in phosphaturia. It was first thought that it would act as a solvent of uric acid calculi, but this was soon disproved.

#### SYSTEMIC ACTION

This drug has no local action, and therefore is not used externally. When taken into the stomach it is absorbed rapidly, and its excretion through the kidneys begins rapidly. It has no effect on the circulatory and nervous systems, and does not seem to cause general poisoning. It has not been shown that it has very strong action as an intestinal antiseptic, except that some of it may be excreted, after absorption, into the colon.

While just what becomes of the whole of the hexamethylenamin in the body has not been determined, it is known to be largely excreted in the urine, and has been found in the blood, in the gall-bladder, in the pancreatic juice, in the middle ear, in the serous fluids of the cerebrospinal axis, and it has lately been shown that it is probably excreted into the various mucous membrane cavities or sinuses associated with the nose and throat. It has been shown that it is excreted into the pleural cavity, and into the synovial fluid of the joints (Crowe: *Johns Hopkins Hosp. Bull.*, 1908, xix, 109, and xx, 102), and into the sputum of patients suffering from bronchitis, pneumonia, pulmonary tuberculosis, and even asthma. (Armstrong and Goodman: THE JOURNAL A. M. A., May 27, 1911, p. 1553.) Its value lies in that it breaks up in the tissues and thus formaldehyd is liberated.

The excretion into the urine begins quickly, but if several doses have been taken, it may not be fully excreted for several days. Part of the drug is excreted unchanged, but during the course of its excretion, under the influence of acids or acid salts, a large part is decomposed and formaldehyd liberated, as above stated. Even after small doses of hexamethylenamin, its presence may be shown in the urine if bromin water is added to it, it causing an orange-yellow precipitate. This precipitate is a dibromid of hexamethylenamin. The drug may be found in the urine in less than half an hour after it has been ingested, and after a single dose of 1 gram, its presence may be demonstrated in the urine for more than twenty-four hours.

While it was first stated that continuous large doses could be given without causing any ill effects, it was soon found that even 1 gram (15 grains), administered three or four times a day, could cause considerable kidney and bladder irritation. On the other hand, an albuminuria may become less, and an irritable bladder from a preceding inflammation may become less irritable. During its administration, however, if it seems advisable to give large doses, any symptoms of urinary irritation should be quickly noted, and the dose should be immediately reduced or the drug temporarily stopped if such irritation is caused.

There is no question but that probably most germs that are likely to reach and infect the kidneys, ureters, and bladder, or may develop in these parts are killed, or more or less completely eradicated by the administration of this drug. Ammoniacal fermentation is stopped, and inflammation of the mucous membrane of the bladder becomes improved from the administration of hexamethylenamin, the urine becoming clear and acid. At times the drug seems to cause diuresis, i. e., an actually increased amount of urine is passed. It is often a successful treatment, and sometimes the only successful treatment of phosphaturia, or an excess of phosphates in the urine. That it can prevent the deposition of uric acid crystals is perhaps a fact; that it dissolves uric acid after calculi have been formed, however, is probably doubtful.

It has positively been shown that it can soon cause destruction of many bacterial infections of the gallbladder. Of course, it could not cure a chronic cholecystitis. It makes, however, the most successful medicinal treatment after operative treatment of cholecystitis (Crowe, S. J.: *Johns Hopkins Hosp. Bull.*, 1908, xix, p. 109).

In certain instances in which it seems advisable, it has been given continuously for months, and sometimes even for several years without causing harm, provided the dose is not large. It seems almost positive that it cannot cause chronic poisoning or degeneration of tissue. This has been proved not only clinically, but also experimentally.

It has lately been advised to administer the drug hypodermatically, and when so administered it has been found in the blood. In animals it has been shown that large doses so administered may cause congestion of the stomach mucous membrane and hemorrhages into the mucosa, with possible ulceration. It also is shown that large doses may cause necrosis of the tissue at the point of injection. If the dose is not large, the animal will recover. This shows that there is no real permanent organic lesion. Small doses may be well tolerated (Frothingham, Channing: *Arch. Int. Med.*, November, 1909, p. 510).

### ACTION OF A THERAPEUTIC DOSE OR THE PRIMARY PHYSIOLOGIC ACTION

The only noticeable effects of an ordinary dose of hexamethylenamin are the slight odor of formaldehyd in the urine, the rendering of alkaline urine acid, and general improvement in the character of a urine that is pathologic from genito-urinary inflammation. The first symptoms of overaction are a slight irritation of the stomach and bladder, irritability or a too frequent desire to urinate.

### TOXIC SYMPTOMS

Unless the dose administered were very large, real toxic symptoms would probably not occur from this drug. If it were to cause severe poisoning, however, the symptoms would be gastric irritation, diarrhea, some abdominal pain, some pain in the back denoting kidney congestion, excessive irritability of the bladder, with strangury, and possibly some hematuria or hemoglobinuria. There may also be, from the intestinal irritation, an eruption on the skin, urticarial in character.

As above stated, while one may treat many patients with ordinary doses of hexamethylenamin without undesired symptoms occurring, not infrequently there seems to be an idiosyncrasy against it; in other words, in such patients gastric irritation is readily caused, and albumin, casts, and a small amount of blood may occur in the urine.

The treatment of poisoning by hexamethylenamin is, of course, withdrawal of the drug; the administration of castor oil or some saline laxative; the administration of subcarbonate of bismuth; plenty of hot water, oatmeal gruel or barley water; withholding of all food except milk; hot baths to relieve the kidney congestion, frequent sitz baths, or hot fomentations to the back; a small dose of morphin with atropin, given hypodermatically, if deemed advisable for strangury, or a suppository of these drugs may be used. Such treatment will probably cure the condition.

If the kidneys are normal, in other words, if there is no chronic nephritis and no serious acute nephritis, the hexamethylenamin will be entirely excreted in from twenty-four to forty-eight hours.

In ordinary doses hexamethylenamin will very rarely cause an albuminuria. If there is chronic interstitial, perhaps latent, nephritis, however, this drug may cause such albuminuria. On the other hand, if chronic nephritis is present, with albumin and casts, and a positive indication for the use of hexamethylenamin exists, as pyelitis or cystitis, or meningitis due to an infection, the drug should be used, and the albuminuria may not only not be increased, but may be diminished.

### THERAPY

This drug has proved of very great value in the treatment of inflammations of the genito-urinary tract. Pyelitis from all causes, cystitis, prostatitis and general urethritis are all benefited, and pyelitis and cystitis may be cured by the more or less continued use of hexamethylenamin. If there is tuberculosis of a kidney or a calculus in the kidney or bladder, of course it should be surgically removed, but preceding the operation and for some time after the operation hexamethylenamin should be administered. If there is albumin in the urine, showing possible disturbance of the liver parenchyma, the dose must be small. Under any conditions in which the drug is to be given for some time the dose should be small; 0.5 gram (7½ grains) three times a day, or 0.3

gram (5 grains) four times a day should be considered a fair dose, and should even at this dose be gradually reduced. One gram (15 grains) should always be considered a good-sized dose, and where the reason for the use of this drug is a chronic condition there is no excuse for the administration of large doses.

Hexamethylenamin is not so irritant to the kidneys as is phenyl salicylate (salol), and is more efficient as an antiseptic. Salicylic acid is somewhat of a genito-urinary antiseptic, but not very efficient. Copaiba is a very weak genito-urinary antiseptic; turpentine somewhat better, but more irritant than hexamethylenamin; and santal oil has a slight antiseptic action.

It has been shown that when hexamethylenamin has been administered the urine may reduce copper solution and cause the suspicion of glycosuria. It does not ordinarily, however, reduce bismuth solutions, and never responds to the ferment test for sugar or to the polarizing test (Abt, I. A.: *Arch. Pediat.*, April, 1907).

If there is a large amount of mucus in the urine from a prostatic irritation, without a real cystitis, the urine becomes more or less irritant and, perhaps, soon is less acid and later is alkaline. Hexamethylenamin, by its ability to keep the urine acid and free from germs, will aid in preventing a cystitis, and even may aid in curing the prostatic irritation.

In gonorrhea anything that will keep the urine and the bladder, and perhaps the posterior urethra, free from germs, without causing harm, is certainly good treatment. Therefore, from the beginning of gonorrhea, hexamethylenamin should be administered, perhaps best in frequent small doses, never more than 0.3 gram (5 grains) four times a day, and perhaps even less. Before and after any instrumentation of the urethra, bladder or ureters, it is good treatment to give hexamethylenamin.

In phosphaturia hexamethylenamin is sometimes the only successful treatment; and phosphaturia, if continuous, is serious for the reason that it causes irritation of the bladder, soon a subacute cystitis, and also gives the impetus to the formation of phosphatic calculi, if mucus or other nuclei for such are present.

It has been a question whether during typhoid fever hexamethylenamin should be administered or not. It has not been shown that this drug will render the region of the intestinal inflammation less prolific in bacteria. However, with the knowledge that typhoid bacilli can migrate to the gall-bladder and the kidney, to say nothing of circulating in the blood, there would seem to be a positive indication for the administration of hexamethylenamin, but in such small doses as to preclude the possibility of causing kidney or gastric irritation. Typhoid bacilluria has been stopped by the administraion of hexamethylenamin. Typhoid carriers have been cured by the administration of this drug. Therefore, it eems wise to prevent typhoid germs appearing in the urine rather than to wait and then cure the condition. The dose during typhoid fever could well be 0.2 gram (3 grains) given once in four hours for the first few days, and then once in six hours, and continued throughut the fever and even through the convalescence, unless here is some reason to stop the drug. Of course the frequency of the dose could be diminished to twice a day if it seemed advisable.

In gall-bladder inflammation, whether due to colon acillus, the typhoid bacillus, or some streptococcic infection, hexamethylenamin is the proper treatment as soon as the diagnosis is made, and for some time after perative interference, if such is necessary.

It seems wise to administer hexamethylenamin during all middle-ear inflammations (otitis media), both acute and chronic.

It has lately been advised that in ordinary colds, influenza colds, or other throat and nose infections, hexamethylenamin is good treatment. The attacks many times seem to have been shortened by its use. The dose in an acute rhinitis, tonsillitis, or middle-ear trouble should probably be large at first, i. e., 0.5 gram (7½ grains) every three hours for five or six doses; the frequency of the dose should then be diminished. Whether this treatment is valuable in bronchitis has not yet been positively shown, but it seems to be good treatment.

In pneumonia it has not been shown to be of much value (Shattuck, F. C.: *Boston Med. and Surg. Jour.*, June 15, 1911), and in pulmonary tuberculosis it is still a matter for more clinical investigation.

Whether this drug will prove of value in acute rheumatism, it seems certainly good treatment for infected joints. It would also seem good treatment in malignant endocarditis.

Whatever else we do, whether by an antitoxin or by medicinal treatments, any meningitis, whether from typhoid fever, pneumonia, cerebrospinal fever, anterior poliomyelitis, or from mastoid inflammation and danger of a local meningitis, hexamethylenamin should probably always be administered. In such serious infections the dose should probably be temporarily large, perhaps 1 gram (15 grains) every four hours for several doses; then the amount should be reduced.

Before all operations on the head or on the spinal canal it is well to give hexamethylenamin for a day or two.

### ADMINISTRATION

The average dose of hexamethylenamin is 0.5 gram (7½ grains), given perhaps two or three times in twenty-four hours, but the exact size and frequency of the dose depends on the condition present. The drug should always be taken dissolved in water and largely diluted. It should never be swallowed as a powder or tablet or in a capsule: 0.3 gram (5 grains) should be dissolved in at least half a glass of water, while a larger dose should be dissolved in a full glass of water.

As above stated, while some patients are susceptible to this drug, and others can only take it a certain length of time without some symptom calling for its cessation, other patients may take the drug for months and even years without any disturbance whatever.

It is probably not advisable to use this drug hypodermatically, although it has been so used (Gundrum, F. F.: *California State Med. Jour.*, July, 1911).

Helmitol, the methylene citrate of hexamethylenamin, has not been shown to be of any greater value, i. e., to liberate any greater amount of formaldehyd, than the straight hexamethylenamin.

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**He Is Certainly Liable to Be Ill.**—A medical certificate, recently given, read as follows: "To Whom it May Concern: This is to certify that I the undersigned this day visited Mr. ————, and find him suffering from the following complaints: chronic articular rheumatism, hemorrhoids, fistula in ano, chronic gingivitis, chronic otitis media, cystitis, angina pectoris, arteriosclerosis, frontal sinusitis, atrophic rhinitis, myalgia. I believe he will be ill and confined to bed or should be for two weeks when he will not be well but may be able to work." This certificate, signed by a physician, would seem to give some ground for the fear that the man might be in danger of feeling somewhat indisposed.

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[*For other information see second page following reading matter*]

SATURDAY, APRIL 20, 1912

## THE NUTRITIVE VALUE OF INORGANIC PHOSPHATES

For many years there has been a wide-spread tendency to assume a better physiologic utilization of certain inorganic elements when they are furnished in the form of organic combinations. This has found expression in the domain of therapy in current preferences for preparations in which iron, phosphorus, calcium and other elements are reputed to be combined or masked in the nature of "organic" compounds. Certain experiments on record have been interpreted to speak in favor of this; but for the most part it must be admitted that there has been little really competent evidence in relation to the whole matter. We have been accustomed so long to question the synthetic or constructive powers of the animal organism that there has been a natural impulse, as it were, to hesitate to believe that inorganic compounds can be built up into blood and muscle and bone with the same readiness as are "organic iron" or "organic phosphorus" and the like. This point of view, based more largely on belief than on actual knowledge, has been fostered by manufacturers to such an extent that "organic" preparations of some of the elements are in high favor at the present time.

In the face of this situation, on the other hand, a stream of evidence is pouring in with respect to the synthetic capacity of the body. Interesting illustrations of this are available in the case of the formation of organic phosphorus compounds from inorganic phosphates. The underlying problem here is expressed in the question: Can lecithins (phosphatids) and nucleoproteins and phosphoproteins (like the casein of milk or the vitellin of eggs) be constructed *de novo* from inorganic compounds of phosphorus by the animal cells? Here again the agricultural experimenters, whose scientific enthusiasm and energy are at times treated with poorly concealed indifference on the part of medical men, have led the way. In Germany, for example, Fingerling[1] has shown that ducks can form lecithins, nucleoproteins and other phosphorus-containing compounds quite as readily out of inorganic phosphates as from organic phosphorus compounds. The animals were fed on dietaries so selected as to furnish little, if any, of the latter; and then they were allowed to lay eggs, which are notably rich in the organically combined phosphorus of the yolks. Phosphates were, of course, fed, and the eggs continued to be furnished in the usual quantity and quality for long periods. Similar experiences have lately been reported by McCollum and Halpin,[2] who showed that lecithins are readily formed by hens when fed rations free from these substances.

These facts, to which others might be added[3] point unmistakably to the ease with which animals can utilize the inorganic phosphates for synthetic purposes. To the physician they emphasize the caution which ought to be exercised in ascribing subtle or unproved advantages to a host of organic compounds like lecithin and glycerophosphates, the rôle of which is still so largely uncertain.

## AMERICAN TYPHUS AND BODY LICE

The recent announcement[1] of the demonstrated identity with typhus fever of the symptom-complex called Brill's disease, has renewed interest in that old-fashioned disease which had become so rare and apparently was so thoroughly under quarantine control as to be quite negligible in this country. The main differential diagnostic signs are the rapid development and the almost critical ending of typhus and the fact that the eruption is distributed on the extremities and occurs occasionally even on the palms and soles. Justifying the name of "typhus," which in the Greek means a mist or cloud, and hence a mind-beclouding stupor, the apathy and prostration begin early in typhus. They are of much later development in typhoid.

More interesting than even the discovery of the occasional presence of typhus unsuspected among us is the mode of distribution of the disease. It has been experimentally demonstrated that typhus may be given to monkeys by the bites of body lice which have previously bitten human patients suffering with the disease or monkeys which have been infected with it in the laboratory. *Public Health Reports* (U. S. P. H. and M.-H. S.) declares that "it seems likely that the body louse is probably the usual distributing agent by which the disease is carried from individual to individual. Observation seems to show almost beyond doubt that typhus fever is not spread by fomites or by direct contact with the patients suffering from the disease unless the contact is of such a kind that the exchange of body lice become possible." In the light of this modern demonstration some well-known traditions with regard to the intense contagious-ress of typhus gain additional interest. In old times typhus was called jail-fever or ship-fever, evidently because of the opportunities for the spread of the disease afforded by the intimate living conditions necessitated by the small crowded ships and jails of those days. A number of stories are told of judges, lawyers, jurymen and spectators being stricken with the disease within a day or two after prisoners suffering from typhus were brought into court. We can only conclude from our present knowledge that in the crowded stuffy conditions of the old-time court-rooms it was not impossible that body or clothing lice found opportunities to pass from prisoners to more promising food material.

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[1] Fingerling, G.: Die Bildung von organischen Phosphoverbindungen aus Phosphaten, Biochem. Ztschr., 1912, xxxviii, 448.

[2] McCollum, E. V., and Halpin, J. G.: Synthesis of Lecithins in the Hen, Proc. Am. Soc. Biol. Chem., 1911, Jour. Biol. Chem., 1912, xi, xiiii.

[3] Wendt: Skand. Arch. Physiol., xvii, 211; Holsti: ibid., xxiii, 143; Hart, McCollum and Fuller: Research Bull. 1, Univ. Wisc. Agric. Exper. Sta., 1909; Gregersen: Ztschr. physiol. Chem., lxxi, 49; Lipschütz: Arch. f. d. ges. Physiol. (Pflüger's), cxliii, 99.

[1] Anderson and Goldberger: Pub. Health Rep., Feb. 2, 1912, p. 149. Demonstration of the Identity of the So-Called Brill's Disease with Typhus, The Journal A. M. A., Feb. 10, 1912, p. 414.

The feeling of instinctive revulsion against parasites of all kinds which characterizes humanity generally, and which is due to something much more than the mere pain or annoyance that their bites might inflict, becomes more interesting as further discoveries show the rôle of such insects in the spread of disease. Unfortunately this natural abhorrence has not been enough to protect man under conditions of poverty and uncleanliness from harboring such parasites, and now those who understand how much more than a mere personal annoyance is in question from the existence of parasites must take up the problem of eradicating them. The possibility of the bedbug conveying relapsing fever, typhoid and leprosy, has been suggested and apparently there is no insect pest of man that may not be a mode of disease conveyance. Flies, fleas, mosquitoes and bugs—not only are all under suspicion, but most of them are also actually demonstrated as ordinary and frequent conveyors of diseases of various kinds. Evidently health authorities must now take up the problem of getting rid of noxious insects quite as seriously as that of preventing the growth and distribution of pathogenic bacteria.

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## THE REPORT OF THE ROYAL COMMISSION ON VIVISECTION

The appointment of the second Royal Commission on Vivisection in 1906 was not regretted by the medical investigators of England, for they welcomed the opportunity it offered to present prominently the results of animal experimentation which had been obtained since the first commission reported thirty years before. The investigators were not disappointed in their anticipations. During the first eighteen months the commission held over seventy meetings at which every aspect of medical and surgical progress and every shade of antivivisectionist opinion was presented by representatives of the two parties concerned. The minutes of evidence, comprised in nearly 22,000 questions with answers, in five huge reports, are a mine of information on the subject. After four years of consideration of this array of testimony the commission has at last reported.

After an account of the British act of 1876 and its administration, the report refutes in detail criticisms of the act by two somewhat notorious antivivisectionists whose visits to this country will be remembered — the Hon. Stephen Coleridge and Miss Lind-af-Hageby. Mr. Coleridge made twelve specific charges against the present legislation and its enforcement. The commission says: "These twelve charges are the outcome of a ten-years' investigation of the administration of the act by the department, conducted by an acute and indefatigable critic, supported, as he told us, with ample funds." But the commission concludes: "We are of the opinion that, on the whole, the working of the act has been performed with a desire faithfully to carry out the objects which its framers had in view."

Miss Lind-af-Hageby's harrowing story of the rabbit she saw in Waller's laboratory, placed in a "freezing machine" and "frozen stiff, like a piece of wood," was investigated by the commission, which found that the lowest temperature to which the animal was subjected was 45 F.! Inasmuch as the animal was described also as "springing back with all signs of terror" when it was removed from the "freezing machine," the wooden stiffness was purely rhetorical. Another heart-rending tale by this romancer concerned a marmot with spinal cord "divided by a vivisector." On investigation the commission found that Miss Hageby had erroneously ascribed to paralysis the state of paraplegia incident to partial recovery from hibernation. No operation whatever had been performed on the animal.

After careful consideration of these and other cases, the commission says: "We have come to the conclusion that the witnesses have either misapprehended or inaccurately described the facts of the experiments."

The laboratory workers are commended as follows: "So far as we can judge, we believe that holders of licenses and certificates, with rare exceptions, have endeavored with loyalty and good faith to conform to the provisions of the law." And the report continues: "We desire further to state that the harrowing descriptions and illustrations of operations inflicted on animals, which are freely circulated by post, advertisement or otherwise, are in many cases calculated to mislead the public, so far as they suggest that the animals in question were not under an anesthetic."

Following this discussion of the existing law and its critics, a section of the report is devoted to the progress of medicine as dependent on animal experimentation. Although many of the statements are undisputed, it is perhaps advantageous to have them expressed, for they give official assent to the claims of the medical witnesses that experiments on animals have played an essential rôle in the revolution in medicine and surgery during the past sixty years. "Having regard to the witnesses who have appeared before us," the commissioners declare, "and to the evidence which we have received, there can be no doubt that the great preponderance of the medical and scientific authority is against the opponents of vivisection."

The moral question involved in experiments on animals is dealt with in one of the most interesting sections of the report. In no feature did the argument of the antivivisectionists differ so greatly in 1906 from what it was in 1876 as in the emphasis on the moral wrong of the practice. They seemed to realize that utter rout would result from serious questioning of utility, and therefore took higher ground. One of them stated, "I would not have one mouse painfully vivisected to save the greatest of human beings, or the life dearest to me." The commissioners, however, seem not to have been greatly impressed by these views. Basing their judgment on the "average moral sense of Christian communities," which is "not offended by the sacrifice of lower animals for the food, clothing, adornment and, within limits, the sport of man," they conclude that "experiments on animals, adequately safeguarded by law, faithfully administered, are morally justifiable and should not be prohibited by legislation." The only modification of this dictum in the report is the subsequent intimation that some of the commissioners would favor eliminating dogs, cats and anthropoid apes from experimentation. Such a course, pursued during the past twenty years, would have prohibited some of the most illustrious and valuable researches in the history of English medicine.

The recommendations made by the commission are insignificant: they include an increase in the number of inspectors from two to four; an unimportant restriction in the use of curare; precautions against pain after operations, and a change in the advisory body for the Home Office. The report and the recommendations are signed unanimously by the eight commissioners; but three of them also present memoranda which, while not affecting the main features of the report, express certain personal reservations. The recommendations fortunately are within the province of the Home Office, and do not require action by Parliament.

The lay press, in commenting on the work of the commission, has, almost without exception, regarded the conclusions as strongly justifying the experimental use of animals, and as giving the antivivisection cause a serious setback. Mr. Stephen Coleridge, on the contrary, rises complacently from the chastisement which he receives, and proclaims the report "a striking and triumphant vindication of the struggle carried on by the National Antivivisection Society for the last fourteen years"! As usual, the agitators are at odds, and Mr. Sidney Trist, of the London and Provincial Antivivisection Society, states that the report must be regarded as "justifying the worst fears of the antivivisectionists."

Happily, the petty quarrels of these malignant critics do not disturb the progress of medical science. As an interesting comment on the rapidity of that progress, it may be noted that the report has nothing to say of antimeningitis serum, of experimental proof of the nature of poliomyelitis infection, of the results of antityphoid inoculation in the United States Army, or of the discovery and use of salvarsan. All these contributions of animal experimentation to practical medicine were too recent to be brought before the commission, and none was utilized in the decision which that body reached. Truly the way of the antivivisectionist is becoming daily more difficult.

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## IS CERTIFIED MILK SAFE?

Certified milk is used chiefly for infant-feeding and for invalids and should be absolutely above reproach. The occasional occurrence of epidemics spread through the use of certified milk brings up the question whether or not the regulations for its production prescribed by the medical milk commissions are really far-reaching enough. Medical milk commissions attempt not only to control the production of milk by prescribing the manner in which the dairy is to be equipped and the regulations for handling and shipping the milk, but also to exclude pathogenic bacteria by periodical examinations of employees in the dairy and by binding the producer by contract to report outbreaks of contagious diseases among his employees. The safety of certified milk, therefore, depends on the honesty, intelligence and circumspection of the producer and on the findings of the medical examiner.

The isolation of the pathogenic bacteria from milk is a difficult problem. They are relatively scarce in proportion to the total bacteria content of milk and are easily overlooked. Considerable time is necessary to determine their presence and consequently routine examination is useless.

It is customary to have one medical examination each month of employees of dairies producing certified milk. Change of personnel may take place during the intervening time. New employees may be in the incubation stage of some infectious disease, such as typhoid fever or diphtheria, or may have recovered from these diseases recently and may be carriers of infection. It is obvious that chronic or intermittent germ-carriers may infect the milk before medical examination under the present system can exclude them.

The quantity of certified milk sold is probably less than 0.5 per cent. of the total amount of milk consumed. One epidemic caused by certified milk would, therefore, bear the same relation to the total amount of certified milk produced as two hundred epidemics to the total milk-supply. Just what proportion of epidemics the use of certified milk saves there are no statistics to show, but the lessening of general morbidity among infants, who consume most of the certified milk, must be considerable.

Sanitary, medical and veterinary inspection under contracts with medical milk commissions involves much expense, which is borne by the dairies, and the requirements in the way of equipment demand the investment of large sums of money. Regulations concerning the food of the cows are also exacting. All of this makes the expense of producing certified milk high. A maximum of 10,000 bacteria per cubic centimeter is the limit set by the milk commissions and it has been found that milk with less than this maximum can be produced by proper care with comparatively inexpensive equipment. It will, therefore, be seen that without compelling producers to go to large expense in providing equipment much could be accomplished by giving more attention to medical inspection and methods in production.

Medical inspection should be accompanied by bacteriologic examination for germ-carriers among the employees. The majority of bacteria occurring in milk are harmless. A milk with a few typhoid germs is more dangerous than milk with large numbers of harmless germs. This fact is sometimes lost sight of in the rivalry of dairies to produce certified milk with low bacterial content. This raises again the question of attempting to secure safety by pasteurization of all milk.

The leaders of the certified milk movement recognize the deficiencies of the present methods and are endeavoring to throw more safeguards around production. It is hoped that at the coming meeting of the American Association of Medical Milk Commissions a thorough revision of the conditions imposed on dairies will be considered and that more stress will be laid in the future on methods of production and medical and bacteriologic examination of employees. Much of the present expense of equipment could thus be eliminated.

## BOOKS AND BACTERIA

What we are pleased to call modern civilization brings with it an almost endless number of perplexing problems which the conservators of public health and general welfare are condemned to face. The public school and the public library have come to stay; and they have brought with them the public book, an acknowledged carrier of contagion and disseminator of disease. The day has gone by when the guardians of health can afford to overlook these facts, despite the indifference with which they are regarded by many people. Was it not yesterday that a poorly concealed sneer greeted the crusade against spitting in public places? Yet who will deny that an unremitting campaign of education has brought about a decided change in public sentiment and a distinctly sympathetic attitude in such matters?

Need we recall the danger of contamination involved in the ordinary handling of books? Doubtless an element of undue exaggeration has often entered into the consideration of the spread of sickness by such modes. Dr. A. H. Doty is reported to have said: "It is fortunate that money constitutes such an unimportant factor in the transmission of disease, as nothing could be more farcical, from a sanitary point of view, than to attempt to disinfect it, although this has been seriously proposed. It is important that those who have given this subject careful investigation should aid in the education of the public, in order that they may have a proper understanding of the matter and not be alarmed by sensational literature on the subject."[1]

Notwithstanding this, the numerous attempts to secure a suitable method of disinfecting books bear witness to the recognized dangers which it is intended to avert thereby. Books are known to have infected people with septicemia and tuberculosis as letters have carried scarlet fever and small-pox. Dr L. B. Nice[2] has made an extensive inquiry regarding the disinfection of contaminated school and library books among the boards of health of all the states and all cities with a population over 100,000. He reports that only nine states and twenty-five cities — those which burn and those which use steam, which likewise destroys — are taking proper precautions in regard to the danger of infection from scarlet fever, diphtheria, small-pox and occasionally measles. This is being done, however, at the sacrifice of the books. A significant fact is that "not one of the one hundred letters mentioned tuberculosis."

As a result of experiments on this subject Dr. Nice has recommended the use of moist hot air at 80° C. and 30 or 40 per cent. humidity for thirty-two hours. This is alleged to destroy all non-sporing bacteria in closed books, even tubercle bacilli in thick layers, without injuring the most delicate bindings. It is suggested that as a matter of precaution, especially against tuberculosis, it would be well if public library books that are much in use and all school books were disinfected by this method at regular intervals. Whether "boards of health should make daily reports to the schools and libraries of all contagious diseases, including small-pox, measles, whooping-cough, scarlet fever, typhoid, erysipelas, dysentery, diphtheria, venereal diseases and tuberculosis," as Dr. Nice advocates, we leave to these already overworked officials to decide. Public school books should, perhaps, always be disinfected before they are given out to a new set of pupils. The lack of a really satisfactory method has hampered progress heretofore.

## NEW SUGGESTIONS REGARDING ECLAMPSIA

"Eclampsia is the disease of theories," says Zweifel. The advent of one more explanation of its causation may, therefore, awaken little confidence in the prospect of an adequate solution. Have we not listened to the arguments about perverted metabolism in eclampsia, the possibility of bacterial invasions, the upset of some hypothetical internal secretion, or that vague uncertainty known as auto-intoxication? Nevertheless, the outlook is so serious and the problem so difficult that we may properly welcome any addition to the list which promises some potent advance in our knowledge of the eclamptic state. An interesting possibility has been suggested by investigations conducted at the Kentucky Agricultural

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[1] Hilditch, W. W.: A Bacteriologic Study of Soiled Paper Money, Pop. Sci. Monthly, 1908, lxxiv, 164.

[2] Nice, L. B.: The Disinfection of Books, Pedagogical Seminary, 1911, xviii, 197

Experiment Station[1] in relation to the condition known in veterinary medicine as the parturient paresis or milk-fever of cows, which develops suddenly in heavy milkers after calving.

Healy and Kastle, who conducted these studies, have become thereby more and more convinced that there is a marked similarity between the milk-fever of cattle and human eclampsia. The symptoms, in so far as comparisons can appropriately be made, are quite similar and in each case parturition plays the most important rôle.

A hint as to the possible causes of both of these conditions is given by the entire success of the modern veterinary treatment of milk-fever — a therapeutic advance which has almost completely abolished the mortality from the disease and has greatly facilitated a speedy recovery. It consists in acute dilatation of the udder by means of suitable liquids or gases. Originally introduced on the hypothesis that an infection of the udder was to be combated, the injections of antiseptic solutions have been replaced by those of bacterially inert agents with equal efficiency. Injections of oxygen or sterile air are now commonly employed. Healy and Kastle believe, in view of these facts, that the success of the modern treatment is due to preventing, by pressure, the absorption of a toxin elaborated in the udder as the result of its own metabolism preceding normal milk production. The intense physiologic activity which is suddenly awakened in the mammary glands may easily be conceived to give rise to a great variety of disintegration products of varied chemical character which may be absorbed into the circulation, precisely as milk-sugar is known to return into the organism in this way at the beginning of lactation. Kastle and Healy remark:

"In the present state of our knowledge it is of little moment whether we call the substances other than milk resulting from the sudden disintegrative changes occurring in the udder at, or about the time of parturition, leukomains, alkaloids, toxins or what not. It seems reasonably certain, however, that no gland of the size and physiologic activity of the udder of a heavy milking cow but must contribute largely and sometimes malignantly to the internal secretions of the animal."

The attempt to test this hypothesis has furnished some interesting experiments. The first colostrum obtained from cows during an attack of parturient paresis has been found to exhibit severely toxic effects when injected into other animals, in contrast with the relative inertness of fresh milk or colostrum from normal cows. The postmortem and microscopic examinations of the organs of guinea-pigs killed by injections of the colostrum of a cow known to have milk-fever are reported to show the same pathologic degenerations and changes that are characteristic of eclampsia.

If, as is here assumed, the current treatment of milk-fever by extreme inflation of the udder accomplishes its cure by shutting off entirely or largely the blood-supply of the milk-gland until it has the opportunity to resume its ordinary excretory activity, thereby eliminating the toxic product in the colostrum and milk, an application to human therapy obviously suggests itself. The harmful products must be kept out of the blood-stream. These studies are in their beginning; hence in quoting the suggestions of the Kentucky investigators we are mindful of the extreme reserve with which they must be stated.

"We are of the opinion," Healy and Kastle conclude, "that eclampsia is due to a similar toxin [i. e., similar to that of milk-fever in cattle] elaborated by the breast in a similar manner, and would strongly recommend. as the most promising treatment, dilatation of the breasts with oxygen or sterile air, accompanied by vigorous massage of the breasts, or forcible compression of them by means of a properly applied bandage, at the same time using whatever medical measures may be indicated. We ourselves shall thoroughly test this method of treatment as soon as the opportunity occurs."

## *Current Comment*

### A PENNSYLVANIA REPORT ON CHEAP CONFECTIONERY

A report which shows that good work is being done in some states in the examination and improvement of food products is that of Charles H. Lawall,[1] in behalf of the dairy and food division of the department of agriculture of Pennsylvania. Lawall gives a tabulated account of the results of his chemical analyses of over 250 samples of cheap confectionery obtained from all parts of the state. He confined his research to such substances as are specifically prohibited by law, and did not take up the question of the relative quantities of sucrose, dextrose, etc. Only four samples were found containing substances prohibited by law, and, so far as harmful ingredients are concerned, Lawall believes that the penny candies, largely consumed by children, are of comparatively safe quality in Pennsylvania. The candy, however, is often filthy and therefore unwholesome. In many instances the retailer is to blame for this because the candies become contaminated with dust through exposure. Occasionally goods were found in the unopened package, purchased from the jobber, in a very filthy condition. Cheap gelatin and glue, the latter occasionally of very offensive quality, were found in some samples. Competition has induced manufacturers, in order to give as large an amount for the money as possible, to concoct mixtures of sugar, gums, starches and flours, gelatin and water, which, while not objectionable as individual ingredients, when combined, form tenacious, indigestible masses. Lawall believes that the practice of combining toys with candies should be discouraged, as they are often played with by children before being eaten and accumulate a large amount of filth with consequent danger of various infections. The use of the so-called "ethereal" flavors and resinous glazes is diminishing. While there is a marked improvement in the quality of cheap candies, according to the bulletin, the quality of some of the ingredients is not yet what it should be. Probably the worst feature found was the filthy condition of about 24 per cent. of the samples, an easily preventable condition. It is recommended that manufacturers be compelled to wrap candies in paraffin papers, as is now done in some instances.

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[1] Healy, D. J., and Kastle, J. H.: Parturient Paresis and Eclampsia; Similarity Between These Two Diseases, Jour. Infect. Dis., 1912, x, 226; The Toxic Character of Colostrum in Parturient Paresis, ibid., p. 233.

[1] Bulletin 216, Penna. Dept. Agri., Dairy and Food Division.

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### SILICA IN METABOLISM

It is commonly assumed that silicic acid is one of the substances which is present in small amounts at most among the inorganic constituents of higher animal organisms. Silica occurs familiarly as a constituent of plant structures; but owing to its tendency to form insoluble compounds the element silicon has not been looked on as playing any conspicuous part in human metabolism or of entering in any noteworthy form into the composition of the tissues. The urine has been supposed to carry at best only traces of silica eliminated through the kidneys. The question of the extent to which comparatively insoluble components of the food intake ordinarily enter into the circulation is an interesting and important one. Some insoluble compounds are rendered sufficiently soluble by the acid gastric secretion to account for the possibility of ready absorption. Silica has usually been looked on as one of the group of substances which pass through the alimentary tract as unutilized refuse. The lack of more accurate actual data on the subject must be charged to the difficulties involved in the exact quantitative estimation of silicon and the analytic errors inherent in such work. In view of what has just been said it is interesting at length to have at hand some further contributions regarding the possible migrations of silica in nutrition. Careful analyses by Professor Schulz[1] of Greifswald, have indicated the daily output in the urine of man to be not inconsiderable under ordinary conditions of diet. His figures range from 0.09 to 0.26 gram of silica per day. The content of silica excreted apparently varies with the nature of the diet. Thus when coarse bread (containing 0.03 per cent. of silica) was omitted from the food ordinarily consumed by the subject there was a corresponding decrease in the amount of silica excreted by the kidneys. The highest figures (0.26 gram per day) on the other hand were obtained after ingestion of a soup prepared from millet, the grain of which is notably rich in silica. It appears probable, therefore, that the silicon derivatives present in the foods may be absorbed to a not inconsiderable extent from the alimentary tract of man and reappear in the urine. To what extent this eliminated product has actually entered into the chemical exchanges of the tissues themselves remains to be disclosed by further research.

### ALCOHOL AND INSANITY

While in almost every part of the civilized world alarm is felt at the increasing ratio of insanity in the population, there are some localities which seem, on the other hand, to be becoming less infested, so to speak, with the virus of mental disease. One of these appears to be the State of Kansas, which had in 1904, 56.2 commitments to its asylums per hundred thousand of population. In 1910 the number for each hundred thousand had fallen to 42.3, and in 1911 to 38.3, and the members of the State Board of Control and the asylum officials are said to credit this to the stricter enforcement of the prohibition laws of the state and the consequent diminished consumption of alcohol. Prohibition does prohibit in Kansas, it is asserted, and William Allen White in a recent article in the *Outlook*,[1] corroborates this statement. Of course, there must be some leakage over the border, but it seems to be a fact that Kansas is practically a "dry" state. It is not surprising that insanity should decrease with the diminished consumption of an article of diet, or rather of indulgence, which is credited by alienists with the direct causation of at least 10 per cent. of existing insanity — probably a considerably higher percentage — and which indirectly is a more or less important etiologic factor in a very much larger percentage of cases. The Kansas figures come reasonably close to those of the alienist statistician.

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### WHAT ONE STATE HAS DONE FOR THE COUNTRY

One of the stock arguments against state laws of a restrictive nature is that such laws place the state that passes them at a commercial disadvantage. One state passes a law prohibiting the employment of children of tender age in factories — a humane law; a law that most civilized countries have had on their statute books for a quarter of a century; a law of which all right-thinking people see the need. At once a plaint goes up from the manufacturers of that state urging that the law be repealed because since its enactment they have been unable to compete with the manufacturers in the same line of business in neighboring states where child-labor is still permitted. Or, it may be, the state passes a law forbidding women to work more than ten hours a day. Again, a protest is raised. The argument that a righteous, much-needed law will drive business from the state is a powerful one and has been responsible for many of the social and economic ills from which we are suffering. Nevertheless, there have been, and are, states that are willing to make some commercial sacrifices for principle's sake. North Dakota has what is called a "net weight law" requiring all package goods to be plainly labeled with the net weight of the contents — certainly a reasonable law and one to which no honest manufacturer should object. Nevertheless, the National Biscuit Company, one of the largest concerns of its kind, preferred to withdraw from the state rather than comply with that law. Possibly the company believed that by the withdrawal of its products — and, more important yet, its advertising — from North Dakota, the net weight law would be overthrown. In this instance the manufacturer made a mistake; the law was not overthrown. On the contrary, this action resulted in the building up within the State of North Dakota of large plants where biscuits were made from the North Dakota wheat and sold to the people of North Dakota under truth-telling labels. After about six years of its short-sighted policy, the National Biscuit Company, doubtless realizing that it had cut off its nose to spite its face, reentered the State of North Dakota a few months ago with its products labeled in accordance with the requirements of the state law. Nor is such labeling exclusively for the North Dakota trade. In every state in the union this company's products now have printed on the carton not only the net weight of the biscuits, but also — which is more than the law requires — the number of biscuits in each package. The people of the whole United States, therefore, now know just how much they are getting for their money when they purchase this brand of crackers. And the State of North Dakota is to be thanked for it.

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[1] Schulz, Hugo: Die quantitative Ausscheidung der Kieselsäure durch den menschlichen Harn, Arch. f. d. ges. Physiol. (Pflüger's), 1912, cxliv, 350.

[1] White, W. A.: Outlook, Feb. 24, 1912.

### THE TITANIC DISASTER

Stunned by the awful tidings, eyes dimmed with tears, the world gropes back to daily tasks with reluctance, hoping against hope for news of more survivors. Death, as though resentful of man's proud boasts over this "unsinkable" ocean palace "built to cross the sea on schedule time regardless of the elements," set an iceberg across its path. Then Death said to Chivalry: "Choose you eight hundred. That is all that you can take. The remaining thirteen hundred will go with me." And, since Death was the master — for the moment — the thirteen hundred went gloriously down with Death in a triumph of self-sacrifice that should give us all, after the terrible heartache, a nobler impulse to service.

### THE SAFETY OF OCEAN TRAVEL

Man has considered his recent steamship creations as comparatively safe and has launched into the air and attempted to conquer that element also. The loss of the *Titanic* bids him pause and consider. Although the largest ocean ships are seldom seriously affected by wind and wave, and although rocks and shoals are so well charted as to be a comparatively slight menace, protection is yet to be secured from the results of ships striking one another or icebergs. Like speed in railway travel, a quick transatlantic voyage is attended with increased peril; it means cutting across that graveyard of steamships, the fog-laden and iceberg-strewn Grand Banks of Newfoundland. If the public were willing to take more time on the passage, the ships would go farther south on a safer course. But wherever a ship goes, should it not be agreed that it must carry life-boats enough for all the souls on board? With other ships usually but a few hours away, and with the miracle of the wireless to summon help, life-boats could keep afloat until rescue came. It has been said that a sufficient number of life-boats would be an embarrassing encumbrance to an ocean greyhound. Then let the ocean greyhound be abandoned: let not death take such costly toll of time.

### CLARA BARTON

Less than two years ago, we recorded the death of Florence Nightingale at the age of ninety, and commented on her work as the originator of military nursing. Now Clara Barton, one of the founders and the first president of the American Red Cross, has just died at about the same age. The careers of these two women are unique in a special line of philanthropic work. Miss Barton's name is associated especially with the foundation and administration of the American Red Cross, though her first great public service was rendered long before. Throughout the Civil War she devoted herself to the care of the wounded soldiers, working not in hospitals but on the battle-field. Later she originated and carried on, at first at her own expense, an organized search for missing soldiers. When, in 1869, broken down in health by these and other activities, she went abroad, the fame of her work had preceded her and she was not allowed the rest she had gone to seek. Representatives of the International Red Cross, organized about five years previously, enlisted her aid and interest; throughout the Franco-Prussian war she followed the German army and distributed relief in Strasburg, Belfort, Montpellier and Paris. In 1881 she became the first president of the American Red Cross, and this position she held until 1904. It was through her efforts that in 1882 the United States government became one of the parties to the Geneva Convention. It would be difficult to enumerate even briefly the items of Miss Barton's public service. In her advanced age she still worked on; Johnstown after the flood of 1889, Russia after the famine of 1892, Armenia, Galveston, the Sea Islands of South Carolina, Cuba — all knew her beneficent presence. The object of the Red Cross as defined by the Geneva Convention in 1864 was confined to organized nursing during war. Clara Barton was the author of the "American Amendment," by which its ministrations are extended to pestilence, famine and great catastrophes like earthquakes and floods. Its invaluable services to practically all countries of the world no doubt suggested and encouraged the extension of nursing and relief to other fields of public responsibility. Out of it has evolved the development of public nursing not only in epidemics, but in the care and management of diseases like tuberculosis, the great prevalence and danger of which have made them the subjects of municipal and governmental supervision.

### CAMPHOR DISTILLED FROM THE LEAVES

Camphor was formerly distilled entirely from the wood of the camphor-tree. The supply of trees having become lessened during the past few years there has been a tendency for the drug to rise in price. This has stimulated the efforts of chemists to produce camphor by synthesis. This achievement has been accomplished, but so far the synthetic product has failed to compete seriously with the natural one, owing to the high prices of the parent substance, oil of turpentine. Within the past year or two it has been found that the leaves of the camphor-tree yield on distillation about 1 per cent. of camphor, and that the crude product distilled from the leaves dried by the sun contains less oil, and therefore requires less purification than the drug obtained from the other parts of the tree. This source has helped to increase the available supply and at the same time permits the preservation of the trees. Recently there has been a downward trend in the price of the drug, which will no doubt continue as the supply of trees is allowed to remain standing and to increase, with the use of the leaves as the source of the drug.

## THE OWEN BILL BEFORE THE SENATE

The Owen bill has been favorably reported on by the Senate Committee on Public Health and National Quarantine, and is now before the Senate as Calendar Bill No. 561. The full text of the amended bill as provided by the committee is published in this issue.[1] As it now stands, the Owen bill is undoubtedly the best bill yet presented. It provides for an independent establishment to be known as the United States Public Health Service under a director of health, to be appointed by the President. To this Public Health Service are to be transferred the present Public Health and Marine-Hospital Service from the Treasury Department, the Division of Vital Statistics from the Department of Commerce and Labor, and that portion of the Bureau of Chemistry of the Department of Agriculture charged with the enforcement of the national Food and Drugs Act. It will coordinate the public health activities of the United States into one service which will be divided into seven bureaus and divisions, namely, a Bureau of Public Health and Marine-Hospital Service; a Bureau of Foods and Drugs; a Bureau of Vital Statistics; a Bureau of Child Conservation, and Divisions of Sanitary Engineering, Personnel and Accounts, and Publications. The committee, in its report recommending the passage of the bill, refers to the annual death loss in the United States, to the enormous financial loss caused thereby and to the possibility of preventing unnecessary disease, as shown in Cuba, the Canal Zone and elsewhere. The last two paragraphs of the report should relieve all doubts on the part of the members of any sect or religious organization as to the effect of the bill on personal liberty.

> "This bill provides that the Health Service shall not interfere with any of the functions belonging exclusively to the states, nor permit anyone to enter the premises of private persons without the permission of the owner or occupant thereof, and shall have no power to regulate the practice of medicine or the practice of healing, or to interfere with the right of a citizen to employ the practitioner of his choice, or to make any discrimination in favor of or against any school of medicine or of healing.
>
> "The opposition which has been stirred up against the establishment of an independent Health Service has proceeded on the assumption that the Health Service would have the right under this bill to interfere with the citizen in employing the practitioner of his own choice or to interfere with the states in the regulation of the practice of medicine or the practice of healing. The Constitution offers abundant protection against these apprehended evils and the bill permits nothing of the sort. It forbids it."

It is gratifying to know that this bill has finally been made satisfactory to the members of the committee. What position a majority of the senators will take remains to be seen. Certainly they cannot be expected to vote in favor of this important measure unless the educated, scientific physicians of the country exert themselves to arouse public sentiment on the subject, and to see to it that the members of both houses of Congress are informed of the views of their constituents. Every physician, and especially every member of every county society, should make it his especial and immediate duty to inform himself on the provisions of this bill, the reasons for its passage and the objections to it, and should use his influence to secure an expression of public opinion in favor of its passage. Every county society and state association, and particularly the members of the committees on legislation and public health, should take immediate steps to inform the public on the importance of the passage of this bill. None of the objections which have been raised can be regarded as valid. Honest opposition to it can be due only to ignorance of its provisions. If all those who favor advanced legislation for public health will lend their assistance the prospects for the passage of this bill will be greatly enhanced.

## THE INSANITY DODGE UNSUCCESSFUL IN CANADA

Mr. Justice Riddle, of the Court of King's Bench of Ontario, speaking before the New York State Bar Association, gave his hearers the decided impression that Canadian justice is more speedy and certain than American. He argued that the ultimate object in legal procedure should be the attainment of substantial equity and justice, and not the exaltation of technicalities. Canadians, apparently, strive to attain concrete justice "no matter if the record does get a shock now and then," to use the words of the learned justice. Apparently it is permitted in Canada to ask an expert alienist the direct question whether or not he considers a witness or a prisoner insane, while in the United States the law is often forced, it seems, to employ the absurd circumlocution of the hypothetical question. In Canada, even if an expert declares it to be his opinion that a prisoner is insane, this does not mean freedom from the penalty of the law. In one case Mr. Riddle obtained from the expert the statement that the prisoner, although insane, knew that his act was against the law. The justice therefore charged the jury, "If a man knows that what he is doing is against the law, no matter how insane he may be, it is the mandate of the law and your duty to hang him." Canadian law, remarked Justice Riddle, in his New York address, "says to a man who's troubled with an irresistible impulse to murder: 'I'll hang a rope up in front of your nose and see if that won't help you to inhibit your impulses.' As a net result," continued the justice, "we're not troubled much with expert witnesses in Canada."

**Suggestion in Hopeless Disease.**—Through fostering and strengthening that power [to master disordered feelings] in his patients who are hopelessly sick, the physician can best demonstrate his powers for good. As Billroth said in a speech delivered in 1891, "The patient comes to the physician for advice, consolation and hope; if you give him nothing of this, you may be an excellent diagnostician and prognosticator, but you are no doctor."—Jacoby in "Suggestion and Psychotherapy."

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[1] Medical Economics, p. 1221.

# Medical News

## ALABAMA

**New Officers.**—Sumter County Medical Society, at Livingston, March 21: president, Dr. W. J. Cocke; secretary-treasurer, Dr. D. S. Brockway, both of Livingston.

**Arrested for Spitting.**—Two special sanitary officers detailed by the health department of Birmingham to watch for and arrest spitters on street cars made eleven arrests for this offense, March 13.

**New Cottage for Tuberculosis Camp.**—Work has begun on the new cottage at the fresh-air camp of the Antituberculosis League at Montgomery, donated by the local camp of the Woodmen of the World.

**Personal.**—Dr. T. C. Jones, Athens, is reported to be seriously ill with pneumonia.——Dr. Robert Nelson, health officer of Birmingham, has been appointed a member of the Chamber of Commerce committee on the abatement of the smoke evil and other nuisances.——Dr. W. S. Britt, Eufaula, Major M. C., N. G., Ala., assigned Fourth Infantry, has resigned.

## GEORGIA

**Personal.**—Dr. R. L. Hope, Easton, has been elected president of the Fulton County Board of Education.——Dr. Paul Peniston, Newnan, was seriously injured March 13, while making a professional call at night. He was thrown from his horse, breaking his right arm and right leg. The accident happened at midnight and he lay until five in the morning until help arrived.

**Medical Society Activities.**—At the meeting of the Georgia Medical Society, March 12, a symposium was held on diseases of the liver. On March 19, the Library Committee and Book and Journal Club met and were addressed by Dr. J. Ewing Mears, Philadelphia, on the development of a great medical library, and rare books, papers and autographs were also exhibited.

**New Officers.**—Tri-County (Early, Calhoun and Miller) Medical Society, April 3: president, Dr. P. H. Fitzgerald; secretary-treasurer, Dr. J. G. Standifer, both of Blakeley.——Burke County Medical Association, organized March 29 at Waynesboro: president, Dr. C. H. Cox; secretary-treasurer, Dr. J. M. Byne, both of Waynesboro.——Seventh District Medical Society at Rome: president, Dr. A. B. Greene, Cartersville; secretary, Dr. T. Lowry, Euharlee.——Second District Medical Society, reorganized March 13 at Albany: president, Dr. W. W. Jarrell, Thomasville; secretary-treasurer, Dr. J. A. Redfearn, Albany.

## ILLINOIS

**Epileptic Colony Asked.**—The State Charities Commission urges the establishment of a state industrial colony for improvable epileptics. This colony is not intended to care for chronic and insane epileptics.

**Society Indorses Sanatorium.**—Fifty-five members of the Peoria Medical Society have signed a statement indorsing the establishment of a tuberculosis sanatorium in the city, as provided by the Glackin law.

**New Sanatorium Head.**—Dr. George A. Weirick, who has been assistant superintendent of the Broughton Sanitarium, Rockford, Ill., has assumed charge of the institution, vice Dr. Russell Broughton, deceased.

**New Officers.**—McLean County Medical Society, at Bloomington, April 4: president, Dr. W. H. Gardner; secretary-treasurer, Dr. T. D. Cantrell, both of Bloomington.——Rock Island County Medical Society, at Rock Island, April 9: president, Dr. E. Sargent, Moline; secretary, Dr. W. D. Chapman, Silvis.

**Personal.**—Dr. John E. Tuite, Rockford, has been elected president of the Teachers' Pension Board.——Dr. E. W. Wahl, Sterling, who has been seriously ill, has recovered and resumed practice.——At the meeting of the Illinois State Board of Health, held in Chicago, April 16, Dr. George W. Webster, Chicago, was reelected president, and Dr. James A. Egan, Springfield, permanent secretary.

**Library for Medical Society.**—At a special meeting of the Stephenson County Medical Society in Freeport, April 8, the committee appointed to consider the matter of the establishment of a medical library and the publication of a local society bulletin, reported favorably on both propositions. The library board has granted the society a room for a medical department, and each physician present at the meeting subscribed $10 toward the establishment of the library.

**Present Condition of Suits Against State Board.**—The mandamus suit of the National Medical University of Chicago against the State Board of Health for recognition, which was filed in the Superior Court of Cook County on December, 1909, is still pending, no attempt being made by the National Medical University to obtain a trial. The personal damage suit of the National Medical University against each individual member of the State Board of Health in the sum of $500,000 is now pending in the Appellate Court. The Superior Court, in which the suit was originally filed, decided in favor of the members of the board.

### Chicago

**The Owen Bill.**—Just before the adjournment of the annual meeting of the West End Woman's Club, April 12, a resolution was presented by Mrs. Mary Ridpath Mann to instruct the delegates to the biennial convention of the Federation of Woman's Clubs to "use all their influence to promote the passage of the bill to provide a Department of Public Health." This resolution was adopted without a dissenting vote.

**Honor to Hektoen.**—A dinner was given to Dr. Ludvig Hektoen at the Chicago Club April 11 by the faculties of Rush Medical College and the College of Physicians and Surgeons and his former students at these institutions, in honor of the twenty-first anniversary of his entrance into the practice of medicine. Dr. Frank Billings presided. An oil-painting of Dr. Hektoen was presented to him by his friends, the presentation speech being made by Dr. E. R. Le Count. Prof. E. O. Jordan and Drs. H. Gideon Wells and James B. Herrick responded to toasts.

## KENTUCKY

**Meningitis in Louisville.**—Up to April 13 there had been reported 159 cases of cerebrospinal meningitis in Louisville, with a mortality of a trifle over 42 per cent. and in about 10 per cent. of the cases there was more than one case in a family. On account of the prevalence of the disease, the Board of Education extended the usual spring vacation one week, during which time every school room was scrubbed and fumigated. The schools reopened April 15, as the number of new cases was much reduced.

## MARYLAND

**Personal.**—Dr. Francis E. Harrington has been reappointed bacteriologist and health officer of Cumberland.——Dr. John P. Beck, Cavetown, has sued the Hagerstown Fair Association for $5,000 damages, on account of injuries said to have been sustained last October by a fall due to the breaking of a handrail at the grand stand in the fairgrounds.

**Laws Passed by Legislature.**—Laws were passed by the last legislature providing for reports on occupational diseases and inspection by the State Board of Health; authorizing the State Board of Health to provide treatment for hydrophobia patients; making appropriations for the Springfield Hospital for the Insane and for the Montevue Hospital, Frederick County; for the reclamation of swamp land, for which $10,000 was appropriated, to be repaid; providing for the publication of vital statistics by the State Board of Health; providing for the distribution of tuberculin by the State Board of Health, and enlarging the powers of the State Board of Health.

**Appropriations by the Legislature.**—The following appropriations, each, except the first, being for a year, were made by the last legislature:

State care of insane, $800,000, by a bond issue which provides also for a new hospital on the eastern shore; University Hospital, $17,500; Mercy Hospital, $17,500; St. Agnes' Hospital, $8,000; St. Joseph Hospital, $10,000; Union Protestant Infirmary, $10,000; Hospital for Crippled and Deformed Children, $12,000; South Baltimore Eye, Ear and Throat Hospital, $2,500; Baltimore General Dispensary, $1,000; General Marine Hospital, Cresfield, $5,000; Medical and Chirurgical Faculty of Maryland, $5,000; Mount Hope Retreat, $15,250; Nursery and Child's Hospital, $3,000; Franklin Square Hospital, $7,000; Hebrew Hospital, $10,000; Hospital for Women of Maryland, $10,000; Maryland General Hospital, $15,000; Maryland Homeopathic Hospital, $6,500; St. Luke's Hospital, $4,000; Provident General Hospital, $1,500; Annapolis Emergency Hospital, $10,500; Easton Emergency Hospital, $5,000; Frederick City Hospital Association, $10,000; Peninsula General Hospital, Salisbury, $12,500; United Charities Hospital Association, Cambridge, $15,000; Havre-de-Grace Hospital, $5,000; Union Hospital, Cecil County, $5,000; Washington County Hospital Association, $10,000; Home Infirmary of Western Maryland, $9,000; Baltimore Eye, Ear and Throat Hospital, $9,000; Baltimore Home for Incurables, $2,500; Jewish Home for Consumptives, $6,500; Maryland Lying-In Hospital, $4,000; Maryland Lying-In Maternity, $4,000; University of Maryland Lying-In Hospital, $4,000; West End Maternity, $4,000; Hospital for Consumptives, Eudowood, $25,000; Silver Cross Home for Epileptics, $1,500; Southern Dispensary, $500; Children's Hospital School for Baltimore, $5,000, and St. Mary's County Hospital, $1,500

### Baltimore

**Hospital in Receiver's Hands.**—The South Baltimore General Hospital is said to have gone into the hands of a receiver. The bill of complaint was filed by Dr. Anna S. Abercrombie, who alleged that the hospital owed her $672 and by the Woman's Medical College, which claimed a debt of $700.

**President Remsen Resigns.**—Dr. Ira Remsen, for nine years president of Johns Hopkins University and one of the original members of the faculty of that institution, tendered his resignation to the board of trustees, April 10. Dr. Remsen will retain his professorship of chemistry in the university.

**Foreign Physicians Visit Baltimore.**—Sir Bertrand Dawson, London, physician extraordinary to King George, visited Baltimore April 10 and was given dinners at the Maryland and Country Clubs by Drs. Thomas B. Futcher and William S. Thayer.——Drs. Fritz Kayser, Ann Kayser, Henry Erik Lind and N. Groely of Sweden visited Johns Hopkins Hospital, April 12.

**Personal.**—Dr. Charles B. Wheltle has been appointed a health warden, vice Dr. L. J. Turlington, and Dr. Bernard J. Wess, vice Dr. E. H. Hayward. Dr. Hayward sailed for Europe, April 17.——Dr. John C. Hemmeter entertained the Baltimore County Medical Society at his residence, April 17. ——Dr. Thomas A. Ashby, president of the Maryland Alumni Association of Washington and Lee University, entertained the association, April 15, the guest of honor being the new president, Dr. Henry Lee Smith.

## MASSACHUSETTS

**New Dean for Medical School.**—Dr. Edward H. Bradford was elected dean of the Faculty of Medicine in Harvard University, March 10, vice Dr. Henry A. Christian.

**Cutter Lecture.**—Dr. John F. Anderson, U. S. P. H. and M.-H. Service, will deliver the annual Cutter lecture on preventive medicine at Harvard Medical School Thursday, May 9, 1912, on "Some Recent Advances in Our Knowledge of Certain Infectious Diseases."

**Small-Pox in Salem.**—The Salem small-pox epidemic was arrested after about sixty cases, mostly mild, had developed, and about 10,000 persons had been vaccinated. The earlier cases occurred among the French-Canadian population, who either concealed them or considered them chicken-pox. No further trouble is anticipated.

**Personal.**—Drs. Augustus Thorndike, Boston, and James S. Stone, Boston, have been chosen members of the executive committee of the Industrial School for Crippled and Deformed Children, of which Dr. E. H. Bradford is a trustee.——Dr. J. Collins Warren has been elected president and Dr. George B. Shattuck first vice-president of the Massachusetts Humane Society.

**Must Report Births.**—On April 21 the new rule of the Boston Board of Health, requiring the reporting of births within forty-eight hours, will go into effect: Five nurses, under Health Commissioner Mullowney, are to give their entire time to teaching how to care for infants, in an effort to lessen the mortality. The board has appealed for volunteers to help in this work.

**New Staff for Brigham Hospital.**—The medical staff of the Peter Bent Brigham Hospital, now under construction, includes in addition to Dr. Henry A. Christian, physician in chief, Dr. Channing Frothingham, Jr., as physician; Dr. Francis W. Peabody, resident physician; Dr. Reginald Fitch, senior medical house officer; Dr. R. P. Dorsan, Jr., medical house officer; Dr. W. G. Smillie, sub-junior medical house officer and Dr. I. Chandler Walker, resident in charge of the medical outpatient department.

## MICHIGAN

**Hospital News.**—A movement was started among business men of Traverse City for the establishment of a hospital to cost $50,000.——The De Vore Hospital, Grand Rapids, has been enlarged and remodeled and will now accommodate thirty patients.

**Honor Walker's Memory.**—At a meeting of the Wayne County Medical Society, April 8, resolutions were unanimously adopted setting forth Dr. Henry O. Walker's work as a surgeon, an administrator and educator, paying tribute to him as an honest and honorable man and a friend to be counted on.——The medical staff of Harper Hospital, at a meeting April 6, adopted similar resolutions.——Resolutions were also adopted by the medical board of St. Mary's Hospital setting forth the faithful and distinguished services of Dr. Walker to that institution.——At Dr. Walker's funeral, which was held April 8, the list of honorary pallbearers was made up of leading physicians of Detroit and the active pallbearers were six physicians who had been associated with Dr. Walker in his office.

**Personal.**—Dr. H. E. Locher, Grand Rapids, is reported to be critically ill.——Dr. H. C. Guillot, Pontiac, is under treatment at the Oakland County Hospital, on account of an infection of the throat and bronchial tubes.——Surgeon R. M. Woodward, U. S. P. H. and M.-H. Service, who, after nearly four years' duty in Detroit, has been ordered to San Francisco, was given a farewell dinner at the Detroit Club, April 3, by members of the Wayne County Medical Society. Dr. C. G. Jennings presided as toastmaster.——Dr. Z. L. Baldwin, Kalamazoo, was injured in a runaway accident, April 4.——Dr. Hayes Kelly has succeeded his father, the late Dr. E. H. Kelly, as surgeon at the Ashland Mine, Ironwood.——Dr. A. S. Wilson, Bellevue, is reported to be seriously ill in the University Hospital, Ann Arbor.——Dr. Clarence W. Young has been reelected mayor of Allegan.——Dr. F. C. Warnshuis, Grand Rapids, was operated on for appendicitis at the Butterworth Hospital and is reported to be doing well.——Dr. B. F. A. Crane, Saginaw, who has been under treatment at the Saginaw General Hospital for several days, is convalescent.——Dr. J. H. Lemen, Whitmore Lake, is reported to be seriously ill.——Dr. and Mrs. I. E. Lindgren, Ishpeming, have gone to Finland for the summer.——Dr. Harry B. Britton, Ypsilanti, was operated on recently for appendicitis at a private hospital in Ann Arbor. ——Dr. A. M. Darling, Crystal Falls, who has been seriously ill with septicemia, due to an operation wound,.is reported to be convalescent.

## MINNESOTA

**Nurses' Home at Rochester.**—The Sisters of St. Francis of Rochester will build a nurses' home, west of St. Mary's Hospital. The building will be four stories in height, will contain rooms for 100 nurses and will cost $100,000.

**Sanatorium Notes.**—Jacob Weil, St. Cloud, has donated a lot on the outskirts of the city as a site for the county tuberculosis sanatorium. Applications will be made to the county commissioners for the fund available under the state law and private contributions from citizens will also be solicited.——"Nopeming Sanatorium," the county sanatorium for St. Louis county, is almost completed and will be ready to receive patients May 1.

**Personal.**—Dr. D. F. Dumas, retiring president of the Cass Lake Village Council, was presented by the Board of Aldermen at the final meeting of the council for the year with a meerschaum pipe as a token of goodwill.——Dr. William H. Smith has succeeded Dr. G. A. Christensen as chairman of the Board of Health of Cass Lake.——Dr. Burnside Foster, St. Paul, has been elected professor of dermatology and syphilology in the Medical Department of the University of Minnesota.

**Hospital Notes.**—An appropriation of $100,000 is to be asked from the St. Paul City and Ramsay County Board of Control to add two stories to one of the wings of the new hospital building, to be used as a tuberculosis ward. This will give accommodation for 200 additional patients.——Hopewell Hospital, Minneapolis, is practically completed and will be ready to receive patients within a few days. The opening of this hospital will mean the closing of the Marcy School Hospital, where for two years consumptives and incurable city patients have been cared for.

## NEBRASKA

**Fraternity Banquet.**—The annual banquet of the Phi Beta Pi Medical Fraternity was held in Omaha, March 27, thirty members of the fraternity and eighteen honorary members being present.

**Personal.**—Dr. L. F. Polk, Louisville, has discontinued the active practice of medicine.——Dr. Charles Lucas, Shelton, has been appointed local surgeon of the Union Pacific system, vice Dr. E. L. Smith, deceased.——Dr. and Mrs. C. F. Secord, Omaha, have returned to their mission field among the Quichi Indians in Guatemala.

**New Officers.**—Butler County Medical Association, at David City, March 9: President, Dr. Handen, Bellwood; secretary-treasurer, Dr. H. E. Marselus, Octavia.——Burt County Medical Society, at Tekamah, April 3: president, Dr. S. A. Swenson; vice-president, Dr. H. W. Benson, both of Oakland.——Gage County Medical Association, at Wymore, April 2: president, Dr. A. V. Robinson; secretary-treasurer, Dr. L. E. Penner, both of Beatrice.

## NEW JERSEY

**Hospital for Soldiers' Home.**—The legislature has passed a bill appropriating $50,000 for a hospital at the New Jersey Soldiers' Home, Vineland

**New Officers.**—Essex County Medical Society, at Newark, April 2: President, Dr. Thomas N. Gray; secretary, Dr. Ralph H. Hunt, both of East Orange.——Gloucester County Medical Society: President, Dr. Vernon E. DeGrofft, Swedesboro; secretary-treasurer, Dr. George Evans Reading, Woodbury.

**Preventorium to Be Opened.**—The new $150,000 home of the Tuberculosis Preventorium for Children at Farmingdale will be opened April 25. The institution will have accommodations for 700 tenement children of families in which tuberculosis already exists. The work of the institution has been conducted for the last two years in frame cottages at Farmingdale and, in this period, 400 children have been saved from tuberculosis and there has not been a single case of illness among its inmates.

**Personal.**—Dr. John K. Bennett has been elected health inspector by the Gloucester City Health Board.——Edward E. Worl, Newark, has resigned as medical director of the Verona Tuberculosis Sanatorium.——Dr. George W. King, Secaucus, has succeeded the late Dr. Charles B. Converse, Jersey City, as physician of Hudson County and Dr. Henry V. Smith, Jersey City, has succeeded Dr. King as medical superintendent of the Hudson County Hospital for the Insane, Snake Hill.——Dr. Alexander McAllister, Camden, has been appointed a member of the state medical board.——Dr. I. N. Griscom has been elected chief of the Bureau of Health and Charity of Ocean City.——Dr. John B. Cassady has been appointed a member of the Burlington Board of Health.——Dr. Joseph M. Malatesta, Cedar Grove, has been appointed fourth assistant physician of the Essex County Hospital for the Insane.

## NEW YORK

**Fire in Hospital.**—On the night of April 1 a fire broke out in the Sayre Hospital, Mount Vernon, which necessitated the removal of all the patients. The fire was confined to the basement and first floor. The damage has not been estimated.

**Commission Changes Name.**—Under the provisions of a law recently passed by the legislature, the name of the State Commission in Lunacy is changed to the State Hospital Commission, thus carrying to a logical conclusion the purpose of the state to abandon the use of the word "lunatic."

**New Board Appointed.**—At the meeting of the board of managers of the Children's Home, Schenectady, March 26, a new medical staff was appointed, made up as follows: Drs. Lester Betts, Walter M. Clark, K. S. Clark, P. E. Garlock, Louis A. Gould, H. P. Groesbeck, H. G. Hughes, Dudley R. Kathan, H. L. Towne, B. Van Zandt, Eleanor D. Mann and Reid Gilmore.

**Personal.**—Dr. Frederick F. Hoyer, Tonawanda, will celebrate his ninetieth birthday anniversary May 9.——Dr. John A. Heatly, Schenectady, has started for Europe.——Dr. Alexander J. Campbell, Syracuse, has purchased property for $30,000, to use for an office and sanatorium.——Dr. John W. Russell, Fishkill-on-the-Hudson, has been appointed superintendent of the Matteawan State Hospital. He was formerly first assistant superintendent and has been in charge of the institution since the resignation of Dr. James V. May.

**Industrial Accidents.**—The New York State Department of Labor, in its quarterly bulletin, shows that during the last three months of 1911, 10,322 employees were injured in factories in this state, 4,520 in building and engineering work and 153 in mines and quarries. This makes a total of 14,955 for these three industries alone and 138 of these accidents were known to have been fatal. During the last six months there have been eighty-seven cases of lead poisoning, two of arsenic poisoning, one each of phosphorus and mercury poisoning, two of anthrax and twenty-nine of caisson disease, making in all 122 cases, with five fatalities.

**Urge Veto for Sullivan Bill.**—The Sullivan bill, amending the poor law so that the financial circumstances of every person applying for admittance to a public hospital or sanatorium may be investigated by the poor law officials, is opposed by 260 local antituberculosis committees of the State Charities Aid Association. This organization contends that county and city tuberculosis hospitals should be kept open to all classes of citizens, self-supporting as well as pauper, and urges the governor to veto the bill because it would restrict the use of these institutions to paupers, by putting the investigation as to circumstances in the hands of the poor-law officers instead of the superintendent of the hospital.

**State Hospital for Deformed and Crippled Children.**—The eleventh annual report for the year ending September 30, 1911, is just out. This hospital was opened at West Haverstraw on December 5, 1900. Although other states anticipated New York in this form of state charity, New York was the first to incorporate a state hospital for the treatment of these cases. Since the foundation of the hospital there have been admitted 266 patients, 203 have been discharged, four died and fifty-nine are now under treatment. All the deaths have been from tuberculous meningitis, complicating tuberculous disease elsewhere. There has not been a single death from acute or from infectious diseases of childhood.

**Insane Aliens.**—Secretary McGarr of the State Commission in Lunacy states that there are at present 31,432 insane patients under treatment in the fourteen state hospitals and of this number 13,163 or 41.9 per cent. are aliens. Foreign born patients have increased since the Federal census of Dec. 31, 1903, by 1,552, or 13.4 per cent. In the two state hospitals for the criminal insane there were 1,230 patients on February 10, of whom nearly 44.4 per cent. were of foreign birth. The Federal census of 1910 showed a percentage of aliens to the total population in this state of 29.9. Of the 5,700 patients admitted to the civil hospitals for the year ending Sept. 30, 1911, 2,737, or 48 per cent., were aliens and 1,481, or 26 per cent., were of alien parentage while less than 26 per cent. were of native stock. Insanity among the foreign peoples of New York occurs in a still larger percentage of cases. Of the first admissions to the hospitals 2,006 out of 3,221 residents of the city were of foreign birth; that is 64 per cent., although the foreign-born population is but 40 per cent. of the whole. These figures show why the State Commission in Lunacy has asked Governor Dix to investigate the whole matter so that this state may present a report on the subject to the United States Government, the ultimate object being to secure an amendment of the federal laws governing the immigration and deportation of defective aliens and so to provide means whereby the state may be reimbursed for the enormous expenditure incurred in caring for persons who should never have been permitted to enter the country.

### New York City

**Small-Pox Holds Liner.**—The White Star steamship Cedric, which arrived from Mediterranean ports on April 12, had a case of small-pox on board and was held at quarantine over night.

**New Hospital.**—The directors of the East New York Dispensary have obtained a charter from the State Board of Charities for the purpose of maintaining a hospital in the Brownsville section.

**Scholarship for Medical School.**—It is reported that by the will of the late Phoebe Caroline Swords $10,000 has been left for the establishment of a scholarship in the College of Physicians and Surgeons, Columbia University.

**Cartwright, Not Middleton-Goldsmith.**—Dr. David Bovaird, Jr., states that the announcement of a series of lectures by Dr. Ludwig Pick, recently sent by him to The Journal, should read "Cartwright" and not "Middleton-Goldsmith" lectures, as written.

**Bellevue to Have New Medical Superintendent.**—The position of general medical superintendent of Bellevue Hospital, which has been temporarily filled by Dr. George O'Hanlon, has been declared open for appointment. A number of names have been submitted by the Municipal Civil Service Commission as eligibles.

**Class Reunion.**—The twentieth anniversary, reunion and banquet of the class of 1892 of the Medical Department of the City of New York University was held April 3, Dr. Robert E. Coughlin, Brooklyn, acting as toastmaster. The class originally numbered 162 and of these nine have died. At the close of the dinner, by common consent, a silent toast was given to the old university, its professors and teachers and the absent members of the class.

**New Seaside Hospital Wanted.**—The Association for Improving the Condition of the Poor has renewed its offer, made in 1906, to erect and equip at a cost of $250,000 a hospital for the treatment of children suffering from non-pulmonary tuberculosis, on condition that the city will provide the seashore site and own and maintain the hospital when it is completed. The association says that there are between 4,000 and 5,000 children of the poor in the city who are crippled by tuberculosis of the bones and glands, and that the Sea Breeze Hospital is the only means in this country of giving such children sea air treatment.

## OHIO

**New Officers.**—Gallia County Medical Association: president, Dr. William H. Pritchard; secretary-treasurer, Dr. Milo Wilson, both of Gallipolis.

**State Society Meeting.**—Arrangements have been completed for the meeting of the Ohio State Medical Association, to be held in Dayton, May 7-9.

**Health Board Moves Offices.**—On account of changes required in the state house, the State Board of Health has moved to offices in the Hartman building.

**State Teachers' Meeting.**—The annual meeting of the Ohio State Medical Teachers' Association was held in Columbus, April 5. Dr. W. E. Mosely, Jr., Toledo, was elected president; Dr. H. M. Knower, Cincinnati, vice-president; Dr. Roy G. Hoskins, Columbus, secretary, and Dr. C. W. McGavran, Columbus, treasurer.

**Hospital News.**—The Isabel Hampton Robb Memorial Home, Cleveland, designed as a gathering place for graduate nurses, was formally dedicated, April 9.——The Marshall Hospital, Portsmouth, which has been closed for two months, has reopened.——The campaign to secure a fund of $100,000 for St. Elizabeth Hospital, Youngstown, started April 17.——Plans have been drawn for the new Niles Hospital, which is to cost $40,000 and will accommodate forty private patients in addition to ward patients.

**Personal.**—Dr. W. W. Smith, Portsmouth, who was operated on recently in Christ Hospital, Cincinnati, has returned home convalescent.——Dr. W. A. Metzger, Youngstown, who has been ill for several weeks in a Chicago hospital, is reported to be convalescent.——Dr. Elijah P. Clemens, Dayton, was held up and robbed in his office, April 5.——Dr. Russell A. Jewitt, Cleveland, while walking across a trestle, March 31, was struck by a train and seriously injured.——Dr. C. O. Probst, Columbus, has returned from Europe.——Dr. E. O. McCall, Portsmouth, was seriously injured recently in a collision between his automobile and a street car.——Dr. L. M. Early, Columbus, who has been seriously ill at Mount Carmel Hospital with cancer, the result of *x*-ray burns on account of which the amputation of the left arm at the shoulder was necessitated, is reported to be improving.

## PENNSYLVANIA

**New Dispensary Opened.**—The dispensary building of the Philadelphia Polyclinic and College for Graduates in Medicine is now completed, fully equipped and in proper running order.

**To Found Suburban Hospital.**—Abington, Montgomery County, and a suburb of Philadelphia, has a movement to raise funds for the purchase of a site and a building for a hospital for the suburban section along the old York Road. The nearest hospital is the Jewish which is from six to ten miles from the district in which it is proposed to build.

**Personal.**—Dr. George E. Alleman has reported for duty and will take charge of the medical department of Altoona Hospital; Dr. A. S. Keeh will have charge of the gynecological work and Dr. H. J. Davis will superintend the surgical work both in the hospital and dispensary.——Dr. David F. Swisher, Darby, fractured his arm while cranking his automobile, April 2.

**Hospital News.**—A movement has been started to establish a sanatorium for the treatment of tuberculosis in Warren.——The new department for children at Mount Alto Sanatorium was opened April 2. The new building is 200 by 40 feet and will accommodate 100 children.——The Charles B. Houston Memorial addition to the Chester Hospital is completed and was opened to the public April 10. The building is intended for the care and treatment of children.

**Pittsburgh Maternity Dispensary.**—The board of directors of the Pittsburgh Maternity Dispensary have sent out invitations for the informal opening of the dispensary, April 15. This dispensary has been founded and is being supported through the generosity of citizens of Pittsburgh with the object of providing free medical service during confinement for the worthy poor of the city. The dispensary staff consists of fifteen medical attendants, physicians and nurses, who live in the dispensary and devote their entire time to this work. These attendants may be reached at any time through the dispensary. Satisfactory evidence must be shown that the patient is unable to pay for the services of a physician. The assurance of reputable societies and individuals referring cases will be sufficient evidence and all cases applying directly to the dispensary will be investigated by the Dispensary's Social Workers. Patients are urged to present themselves for registration at the dispensary on Mondays, Wednesdays and Fridays from 2 to 3 p. m. Such patients will be cared for before labor, at the time of confinement and so long thereafter as may be necessary. Medicine, dressings and all other necessary medical supplies will be furnished.

### Philadelphia

**Personal.**—Dr. and Mrs. James A. Irwin sailed for Europe, April 18.——Dr. D. Randall MacCarroll was thrown from his carriage in a runaway accident and sustained painful injuries.

**Baby-Saving Show.**—A baby-saving show is to be held in Horticultural Hall from May 18 to 25. It is planned to have the show demonstrate every phase of the care of the mother and child, previous to birth and during the early years of the child.

**Directory for Wet-Nurses.**—The Children's Aid Society of Pennsylvania is establishing a directory and Registration Bureau for Wet-Nurses in its building at 419 South Fifteenth Street. The society has undertaken this work in order to secure wet-nurses for young babies for whom it is asked to provide such care on the recommendation of doctors connected with hospitals and charitable agencies. In addition, the society hopes to keep on hand a list of certified wet-nurses who may be employed by doctors for their private patients. The wet-nurses and their babies will be examined by a doctor and no one will be recommended who has not passed the various tests required to provide every safeguard for both the wet-nurse and the baby.

**Work on Home for Indigent to Continue.**—In reply to the proposition of the Citizens' Committee that the contracts for the Home for Male Indigents and the Home for Feeble-Minded Women be abrogated, Mayor Blankenburg wrote the committee in part as follows: "The congested conditions at Blockley are intolerable and the new buildings, under construction at Holmesburg, will greatly relieve this congestion, and will do it very quickly. To stop the work on this contract will be to delay for many months and possibly for years, any material relief for these conditions." He also suggested that auxiliary buildings could be dispensed with and that the present structure might be turned over to the department of Public Safety as an addition to the House of Correction, when a home for the indigent could be built along ideal lines. The committee accepted the mayor's decision and is now formulating plans for handling the feeble-minded, and for better care of tuberculous patients.

**Tuberculosis Society Report.**—The twentieth annual meeting of the Pennsylvania Society for the Prevention of Tuberculosis was held at the Roger Williams building on April 10. Asa S. Wing was reelected president and the following officers were elected: vice-presidents, Drs. James Tyson, Joseph S. Neff, William Duffield Robinson, William C. White and Mr. Talcott Williams; treasurer, F. A. Evans; secretary, Dr. Ward Brinton; solicitor, Samuel Scoville, Jr.; directors to serve three years, Dr. J. Clinton Foltz, Dr. J. Willoughby Irwin, L. J. Palmer, Alexander M. Wilson, assistant director of health and charities, and Dr. A. J. Cohen. The annual report of the society showed that there are 22 children in their open-air school on the roof of the Lighthouse at 152 West Lehigh Avenue. Through its lecturer and demonstrator, in the last year, the society has instructed several thousand children in hygiene, with special reference to the prevention of tuberculosis. The society is making an investigation of the care of tuberculosis convicts in the prisons of the state and a report of the survey of Philadelphia's tuberculosis equipment will soon be published.

## TENNESSEE

**Sanatorium Changes Name.**—The Boyd Memorial Tuberculosis Sanitarium, Knox County, announces its change of name to the East Tennessee Sanitarium.

**Gift to Medical College.**—Mr. Julius Rosenwald, Chicago, has agreed to give $2,500 annually to the Meharry Medical College, Nashville, for five years, providing that $37,500 additional is raised during that time.

**State Board Short of Funds.**—At a recent meeting of the State Board of Health it was shown that the board has less than enough money to meet current expenses, while the epidemic fund is less than $3,000. It was reported that $11,091.01 had been expended by the board prior to March 2 of this year.

**Health Officers' Meeting.**—The second annual meeting of the Tennessee Health Officers' Association was held in Nashville, April 2-4, under the presidency of Dr. K. S. Howlett, Franklin, and the following officers were elected: president, Dr. W. E. Hibbett, Nashville; vice-president, for East Tennessee, Dr. J. F. Arnold, Limestone; for West Tennessee, Dr. C. T. Love, Alamo, and for Middle Tennessee, Dr. T. O. Bratton, Watertown; and secretary-treasurer, Dr. John B. Steele, Chattanooga.

**State Society Meeting.**—The seventy-ninth annual meeting of the Tennessee State Medical Association was held in Chattanooga, April 9-11, under the presidency of Dr. C. J. Broyles, Johnson City. Nashville was selected as the next place of meeting and the following officers were elected: president, Dr. O. Dulaney, Dyersburg; vice-presidents, Dr. Zeb L. Shipley, Cookeville, for Middle Tennessee; Dr. G. R. Livermore, Memphis, for West Tennessee and Dr. W. J. Matthews, Johnson City, for East Tennessee; secretary, Dr. Perry Bromberg, Nashville (reelected), and treasurer, Dr. W. C. Bilbro, Murfreesboro.

**Military-Medical Notes.**—The Adjutant-General has been advised that the camp of instruction for officers of the medical department will be held at Chickamauga, Ga., May 11 to 18.——The Medical Examining Board of the Tennessee State National Guard, composed of Surgeon-General J. H. McCall, Huntingdon, and Captains Larkin Smith, Nashville, and J. W. Moore, examined the following applicants for the medical corps at its last meeting: Drs. J. O. Nichols, Etowah; A. Smith, Lafollette; W. Frank Massey, J. F. H. Gallagher and Frank P. Head, Nashville.——The officers and enlisted men of Knoxville County were inoculated with antityphoid serum, March 15.

**Personal.**—Dr. J. S. Dye, chief of the summer staff of Erlanger Hospital, Chattanooga, entertained the members of the staff at his home, April 5.——Dr. W. L. McCreary, Knoxville, has been reappointed a member of the State Board of Medical Examiners.——Dr. J. O. Woods, Morristown, has been appointed physician at the lock and dam on the Tennessee River, below Chattanooga.——Dr. J. A. Albright, Nashville, formerly secretary of the State Board of Health, has been appointed agent of the Citizens' National Life Insurance Company, with headquarters in Nashville, and with Arkansas, Mississippi and West Tennessee as his territory.——Dr. W. T. Watson, Lexington, fractured his left femur, March 10, in a runaway accident.——Dr. P. B. Lusk, Jackson, was operated on in St. Thomas Hospital, Nashville, for a deep-seated abscess, March 13, and is reported to be doing well.

## VIRGINIA

**Hospital Opens.**—The new Grace Hospital, Richmond, was opened March 12, with a reception by Drs. Robert C. Bryan and H. Stuart MacLean, from midday to 9 p. m., and inspection of the building by the invited guests. The institution represents an expenditure of about $80,000, is four stories in height and of fireproof construction.

**Sanatorium News.**—The State Board of Health has decided to erect at once a receiving hospital and examining staff in connection with the State Tuberculosis Sanatorium, Catawba, at a cost of $40,000. In this institution, patients who desire to enter will be received and examined. If it is decided not to admit them at Catawba, they will be given treatment at the reception hospital.——Dr. A. M. Showalter, Christianburg, has begun excavation preparatory to erecting a sanatorium at Cambria.

## GENERAL

**First Aid on Pullman Cars.**—The Pullman Company has completed plans for the installation of first-aid packages on all cars of the company.

**Clinical Congress.**—The third annual session of the Clinical Congress of Surgeons of North America will be held in New York City, November 11-16.——Dr. Franklin H. Martin, 31 North State Street, Chicago, is secretary.

**New Officers.**—Medical Association of the Isthmian Canal Zone, at Ancon Hospital, March 13: president, Dr. W. E. Deeks; secretary-treasurer, Dr. Howard V. Dutrow, both of Ancon.——Grand Chapter of Omega Upsilon Phi Medical Fraternity, at Buffalo, March 13-15: Dr. H. A. Smith, Buffalo, senior grand master; Dr. N. W. Strohm, Buffalo, grand scribe.

**Prize Offered for Public Health Booklet.**—The local medical society of Berne offers a prize of $100 for the best popularly written pamphlet suitable to be given to young married people to aid them in maintaining their own health, and to ensure and rear healthy and robust children. The pamphlet can be written in either French or German and must be in the hands of the secretary before June 1, 1912. Address Professor Lindt, Zieglerstrasse 8, Berne, Switzerland.

**Doctors on the Titanic.**—On the passenger list of the *Titanic*, which was sunk by ice off the coast of Newfoundland, April 15, appear the names of Dr. Arthur Jackson Brewe, Philadelphia; Dr. and Mrs. Henry W. Frauenthal, New York City; Dr. W. E. Minahan, wife and daughter, Fond du Lac, Wis.; Dr. and Mrs. Washington Dodge and son, San Francisco. Dr. W. F. N. O'Loughlin was surgeon and Dr. J. E. Simpson, assistant surgeon of the steamer. Later advices are that Dr. and Mrs. Frauenthal, Mrs. and Miss Minahan, Dr. and Mrs. Washington Dodge and son, are safe on the *Carpathia*.

**Bequests and Donations.**—The following bequests and donations have recently been announced:

German Hospital, Chicago, $20,000; Alexian Brothers' Hospital, Chicago, $5,000; Michael Reese Hospital, Chicago, $5,000; St. Joseph's Hospital, Chicago, $5,000, by the late William C. Seipp.

Mount Sinai Hospital, New York City, $10,000; German Hospital, New York City, $5,000, by the late Ernest Tahlmann.

Nassau Hospital, Mineola (L. I.), N. Y., $100,000, by Mrs. Alice A. Hicks, Westbury, L. I.

German Hospital and Dispensary, New York City, $2,000, by a benefit given by the Ladies' Aid Society.

Ithaca (N. Y.) City Hospital, a "generous and substantial legacy," probably about $100,000, by the late Edward M. Marshall.

**International Accident Congress.**—The third international gathering to discuss the laws in regard to accidents in various countries and all questions relating to accident insurance, estimation and treatment of the consequences of accidents, trauma as a factor in tumors and other phases of accidents, will be held at Düsseldorf, Aug. 6-10, 1912. The subjects of traumatic neuroses and hernias are not to be taken up at this meeting at all, but special attention is to be paid to the examination of persons after accidents and to measures aiming to restore normal functioning. For further information address Professor Liniger, Düsseldorf, Germany.

**Sanitary Association Meeting.**—At the fifth annual meeting of the Lake Michigan Sanitary Association, held in Hammond April 4, the creation, by legislative enactment, of a sanitary district covering all the Indiana territory drained by the Little and Grand Calumet Rivers and their tributaries, and the establishment of a sanitary commission with liberal power to tax the territory were recommended. The following officers were elected: president, A. J. Horlick, Racine, Wis.; vice-presidents, Drs. George B. Young, Chicago, and F. A. Tucker, Noblesville, Ind.; secretary, W. R. Humphrey, Chicago, and executive committee, Prof. E. Bartow, Champaign, Ill.; Langdon Pearce, Chicago; Dr. C. H. Sutherland, Janesville, Wis.; Dr. G. A. Bading, Milwaukee; Dr. R. L. Dixon, Lansing, Mich.; J. A. Glodgett, Grand Rapids, Mich.; Dr. A. J. Lauer, Whiting, Ind., and C. D. Davidson, Gary, Ind.

**International Congress on Hygiene and Demography.**—At a recent meeting in New York of the committee on organization of the coming Congress on Hygiene and Demography a provisional program was adopted for the five day meeting which is to begin Monday, Sept. 23, 1912. The evenings of Monday, Tuesday and Wednesday of the session are each to be devoted to some distinguished visitor. Among those who have already accepted are Sir Thomas Oliver, London, and Prof. Max Rubner, Berlin, who have consented to deliver special addresses. An invitation has also been extended to Professor Laveran of Paris. Twenty-six federal bureaus have accepted the invitation to participate in the exhibition and the Department of State has repeated its invitation to the seven states which had not accepted the previous invitation. An appropriation will be asked of Congress for the exhibition. The president of the United States will address the congress on the morning of September 23. June 1 is the latest date on which abstracts of papers will be received and July 1 the latest date for receiving full papers. Among those of international reputation the following will address the congress: Dr. Max Rubner, director of the Physiologic Institute of Berlin University, who will deliver an address to the congress on the following subject: "An exposition of the significance of hygiene and demography in the sanitary intercourse of nations with special emphasis on cooperative international work and a historic review of what has hitherto been accomplished." Sir Thomas Oliver, one of the world's authorities on industrial hygiene, has selected for his subject, "Dust and Fume, the Foes of Industrial Life." Dr. Jacques Bertillon, chief of the Bureau of Municipal Statistics of Paris, well known as the moving spirit in the compilation of the international classification of the causes of death, will address the congress on some demographic subject. The presidents of the nine sections of the congress are rapidly filling programs which promise to be replete with papers of importance on hygienic questions.

**Agramonte and Finlay for Nobel Prize.**—As The Journal (March 2, page 645) announced as an expected event, the Academy of Sciences, the Medical Faculty of the University of Havana and several other scientific societies and institutions have passed a joint resolution in which the names of Drs. Carlos J. Finlay and Aristides Agramonte are presented to the Nobel Prize Commission as candidates for the prize in medicine to be awarded in 1912. Dr. Agramonte is the only survivor of the U. S. Army Board, composed of Drs. Reed, Carroll, Lazear and himself, which demonstrated the transmission of yellow fever by the mosquito *Stegomyia calopus*, at the same time showing that "fomites" are absolutely innocuous. Dr. Agramonte and his colleagues fixed the points on which subsequent successful prophylactic campaigns were based, such as the infective period in man, the period of incubation of the disease and the length of time before the contaminated insect became capable of infecting. Dr. Finlay is said to have been the first one to claim the transmission of yellow fever from the sick to the susceptible individual by means of the mosquito; he studied many of the epidemiological conditions which pointed to the mosquito's agency in this particular and also many other meteorologic and telluric influences, its habits and peculiar resistance to adverse circumstances; he also made a number of inoculations which failed to carry conviction at the time, and which to-day we know must have given negative results because of the technic employed. Nevertheless, Dr. Finlay defended his theory for twenty years and presented a plan for the extinction of yellow fever very much like the one subsequently put into practice in Cuba and later in Mexico, New Orleans and Brazil with such brilliant results. The experiments of the U. S. Army Board which converted the theory into practical results, have been repeated by various investigators at home and abroad, thus complying with the fundamental requirement of the Nobel Prize Commission.

## LONDON LETTER

*(From Our Regular Correspondent)*

London, March 30, 1912.

### Life Insurance and Total Abstinence

The report of the Scepter Life Association contains an instructive comparison between the mortality of its abstaining and non-abstaining policy-holders. In 1911, in the general section, the mortality was 77.78 per cent. of the expected; that is, there were 105 out of 135 expected deaths. In the temperance section the mortality was only 51.11 per cent. of the expected deaths, or sixty-nine out of 135. For the last twenty-eight years the percentage of actual to expected deaths has been in the general section, 79.7; in the temperance section, 52.45. It is to be noted that both classes of policy-holders are of the same social status, engaged in the same occupations and have both passed the same medical examination. It is possible that some of the non-abstainers may shorten their lives by giving way to drink, but they can only be a small proportion. The examining physicians are alert and would not pass any one of intemperate habits. Moreover, the proposer must make a declaration of sobriety. The conclusion is therefore drawn that total abstinence tends to longevity. As usual, in such reports, no attempt is made to exclude an important source of fallacy. Persons who adopt total abstinence are more careful in all their ways of life than the average citizen. They are more thrifty, pay more attention to hygiene, etc. These factors must play some part in their longevity, yet to abstinence from alcohol is given all the credit.

## PARIS LETTER

*(From Our Regular Correspondent)*

Paris, March 29, 1912.

### Personal

The Académie des Sciences, in its last session, elected M. Metchnikoff, sub-director of the Pasteur Institute, as a foreign associate in place of Sir Joseph Dalton Hooker of Kew, deceased.

### Virulence and Contagiousness of the Perspiration of Tuberculous Patients

On March 26 Professor Poncet of Lyons presented before the Académie de médecine a study of this subject by Dr. Piery, who attended a number of consumptives, most of whom lived in lodgings each, in many instances, consisting of a single room used by the patient with the patient's wife or husband and numerous children. Dr. Piery was impressed on the one hand by the absence of tuberculous infection in the children playing on the floor in the midst of sputum, carrying to their mouths culinary utensils and other objects much soiled by the bacillus of Koch—in short, surrounded by ideal conditions of contamination—and, on the other hand, by the frequent infection of the patient's husband or wife, who was, perhaps, equally exposed apparently, but capable of taking prophylactic precautions unknown to the children. He endeavored to trace the cause of this apparent contradiction. The researches of Professor Poncet and his pupils with regard to the septicity of the perspiration of the hands and the infection of surgical wounds by perspiration from the hands of the surgeon gave him the idea of investigating the possible virulence of the perspiration of the tuberculous patient as a cause of the frequency of conjugal tuberculosis. It appears from his investigation that the perspiration of tuberculosis patients is virulent in 30.76 per cent. of cases (surgical lesions, tuberculous rheumatism and tuberculous peritonitis, that is to say, in securely closed and slowly progressing lesions). In 41.66 per cent. of tuberculous cases the perspiration may be the vehicle of tubercle bacilli. This elimination of the tubercle bacillus through perspiration seems an argument in favor of the frequent septicemic nature of tuberculous infection. The heavy perspiration of the tuberculous may be considered as crises of elimination of the bacillus. At all events, perspiration is the agent of contagion, dangerous in itself, directly or indirectly, and should be guarded against by disinfection of clothing and other objects soiled by tuberculous perspiration and by isolation of the patient—at least, the use of a separate bed. The endeavor to combat overcrowding by the establishment of cheap dwellings is an urgently needed measure of social prophylaxis.

### Protection of Young Children

The minister of the interior has just issued a report of the administration of the law in 1909 in regard to the protection of the young children. Out of 128,483 children coming under the operation of the law, there were 117,801 legitimate children and 10,682 illegitimate. Most of the children were fed by artificial means. Only 39.5 per cent. were breast-fed. There were 8,973 deaths or 4.92 per cent. The expenses of the service were $413,236 (2,066,184 francs). The report concludes by a statement of the constant improvement in the application of the law, which is aided materially by numerous private organizations.

### Reestablishment of the Functions of the Superintendent of Practical Anatomic Instruction in the Paris Medical School

The minister of public instruction has just reestablished the functions of the *chef des travaux pratiques d'anatomie* which have been suspended since the nomination of Professor Nicolas. Following the recommendations of the commission for the reform of anatomic studies the minister has decided that the *chef des travaux* shall be appointed, after a competition, for a period of five years. This official is not to be a physician or a surgeon or an obstetrician of the hospital—a decision which will be satisfactory to the partisans of Professor Nicolas. The *chef des travaux pratiques d'anatomie* will have charge of all which pertains to practical instruction in anatomy.

### Chloroform Anesthesia and the Adrenals

On March 5, Dr. Pierre Delbet, professor of the surgical clinic at the Faculté de médecine de Paris, read before the Académie de médecine a paper by himself and Drs. Herrenschmidt and Beauvy on their experimental and clinical researches on the fixation of chloroform in the suprarenal capsules, and its action on the fats of these glands and on the chromaffin substance and the epinephrin. They have ascertained that, after narcosis, the chloroform content of the suprarenal capsules is always higher than that of the blood and that under the influence of prolonged chloroform anesthesia the fat of the fasciculated zone of the suparenal capsules extends toward the medullary zone in proportion to the duration of the anesthesia. The anesthesia determines, therefore, the modifications of the medullary zone in which the chromaffin substance and the epinephrin diminish and even disappear.

Without intending to attribute all sequelæ of chloroform anesthesia to alterations of the suprarenal glands, Dr. Delbet is thoroughly convinced that certain of these sequelæ are due to these alterations, and that it is possible to diminish or avoid them by reenforcing the insufficient suprarenal function by injections of epinephrin or of extract of suprarenal glands. There are, indeed, certain sequelæ which are entirely attributable to suprarenal insufficiency. Operative shock is one of these. It is characterized essentially by asthenia and weakening of the pulse, which are the symptoms of suprarenal insufficiency. There is no surgeon who has not had to deplore the sudden death of some operative patient. A patient is observed in the evening, the next day or even the third day after an operation. Nothing in his condition appears alarming. The next morning one is astonished to learn that the patient died during the night. It is in such cases that embolisms are talked of; and they are more often talked of than seen, but the treacherous aspect of death from suprarenal insufficiency is evident.

Since 1909 Dr. Delbet has used injections of epinephrin in all his operative patients. He began with 0.1 mg.—an absolutely insufficient dose. At present he injects as much as 0.4 mg., which seems sufficient for ordinary operations. In operations involving much trauma, he uses as much as 0.6 mg. at one injection. He has never used a larger amount in a single dose, but sometimes he repeats injections up to the point of giving 1 mg. a day. For a long time he made the injection at the end of the operation. Lately he has been making it at the beginning. The anesthesia is thereby made more regular, and there are none of those little annoyances which sometimes disturb the course of an operation.

Examinations have shown that in animals the suprarenal capsules recover their activity about twelve hours after the chloroform anesthesia. There are cases, however, in which suprarenal exhaustion is prolonged. Therefore, when the patient remains asthenic twenty-four hours after the operation, Dr. Delbet injects again 0.4 mg. epinephrin. It would doubtless be preferable to inject the complete extract of suprarenal capsules, since under the influence of anesthesia the cortical as well as the medullary portion is modified. The difficulty of securing good extracts has prevented him from doing so. According to Dr. Delbet's experience with more than one thousand patients, epinephrin administered subcutaneously diminishes and in the majority of cases entirely suppresses operative shock.

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, March 29, 1912.

### Personal

Professor Pankow of Freiburg has been chosen director of the gynecologic clinic at the Academy for Practical Medicine in Düsseldorf.

Professor Fürbinger, the director of the anatomic institute at Heidelberg, retires from the direction of the institute at the close of the summer semester; Professor Braus of Heidelberg has been chosen as his successor.

Professor Roepke of Jena has been chosen as the successor of Professor Heusner, the head of the surgical department of the Municipal Hospital at Barmen.

### The Campaign Against Sleeping Sickness in German East Africa

Professor Steudel, the medical reporter for the imperial colonial office, has returned from his long tour of investigation in German East Africa and a few days ago delivered a lecture on the campaign against sleeping sickness in that country. The oldest focus of the disease is in the Bukoba region, west of Lake Victoria, where the infection is not indigenous, since the *Glossina palpalis* does not occur in that region; the disease was imported by natives who went from there to Uganda to get work. The plan of Robert Koch, who introduced in Kigarama the first sleeping sickness camp, consisted in collecting the patients and keeping them together until their cases terminated in recovery or death, in order to hinder a further spread of the disease by preventing sleeping sickness patients from wandering into districts in which the *Glossina palpalis* does not exist. This has been successful in that district as physicians have been able to make the stay of the natives in the camp agreeable and their chiefs (*Sultane*) have influenced the population in their favor; 800 patients were gradually collected in two camps, part of whom were cured by means of atoxyl, but the majority, in spite of treatment, have died, so that there are now only 300 patients in the camp, of whom 200 can be treated as ambulant patients. As it is forbidden to go to Uganda to look for work, there is a prospect that this focus will be extinguished in the course of a few years. To the east of Lake Victoria on the Mori River, sleeping sickness flourishes among the Wagaia, where 1,000 sick with it have been discovered. It has been found difficult in this region to concentrate the patients in camp because the people belong to a formerly very warlike race, who have been accustomed to wander about the country as nomad herders of cattle. Furthermore, it is difficult to detain in camp those who have the disease in a mild form, as they do not feel sick. Therefore, only the severely sick and delirious, who came of their own free will or were brought to the camp by their relatives, were received, while the essential fight is with the *Glossina* flies. As these insects love the shade and dampness and therefore frequent the bushes on the shores of the lake and river, a systematic clearing of the banks has begun. In districts where only a few people were living, the inhabitants were removed to places where none of these flies existed. In the opinion of the lecturer, such progress has been made through these measures that an infection with sleeping sickness is impossible on Lake Victoria. At his visit in that region only fifty-three patients were in camp, while the others were being treated as ambulant patients. The largest focus, with 7,500 sick, is found on Lake Tanganika among the very populous Urandi, who are only slightly under German influence—they pay no taxes—and oppose isolation by betaking themselves to the woods. For this reason the same system was successfully introduced as among the Wagaia, the patients being treated as ambulant patients until they were severely ill, and receiving two cents for each double injection of atoxyl, while the village elders also received a small present for each patient they brought in. The physicians practicing there succeeded in a short time in securing the confidence of the people, who were at first very shy, the physicians thus proving pioneers of civilization in the best sense of the word. Systematic work was done also in clearing the brush and destroying the reeds along the shores of the lake and the river and, in common with the Belgians, on the river that forms the boundary of Belgian Congo. Half of the work is already done. The expense for each band of 300 laborers amounts to 300 rupees, but this is richly repaid by the preservation of many human lives. Difficulties arise partly on account of the configuration of the rocky shores of the lake and on account of the extensive forests in which the disease is already so widespread among the population that relief seems to be possible only by moving the natives to other regions. Of other nations, only the English in Uganda have undertaken a systematic campaign against sleeping sickness, but in consequence of the enormous extent which the disease has already attained there, only the transportation of the population to districts free from the specific flies was undertaken. Steudel regards the German system as more radical and less of a hardship for the population. Some observations lately made in the southern part of the colony, on the Portuguese frontier, are of importance for the campaign against sleeping sickness. Persons with sleeping sickness have been found there in districts where the *Glossina palpalis* is not known, but the *Glossina morsitans*, the carrier of the tsetse-fly disease of animals is common. Trials with this fly have shown that it conveys the trypanosomes of sleeping sickness to apes. The fight against the morsitans would be more difficult, as this fly prevails generally, but for the present there is no danger, as the focus is only very small.

### Annual Meeting of the German Association for the Advancement of Science

This year's session of the German "Naturforscher-Kongress," the eighty-fourth, is to be held at Münster in Westphalia, Sept. 15 to 21. Münster has, for many years, entertained the desire to possess a full university, there being no university throughout the large province of Westphalia. Some years ago in consequence of repeated pressure on the part of the city and province, the department of education determined to establish at least the beginning of a university, and several medical institutes have already been established there so that students can complete the necessary course of five semesters for the so-called "Tentamen physicum." It is quite reasonable to suppose that the city of Münster has invited this association to meet within its walls because it expects from this visit further assistance toward the fulfillment of its desire for the completion of the university. According to the program, so far published, the subjects of the addresses in the general session are: "Non-operative Treatment of Tumors," by Professor Czerny of Heidelberg; "Life and Love" (Leben und Liebe); "Wireless Telegraphy," "The Recent Development of Thermodynamics," by Professor Nernst of Berlin, and "Modern Military Surgery," by Professor Küttner of Breslau. In a joint session of the chief group of natural scientists there are to be four speakers on the theme of the science of life and its significance for the civilization of the present. In the joint session of the groups of natural sciences and of medicine there will be two speakers on "Heredity and Determination of Sex," and Professor Straub of Freiburg will speak on the importance of the cell membrane for the action of chemical substances.

### Popular Lectures on Hygiene

The German association for popular hygiene (*Verein für Volkshygiene*) which as may be seen from its name has dealt for many years with the popularizing of a knowledge of hygiene, has lately formed a plan at the instigation of the Prussian minister of the interior to advance its purpose by placing easily understood pamphlets in the offices of physicians and dentists and in pharmacies. It will first, according to this plan, distribute 100,000 circulars furnished by the department of the interior on the most important communicable diseases. In addition there will be placed in the localities mentioned 1. a short, easily understood circular on the importance of public and personal hygiene; 2. circulars on the abuse of alcohol, the campaign against the spread of tuberculosis, and things injurious to plants and the like, which the imperial health office and the medical department of the Prussian department of the interior have published; 3. rules for the care of infants. All teaching with reference to the cure or treatment of disease will be avoided in these pamphlets. The public, on the other hand, will be advised to apply immediately to a physician on the appearance of illness. Instruction with reference to the damage done by quacks and nostrums will be included.

**Establishment of a National Museum of Hygiene in Dresden**

The originator and president of the recent international hygiene exposition at Dresden, Exzellenz Lingner, has petitioned the local authorities to establish a national museum of hygiene in Dresden. It is contemplated to use the hall, "Man" (*Der Mensch*), which proved the greatest attraction for visitors to the exposition, as the nucleus of the museum. The museum is to be designed to realize the important principle that every one shall gain by direct inspection the knowledge which will fit him for a sanitary and intelligent conduct of his life. For the completion of this self-instruction, popular weekly lectures are to be held, which will gradually cover the entire field for the care of health. In addition, the management of the museum shall provide scientific lectures and demonstrations for professional people, that is, for physicians, officials, engineers and the leaders of industry. An academy of scientific character is also proposed to supplement the museum. Lingner will present to the museum the objects exhibited at the exposition, which represent a value of $250,000 (1,000,000 marks). The land, which is reckoned at about 6,000 square meters, is to be donated by the city of Dresden. The expense of building and furnishing are reckoned at about $875,000 (3,500,000 marks). The expense of building will be defrayed first out of the surplus from the international hygiene exposition, amounting to $250,000 (1,000,000), while the government of the province (Saxony) will give the rest. The annual expenses are estimated at about $62,500 (250,000). Of this, the city of Dresden will furnish $37,500 (150,000 marks); the special income of the museum from entrance money and fees for attendance at lectures, etc., is estimated at $20,000 (80,000 marks). The rest, it is hoped, will be supplied by the rich and from other sources. The museum is to include three chief divisions, "Der Mensch," the historical division and the ethnologic division.

**Increased Death Rate in Prussia in 1911**

Although in 1910 the population of Prussia had increased as compared with 1876 from 26,000,000 to 40,000,000, the number of deaths was really less and the smallest in the past thirty-five years. Per 1,000 living the death rate had decreased from 25.6 to 16.1. On the other hand that of 1911 underwent again a marked increase. Dr. Behla of the Prussian statistical bureau makes a report of this subject in the last number of the *Berliner klinische Wochenschrift*. It is clearly shown that the cause was the intense heat of last summer. The third quarter shows an increase above the same period of 1910, 50,000 deaths or 32 per cent, and the increase in the cities is larger than in the country (for instance 34.7 per cent, as contrasted with 30.2). It is quite remarkable that all ages show an increase, but it is most in infancy. Here the increase as compared with 1910 is not less than 65.4 per cent. (76.2 in the cities, 57.8 in the country). As to the cause of death in the majority of cases, the increase was due to digestive disorders and heat stroke. The predominant influence of the heat is shown moreover in all countries; according to Behla's international estimate, one-third of a million deaths in Europe in 1911 should be attributed to the unusual temperature. Such an effect from the action of abnormally cold weather is not known. Behla remarks in conclusion that modern hygiene has inscribed the word preventable on its banner. Efforts at prevention should not be limited to the diseases of bacteriologic origin but should take a wider scope, including social and metereologic causes and above all must secure the means of protecting infants from the effects of overheating and nutritional disturbances

## Miscellany

**The Ministrations of the Earthworm.**—J. Newton Friend points out (*Science Progress*), that the chief activity of worms in the aeration of the soil lies in their power of excreting acids in their castings, of exhaling carbon dioxid, and of aerating the soil both by mechanical and by chemical means. He has made a number of observations on these points which show that the rôle of the earthworm amply repays study. Worms effect the aeration of the soil in a variety of ways. In burrowing through the soil the worm renders it more porous and permeable to gases, not merely by virtue of the air spaces formed, but by reason of the fact that the soil is thus continually kept in gentle motion. Again, the soil passing through the bodies of worms is excreted in a finer condition, being ground by attrition through the intestines. This increased fineness up to a certain limit means increased area, and hence greater susceptibility to the action of gases; beyond this limit the particles begin to cling together, and a proportionately less porous mass results resembling clay rather than ordinary soil. It was Darwin who estimated that no less than 15 tons of soil annually pass through the bodies of worms for every acre. Further, worms breathe in oxygen and exhale carbon dioxid, and the latter gas, as is well known, readily dissolves in water, forming an acid solution which will render alkaline earths and metallic oxids, e. g., iron—soluble. The amount of carbon dioxid exhaled in the course of a year by an active worm-inhabited acre would amount to 29.6 kilograms, or 15,000 liters. The interchange of oxygen and carbon dioxid effected by worms is thus considerable. Worms materially aid in producing soluble salts of iron in the soil when other agencies (e. g., dilute mineral acids) fail. The iron is eventually given back to the soil in a more soluble condition, and presumably in one which can be directly absorbed by plant roots. As Friend points out, worms probably have an important ministry to perform in the soil, and it is to be hoped that further researches in this direction will be undertaken, for the habits and distribution of the earthworm appear to have received little attention since the days of Darwin, or with the aid of modern scientific apparatus.

**Arteriovenous Anastomosis for Impending Gangrene.**—W. Greiffenhagen (*St. Petersburg. med. Wchnschr.*) reports a case of gangrene of the left foot and two years later of the right foot, compelling amputation. Four years after this the patient had symptoms suggesting impending gangrene of the right hand. Greiffenhagen made an anastomosis between the brachial artery and vein, which seemed normal. Great improvement in the pains and color of the arm resulted at first, but by the third day the circulation became defective and the forearm had to be amputated by the end of the week. An attempt to make an anastomosis in the other arm three months later for the same trouble failed and the arm was amputated at the same sitting. The sclerotic arteries in the arm last amputated had grown to the nerves. Greiffenhagen had had a similar case a few years previously in which the feet and hands had to be amputated in turn, the young man surviving for three years after the last amputation. This experience justified any attempt to save his last patient from such a fate, although such anastomosis operations have rarely succeeded.

**The Care of Nervous Patients.**—As a gardener waters his plants daily until they become strong and vigorous, so the physician should watch over his nervous patients, to interpret their symptoms, teach them to understand their significance, dispel their fears and sustain them against their hopelessness and depression. That one needs tact, adaptability and experience, as well as optimism and force, will be conceded, and in many instances—especially with intelligent patients—knowledge of general matters will help considerably. And even the illiterate will not think less of us when they learn we take an interest in affairs outside our profession and our libraries are not limited to medical literature.—J. J. Macphee in the *Post-Graduate*.

## Marriages

Lester Hayden Humphrey, M.D., Silver Springs, N. Y., to Miss Harriet Sophia Barber of Warsaw, N Y., April 3.

Howard Milton Leinbach, M.D., Reading, Pa., to Miss Gertrude E. Hyndman of Pen Argyl, Pa., March 29.

Arthur J. Taveira, M.D., New Bedford, Mass., to Miss Camella la Rosa of Lisbon, Portugal, recently.

Garnett W. Quillian, M.D., Atlanta, to Miss Rosalie Beacham of Spartanburg, S. C., January 31.

Lister Collins, M.D., to Miss Mary Brown, both of Mount Eden, Ky., at Jeffersonville, Ind., March 28.

Henry Oscar Hovelson, M.D., Osage, Ia., to Miss Effie Church of Bloomingdale, Ind., March 31.

Olin Bertram Norman, M.D., Bedford, Ind., to Miss Grace Cromer of Anderson, Ind., February 28.

Rev. Joseph Cannon Ellis, M.D., to Rev. Mary H. Munford, both of Philadelphia, April 3.

## Deaths

**William Henry Banwell, M.D.** Cincinnati College of Medicine and Surgery, 1871; a veteran of the Civil War; until 1881 a practitioner of South Charleston, Ohio, and since that time a resident of Harlan County, Nebraska; for many years a member of the American Medical Association; some-time president of the Clark and Greene County (Ohio) Medical Society and Harlan County (Neb.) Medical Society; department commander and department medical director of the Grand Army of the Republic in Nebraska; coroner of Harlan County; a member of the Nebraska State Legislature; local surgeon of the Burlington and Missouri River Railway at Orleans; died at his home in that place, March 31, aged 79.

**Charles Potts Britton, M.D.** University of Pennsylvania, Philadelphia, 1873; a member of the Medical Society of the State of Pennsylvania and formerly a member of the American Medical Association; until 1882 physician to St. Francis' Hospital and the New Jersey State Asylum for the Insane, Trenton; for several years a member and president of the Trenton Board of Health; died at his summer home in Bushkill, Pa., March 29, from cerebral hemorrhage, aged 66.

**Willis M. Wells, M.D.** University of Vermont, Burlington, 1874; a member of the Medical Society of the State of New York; past president of the Oswego County Medical Society and Academy of Medicine of Fulton and a member of the board of governors of the Fulton City Hospital; died at his home in Fulton, March 30, from cerebral hemorrhage, aged 61. At a special meeting of the Fulton Medical Society, April 2, resolutions of regret and sympathy were adopted.

**Oscar H. Hall, M.D.** University of Buffalo, N. Y., 1868; a veteran of the Civil War; professor of renal diseases and practice of medicine in the University of Minnesota, College of Homeopathic Medicine and Surgery, St. Paul; a member of the staff of St. Paul Hospital for twelve years and a member of the State Board of Medical Examiners; died at his home, April 2, aged 70.

**Theophilus Westmoreland, M.D.** Vanderbilt University, Nashville, Tenn., 1855; formerly a member of the Tennessee State Medical Association; surgeon in the Confederate service during the Civil War; for many years president of the board of control of the State Agricultural School, Athens, Ala.; died at his home in Athens, March 7, from senile debility, aged 79.

**James L. Shirey, M.D.** Starling Medical College, Columbus, Ohio, 1885; a member of the Ohio State Medical Association; of Akron; fell down stairs in a drug store in that city, April 6, sustaining a compound fracture of the right wrist, several severe scalp wounds and a concussion of the brain, as a result of which he died in the Akron City Hospital, April 8, aged 60.

**Floyd W. Rogers, M.D.** University of Maryland, Baltimore, 1902; formerly a member of the American Medical Association; a member of the Rhode Island Medical Society; who fractured his right hip at his home in Wickford, R.I., March 13; died in the Newport Hospital March 26 from heart disease, a day after an operation for wiring the broken bone, aged 52.

**John Gerard Vogt, M.D.** Washington University, St. Louis, 1886; Homeopathic Medical College of St. Louis, Mo., 1890; a member of the Illinois State Medical Society, and once president of the Clinton County Medical Society, for four years president of the Board of Education of Trenton; died at his home in Trenton, March 26, aged 49.

**Charles Mortimer Smith, M.D.** Rush Medical College, 1860; Bellevue Hospital Medical College, 1873; assistant surgeon of the Thirteenth Wisconsin Volunteer Infantry throughout the Civil War and for more than fifty years a practitioner and for several terms president of the village board of Evansville; died at his home, April 1, aged 77.

**Rafael Echeverria, M.D.** University of Havana, Cuba, 1885; a member of the Hillsboro (Fla.) Medical Society; for many years a resident of Tampa, assistant surgeon in the army during the Spanish-American war, with service in Cuba, and afterwards major and surgeon of U. S. volunteers; died at his home in Tampa, April 1, aged 60.

**Auguste Renouard, M.D.** Missouri Medical College, St. Louis, 1859; assistant surgeon in the Confederate service during the Civil War; for a time lecturer on surgery in his alma mater; a pioneer embalmer and at the head of the Renouard School of Embalming, New York City; died at his home March 16, from arteriosclerosis, aged 73.

**Thomas De Lap Smith, M.D.** Medical School of Maine, Brunswick, 1867; formerly a member of the American Medical Association; a fellow of the Massachusetts Medical Society; for a time examiner to the New York State Board of Health, but of late years a practitioner of Roxbury, Boston; died at his home, March 20, aged 75.

**George Arthur Brown, M.D.** Ohio Medical University, Columbus, 1898; of Barberton, Ohio; a member of the American Medical Association; for four years health officer of Barberton; who was taken to the Akron Hospital, August 4, for a minor operation, died April 6, from cerebral embolism, aged 38.

**John Evans Mackall, M.D.** University of Maryland, Baltimore, 1908; a member of the Medical and Chirurgical Faculty of Maryland; for two years a member of the staff of the Atlantic Coast Line R. R. Hospital, Rocky Mount, N. C.; died at his home in Elkton, April 4, from typhoid fever, aged 29.

**John W. C. White** (license, South Dakota, ten years of practice, 1890); formerly a member of the American Medical Association; for a time circuit judge at Deadwood, S. D., and a practitioner of Plankinton for seventeen years; died at the home of his daughter in Acorn, Neb., recently, aged 72.

**Henry Clay Miner, M.D.** Northwestern University Medical School, Chicago, 1875; a member of the Kansas Medical Society; formerly a member of the Kansas State Board of Health; a practitioner since 1865; died at his home in North Topeka, April 4, from disease of the liver, aged 69.

**James N. Day, M.D.** Medical College of Ohio, Cincinnati, 1874; a member of the Iowa State Medical Society; vice-president of the Henry County Medical Society in 1911; for several terms a member of the city council of Mount Pleasant; died at his home March 31, from heart disease, aged 61.

**Albert Franklin East, M.D.** Jefferson Medical College, 1893; a member of the Medical Society of the State of Pennsylvania and of the staff of the Reading Hospital Dispensary; died suddenly at the home of his brother-in-law in Burlington, N. J., April 5, from cerebral hemorrhage, aged 41.

**Marley Milfred Lockwood, M.D.** College of Physicians and Surgeons, Baltimore, 1896; a member of the Medical Society of the State of California; formerly a practitioner of Hallock, Minn., and coroner of Kittson County; died at his home in Colusa, April 2, from nephritis, aged 45.

**William S. Jackson, M.D.** University of Michigan, Ann Arbor, 1898; of Houghton, Mich.; a member of the Michigan State Medical Society and physician of Houghton County; died in Hicksville, Ohio, recently from uremia, aged 42, and was buried in Houghton March 14.

**Charles Vincent Burke, M.D.** College of Physicians and Surgeons, New York City, 1894; a member of the American Medical Association; formerly a practitioner of Newark, N. J., but for eight years a resident of Montana; died at his home in Dupuyer, recently, aged 40.

**Joseph Osburne McKee, M.D.** Detroit Medical College, 1874; a member of the Medical Society of the State of Pennsylvania and the McKeesport Academy of Medicine; died in the McKeesport Hospital, April 6, three days after an operation for carcinoma, aged 58.

**Abraham Jeremiah Hammer, M.D.** Pulte Medical College, Cincinnati, 1880; in charge of the medical and surgical departments of the Lucas County (Ohio) Infirmary; died at his home in Toledo, April 5, from septicemia, due to an operation wound, aged 58.

**George Rhoades, M.D.** Hahnemann Medical College, 1889; surgeon to the Wesson Memorial Hospital, Springfield, Mass., and oculist and aurist to the Hampden Homeopathic Hospital; died at his home in Springfield, March 29, from acute gastritis, aged 52.

**Horatio N. Atkinson, M.D.** Bennett Medical College, Chicago, 1898; for several years surgeon for the Dolores mines at Madera, Chihuahua, Mexico, and later of Humble, Texas; died in the Sealy Hospital, Galveston, March 28, from gastric ulcer, aged 33.

**Ephraim Pearson James, M.D.** University of Toronto, Ontario, 1902; for four years surgeon on transatlantic steamers, but for the last six years a practitioner of Galt, Ont., was found dead in his office, March 27, from heart disease, aged 33.

**Henry Martin Blake, M.D.** Bellevue Hospital Medical College, 1869; a member of the Maine Medical Association; for one term a representative in the state legislature; died at his home in Monmouth, April 7, from double pneumonia, aged 75.

**Avelin Hurbert Street, M.D.** New York; since 1869 a practitioner of medicine and dentistry of Albert Lea, Minn.; for several years justice of the peace; died at the home of his niece in Alden, Minn., March 13, from senile debility, aged 78.

**Madison W. Culp, M.D.** Medical College of the State of South Carolina, Charleston, 1881; a member of the South Carolina Medical Association; died suddenly at his home in Union, March 30, from cerebral hemorrhage, aged 54.

**Acestes Grant Loder, M.D.** University of Pennsylvania, Philadelphia, 1897; for several years demonstrator of anatomy in the Pennsylvania College of Dental Surgery, Philadelphia; died at his home in that city, April 5, aged 47.

**Robinson Bell, M.D.** Western Reserve University, Cleveland, 1883; formerly coroner of Cuyahoga County, Ohio, and a practitioner of Cleveland; died suddenly in his office in Toledo, March 29, from heart disease, aged 52.

**James Irving Rasbach, M.D.** Bellevue Hospital Medical College, 1876; for eighteen years a member of the board of education of Ilion, N. Y.; died at his home in that city, March 27, from cerebral hemorrhage, aged 59.

**James N. Stanton, M.D.** Atlanta (Ga.) Medical College, 1859; for many years a practitioner of Warrenton, Ga.; a Confederate veteran; died at his home in Marietta, January 20, from pneumonia, aged 74.

**John Early Logan, M.D.** Jefferson Medical College, 1859; one of the best-known and most generally-esteemed practitioners of Guilford County, N. C., died at his home in Greensboro, March 31, aged 76.

**John Phelps Shumway, M.D.** Albany (N. Y.) Medical College, 1860; formerly of Geddes and Syracuse, N.Y., but since 1890 a resident of Los Angeles, Cal.; died at his home in that city, March 17, aged 75.

**William Harrison Evans, M.D.** University of Michigan, Ann Arbor, 1865; University of Wooster, Cleveland, Ohio, 1866; died at his home in Sanford, Fla., March 25, from cerebral hemorrhage, aged 72.

**George L. Peaslee, M.D.** Castleton (Vt.) Medical College, 1848; for twenty years a practitioner of Wilton, Me., and thereafter of Auburn; died at his home March 3, from senile debility, aged 82.

**Henry Melgrove Adams, M.D.** Medical School of Maine, Brunswick, 1849; for many years a practitioner of South Dakota; died at his home in Blunt, March 2, from senile debility, aged 88.

**John Allen Hubbs, M.D.** Physiomedical Institute, Cincinnati, 1860; formerly of Brownsville and Charleroi, Pa.; died at his home in Youngstown, Ohio, March 27, from senile debility, aged 72.

**Charles S. Smith, M.D.** University of Buffalo, N. Y., 1890; a member of the Steuben County Medical Society; died suddenly at his home in Campbell, March 29, from acute gastritis, ged 47.

**Eli L. Schlotterback** (license, Ind., 1897); for many years a ractitioner of South Bend, and for thirty years a practitioner f Ligonier; died at his home April 1, from acute gastritis, ged 70.

**Walter James Webb, M.D.** University of Bishop College, Montreal, 1897; a fellow of the Massachusetts Medical Society; died at his home in Cambridge, Mass., March 24, aged 41.

**William Enoch Hoag, M.D.** New York University, New York City, 1874; a physician and dentist of New York City; died at his home, April 2, from arteriosclerosis, aged 70.

**Henry T. Wilbanks, M.D.** University of Louisville (Ky.) 1894; formerly of Caps, Texas; died at his home in Dodsonville, Texas, March 12, from pneumonia, aged 41.

**C. M. Dodge** (license, practitioner, Iowa, 1886); for many years a practitioner and postmaster of Griswold, Ia.; died at his home March 26, from senile debility, aged 85.

**James Oglesby, M.D.** Jefferson Medical College, 1868; a member of the American Medical Association; died at his home in Danville, Pa., February 21, aged 71.

**William T. Arnold, M.D.** University of Maryland, Baltimore, 1875; a physician and dentist of West Baltimore; died at his home March 31, from heart disease, aged 67.

**James H. Hartwell, M.D.** University College of Medicine, Richmond, 1897; of Stewartsville, Va.; died in the Jefferson Hospital, Roanoke, Va., March 28, aged 38.

**Jefferson T. Colliver, M.D.** Eclectic Medical Institute, Cincinnati, 1865; of San Bernardino, Cal.; died in the Angelus Hospital, Los Angeles, March 15, aged 70.

**James Weller Hughes** (license, Ind., 1899); a practitioner of Waterloo and Bristol, Ind., since 1872; died at his home in Bristol, April 6, from nephritis, aged 60.

**Charles E. Moore, M.D.** College of Physicians and Surgeons, Baltimore, 1883; of McKeesport, Pa.; died in a hospital in Pittsburgh, March 23, aged 57.

**James H. Sternberg, M.D.** Jefferson Medical College, 1856; one of the oldest residents of Waterloo, N. Y.; was found dead in his bed, March 26, aged 78.

**Harry E. Yost, M.D.** Louisville (Ky.) Medical College, 1895; health officer of Jackson County, Ind.; died at his home in Vallonia, April 7, aged 46.

**Willard Eddy, M.D.** University of Michigan, Ann Arbor, 1863; of Waterloo, Iowa; died in the Hill Sanitarium, Des Moines, March 21, aged 77.

**John David Davis, M.D.** University of Buffalo, N. Y., 1886; formerly of Westfield, N. Y., died at his home in Springville, N. Y., March 26, aged 52.

**William Hewitt, M.D.** Eclectic Medical Institute, Cincinnati, 1858; died at his home in Memphis, Tenn., March 17, from senile debility, aged 90.

**Albert Stotiff Wilson, M.D.** University of Michigan, Ann Arbor, 1894; died at his home in Bellevue, Mich., April 3, from heart disease, aged 44.

**William A. Huff, M.D.** University of Louisville, Ky., 1871; died at his home in Altamont, Kan., January 31, from cerebral hemorrhage, aged 65.

**Frank W. Bailey, M.D.** Starling Medical College, Columbus, Ohio, 1882; died at his home in Joplin, Mo., March 25, from paralysis, aged 52.

**W. H. Little, M.D.** Louisville (Ky.) Medical College, 1891; of Whitewright, Texas; died in the Baptist Sanitarium, Dallas, March 26, aged 45.

**John Tiedemann, M.D.** Long Island College Hospital, 1894; of Seattle, Wash.; died in that city, March 29, from uncinariasis, aged 46.

**Herbert L. S. Chaplin, M.D.** McGill University, Montreal, 1903; died at his home in St. Johns, Newfoundland, January 18, aged 31.

**Daniel Winter, M.D.** Homeopathic Medical College of St. Louis, Mo., 1886; died at his home in Columbus, Kan., March 25, aged 79.

**William J. Edmundson, M.D.** University of Tennessee, Nashville, 1882; died at his home in Napa, Cal., March 6, aged 60.

**Thomas Joseph Backes, M.D.** Bellevue Hospital Medical College, 1895; died at his home in New York City, March 31.

**Mary L. Randall Morris, M.D.** Halifax (N. S.) Medical College, 1899; died at her home in Truro, N. S., January 18.

**J. D. Raines** (license, Mo., 1883); of Maywood.; died suddenly in Palmyra, Mo., April 4, aged 73.

# The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

## SANATOGEN

### Cottage Cheese—The New Elixir of Life

The psychology of advertising is nowhere better exemplified than in the "patent medicine" and proprietary fields. The reason is evident. Knowing that the general tendency of the human organism is toward health rather than toward disease and that the "healing power of nature"—*vis medicatrix naturæ*—will account for a large proportion of recoveries from sickness, it is not to be wondered at that thousands of preparations sold for medicinal purposes receive credit that is entirely undeserved. The awarding of such undeserved credit is largely due to the universal tendency of those who are not trained in science to apply the *post hoc, ergo propter hoc* argument in all matters relating to health and disease.

John Smith suffers from a passing indisposition. When he recovers he credits his recovery to whatever he may have done just preceding that recovery. If he has received medical attention, the physician gets the credit; if he has taken "absent treatment," Christian Science is responsible; if he has taken sugar pills, "Prof." Munyon gets the praise—while, as a matter of fact, if he had taken none of these, he would have recovered since he was only temporarily indisposed.

Nor are laymen the only ones that fall into such errors. Many physicians who prescribe new, widely-advertised preparations are likely to give those products credit for whatever favorable change may take place in their patients' condition. This failing is not a modern one. In 1842 Dr. Benjamin Brodie wrote: "We have no doubt that many well-instructed medical practitioners have not sufficiently considered what course a given disease would take if it were left to itself; and as to others, it is not possible that they should have any real knowledge on the subject. With the majority of persons a recovery will generally pass for a cure."

While every physician is perfectly familiar with the facts just stated, it seems worth while to give them as a probable explanation of what is to follow. Within the last few years the medical profession and the public of this country have been asked to believe that a combination of cottage cheese—or its equivalent—with a small amount of glycerophosphates is capable, when sold under a proprietary name and with the right kind of advertising, of producing physiologic effects that are little short of marvelous.

The name of this elixir of life is Sanatogen, and it is doubtful if the history of modern advertising furnishes any more notable example of the commercial potentialities of publicity than that exhibited in the exploitation of this product. The Sanatogen advertising campaign is probably the most skilful piece of work of its kind ever done. On both sides of the Atlantic, every effort has been made to endow the advertisements with a dignity which, to those who know the very ordinary nature of the product advertised, is grotesquely out of keeping. Only the highest-class magazines and newspapers have been patronized; the "copy" has been so written as to appeal not to the ignorant but to the intelligent. Testimonials from men whose names are well known, even though by training and education they are incompetent to pass judgment on a product of this kind, and fulsomely laudatory letters from men whose education and training should have taught them better—both have been used with all the skill of the trained publicity man. In short, Sanatogen stands as a monument to the power of printers' ink.

The claims for this product have already been referred to in The Journal, but it will do no harm to bring them again before our readers. Here are some taken from advertisements:

"The Re-Creator of Lost Health."

"Sanatogen is . . . a rebuilding food."

" . . . revitalizes the overworked nervous system."

"Specific nerve tonic action."

"Most reliable and scientific of all nutrients."

" . . . *in certain diseases* it exerts a *specific action* which renders it a valuable adjunct to other curative measures."

"It stimulates metabolic activity of tissue cells and secures more complete oxidation of energy yielding elements."

"Sanatogen nourishes the system in a persistent, gradual, cumulative way, so that its best effects unfold themselves in a systematic, substantial progression to health and strength. It follows that a regular and prolonged administration of Sanatogen is necessary for the attainment of lasting results."

"Sanatogen is a scientific compound, every particle of which represents the finest concentrated, tissue-constructing nutriment, endowed with unique revitalizing and rejuvenating powers."

"Sanatogen contains over 700 per cent. more tissue-building, life sustaining nourishment than wheat flour."

Truly a wonderful preparation—if these statements are true! But they are false—most of them at least. And in that many who can ill afford it may be led to pay a ruinously high price for a very ordinary food, the statements are viciously and cruelly false.

In view of the properties with which Sanatogen is credited, its composition is naturally a matter of more than ordinary interest. What is this life-giving product? A package of Sanatogen was purchased and subjected to examination and analysis in the Association's laboratory. Our chemists report:

#### LABORATORY REPORT

Sanatogen is a fine, nearly white powder having a faint yellowish tinge. A circular which is enclosed in the package states:

> "Sanatogen is a definite organic combination of 95 per cent. of pure, specially prepared casein and 5 per cent. of sodium glycerophosphate, . . . "

Qualitative tests indicated the presence in Sanatogen of casein, sodium, a phosphorous compound and glycerin or a glycerin compound. Starch and sugars were absent. Quantitative analysis showed that the composition of the specimen was essentially as follows:

| | |
|---|---|
| Water (loss at 130 C.) | 8.60 |
| Ash | 6.23 |
| Casein and other proteins (N × 6.38) | 83.10 |
| Casein (N in precipitated casein × 6.38) | 80.57 |
| Proteins other than casein (by difference) | 2.53 |
| Sodium glycerophosphate ($NaC_3H_7O_6P$) (P in filtrate from casein precipitation × 6.79) | 5.59 |
| Insoluble matter | 0.84 |
| Undetermined | 1.87 |

While these results show that the claims concerning the composition of Sanatogen are not entirely correct, they indicate that the essential element in Sanatogen is casein.

The slight variation between the composition claimed for Sanatogen and the composition as determined by chemical analysis is of minor importance. Whether there is 83 per cent. of casein as found by the Association's chemists or 95 per cent. as asserted by the manufacturers matters little. The important fact is that casein makes up about nine-tenths of the preparation and, as must be perfectly evident, Sanatogen derives whatever food value it may have from that casein. Casein is known in its commonest form as the curd in milk, or as "cottage cheese." After the cream has been separated, the milk which remains contains nearly all the casein and milk sugar originally present but practically none of the fat.

Whence comes the stimulation of metabolic activity, the wonderful nourishment of the system, the marvelous revitalizing and rejuvenating power claimed for Sanatogen? Not from the sodium glycerophosphate, for the consensus of opinion among leading physiologists indicates that phosphorus in the form of glycerophosphates has little influence on metabolism. Not from the glycerin, surely, for even granting that glycerin has food value the amount present is so small as to be negligible. The real source of energy in Sanatogen, then, lies in the casein which comprises about nine-tenths of its ingredients.

Of course Sanatogen, being composed largely of casein, has some food value. What that food value is may be seen by the accompanying table which compares the yield of energy for Sanatogen with that of a number of staple food products, the figures for the latter having been adapted from Professor Atwater's calculations. This table shows that, from the standpoint of economy in the purchase of energy, no other food in the list is so poor as Sanatogen. While the manufacturers claim that "Sanatogen contains over 700 per cent. more tissue-building, life-sustaining nourishment than wheat flour," the table shows that one dollar's worth of wheat flour contains as much energy as one hundred and ninety-seven dollars' worth of Sanatogen!

| Kind of Food Material | Price per Pound | Cost of 1,000 Calories Energy | Calories. Energy for One Dollar |
|---|---|---|---|
| Sanatogen ........... | $4.54 | $3.01 | 332 |
| Celery ............... | .05 | .77 | 1,300 |
| Eggs ($0.36 per doz.).. | .24 | .39 | 2,600 |
| Beef, round .......... | .14 | .16 | 6,300 |
| Milk ($0.07 per qt.)... | .035 | .11 | 8,850 |
| Pork, loin roast....... | .12 | .10 | 10,350 |
| Butter ............... | .30 | .09 | 11,250 |
| Mackerel, salt dressed.. | .10 | .09 | 11,350 |
| Cheese ............... | .16 | .08 | 11,850 |
| Beef, stew meat....... | .05 | .07 | 15,300 |
| Wheat bread ......... | .06 | .05 | 20,000 |
| Rice ................. | .08 | .05 | 20,250 |
| Sugar ................ | .06 | .03 | 29,200 |
| Pork, fat salt......... | .12 | .03 | 29,500 |
| Potatoes ............. | .01 | .03 | 29,500 |
| Beans, white ......... | .05 | .03 | 30,400 |
| Oatmeal ............. | .04 | .02 | 45,000 |
| Cornmeal ............ | .025 | .02 | 65,400 |
| Wheat flour .......... | .025 | .02 | 65,400 |

Like all "patent medicines," Sanatogen is exploited by the testimonial route. Actors, authors, politicians and not a few physicians—the latter, to the credit of the American profession, be it said, being chiefly Europeans—have testified to the wonderful properties of this product. Believing that it would be of interest to learn what scientific men thought of Sanatogen a letter of inquiry was written to several men whose training particularly fits them to express an impartial opinion on a question of this kind. The following inquiry, expressed in practically the same words, was propounded:

Is it possible for a product, even if it has the composition claimed for Sanatogen, to have properties as a food and medicine which are claimed for this preparation?

The replies to this inquiry are interesting and instructive, although they are what might have been expected from men whose judgment has not been warped by the glittering claims of the Sanatogen publicity agents.

Dr. Lewellys F. Barker, professor of medicine, Johns Hopkins University, medical department, says in part:

"If Sanatogen consists simply of casein and sodium glycerophosphate, it is pretty obvious that all of its good effects (except perhaps the psychic influence of taking an expensive and, to the layman, mysterious remedy) can be gotten by including milk and eggs in the food. . . .

"The objection to Sanatogen lies, it seems to me, not in the assertion of its proprietors that it is a 'food and a tonic,' but in the misleading of the public and physicians into the belief that it possesses extraordinary powers which make it worth while to pay the price charged for it in order to get it. Very extravagant claims are being made for it in advertisements in the lay press. If just as much, and more, good in the form of 'food and tonic' can be obtained from a dollar's worth of milk and eggs as from a dollar and ninety cent's worth of Sanatogen, it is surely the duty of the medical profession to inform the public of the fact."

Dr. Frank Billings, professor of medicine and head of the Department of Medicine, University of Chicago, expresses his opinion thus:

"Of course, the thing is a fraud both as a food and as a tonic. Even if it met all the requirements of the statements made of it by the makers, it would not be any more of a food than as much casein taken in milk and probably not as good; or any more than some other albumin taken in some other form. I do not know just what pharmacologists say of the glycerophosphate of soda, but so far as my own clinical observations go I never saw any result from its use that could be called specific, that is, due to the drug."

Dr. Richard C. Cabot, assistant professor of clinical medicine, Harvard Medical School, says:

"In reply to your letter respecting the properties of Sanatogen, I would say that in my opinion it is vastly improbable that it has the properties claimed for it in the advertisements which you enclosed to me. I have no doubt that it is a fairly good food. I see no reason to believe that the phosphorus that it contains has any special action."

Otto Folin, professor of biological chemistry, Harvard Medical School, expresses himself thus:

"For myself, or for any one who would take my advice, I would prefer a glass of milk to Sanatogen when hungry and plain glycerophosphate to Sanatogen when in need of a tonic.

"Medicated feed used to be sold for horses. To me the 'food tonic' combination represents one of the most unscrupulous fake ideas used by manufacturers of patented articles to fool the public."

Ludvig Hektoen, professor of pathology, University of Chicago, says in part:

"In my opinion, no attention whatsoever should be paid to the claims advanced in favor of 'Sanatogen' as food and as medicine, because the statements made in the advertisements of this product are extravagant, misleading and quackish."

J. H. Long, professor of chemistry and director of chemical laboratories, Northwestern University Medical School, expresses the following opinion:

"With every reading of the advertising literature of the Sanatogen Company I am more and more impressed by the gross exaggeration of the claims made for this mixture of casein and sodium glycerophosphate. Cow's milk contains 3½ to 4 per cent. of casein, associated with soluble phosphates. It is absurd to think that this casein after precipitation from the milk has a greater nutritive value than it has in its native condition. Casein, at best, is probably less valuable as a food than are certain other proteins, because of its lack of some of the amino groups essential in tissue building, and the addition of a glycerophosphate cannot supply this deficiency.

"This is not the first attempt to exploit casein preparations. The earlier efforts failed in practice because they were based on a wrong conception concerning the physiologic value and importance of this protein. The assumption that in the case of Sanatogen a 'definite organic combination' with the glycerophosphate is formed cannot be taken seriously by chemists. We have witnessed many such efforts to palm off mixtures as definite organic compounds, and in this way to claim for them a value in excess of that which they actually possess."

Graham Lusk, professor of physiology, Cornell University Medical College, after calling attention to the falsity of the claim that Sanatogen is "a life-sustaining agent in disease," says:

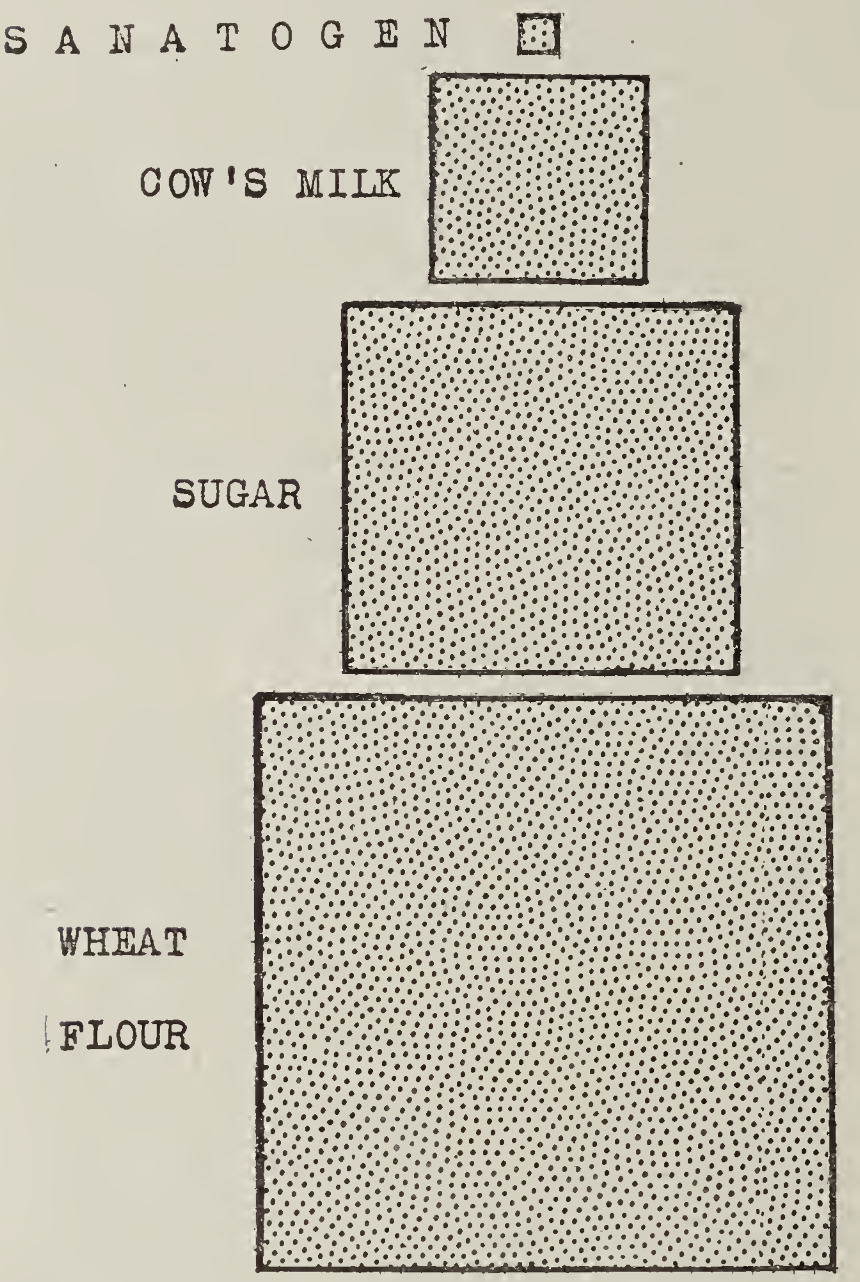
"If one considers the casein content alone, the dose of Sanatogen recommended in the circular would furnish, at best, about what is contained in a pint of milk, or one-fourth of the total of the protein necessities of the body—using a low protein requirement. That sodium glycerophosphate has any distinctly beneficial physiologic action has never, to my knowledge, been shown.

"It is a great pity that the public does not realize the splendid and economical value of milk, bread and the ordinary vegetables, cereals and meats, as true 'tonic food stuffs,' in contradistinction to prepared nostrums whose sale depends on a psychic stimulus applied to a susceptible populace."

H. Gideon Wells, associate professor of pathology, University of Chicago, says:

"There is nothing in my knowledge of physiologic chemistry which would lead me to believe that a mixture of chemically isolated casein and sodium glycerophosphate would possess any effect more favorable than that of a corresponding amount of milk. I can easily believe that it would be less valuable than milk. The successful practice of many commercial houses, of isolating one of the constituents of our food, and ascribing to it marvelous nutritive or therapeutic properties, is one of the most telling bits of evidence of the inadequacy of the education of the medical profession in physiology and physiologic chemistry that can be conceived."

The consensus of opinion thus expressed is only what might have been expected from men who could discuss the problem in a purely judicial spirit and with a freedom from that bias which seems to be inseparable from the consideration of the simplest of mixtures that have been glorified by a proprietary name.



WHAT ONE DOLLAR WILL BUY IN FOOD ENERGY! A COMPARISON OF THE CALORIC VALUES OF SANATOGEN, COW'S MILK, SUGAR AND WHEAT FLOUR. BASED ON THE TABLE ACCOMPANYING THIS ARTICLE.

Herr Teufelsdröckh was right when he panegyrized clothes. And the worship of clothes is carried to the extreme nowhere so much as in the case of word-clothes. The most plebeian of things when bedecked in sufficiently imposing word-finery are endowed with the attributes of royalty before which the average intellect bows down. Neither cottage-cheese nor glycerophosphates, when exposed naked to the world, commands any overweening respect; combined and dressed in the magic word "Sanatogen," they receive the homage of those whose judgment is blinded by the glittering trappings of word-finery. Some day, possibly, there will be a democracy of intellect which will refuse to prostrate itself before mere word-raiment and will insist on appraising things at their naked worth. When that day comes, proprietary humbugs like Sanatogen will have become as extinct as the dodo and the great auk.

### DR. WILEY AND SECRETARY WILSON

*Collier's Weekly* says: "Senator La Follette conducts a weekly magazine which, like the senator himself, is unceasing in its public service. It now takes up the relation of Dr. Wiley to those who, on his retirement, remain triumphant in the Department of Agriculture. Public health, as *La Follette's* says, is the foundation of national efficiency and greatness, and Wiley has spent a quarter of a century in the promotion of public health. It took twenty-five of his twenty-nine years of service to reach a point where the general interest had become strong enough to drive the courts into action, and the food and drugs act is more a monument to him than to any other one person. The adulterators and poisoners, beaten in Congress, found ardent aids in the Department of Agriculture. 'This situation, together with President Taft's 'gag rule,' which puts the hand of silence over the mouth of every bureau chief, left Wiley helpless. He could neither enforce the pure food law nor lift his voice in protest to the country. Had public opinion not been so much aroused, the false evidence which McCabe manufactured against Wiley, even at the risk of changing a document, would have been successful, backed as it was by Wickersham's recommendation that Wiley be punished. *La Follette's Magazine* is perfectly correct when it says: 'The press and the public demanded the removal of Wilson and McCabe and the other plotters. A year has passed since then, but these officials are still at their posts, hampering the enforcement of the food and drugs act and undermining the efficiency of the department.' That demand, in fact, was almost universal. Perhaps there is somebody who has a definite knowledge of *why* President Taft was willing to let Wiley go and to keep Secretary Wilson and Mr. McCabe. Our own opinion, which is merely a guess, is that it was less a positive wish of the President's than a feeble yielding to the influences about him. Secretary Wilson is an old man, and he wants to stay in office, and so no matter how much harm he does the President lets him stay there. What part Mr. Wickersham takes in this decision can only be surmised from his recommendation that Dr. Wiley be visited with 'condign punishment.'

"With Wiley away
The microbes will play.

"The New York *Evening Post* argues this current poetry unfair, on the ground that as the President found a good successor to Ballinger he may do as well in the Bureau of Chemistry. The cases are somewhat different. Ballinger was forced out, against the President's will, by public opinion. Wiley was forced out by intrigue, against the public's wish. What good can anybody do in Wiley's place, with McCabe, Dunlap and Wilson in control?"

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## *Correspondence*

### Two Distinct Stages of Hunger

*To the Editor:*—I read with considerable interest the editorial entitled "What is Hunger?" (THE JOURNAL, April 6, 1912, p. 1018.) As I have had some little experience with hunger, both personally and among my hunting companions, I venture to contribute a few facts to the discussion.

To begin with, there are two distinct states called hunger. The first of these is familiar to every one. It is caused by the loss of one or two meals and is characterized by a desire for food and an empty feeling in the stomach. One may even be "faint with hunger." One good meal relieves this kind of hunger which seems to be the only variety discussed by Professor Cannon.

If, however, food be wholly or largely withheld for several days this first variety of hunger almost entirely passes away. As soon, however, as the body loses much weight from starvation the first variety of hunger is replaced by a psychic state, which may be called the second variety of hunger. In this state the mind is wholly occupied with thoughts of food. One plods along all day keen for the least sign of game or lost in reveries of past feasts, but there is no sensation of hunger nor any particular bodily feeling referred or otherwise. At night over the camp fire the men discuss various articles of diet. Newfoundlanders wistfully describe "brouse," a murderous soup thickened with codfish, salt pork and dough; half-breeds long for "bannock"; Indians recall the delights of caribou eyes, fetus, marrow-grease and other aboriginal dainties. Nor is this obsession with thoughts of food confined to waking hours. I have never known a man to lose much weight from lack of food without dreaming of prodigal banquets. These dream feasts are a regular feature in the published accounts of starvation trips and are singularly constant.

The most interesting feature of this second variety of hunger is that it cannot be appeased until nearly all of the weight lost from starvation is regained. As long as the sufferer is thin he is hungry. He may eat again and again till his abdomen hurts, yet he is never satisfied. The abnormal hunger of typhoid convalescents is a familiar example of this fact, but it is more noticeable in otherwise healthy people who have been living a vigorous life on insufficient food. After returning from a starvation trip, although the stomach may be as full as it will hold, a dry crust in the gutter looks appetizing and attractive. One of the most striking instances of the difficulty of appeasing this kind of hunger occurred to me while hunting with six Indians. For a long time we had bad luck and became gaunt and thin. Some of us even lost strength which, I think, only occurs after all the subcutaneous and abdominal fat is absorbed. Finally one of the Indians killed a grizzly bear, not quite full-grown but in good condition and very fat. For forty-eight hours we did nothing but eat and sleep and in that time we ate the whole bear except for a few scraps. As nearly as I could figure out, each of us ate 40 pounds of fat meat, clear of waste, in the two days. In consequence we all had diarrhea. After such feasts there is a feeling of lassitude apparently due to mild proteid poisoning. The urine also acquires a strong animal odor varying with the species of animal supplying the meat.

Yet in spite of these symptoms of repletion of the stomach, bowels and blood with alimentary matter, the feeling of hunger, the desire to eat, persists. To judge by their actions, sledge dogs are the same in this respect as human beings.

It seems to me that the only explanation of these phenomena is to assume that there is a psychic state characterized by a desire to eat caused by the absorption from the fat-cells of the body of their accustomed oil-droplets.

It would be an improvement in the accuracy of the English language if we always characterized the first of these two states by the word "appetite" and reserved the word "hunger" for the second.

DAVID E. WHEELER, Buffalo, N. Y.

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### Digipuratum

*To the Editor:*—We have read with great interest the editorial on the reliability of digitalis and ergot preparations in THE JOURNAL, March 9, p. 705, which, however, we find to be misleading, if not unjust, and for several reasons.

With regard to digitalis preparations the editorial mainly refers to investigations carried out by Hale, published in Bulletin 74 of the Hygienic Laboratory, and it states that Hale concluded that "the proprietary preparations for which reliability and permanence were claimed in reality were not only unreliable, but also in some cases practically worthless"; further that "in fact, it almost looked as if the biologic assays of this class of preparations had been largely a matter of printer's ink."

The editorial speaks so generally of "proprietary preparations for which reliability is claimed" that it must lead one to assume that all of the drugs investigated by Hale were found to be unreliable. The author, however, also included digipuratum in his assays, and in the same bulletin (pp. 52 and 53) states that his "results indicate that the two samples (of digipuratum) are of the same strength, a result which accords with the manufacturers' claim that digipuratum is an assayed product." Furthermore, his own biologic tests show "that digipuratum is of the same strength whether purchased in the tablet or in the powdered form, and that it is of about the same activity as the strongest official digitalis preparation on the market."

The editorial then goes on to state that most manufacturers did not act on these criticisms but "in justice it must be said . . . that one firm took the reports seriously and proceeded to put its house in order." This firm is highly praised for its action of submitting its products to the Council on Pharmacy and Chemistry for approval, and the notice of acceptance appears in the same issue, March 9, 1912. The editor concludes by saying, "How long it will be before the manufacturers of other proprietary digitalis and ergot preparations secure similar endorsements is as yet uncertain."

In connection with this permit us to state the fact that digipuratum was submitted to the Council on Pharmacy and Chemistry as early as Aug. 12, 1909, and the notice of the acceptance of this preparation appeared in THE JOURNAL May 28, 1910, or long before the action of the firm above referred to.

KNOLL & CO.

[COMMENT.—The editorial discussed American pharmaceutical products, but on rereading it we see that it might be taken to apply to Knoll and Company's digipuratum. It was not so intended.—ED.]

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### Psychology in the Medical Course

*To the Editor:*—In THE JOURNAL for March 30 was published an interesting collection of papers bearing on the relation of psychology to medicine. It was urged by some of the writers that psychology should be included as one of the regular studies of the medical curriculum. In every advance of this sort it is of critical importance to find a "sheep" who will "jump first." It is then relatively easy to get the rest of the flock to follow. It may, therefore, be of interest to call attention to the fact that in the Yale Medical School for some years past a course in psychology has been part of the required work of the second-year students. The instruction is given by the department of psychology of Yale College, but is especially arranged for medical needs. In addition to this course, practically all of the students who have not already had elementary psychology during their academic course are required during the first year in the medical school to take this study in Yale College. The principal obstacle in the way of introducing these courses is lack of time because of the enormously (and, in my judgment, quite unnecessarily) extended course in anatomy which is still required by the orthodox medical curriculum.

I believe that elementary psychology ought to be included as one of the premedical requirements along with physics, chemistry and biology. In the medical course the functions of the sense organs should be taught from the psychic rather than the physical standpoint. It is of at least as much importance for the future physician to know something of the laws of thought as it is for him to understand the chemical composition of gastric juice. Nevertheless we should hesitate to add any subject to the already overcrowded medical curriculum which will further delay the entrance of our students on their professional work. We ought to bring pressure to bear on the academic colleges so as to get our students into the medical school by the time they are 20, at latest. If this were done, and if the time devoted to anatomy were reduced, it would be easy to include such instruction in psychology as is advocated by the writers above referred to.

YANDELL HENDERSON, New Haven, Conn.

# Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

## HEMORRHAGE AND BLOOD COAGULATION; USES OF CALCIUM, ATROPIN, NITROGLYCERIN AND DIGITALIS

*To the Editor:*—1. In THE JOURNAL (March 23, 1912, p. 859). I read the following: "It is known that the blood, properly to coagulate, needs calcium." In my freshman year I was taught that, but in my junior year, 1903, I was taught that calcium salts are not needed, the earlier experiments being in error in the method of precipitating the calcium salts. Precipitating calcium salts by another method allowed calcium-free blood to coagulate. Which view is right?

2. How should one administer digitalis to overcome the momentary seriousness when called to a bleeder?

3. Further in the article above referred to this appears: "A tablespoonful of lime-water given in milk." Bunge, in "Physiologische Chemie" (Ed. 3, 1894, p. 325), says that "cows' milk contains more calcium than does lime-water." If this is correct, why add the lime-water?

4. In an article on "bleeders" why is a vasodilator (nitroglycerin) for hemoptysis suggested without stating whether or not there are any contra-indications, and in the next paragraph why is it suggested that vasoconstrictors are needed in some cases?

5. Atropin is suggested as a vasoconstrictor. Cushny mentions only the arterioles of the abdomen as being constricted by atropin, while it acts as a dilator of the skin-vessels (Cushny's Pharmacology, Ed. 2, p. 284). I have used both atropin and calcium chlorid with success in bleeders, but am asking these questions to get more light on the subject.

G. E. HENSCHEN, M.D., Georgetown, Tex.

ANSWER.—1. We think that there has been some misapprehension by our correspondent in reference to the teaching with regard to the coagulation of blood. Coagulation of the blood, as at present understood, involves the action of a number of elements, including the salts of calcium. It was formerly supposed that the presence of calcium was necessary to the final formation of fibrin. Some experiments, however, seem to indicate that it is essential to the formation of thrombin from the prothrombin, but that, when the thrombin is once formed, it can act on fibrinogen to form fibrin, without the presence of calcium. It would appear, therefore, that the experiments to which our correspondent's teacher referred, indicated simply that the calcium might be absent at a certain stage of the process, that is, in the action of the thrombin on fibrinogen, but did not invalidate the assertion that calcium is a necessary element in the formation of thrombin and, therefore, absolutely indispensable for the coagulation of the blood.

2. Digitalis is of little, if any, value in overcoming the immediate serious condition in which a patient may be after hemorrhage. The physiologic action of digitalis requires about twelve hours. If an immediate cardiac tonic is advisable, strophanthin, given intravenously, or at least hypodermatically, is the best treatment. It is doubtful if, after a hemorrhage, a cardiac tonic is the best treatment. In a prolonged weakened circulatory condition in which the heart-muscle is weak and improvement in the heart tone is needed, digitalis is the best treatment. In other words, digitalis looks toward the future and is the best treatment of a chronic condition.

3. It is true that milk contains a larger percentage of calcium than does lime-water and, therefore, that adding lime-water to milk does not increase the proportionate calcium content. Empirically, however, the addition of lime-water is believed to possess some advantages. It may be that the calcium in the lime-water is more readily available to the system; or it may increase the availability of the calcium in the milk by causing the latter to coagulate in finer particles and making it more digestible. We find no record of experimental work to determine these points.

4. Hemoptysis was instanced only as one of several possible internal hemorrhages, and, whether a patient is a bleeder or not, when a hemorrhage is taking place at a point where it cannot be locally prevented or pressure locally applied, anything that lowers the blood-pressure is the immediate treatment, such as nitroglycerin. On the other hand, if a hemorrhage from the lungs, for instance, were due to valvular lesion and a dilated heart, the hemorrhage would be likely to recur unless the heart-muscle were improved, and digitalis would be the drug indicated.

5. Atropin may raise the blood-pressure by stimulating the heart and by contracting the arteries of the abdomen without a sufficient compensating dilatation of the peripheral blood-vessels. In this way it may fulfil the offices of a vasoconstrictor in raising the blood-pressure. It was, therefore, mentioned among the vasoconstrictors, but it must be admitted that its action is uncertain.

## SERUM IN EPIDEMIC CEREBROSPINAL MENINGITIS

*To the Editor:*—Please refer me to articles that have appeared in THE JOURNAL within the last two or three years in regard to the treatment of epidemic cerebrospinal meningitis by serum. I am desirous of looking up the literature with reference to this matter before reporting an atypical case in which the patient was cured with Flexner's serum. ADELBERT C. MATTHEWS, M.D., Napa, Cal.

ANSWER.—We give below a list of some articles on this subject which have appeared originally or have been abstracted in THE JOURNAL.

Department of Therapeutics, THE JOURNAL, Sept. 2, 1911, p. 823.
Dunn, C. H.: Animal Experimentation in Relation to Epidemic Cerebrospinal Meningitis, THE JOURNAL, July 22, 1911, p. 259.
Benedict, R.: THE JOURNAL, Feb. 4, 1911, p. 346.
Flexner, S.: Present Status of Serum Treatment of Epidemic Cerebrospinal Meningitis, THE JOURNAL, Oct. 30, 1909, p. 1443.
Churchill, F. S.: Serum Treatment of Epidemic Meningitis, THE JOURNAL, July 24, 1908, p. 21; Sept. 11, 1909, p. 841.
Ladd, L. W.: Serum Treatment of Epidemic Cerebrospinal Meningitis, THE JOURNAL, Oct. 17, 1908, p. 1315.
Flexner, S., and Jobling, J. W.: An Analysis of 400 Cases of Epidemic Cerebrospinal Meningitis Treated with Antimeningitis Serum, THE JOURNAL, July 25, 1908, p. 269.
Dunn, C. H.: The Serum Treatment of Epidemic Cerebrospinal Meningitis, THE JOURNAL, July 4, 1908, p. 15.
Serum in Cerebrospinal Meningitis, THE JOURNAL, Queries and Minor Notes, Feb. 10, 1912, p. 430.
Jochmann, G.: Serotherapy of Epidemic Cerebrospinal Meningitis, *Deutsch. med. Wchnschr.*, Sept. 21, 1911; abstr. in THE JOURNAL, Oct. 28, 1911, p. 1497.
Brown, P. K.: Epidemic Meningitis in California and Its Treatment with Flexner's Antimeningitis Serum, *California Jour. Med.*, August, 1910; abstr. in THE JOURNAL, Aug. 27, 1910, p. 802.
White, S. M.: Diagnosis and Treatment of Epidemic Cerebrospinal Meningitis with Flexner's Antimeningitis Serum, *Northwest. Lancet*, Aug. 1, 1910; abstr. in THE JOURNAL, Aug. 27, 1910, p. 800.
Hutinel, V.: Serotherapy and Anaphylaxis in Cerebrospinal Meningitis, *Presse Méd.*, July 2, 1910; abstr. in THE JOURNAL, Aug. 6, 1910, p. 538.
Churchill, F. S.: Serotherapy of Epidemic Cerebrospinal Meningitis, *Illinois Med. Jour.*, September, 1909; abstr. in THE JOURNAL, June 5, 1909, p. 1881.

## PREPARATION OF PHENOLPHTHALEIN

*To the Editor:*—In discussing the importance of phenolphthalein (Feb. 24, 1912, p. 578), with reference to its preparation, aside from the proprietary preparations, you referred to New and Nonofficial Remedies, 1912, p. 180, but on referring to that page I did not get the information I wanted. I have used phenolphthalein for some time in chronic constipation and will be glad to know of a method of preparation by the local pharmacist, so that I may discontinue the use of the proprietary article.

C. A. HOWELL, Cheyenne, Okla.

ANSWER.—Phenolphthalein is not a proprietary article; it is manufactured and sold by a number of chemical houses. The method of preparation is described in the section of New and Nonofficial Remedies referred to, but it is not to be supposed that the retail pharmacist will undertake to prepare a chemical of this character, because it can be purchased from reliable chemical houses, in a state of chemical purity, more cheaply than he can prepare it. The powder, as it is purchased, is suitable for medicinal use without preparation. It needs only to be prescribed in powders, capsules, pills or tablets. As it is comparatively tasteless it may be given in powders. Thus: ℞

Phenolphthalein, 2 gm.
Divide in pulveres No. XXX.

Or, the powder may be put in capsules, or the pharmacist may be directed to make the corresponding number of pills.

## PREDETERMINATION OF SEX

*To the Editor:*—In THE JOURNAL for March 30, 1912, p. 983, I see mention of an article on "Predetermination of Sex," by O. Schöner, in the *Zentralblatt für Gynäkologie*, February 24. Does this author believe that sex can be controlled, i. e., male or female produced at will, and does he offer anything new?

J A. BURNETT, M.D., Marble City, Okla.

Answer:—Schöner's views were briefly summarized in The Journal, Dec. 11, 1909, p. 2042. He has since written a book, and the article in the *Zentralblatt*, referred to above, is merely a reply to Ahlfeld's derogatory criticism of his book, in the same *Zentralblatt*, Dec. 16, 1911. His theory is based on the alternating functioning of the ovaries according to a two-in-three rhythm of the sexes and the assumption that the sex is determined before conception and that the functioning ovary is tender on palpation. He thinks one may compute sex by counting the menstruations between two conceptions.

### CITRIC ACID IN HEADACHE

*To the Editor:*—My mother, who is 58 years old and weighs about 138 pounds, is generally in good health but has periodical attacks of intense headaches. They come on about every six weeks. The pain begins at the base of the brain, about 3 or 4 o'clock in the morning, and spreads gradually until the skull seems about to burst. At first the pain was allayed by 1 grain hypodermatic doses of codein. Of late, however, the attack has been aborted by drinking lemonade, eight to ten lemons in four or five hours. This also allays an intense bladder irritation. Can this be a hyperalkalinity of the blood? If so, what would be the treatment? Is this the opposite of a rheumatic diathesis? O. L. Rhodes, M.D., Denver.

Answer.—Hyperalkalinity of the blood is practically unknown and the fact that lemonade relieved the condition would not warrant the assumption that the blood was excessively alkaline. The acid of lemonade, citric acid, is readily oxidized to carbon dioxid and water excreted by the lungs, so that it has only a temporary effect on the reaction of the blood and the urine. On the other hand, lemon juice contains a considerable quantity of the citric acid salts of the fixed alkalies, principally potassium. When these are oxidized in the system a carbonate of the alkaline metal is formed which has the effect of increasing the alkalinity of the blood and decreasing the acidity of the urine. One might therefore explain the good influence of the lemonade by supposing that it acted as an alkali rather than as an acid, and the relief of the bladder trouble would seem to confirm this opinion. Although it is somewhat speculative it might be suggested that the headache may be connected with an increased viscosity of the blood which it has been shown is reduced by the action of citric acid. For further analysis of the ramifications of this theory, see an article on the therapeutic use of citric acid by Dr. H. B. Hemenway in The Journal, April 6, 1912, page 992.

### TINCTURE OF FERRIC CHLORID AND THE TEETH

*To the Editor:*—After reading the article in The Journal for March 16, 1912 (p. 805), I desire to submit a method of administering tincture of ferric chlorid which I have used for many years and which has always proved satisfactory, never producing any ill effects.

℞ Tinct. $Fe_2 Cl_6$.................... ℥i
Capsules (No. 0 or No. 00)........ xxiv
Medicine dropper.

Sig.: Eight drops (5 minims) to be taken in capsule after food as directed; follow with quarter glass of water or milk.

I direct the patient to open capsule and put eight drops in larger or inner portion and replace cap. These capsules may be sealed readily by filling the cap with water, emptying and replacing on the larger or inner portion. The U. S. P. tincture of ferric chlorid may be diluted with two parts absolute alcohol, and capsules so filled and sealed remain in perfect condition for from twelve to twenty-four hours. I have never found a patient who objected to this simple and efficacious method after the action on the teeth had been explained to him. The original query by "X Y Z" asked for a "diluent" which would render tincture of ferric chlorid harmless to the teeth and still retain its virtue. From the nature of the substance it is impossible for them to come in contact without a chemical reaction. The effect of a diluent with tincture of ferric chlorid to remove its corrosive action on the teeth is to deprive it of its virtue, as is the case with the organic preparation on the market. With the ordinary medicine-dropper 5 minims equals 8 drops. For my private use I take an ordinary medicine-dropper and file off gradually from the point until I get a bore of sufficient size so that 1 minim equals 1 drop, which is determined by measuring in a graduate. Incidentally this is an excellent method for administering terebene, creosote, etc.

H. A. Sharpe, Ph.C., M.D., Mount Vernon, Wis.

## The Public Service

Journal Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter

## Medical Economics

This Department Embodies the Subjects of Post-graduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

### SENATE COMMITTEE REPORTS FAVORABLY ON MODIFIED OWEN BILL

The Senate Committee on Public Health and National Quarantine has reported favorably on Senate Bill 1, known as the Owen bill, and this bill is now before the Senate as Calendar No. 561. Senator Owen made a report on Saturday, April 13, presenting a bill agreed on by the committee, the text of which appears below:

#### A BILL TO ESTABLISH AN INDEPENDENT PUBLIC HEALTH SERVICE, AND FOR OTHER PURPOSES

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That there be at the seat of government an independent establishment known as the United States Public Health Service (which may be called the Health Service), and a Director of Health, who shall be the head thereof. The Director of Health shall be appointed by the President, by and with the advice and consent of the Senate, at a salary of six thousand dollars per annum and with tenure of office of six years, unless sooner removed for cause. And said director shall cause a seal to be made for said Health Service, of such device as the President approves, and judicial notice shall be taken of said seal.

Sec. 2. That there shall be in the Health Service, as assistants to the Director of Health, three commissioners of health, two of whom shall be skilled sanitarians and one a skilled statistician, appointed by the President, by, and with the advice and consent of the Senate, who shall serve at the pleasure of the President on the recommendation of the Director of Health. The head of the Public Health and Marine-Hospital Service, the head of the Bureau of Chemistry, charged with the investigation of the adulteration of foods, drugs, and liquors under the act approved June 30, 1906, and the head of the Division of Vital Statistics shall comprise the three commissioners of health above established with the same salary for each as now fixed by law, respectively. The commissioners of health shall perform such duties as are required by law and such as shall be prescribed by the Director of Health not in conflict with the provisions of this act. In the absence of the Director of Health, the commissioners, in the order above named, shall exercise the duties of the Director of Health as first, second, or third assistant director of health. There shall be also a chief clerk, a disbursing clerk, and such other employees as Congress may from time to time authorize. The Auditor for the State and Other Departments shall receive and examine all accounts of moneys paid in and of moneys expended on account of the Health Service, and shall certify the balance arising thereon to the Division of Bookkeeping and Warrants of the Treasury Department, and forthwith send a copy of each such certificate to the Director of Health.

Sec. 3. That it shall be the duty of the Health Service to collect and disseminate information relating to the public health and to enforce the observance of all regulations and laws of the United States relating to the public health: *Provided,* That this act shall not be construed as attempting to authorize the Health Service to exercise or attempt to exercise, without express invitation from the chief executive or other proper authority of the state, any function belonging exclusively to such state, or to enter any premises without the consent of the owner or occupant thereof; but the Director of Health, on request of the chief executive or other proper authority of any state, territory, the District of Columbia, or any insular possession, may detail for limited periods an officer or officers, employee or employees, from the Health Service to assist the health authorities of such state, territory, district, or insular possession in protecting the health of the people of such jurisdiction: *And provided further,* That the Health Service established by this act shall have no power to regulate the practice of medicine or the practice of healing, or to interfere with the right of a citizen to employ the practitioner of his choice, and all appointments within the Health Service, including the head of the service, shall be made without discrimination in favor of or against any school of medicine or of healing

Sec. 4. That to the Health Service are hereby transferred the following bureaus, divisions, and other branches of the Government, and all that pertains to them, and they and each of them shall remain under the supervision and direction of the Director of Health until otherwise authorized by law, namely:

(a) From the Department of the Treasury is transferred the Public Health and Marine-Hospital Service.

(b) From the Department of Agriculture is transferred that part of the Bureau of Chemistry charged with the investigation of the adulteration of foods, drugs, and liquors, and with the execution and enforcement of the act of Congress entitled "An act for preventing the manufacture, sale, or transportation of adulterated or misbranded or poisonous or deleterious foods, drugs, medicines, and liquors, and for regulating traffic therein, and for other purposes," approved June 30, 1906.

(c) From the Department of Commerce and Labor is transferred the Division of Vital Statistics, Bureau of the Census.

And the President is hereby authorized to transfer to the Health Service at any time either the whole or any part, as to him may seem best, of any bureau, division, or other branch of the Government engaged in work pertaining to the public health, except the Medical Department of the Army and the Bureau of Medicine and Surgery of the Navy.

And each and every function, authority, power, duty, and jurisdiction, of whatsoever character it may be, vested at the time of any transfer aforesaid in the head of the executive department from which said bureau, division, or other branch of the Government is transferred, shall, to the extent to which such function, authority, power, duty, or jurisdiction pertains to such bureau, division, or other branch of the Government, immediately on such transfer become vested and thereafter remain vested in the Director of Health.

All land, buildings, furniture, apparatus, equipment, and property of whatsoever description, and all official records and papers, in the custody of any executive department from which any bureau, division, or other branch of the Government is transferred as aforesaid and pertaining to the business of such transferred bureau, division, or other branch of the Government, shall at the time of such transfer, or as soon thereafter as practicable, and in so far as such action can be taken without hindering the work of the executive department from which such transfer is made, be given over into the custody of the Health Service. And all unexpended balances of appropriations available at the time of such transfer for the use of any such transferred bureau, division, or other branch of the Government, or which may become available thereafter, shall be and remain available, in similar manner and to the same extent as if no transfer had been made.

Sec. 5. That within the Health Service there shall be the following bureaus and divisions:

(a) Bureau of the Public Health and Marine-Hospital Service; (b) Bureau of Foods and Drugs; (c) Bureau of Vital Statistics; (d) Bureau of Child Conservation; (e) Division of Sanitary Engineering; (f) Division of Personnel and Accounts; (g) Division of Publications. And the Director of Health is hereby authorized to arrange and rearrange from time to time, with the approval of the President, the functions, duties, personnel, papers, records and property, and the work, resources, and equipment generally, coming into the jurisdiction and control of the Health Service by the operation of this act, so as most efficiently and economically to organize and maintain the several bureaus and divisions herein named and offices thereof as to said director seems proper; but in arranging and rearranging the personnel, the rank, pay, and allowances of the officers of the Public Health and Marine-Hospital Service and of other services commissioned at the time of the transfer of such service to the Health Service shall not, by reason of anything in this act contained, be diminished. And the Director of Health may call on the heads of executive departments for information in their possession whenever such information is needed for the efficient and economical working of the Health Service.

Sec. 6. That the President is hereby authorized to detail officers and employees from any of the several executive departments of the Government for duty under the Director of Health when so requested by said director, and to detail officers and employees in the service of the Health Service to any of the executive departments on request of the head of such department, provided such detail can be made without prejudice to the public service, to carry into effect the purpose and intent of this act; but officers and employees so detailed shall receive no additional compensation, but shall be paid such actual and necessary additional expenses as they incur in the discharge of their duties

Sec. 7. That the Director of Health may, in his discretion and with the approval of the President, appoint an advisory board of not more than seven members to confer with him on his request, from time to time as he deems necessary, concerning the work of the Health Service and the health of the people. The members of said board shall be selected because of their special knowledge of matters relating to the public health, and each shall hold office for a term of seven years or until his successor is appointed, except that the appointments first made, and appointments thereafter made to fill unexpired terms and terms of members who have held over beyond the periods of their original appointments, shall be made so that not more than one member shall retire during any one fiscal year. No member of any such advisory board shall receive any compensation for his services, but each shall be paid all actual expenses necessarily incurred in the discharge of his duties. And from and after the passage of this act the advisory board for the Hygienic Laboratory created by section five of an act entitled "An act to increase the efficiency and change the name of the United States Marine-Hospital Service," approved July 1, 1902, be, and the same hereby is, abolished.

Sec. 8. That from and after the passage of this act annual and other conferences of state and territorial boards of health, quarantine authorities, and state health officers, provided for by section seven of an act entitled "An act to increase the efficiency and change the name of the United States Marine-Hospital Service," approved July 1, 1902, be, and the same are hereby, placed under the jurisdiction of the Public Health Service.

Sec. 9. That, except as expressly provided in this act, nothing herein contained shall be construed as limiting the existing quarantine laws or abrogating any function, right, or duty imposed by law on any existing bureau, division, or other branch of the Government; but such bureaus, divisions, and other branches of the Government as are by this act or by authority thereof transferred to the Health Service shall continue, under direction of the Director of Health, to have such functions, duties, and rights as they have at the time of such transfer; and in the case of such bureaus, divisions, and other agencies of the Government as are transferred in part only, the part not transferred shall continue to have and to exercise all such functions, duties, and rights, except as specifically relate to the part transferred to the Health Service, in the same manner and to the same extent as if no such transfer had been made.

Sec. 10. That the Director of Health shall annually submit to Congress a report in writing showing the operations of the Health Service during the last preceding fiscal year, which report shall give an account of all moneys received and all moneys disbursed on account of such operations: *Provided*, That there may be employed in the United States Public Health Service such help as may be provided from time to time by Congress. He shall make such other reports from time to time as may be required by the President, or by either House of Congress, and such as are in his judgment necessary or expedient.

Sec. 11. That all acts and parts of acts contrary to the provisions of this act or inconsistent therewith be, and the same are hereby, repealed.

Sec. 12. That this act shall take effect on and after July 1, 1912.

## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

*General Subject for the Month, Diseases of the Liver and Biliary Tract*

### Ninth Month—First Weekly Meeting

### Anatomy of Liver and Gall Bladder

Liver: Situation, surface markings, important relations. Shape, volume, dimensions. Weight, color, consistence. Surfaces, lobes, fissures, capsule of Glisson, ligaments. Blood-supply; trace portal vein to inferior vena cava; trace hepatic artery. Trace hepatic duct. Lymphatic vessels and glands. Nerve supply.

Microscopic Anatomy: Lobule, cells, blood-vessels, ducts. Trace ducts from origin to common duct.

Gall Bladder: Shape, size, situation. Fundus, body and neck. Important relations. Blood-supply, nerves and lymphatics. Microscopic structure; three coats.

### PHYSIOLOGY OF LIVER AND GALL BLADDER

1. Secretion of bile. Increased flow; causes, hemolytic agents. Effect of bile, of secretion, section of nerves. Function of gall bladder. Ejection of bile into duodenum. Bile as an excretion.
2. Formation of glycogen. Quantity in liver, causes of variation in quantity. Effect on amount of glycogen, (a) of carbohydrates, monosaccharids and disaccharids, (b) of proteids, (c) of fats. Function of glycogen, changes occurring in glycogen, effects of exercise and starvation on glycogen.
3. Formation of urea. Sources of urea, probable changes in proteids.
4. Detoxification of poisons.

### THE CHEMISTRY OF BILE

Color, reaction, specific gravity. Bile pigments; origin, color, of each, reabsorption, Gmelin's reaction. Bile acids, sodium salt of each. Reabsorption, probable effect. Effect on cholesterin and fats. Cholesterin, probable source. Lecithin. Bile as an antiseptic.

### REFERENCE BOOKS FOR THE NINTH MONTH

Text-Books on Practice of Medicine.
Rolleston: Diseases of Liver and Gall-Bladder.
Allbutt's System of Medicine.
Osler's Modern Medicine.
Nothnagel's Practice: Liver and Pancreas.
White: Affections of the Liver.
Kehr: Diagnosis of Gall-Stone Disease.
Robson: Diseases of the Gall-Bladder.

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# *Society Proceedings*

## COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 4-7.

American Academy of Medicine, Atlantic City, May 30-June 2.
American Dermatological Association, St. Louis, May 23-25.
American Gynecological Society, Baltimore, May 28-30.
American Laryngological Association, Atlantic City, May 9-11.
American Medico-Psychological Association, Atlantic City, May 28-31.
American Neurological Association, Boston, May 30-June 1.
American Orthopedic Association, Atlantic City, May 30-June 1.
American Pediatric Society, Hot Springs, Va., May 29-31.
American Surgical Association, Montreal, May 29-31.
American Therapeutic Society, Montreal, May 31-June 1.
Arizona Medical Association, Bisbee, May 7.
Arkansas Medical Society, Hot Springs, May 13-16.
Association of American Physicians, Atlantic City, May 7-8.
Connecticut State Medical Society, New Haven, May 22.
Florida Medical Association, Tampa, May 8-10.
Illinois State Medical Society, Springfield, May 21-23.
Iowa State Medical Society, Burlington, May 8-10.
Kansas Medical Society, Hutchinson, May 1-2.
Louisiana State Medical Society, New Orleans, April 23-25.
Maryland Medical and Chirurgical Faculty, Baltimore, April 23-25.
Missouri State Medical Association, Sedalia, May 21-23.
Montana State Medical Association, Helena, May 8.
Nat. Assn. for Study and Prev. Tuberculosis, Washington, May 30-31.
Nebraska State Medical Association, Lincoln, May 7-9.
New Hampshire Medical Society, Concord, May 8-9.
North Dakota State Medical Association, Valley City, May 8-9.
Ohio State Medical Association, Dayton, May 7-9.
Oklahoma State Medical Association, Shawnee, May 7-9.
South Dakota State Medical Association, Mitchell, May 22-24.
Texas State Medical Association, Waco, May 7-9.
Wisconsin State Medical Society, Wausau, May 22-24.

## TENNESSEE STATE MEDICAL ASSOCIATION

*Seventy-Ninth Annual Meeting, held at Chattanooga, April 9-11, 1912*

The President, DR. C. J. BROYLES, Johnson City, in the Chair.

### The New Officers

The following officers were elected for the ensuing year: president, Dr. O. Dulaney, Dyersburg; vice-presidents, from West Tennessee, Dr. George R. Livermore, Memphis, from East Tennessee, Dr. W. J. Matthews, Johnson City, from Middle Tennessee, Dr. Zeb Shipley, Cookville; treasurer, Dr. W. C. Bilbro, Murfreesboro; secretary, Dr. Perry Bromberg, Nashville; delegates to the American Medical Association, Drs. A. B. Cooke, Nashville; S. R. Miller, Knoxville; alternates, Drs. Scott Farmers, Cookeville, and George R West, Chattanooga.

Nashville was selected as the place for the next annual meeting; April 8-10, 1913.

### The Management of Syphilis

DR. W. F. GLENN, Nashville: I strongly urge against the routine of prescribing mercury and iodid of potassium in the same dose to every patient, and continuing it without intermission over a period of two or three years. I would earnestly advise that you treat each patient as a separate and distinct case, adapting your method, your dose and your remedy to each individual case. I should advise you not to treat syphilis, but to treat a patient suffering from syphilis. When a person applies for treatment, I should insist on the observance of the following hygienic rules: 1. The patient should abstain strictly from all forms of hog meat. 2. He should abstain from the use of alcoholic stimulants. 3. It is best not to use tobacco. 4. The body should be kept clean by sufficient bathing. 5. The condition of the general system must be carefully watched and medicated accordingly. 6. The teeth should be carefully attended to. 7. Be moderate in all things.

With reference to salvarsan, it is not yet decided and will not be for years to come whether six or a dozen doses will effect a permanent cure of syphilis. Yet in many cases brilliant results have been obtained by its use, but the same thing has been obtained with mercury and iodin. So I would reiterate what I said a year ago, that I regard salvarsan as a great addition to the therapeutics of syphilis, but I do not think it can displace mercury.

#### DISCUSSION

DR. WILLIAM ST. JOHN, Bristol: In mercury we have a remedy that has given excellent service, while there have been several sad deaths from the use of salvarsan. The great trouble about syphilis is we are not able to make a diagnosis sufficiently early to prevent the damage due to the poison. Last July a married man developed a classical case of jacksonian epilepsy. He had no history of syphilis. I had an *x*-ray picture taken of his brain, which showed nothing. He was having from ten to twenty distinct attacks of this form of epilepsy a day. The Wassermann test made of his blood showed positive spirochetic infection. Under the use of mercurial inunctions, in less than ten days the disease passed away.

DR. E. T. NEWELL, Chattanooga: At the Nashville meeting last year I reported fifteen cases in which I had used salvarsan intravenously. Since that time I have used it in a series of 155 cases intravenously, and of that number I have not had to give it to more than twenty-five cases a second or third time, and the results achieved in those cases were just as good and better than the clinical results from the use of mercury.

DR. JERE L. CROOK, Jackson: In salvarsan we have a drug which, when properly administered intravenously, will clear up the symptoms in the most marvelous manner and in the briefest possible time, with the least discomfort to the patient, and the patient leaves the hospital in two or three days, walks the street, does not have to take drugs all the time, and feels that he is a new man again.

DR. EDWIN B. ANDERSON, Chattanooga: I have given salvarsan seventy-five times in my own practice and for other men. To every case of primary syphilis I give a second dose. In several cases I have given salvarsan three times. In the case of a woman I gave it a fourth time. It is a great remedy. I believe in it strongly, but I keep up the use of mercury just the same.

DR. L. WEBSTER FOX, Philadelphia: I wish to emphasize the relationship which the ophthalmic surgeon bears to the general surgeon in these cases. As is well known, syphilis vents itself upon the intraocular structures, and we have in consequence serious results. We consider salvarsan our sovereign remedy to get rid of syphilitic chorioiditis, etc., excepting optic neuritis. With us in Philadelphia nearly every case for salvarsan is examined by an ophthalmologist before the injection is made by the general practitioner, because we have found that where there is a persistent anemia, where practically the nerves look white, the circulation of the eye is not what it should be; therefore, a full dose of salvarsan is not given, and Dr. Daland and others are now giving one-third of the dose in those cases at our suggestion.

DR. J. W. BRANDAU, Clarksville: The Wassermann reaction is still positive in cases in which the salvarsan has been administered. This is explained by the fact that we have isolated spirochetes that have not been reached by the salvarsan on account of having been walled off by the inflammatory tissues impervious to the circulation, and consequently salvarsan has not reached these foci. In those cases mercury comes in well as an interval treatment and should be used.

Dr. Perry Bromberg, Nashville: I have had considerable experience with the use of salvarsan administered intravenously and intramuscularly. According to the latest reports, in a large number of cases in which the drug has been administered intravenously, a positive Wassermann reaction may be expected to recur within three months; that in 6 per cent. of a series of thirty-two cases in which the intravenous method was adopted nephritis with casts, hyaline, granular and epithelial, were found in the urine and usually persisted. This was not so in another series of thirty-two cases in which the intramuscular method was used.

*(To be continued)*

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## CHICAGO MEDICAL SOCIETY

*Regular Meeting, held March 20, 1912*

The President, Dr. J. M. Patton, in the Chair

### Studies in Tuberculosis

Dr. Gerald B. Webb, Colorado Springs, Colo.: In spite of improved hygienic conditions, every individual is exposed at some time to virulent tubercle bacilli. Hygiene alone, without vaccination, has always failed to stop small-pox, and the same must be true of tuberculosis. The skin tuberculin test has shown that in many communities almost every child by the age of puberty has become infected. The present interpretation of this infection must be that it is Nature's method of vaccination. The child that survives is placed in a hypersusceptible condition in regard to the tubercle bacillus. The organism possesses power of defense against small numbers of bacilli, but against large numbers it is more helpless than the non-infected. The condition is one similar to anaphylaxis.

The question arises whether, if we can control numbers, virulence and point of attack, before Nature infects it, we might possess a form of vaccination which would protect us. I have been attempting to produce immunity in calves by the inoculation of small numbers of virulent bovine tubercle bacilli and gradually increasing the numbers in subsequent doses. The calves were tested later and all gave definite reactions except one. It is impossible to say at which dose infection took place, but the result indicates that more careful dosage must be employed. I inoculated subcutaneously three full-grown guinea-pigs with 35, 75 and 125 virulent human tubercle bacilli respectively. The largest number produced the most rapid infection and in this pig bacilli were obtained from inguinal glands after three weeks. The animal was killed and showed extensive visceral lesion. In the animal receiving 35 gm. the disease after six weeks was limited to the inguinal glands. The lesions in the remaining pig were intermediate in degree. Tuberculosis is a disease in which the virulence of the bacteria is not so much to be reckoned with as the numbers received.

It occurred to me that by inoculating animals with increasing numbers of virulent bacteria, beginning with one, we might be able to produce immunity. I first worked with mice and anthrax bacilli and by inoculating first one bacillus and gradually increasing the number, I was able to give doses which inoculated all at one time would mean certain death. Next I inoculated guinea-pigs with virulent human tubercle bacilli and with the same result as in the case of mice and anthrax. I carried the work a step farther by inoculating monkeys with virulent human tubercle bacilli. They were first tested with tuberculin and shown to be uninfected. The inoculations were continued at weekly intervals over a year, and up to date the animals are perfectly healthy. Six monkeys were killed and a thorough search failed to reveal any trace of tuberculous disease. These monkeys received enough virulent tubercle bacilli to kill nearly 20,000 guinea-pigs, and yet the monkeys weighed only as much as three full-grown guinea-pigs.

At the request of the father, I inoculated two children, aged 9 months and 3 years, respectively, with virulent tubercle bacilli, after having first tested them and found a negative reaction. The inoculations were started with one bacillus and increased at weekly intervals until six hundred had been injected. After twelve months the children still gave a negative tuberculin reaction. It is quite probable that immunity may be produced in this way, but it would seem necessary to begin the vaccination immediately after birth.

All the inoculations were made subcutaneously. I found that when I reached from 3,000 to 5,000 bacilli a lump occurred at the inoculation point which would take from one to three weeks to disappear. I believe that the reason for this is that the organism has become saturated and that therefore the bacilli remain localized because on examining these lumps we found that they contain disintegrating organisms.

The lymphocytes are the cells which are directly responsible for the disappearance of the bacilli. In my work on cockroaches and grasshoppers I found that after injection of tubercle bacilli, lymphocytes containing the germs in all stages of digestion could be found in the circulating blood. This digestion went on for several days. The lymphocytes contain or furnish lipase which destroys the waxy parts of the tubercle bacilli. Therefore, there exists a definite relationship between the cure of this disease and the lymphocytes. The differential blood-picture is also of some value in indicating the stage of the disease and the prognosis. The greater the number of lymphocytes, the better the prognosis. Progression of the disease is accompanied by a low leukocytosis. I also investigated the claims of Arneth and my findings corroborated his statements.

A series of observations on the effect of high altitudes on blood showed very definitely that there is a rise in hemoglobin, as high as 120 per cent. at the top of Pike's Peak, and an increase in red blood-cells, as high as 8,000,000, with a lymphocytosis of 70 per cent. This increase has been explained as being due to hyperplasia of the bone-marrow. Believing that artificial hyperemia of accessible bones might be equally effective, I applied a rubber bandage to the legs as high up on the thigh as possible, with sufficient pressure to interfere with the return venous flow, but not enough to obstruct the arterial. The results confirmed my deductions. A marked lymphocytosis, an increase of 20 per cent. above the normal, was produced. The patients applied the bandage in the form of an elastic, one inch wide, day and night, without discomfort.

A similar result was produced by hot mustard footbaths. I found that continued arm hyperemia of two weeks' duration is required to prove the greatest results. After this time the patient's sputum decreases, especially the thick yellow portion, and in some patients the temperature has dropped. In some experiments on rabbits the red cells were also increased by marrow hyperemia. The lymphocytes appeared in the sputum in large numbers, almost entirely replacing the polymorphonuclear cells. They contained fragmented tubercle bacilli. It was shown that the large lymphocyte has decided phagocytic powers. The polymorphonuclear cells do not seem to have this power. I have modified the skin test somewhat in technic. I found that old tuberculin would dry on hypodermic needle-points. These points are moistened with a drop of pure water placed on the sterilized skin and then plunged through the skin and given a twist as they are withdrawn. I have received positive tests when the von Pirquet test was negative. The reaction is characterized by a very definite lump, probably an actual tubercle. In two instances a slight temperature reaction followed. The best location is over the radial muscles, as here it is very rare to puncture a vein.

### Displaced and Movable Kidney

Dr. William Cuthbertson: This condition is not recognized often enough, especially in the case of women, who suffer from this disturbance far oftener than men. The kidney may be displaced without being floating, and it may or may not cause symptoms; in many cases, however, the symptoms may be very distressing and not referable to the kidney. In such cases stitching the kidney back in place often gives complete and permanent relief. There is no question that this operation should be resorted to more frequently, and the fact that some kidneys prolapse again is not an argument against the operation. Sometimes one kidney is stitched back in place, and then the symptoms recur, but are caused by a prolapse of the other kidney. I have had such cases, in which a second operation has given the desired relief.

### DISCUSSION

Dr. J. L. Miller: I believe that this operation is often performed when it is not necessary, because often symptoms which are referred to a movable kidney are caused by some other condition. When this is treated the symptoms disappear. These cases offer great difficulties in diagnosis, especially when they are referred to the right side. The result in some cases that is claimed as a credit for the operation is in reality to be ascribed to suggestion. These patients remain well for a time and then the symptoms recur. The suggestion has worn itself out and the patient returns again seeking another period of relief. The mere stitching up of the kidney has not relieved the patient of the underlying pathologic process from which she is really suffering, and which has escaped detection. There can be no doubt that better diagnosis and treatment is demanded in these cases.

Dr. A. Goldspohn: Not every movable kidney should be operated on to relieve the symptoms. Often even a floating kidney does not cause symptoms. Only such kidneys should be replaced as cause definite symptoms referable to the kidney. I have demonstrated in a number of cases that suggestion does not play any rôle in the production of a cure, or in giving these patients relief. In cases in which I did not tell the patient what I suspected to be causing the trouble, or what I was looking for, or what I was trying to do, replacing the abdominal viscera with the patient in the Trendelenburg position and then applying a tight abdominal bandage, has often given relief from distressing symptoms. It is remarkable how long such patients wear the bandage because they fear that when it is removed their symptoms will return.

# Medical Education and State Boards of Registration

## COMING EXAMINATIONS

Arkansas: Regular, Little Rock, May 14. Sec., Dr. F. T. Murphy, Brinkley.

Florida: Regular, Jacksonville, May 7-8. Sec., Dr. J. D. Fernandez; Eclectic, Jacksonville, May 6-8. Sec., Dr. Hiram J. Hampton, Tampa.

Georgia: Regular, Atlanta, May 1-4. Sec., Dr. C. T. Nolan, Marietta; Homeopathic, Atlanta, May 8. Sec., Dr. R. E. Hinman, 106½ Whitehall Street, Atlanta.

Illinois: Coliseum Annex, Chicago, April 30. Sec., Dr. James A. Egan, Springfield.

Louisiana: Regular, Tulane University, New Orleans, May 30 to June 1. Sec., Dr. A. B. Brown, 108 Baronne Street; Homeopathic, New Orleans, May 6. Sec., Dr. Edward Harper, 702 Macheca Bldg.

Massachusetts: State House, Boston, May 14-16. Sec., Dr. Edwin B. Harvey, State House.

Mississippi: State Capitol, Jackson, May 14. Sec., Dr. W. W. Smithson.

Nebraska: Senate Chamber, State House, Lincoln, May 22-23. Sec., Dr. C. P. Fall, Beatrice.

Nevada: Carson City, May 6. Sec., Dr. S. L. Lee.

New York: May 14-17. Chief of Examinations Division, Mr. Harlan H. Horner, Department of Education, Albany.

Tennessee: Memphis, Nashville and Knoxville, May 1-2. Sec., C. A. Abernathy, Pulaski.

Wisconsin: Milwaukee, May 28-30. Sec., Dr. J. M. Beffel, 3200 Clybourn Street.

## Oregon January Report

Dr. E. B. McDaniel, secretary of the Oregon State Board of Medical Examiners, reports the written examination held at Portland, Jan. 2-4, 1912. The number of subjects examined in was 15; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 82 of whom 51 passed, including 5 nongraduates and 2 osteopaths, and 31 failed, including 12 nongraduates and 5 osteopaths. The following colleges were represented:

PASSED

| College | Year Grad. | Total No. Examined. |
|---|---|---|
| College of Phys. and Surgs., San Francisco | (1910) | 1 |
| Gross Medical College, Denver | (1892) | 1 |
| Northwestern University Medical School | (1898) | 1 |
| Rush Medical College | (1877) (1884) (1905) (1909) (1910, 3) (1911, 4) | 11 |
| College of Phys. and Surgs., Chicago | (1902) (1908, 3) | 4 |
| Chicago College of Medicine and Surgery | (1907) | 1 |
| Indiana University | (1911) | 1 |
| Central College of Physicians and Surgeons | (1890) | 1 |
| University of Iowa, College of Medicine | (1910) | 1 |
| University of Louisville | (1907) | 1 |
| University of Maryland | (1901) | 1 |
| Harvard Medical School | (1908) | 2 |
| Detroit College of Medicine | (1890) | 1 |
| University of Missouri | (1875) | 1 |
| University Medical College, Kansas City | (1907) | 1 |
| Washington University, St. Louis | (1911) | 1 |
| Marion-Sims College of Medicine | (1899) | 1 |
| Columbia University, College of Phys. and Surgs. | (1882) | 1 |
| Cleveland Homeopathic Medical College | (1885) | 1 |
| Pulte Medical College | (1894) | 1 |
| Medical College of Ohio | (1901) | 1 |
| Starling-Ohio Medical College | (1911) | 1 |
| University of Oregon | (1911) | 1 |
| Jefferson Medical College | (1906) (1910) | 2 |
| University of Pennsylvania | (1900) | 1 |
| University of Pittsburgh | (1911) | 1 |
| Queen's University, Kingston, Ontario | (1909) | 1 |
| Trinity Medical College, Ontario | (1902) | 1 |
| University of Athens, Greece | (1881) | 1 |

FAILED

| College | Year Grad. | Per Cent. |
|---|---|---|
| College of Physicians and Surgeons, San Francisco | (1910) | 70.3 |
| Chicago College of Medicine and Surgery | (1904) | 36.2 |
| College of Physicians and Surgeons, Chicago | (1909) | 68.0 |
| Medical College of Indiana | (1879) | 45.1 |
| Hospital College of Medicine, Louisville | (1907) | 69.1 |
| Barnes Medical College | (1904) | 64.3 |
| Ohio Medical University | (1906) | 71.8 |
| Eclectic Medical College, Cincinnati | (1909) | 71.0 |
| University of Oregon | (1911) | 68.8 |
| Willamette University | (1907) 71.3; (1908) | 73.4 |
| University of Oklahoma | (1911) | 74.1 |
| University of Naples, Italy | (1897) | 63.2 |
| University of Virginia | (1910) | 72 |

Non-graduates—55.2, 61.4, 62.3, 63.2, 64.2, 68.7, 70.2, 70.8, 72.7, 72.9, 74.1, 74.4.

## Connecticut March Report

Dr. Charles A. Tuttle, secretary of the Connecticut Medical Examining Board, reports the written and practical examination held at New Haven, March 12-13, 1912. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 20 of whom 12 passed and 8 failed. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Yale University | (1911) | 75, 78.8, 85.4 |
| University of Maryland | (1910) | 76.1 |
| College of Physicians and Surgeons, Baltimore | (1911) | 77.5 |
| Harvard University | (1910) | 86.2 |
| University of Michigan, Dept. of Med. and Surg. | (1903) | 77.3 |
| Columbia University, Coll. of P. and S., New York | (1909) | 88.7 |
| Medico-Chirurgical College of Philadelphia | (1901) | 76.9 |
| University of Pennsylvania | (1909) | 76.5 |
| Temple University, Philadelphia | (1909) | 76.8 |
| McGill University | (1886) | 83.2 |

FAILED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Yale University | (1909) | 71.9 |
| Rush Medical College | (1905) | 71.7 |
| University of Maryland | (1908) | 63.9 |
| Baltimore Medical College | (1909) | 72.6 |
| College of Physicians and Surgeons, Baltimore | (1911) | 71.9 |
| Long Island College Hospital | (1899) | 61.8 |
| University of North Carolina | (1910) | 73.7 |
| Laval University, Quebec | (1902) | 49.1 |

# Book Notices

Anatomie Topographique et Chirurgie du Thymus. Par M. le Dr. Eugène Olivier, Aide d'Anatomie à la Faculté de Médecine. Paper. Pp. 152. Paris: G. Steinheil, 2 Rue Casimir-Delavigne, 1911.

This thesis will be of interest to both the pediatrician and the surgeon. Most of the cases of pathologic thymus come under the care of the pediatrician first, but the author considers that these cases are all surgical at the present time.

The work is divided into two parts, the first purely anatomic, in which the author gives his personal researches on the topography of the thymus, while in the second the surgical side of the subject is taken up in all its details. The author describes twelve cases of surgery of the thymus which he has had an opportunity to study personally and twenty-seven other cases which he has been able to collect from the literature. The histories of these cases are all given in full. As a result of his study the author concludes that the proper treatment of hypertrophy of the thymus is thymectomy and that this should be subtotal and subcapsular. He thinks subtotal, subcapsular thymectomy a simple operation requiring only about ten minutes for its performance when done through the inferior cervical region in the manner he describes. He also thinks the operation should have no mortality provided, (1) that the case is not septic from the beginning; (2) that it is not necessary to do tracheotomy either before or after the operation, and (3) that drainage is not used. In other words, he says that patients die from sepsis only.

In the thirty-nine cases reported, twenty-four patients recovered and fifteen died. Of the deaths, five were due to infection following tracheotomy with drainage; four were errors in diagnosis (tracheobronchial adenopathy), and three patients were in a desperate condition before the thymectomy. One patient died of bronchopneumonia eighteen days after the operation, one of infantile diarrhea one month after operation and one from an unknown cause.

This is an excellent record for a comparatively new operation in a new field of work.

Health for Young and Old. Its Principles and Practice. By A. T. Schofield, M.D., M.R.C.S., etc. Author of "Hygiene for Schools." Cloth. Price, $1.50. Pp. 300. New York: G. P. Putnam's Sons, 1911.

How to Be Healthy. By J. Halpenny, M.A., M.D., Surgeon to the Winnipeg General Hospital, and Lilian B. Ireland, Manitoba Normal School. Cloth. Price, 50 cents. Pp. 242, with illustrations. Toronto: Educational Book Co., (1911).

Herself. Talks with Women Concerning Themselves. By E B. Lowry, M.D., Author of Confidences, etc. Cloth. Price, $1. Pp. 221. Chicago: Forbes & Co., 1911.

A Mother's Guide. A Manual for the Guidance of Mothers and Nurses. By Francis Tweddell, M.D., Alumnus, Bellevue Hospital, New York. Cloth. Price, $1. Pp. 182 New York: James T. Dougherty, 1911.

Womanhood and Its Development. A Treatise on Adolescence Designed for the Young Woman, Embracing the Fundamental Principles of Biology, Physiology, Hygiene and Maternity. By Luella Z. Rummel, Ph.B., M.D. Cloth. Price, $1.50. Pp. 221. Kansas City, Mo.: Burton Publishing Company, 1912.

These five books are all intended for the general public, and their publication is evidence of the public demand for appropriate instruction on health matters.

"Health for Young and Old," according to its title page, is an "unconventional manual of principles and practice." While written for the English public, it is sufficiently broad to be of interest to the general reader in this country. Without attempting to give any instruction on the subject of sexual hygiene, on which so much is being written today, the tone of the entire book is toward self-restraint, good living and the increase of general knowledge on all conditions affecting bodily health.

Halpenny and Ireland's book, "How to Be Healthy," is a Canadian publication intended for school children. It is well printed and illustrated and, while necessarily rudimentary, is well adapted to its purpose.

"Herself," according to the author, was written to fill a want expressed in an answer to a correspondent in The Journal some years ago. In reply to the correspondent, we stated that there was no satisfactory book on the market for physicians to place in the hands of their young women patients. While it would probably be impossible to produce a book on such a delicate and difficult subject which would not be open to criticism by some one, yet this book must be regarded as a valuable contribution to the solution of the problem of sexual hygiene and the manner in which instruction on this subject shall be given to our girls and young women. Although showing some of the faults of the old conventional attitude on these questions, this book can be safely recommended to physicians for use in appropriate cases.

"A Mother's Guide" is a little book intended to give simple, but complete, directions to young mothers regarding the care of infants, nursing, artificial feeding, common disorders, the digestion, the general characteristics, the more common diseases, etc. The book is of a convenient size and is well indexed.

Infections of the Hand. A Guide to the Surgical Treatment of Acute and Chronic Suppurative Processes in the Fingers, Hand and Forearm. By Allen B. Kanavel, M.D., Assistant Professor of Surgery, Northwestern Medical School, Chicago. Cloth. Price, $3.75. Pp. 447, with 133 illustrations. Philadelphia: Lea & Febiger, 1912.

To undertake the task of preparing a book of about 450 pages dealing only with infections of the hand would on first thought appear to verge on the impossible, but an inspection of this book is convincing that it can be done. Use is made of large type, the lines are well leaded out and many illustrations help to convert a modest monograph into a text-book. Of course, that is not the fault of the author. While it is well to know much about infections of the hand, it is doubtful that the subject is of sufficient importance to require such extensive treatment or such a large book. It rather impresses one as being an elaborate prize thesis. The author has not contented himself with a simple statement of clinical facts, but he introduces reports of experiments and the results, in detail, of observations made in the dissection room, each valuable in its place, but hardly in place here. The first eighty pages are devoted to the discussion of clinical conditions which cannot fail to be of interest, but on which the author presents nothing new. Then follow eighty pages of anatomy, 130 on tendon sheath infections and fascial space abscesses, sixty on lymphatic infections, seventeen on allied infections, such as anthrax, erysipelas, etc., and sixty pages on complications. In order to present the subject in book form the author has called on many sources to get together enough material. One cannot, however, fail to commend the anatomic work done by him in this connection. Much of the text was published some time ago in a current medical periodical.

A Handbook of Practical Treatment. By Many Writers. Edited by John H. Musser, M.D., LL.D., Professor of Clinical Medicine in the University of Pennsylvania, and A. O. J. Kelly, A.M., M.D. Volume III. Cloth. Price, $6 net. Pp. 1095, with illustrations. Philadelphia: W. B. Saunders Company, 1912.

A careful examination of the third volume of this work serves to sustain the favorable opinion expressed in regard to the preceding volumes. The present volume covers constitutional diseases, the respiratory, digestive, nervous and muscular systems and mental diseases. The surgical treatment of the various regions involved is also discussed. Thus we have articles on the surgery of the infectious diseases of the lungs and pleura, the surgical treatment of visceroptosis, surgical treatment of diseases of the spinal cord, etc.

In general the treatment is excellent. There are some indications of insufficient editorial control. Thus it is stated (p. 126): "The pollantin which was imported into this country previous to the present year was made from grasses and therefore should theoretically be of no value when used to prevent or control hay-fever produced by the ragweed or goldenrod." This statement must refer to 1905 or 1906 and not to 1910, since pollantin, fall, made from ragweed toxin has been described in New and Nonofficial Remedies since 1906.

On the whole, however, this volume compares favorably with the previous one and completes what must be regarded as a worthy presentation of modern therapeutics.

Municipal Advance: Extracts from the Papers on Various Municipal Services, read at the First International Municipal Congress and Exposition, Chicago, September, 1911. Paper. Chicago Association of Commerce, 22 West Jackson Boulevard.

This pamphlet contains abstracts of papers by experts in every department of municipal activity and reflects the progress that has been made in the various branches of municipal government, together with suggestions for improvements along these lines. Among the subjects covered are public utilities, charters, accountings, city planting, control of milk-supplies, parks and play-grounds, contagion and school inspection, pure water, sewage and garbage disposal, the work and cost of health departments, etc. As stated by the chairman, municipal advancement forms one of the most important phases of latter-day progress, and such conferences, emphasizing particularly the health and public welfare side of municipal governments, will no doubt become a feature of future municipal governmental and sociologic work.

LEHRBUCH DER THERAPIE INNERER KRANKHEITEN. Herausgegeben von Dr. Paul Krause, O.Ö. Professor und Direktor der Medizinischen Universitäts-Poliklinik in Bonn, und Dr. Carl Garrè, O.Ö. Professor und Direktor der Chirurgischen Universitäts-Klinik in Bonn. Vol. 2. Spezielle Therapie Innerer Krankheiten. Paper. Price, 10.50 marks. Pp. 712, with 10 illustrations. Jena: Gustav Fischer, 1911.

The second volume of this text-book is devoted to the special therapy of internal diseases, which are treated by a number of authors including, besides the editors, such well-known names as von Noorden, Winternitz, Lommel, Lüthje, Jochmann, Matthes, Magnus, etc. The work is at the same time practical and thorough and, to the reader of German, will form a very desirable supplement to his English text-books.

A MANUAL OF THE PRACTICE OF MEDICINE. Prepared Especially for Students. By A. A. Stevens, A.M., M.D., Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania. Ninth Edition. Leather. Pp. 553. Philadelphia: W. B. Saunders Co., 1911.

This manual has been subjected to a thorough revision involving the rewriting of a number of articles and the addition of several new ones. The information given is very condensed and elementary, but the book supplies a want felt by many students and by the busy practitioner at times.

DIE GONORRHOE DES MANNES. Ihre Pathologie und Therapie. Ein Leitfaden für Aerzte und Studirende. Von Dr. Wilhelm Karo. Paper. Price, 2.80 marks. Pp. 100. Berlin: Julius Springer, 1911.

This is an excellent little book on gonorrhea for students and for the general practitioner. The author gives in brief recognized methods of diagnosis and treatment. One point especially good is his association of pathology with symptoms and treatment. The book is somewhat brief.

## Medicolegal

### Construction of Medical Practice Act—Chiropractics Not "Other Agency"

*(State vs. Gallagher (Ark.), 143 S. W. R., 98)*

The Supreme Court of Arkansas holds that "Dr. Gallagher" was not charged with the commission of a public offense by an indictment which charged that he "did unlawfully and repeatedly prescribe and direct for the use of Mrs. Randolph Gibson an agency, commonly known as 'chiropractics,' for the treatment, cure and relief of a bodily disease of said Mrs. Randolph Gibson; the said Dr. Gallagher not then and there having first procured a certificate authorizing him to practice medicine, as provided by the Revised Statutes of the State of Arkansas."

The portion of the Arkansas statute directly involved provides that "Any person shall be regarded as practicing medicine, in any of its departments, within the meaning of this act, who shall append 'M.D.' or 'M.B.' to his name; or repeatedly prescribe or direct, for the use of any person or persons, any drug or medicine or other agency for the treatment, cure or relief of any bodily injury, deformity or disease." The court says that in this definition, the expression "medicine, in any of its departments" is as broad and inclusive as, and was doubtless used with the same meaning as, the expression "medicine, in any of its branches," contained in the prior section, which provides that "every person who shall practice or who shall attempt to practice medicine in any of its branches," etc., shall be punished, etc. It was not and could not be contended that chiropractics is a drug or medicine, within the meaning of the act; and, although it is an agency n the common acceptation of the term and if that term had een used without the association in which it is found there s no doubt but that it would have included the practice of hiropractics, yet it was not so used.

Under a familiar rule of construction, this general term "other agency" must be limited by the meaning of the specific terms "drug" or "medicine" preceding it, and can only include agencies of a like nature as those designated by said words. This rule of construction does not deprive the term "other agency" so used of all meaning, but only limits its meaning to agencies of the like nature and quality as those designated by the particular words.

The practice of medicine act was designed for the protection of the public against all who are not learned and skilled in the science of medicine and the treatment of diseases, and is to be liberally construed in that regard; still it inures to the benefit of the favored class—those who are sufficiently learned and skilled, and are permitted by its terms to practice the profession—and creates a new offense for its violation unknown to the common law. On that account, it must be strictly construed. The practice of chiropractics, as defined, understood, and used in the treatment of ailments of the body, is not included within the definition of the practice of medicine in said statute, and not limited by it to those only who have procured certificates in accordance with said act.

The many cases cited from other states do not assist greatly in the construction of this statute, having arisen under statutes materially different from it. This statute was not intended to include the practice of osteopathy, which chiropractics more nearly resembles than it does the practice of medicine; for the legislature passed an act regulating that practice, which expressly declares that it is not included within the practice of medicine. It is not necessary to decide whether the statute regulating the practice of osteopathy was violated by the defendant by the practice of chiropractics, the indictment not charging a violation thereof.

In a brief dissenting opinion, Justice Hart says that he believes that a chiropractor is amenable to the penalties of the statute under consideration. This statute is broader than the statutes in the cases cited in the opinion of the majority. It specifically refers to the practice of medicine in all its branches. This would include osteopathy, except that a subsequent section of the same act expressly excludes it from the definition of the practice of medicine in all its branches. The phrase "other agency" is a very broad term, and includes the use of the hands. The practice of medicine in all of its branches includes surgery, and surgery is practiced by manual operation, as well as by instrumental appliances. The object of the statute under consideration is, broadly stated, for the protection of the public health, and the legislature evidently intended to guard the overcredulous against injury that might result from yielding to the solicitations of those who undertake to diagnose and prescribe for human ailments without possessing the learning and qualifications prescribed by the statutes. The fact that the legislature used the term "practice of medicine in all its branches," and expressly exempted osteopathists from the operation of the statute, convinces that it intended to include all others who practice the art of healing by the phrase "other agency."

### Rights and Risks in Home Treatment of Injuries

*(Biggie vs. Chicago, Burlington & Quincy Railroad Co. (Mo.), 140 S. W. R. 602)*

The Kansas City Court of Appeals affirms a judgment for $2,000 in the plaintiff's favor for injuries sustained by stepping into a hole in a depot platform. The court says that the defendant earnestly attacked the verdict on the ground that it was grossly excessive, and in the attack went to the length of charging the plaintiff with being a malingerer and with having aggravated the slight injuries she received from falling into the hole by her own subsequent gross negligence. But the evidence not only was substantial but convincing that the plaintiff had been rendered a permanent cripple by her injury. She received a bad sprain in her left ankle, which pained her from the start, but which she thought would yield to simple home treatment. The imputation of negligence on her part must rest on the fact that she did not call a physician, but relied on her own homely skill. The court thinks the characterization of her conduct was an issue of fact for the jury to determine, and that the court would do wrong to hold her culpable in law. In many poor families physicians are not called except in extreme cases. Ordinary injuries, such as cuts, bruises, burns and sprains are given none but home treatment. Courts should be slow to condemn as contrary to rules of law the ordinary practices and usages of the large class of people who must practice the closest economy to make ends meet. It appeared that this sprain, which, at first, promised to be nothing of great consequence, turned out badly, as such injuries sometimes do, and developed into a serious injury which would permanently handicap the plaintiff in her efforts to earn a living. The court cannot say that a verdict of $2,000 for such an injury was excessive. The jury were instructed, among other things, that, as between the plaintiff and the defendant, it was her duty to have used all ordinary care for the treatment and recovery of her injuries, and if she neglected to do so, and as a result of such neglect her injuries became aggravated and incurable, she could not be allowed any damages for such aggravation or incurable condition. In other words, she could be allowed only such sum of money as would fairly compensate her for the damages necessarily resulting from such injuries and nothing more. If, in the exercise of ordinary care, she should have employed a physician to treat her limb, and failed to do so, and her injuries were increased or aggravated, or made permanent or incurable, because she did not have medical advice and treatment, then she could not be allowed anything for such increased damages or incurable condition.

### No Damages for What Simple Operation Will Prevent

*(Leitzell vs. Delaware, Lackawanna & Western Railroad Co. (Pa.), 81 Atl. R. 543)*

The Supreme Court of Pennsylvania holds that a proper view of the law was presented by a request that the jury be instructed, in this personal injury case, that if they believed that the condition of the plaintiff could be relieved by a simple surgical operation, which an ordinarily prudent man would undergo, such facts must be taken into consideration as an element which would reduce the amount of damages to which the plaintiff would otherwise be entitled. The court says that the plaintiff of course was entirely at liberty to refuse to submit to an operation; but, if the effect of his refusal would be to retain permanently a condition which might be removed by a simple operation, which an ordinarily prudent man would, under the circumstances, undergo, that matter should certainly be taken into consideration by the jury in estimating the damages. No compensation should be allowed for damages that might reasonably be averted. Evidence as to the probability of a cure by means of a simple operation was not to be received in mitigation of damages, but as a proper method of showing the actual damages sustained. If the plaintiff could be cured by an operation reasonably safe, and one which would commend itself to the judgment of a prudent man, the injury would certainly be less serious than one for which no hope of cure existed.

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# *Current Medical Literature*

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### Journal of Experimental Medicine, Lancaster, Pa.

*April, XV, No. 4, pp. 307-428*

1 *Pathogenesis of Hemorrhagic Diseases of New-Born. E. A. Graham, Chicago.
2 *Glomerular Lesions of Subacute Bacterial Endocarditis. G. Baehr, New York.
3 *Function of Circle of Willis. S. P. Kramer, Cincinnati.
4 Experimental Infection of Mule with Trypanosoma Hippicum by Means of Musca Domestica. S. T. Darling, Ancon, Canal Zone.
5 Infection of Mules by Trypanosoma Hippicum Through Mucous Membranes. S. T. Darling, Ancon, Canal Zone.
6 Respiratory Waves of Blood-Pressure, with Investigation of Method for Making Continuous Blood-Pressure Records in Man. J. Erlanger and E. G. Festerling, St. Louis.
7 *Ultimate Results of Aortic Transplantations. A. Carrel, New York.
8 Technic for Cultivating Large Quantity of Tissue. A. Carrel, New York.
9 Influence of Heat on Different Serums as Culture Media for Growing Tissues. R. Ingebrigtsen, New York.
10 Constricting Influence of Adrenalin on Human Coronary Arteries. H. G. Barbour.
11 *Experimental Study of Arteries in Shock. W. Bartlett, St. Louis, Mo.

1. **Hemorrhagic Diseases of New-Born.**—Those conditions of the new-born characterized by a hemorrhagic tendency, icterus and fatty changes, Graham believes are probably all syndromes which may occur as the result of a number of toxic agents. All of them, however, have been produced by him experimentally by the action of a single experimental agent. Chloroform is not held to be the only substance that has this power. It stands rather as one member of a group of agents, the effects of which in general and in individual organs are similar to those caused by lack of oxygen. The essential features of these conditions have also been produced by direct asphyxiation of the fetus. The suggestion is therefore made that underlying all these symptoms and pathologic complexes, there is a deficiency of oxidation, general, local, or selective, thus bringing this group of diseases into the general category of acute yellow atrophy of the liver, eclampsia, pernicious vomiting, cyclic vomiting, phosphorus poisoning, etc. Graham believes that in human beings, chloroform and asphyxia must, in many instances, be the determining causes. There remain, however, other cases in which different factors are to be sought. Summarizing his experimental results Graham says that administration of chloroform to pregnant animals a short time before term has been followed within a few hours or days by labor. The regularity with which labor follows the anesthesia seems to indicate that it is induced thereby. The mothers may give no external evidences of injury or they may die with icterus, hemorrhages and acute parenchymatous degeneration of the viscera, accompanied by fatty infiltration which is most marked in the liver. The offspring may be born dead, or may die soon after birth, or live for a few days in apparent health and then develop symptoms ending in death, or they may show only mild symptoms and go on to a normal development. The changes shown by the offspring are always much the same, except as regards intensity and distribution. The general changes and those in the different viscera are hardly distinguishable from those that may be produced experimentally by general or local protracted asphyxia; namely, cyanosis, hemorrhages, acute parenchymatous degeneration with marked fatty infiltration of the liver, or acute parenchymatous degeneration and some fatty infiltration in the other viscera, edema and icterus. According to the degree, relative proportion, or site of these changes, we have the picture of Buhl's disease, Winckel's disease, etc., as the case may be.

2. **Glomerular Lesions of Subacute Bacterial Endocarditis.**—In most cases of chronic or subacute bacterial endocarditis due to the endocarditis coccus (*Streptococcus viridans*), Baehr found a distinctive pathologic lesion in some of the glomeruli due to bacterial emboli. The salient features of the pathologic picture are first, the involvement of one or more loops of a variable number of glomeruli; secondly, the absence of any visible disease in the uninvolved glomeruli and in the uninvolved portions of affected glomeruli; and thirdly, the association in most of the bacterial cases of all the various stages of the glomerular process often seen in a single microscopic section. The lesion does not occur in cases of acute endocarditis, and up to the present time it has been absent in cases of subacute bacterial endocarditis due to organisms other than the endocarditis coccus. In a group of cases having vegetations that are typical of those in the active stage of subacute endocarditis (except that they are free from bacteria and healing or healed), the healed stage of this distinctive glomerular lesion is present, although it is less extensive than in the active bacterial cases. These cases, therefore, are most probably examples of subacute bacterial endocarditis due originally to the endocarditis coccus, but in which the endocardial vegetations have become free from bacteria rather early in their course and are now healing or healed. During the active bacterial stage of the disease, if the glomerular lesions are not too numerous, the only symptoms produced

will be an almost constant hematuria, usually demonstrable only microscopically. If the glomerular lesions are very numerous, symptoms resembling those of subacute hemorrhagic nephritis may occur and may even cause a fatal issue. If the glomerular lesions are very numerous but not sufficient to cause death, and the cardiac lesion should go on to healing, a contracted kidney, secondary to the glomerular lesion, may subsequently ensue and produce the typical symptoms and death. In such a case, the finding of the healed or healing lesion of subacute bacterial endocarditis will be accidental.

3. **Function of Circle of Willis.**—In the experiments made by Kramer on the function of the circle of Willis, fifty dogs and three monkeys were used. The animals were anesthetized with ether and 2 c.c. of a 3 per cent. solution of methylene blue were injected into a carotid or vertebral artery by means of a fine hypodermic needle. The circulation of the blood in the artery that was being injected was not interfered with except by the insertion of the needle. Just enough pressure was used in the syringe to overcome the arterial blood-pressure. The animals were killed by opening the heart two minutes after the injection of the methylene blue. The brain and spinal cord were then removed and the distribution of the methylene blue was noted. The results obtained were surprisingly constant. On injection into one carotid artery, the other carotid and both vertebrals being unobstructed, the methylene blue was distributed to all that part of the cerebral hemisphere which is supplied by the anterior and middle cerebral arteries by the anterior chorioid, and by the posterior communicating arteries on the same side as that on which the injection was made. As a rule, the anterior portion of the frontal lobe on the opposite side was also stained; that is, there was some crossing over of the stain in the region of the anterior cerebral artery, but not into the other vessels. In *Macacus sinicus*, the posterior two-thirds of the occipital lobe was unstained after carotid injection. Otherwise the staining corresponded to that described in the dog. If methylene blue is injected into one of the vertebral arteries in the living dog, the other vertebral artery and both carotids being unobstructed, the stain is distributed to those parts of the brain and spinal cord supplied by both vertebral arteries, the basilar artery and both posterior cerebral arteries and their branches. In *Macacus sinicus*, the posterior two-thirds of both occipital lobes was stained after vertebral injection. If one vertebral artery is tied and the other injected, then the distribution of the stain is incompletely bilateral in the parts supplied by the vertebrals; that is, the staining is incomplete on the side on which the vertebral was tied. If one carotid was tied and the other injected, no appreciable or constant difference in distribution could be noted; that is, the parts were stained as in the experiments in which one carotid was injected, the other carotid being unobstructed. If both carotids or both vertebrals are tied and one of the other arteries is injected, then the separation of the areas disappears and the stain is carried forward or backward as the case may be. In other words, the circle of Willis is an anteroposterior anastomosis between the carotids and the vertebrals, which under physiologic conditions does not permit the mingling of the blood streams. When, however, either the anterior or posterior arteries are completely blocked, then the anastomosis will supply blood to the areas of the central nervous system supplied by the blocked vessels.

7. **Aortic Transplantations.**—In several cats and dogs in which portions of the abdominal or thoracic aortas have been replaced by segments from other vessels, Carrel has observed a normal circulation after two, three and four years. As two of the animals died a few months ago, the anatomic results of the transplantations could be examined. In the first experiment, a segment of popliteal artery, extirpated from the leg of a young man and preserved for twenty-four days in cold storage, was transplanted on the abdominal aorta of a small bitch. The animal lived in excellent health for four years and two months, became pregnant several times, and finally died during labor. The abdominal aorta was normal, but the human arterial segment was slightly dilated and its wall was composed of connective tissue only. In the second experiment, a segment of a dog's jugular vein, preserved for twenty-four hours in cold storage, was transplanted on the thoracic aorta of a fox terrier. In spite of slight lesions of the cord due to interruption of the aortic circulation during the operation, the animal remained in excellent health. After two years and two months, the dog died of an epidemic disease. The descending aorta was normal. The transplanted segment had about the same caliber as that of the aorta, but its wall was composed of connective tissue, with no evidence of muscular or elastic tissues. In these two experiments, the walls of the transplanted segments contained neither muscle nor elastic tissue fibers and were not thicker than those of the artery. Nevertheless they were able to withstand the pressure of the blood without undergoing any marked dilatation.

11. **Arteries in Shock.**—As a result of his experimental work Bartlett says there can be no doubt of the fact that the rate of inflow in shock was faster than normal, and in his experiments the average increase was 36 per cent. It is concluded, therefore, that decreased vasomotor tone is an accompaniment of shock.

## Journal of South Carolina Medical Association, Seneca

*March, VIII, No. 3, pp. 61-92*

12 Nasal Polypi. J. W. Jervey, Greenville, S. C.
13 Early Diagnosis of Cancer of Uterus. F. T. Meriwether, Asheville, N. C.
14 Successful Removal of Two Pieces of Steel from Eye with Electro-Magnet. C. W. Kollock, Charleston, S. C.
15 Case of Parinaud's Conjunctivitis. J. G. Johnson, Chester, S. C.
16 Treatment of Alcoholism: Who Shall Treat It? W. Cheyne, Sumter, S. C.
17 Part Played by Mouth in Digestion. F. M. Durham, Columbia, S. C.

## Maryland Medical Journal, Baltimore

*April, LV, No. 4, pp. 79-104*

18 *Cardiopathies Complicating Pregnancy and Labor. A. Samuels, Baltimore.
19 Social Progress. P. A. Morrow, New York.
20 Influenza: Odonto-Neurosis. W. A. Mills, Baltimore.

18. **Cardiopathies of Pregnancy.**—When we consider the great dangers of cardiopathies complicating pregnancy, Samuels says the question naturally arises, whether women with heart disease should marry. This is by no means a settled question. We all know that when heart disease is complicated with any condition that throws an additional strain on it, it endangers the patient's life. However, matrimony and pregnancy are not identical terms, and we do know that the great majority of women with good compensation go through pregnancy without any noticeable ill-effects. Marriage to many girls means an improvement in their social condition. It may mean a life of comparative ease as compared with the possible necessity of earning a livelihood by work. These are factors worth considering when the physician is asked the question whether a girl with a cardiac lesion should be permitted to marry. Indiscriminate denial of marriage to all women having valvular lesions may imply an injustice to many of them. In all cases of valvular lesion, heart failure will occur sooner or later, but it is an open question whether its onset will be precipitated by child-bearing, and it is doubtful if the risk of this is so marked as to justify denying her the right to marry. Samuels would say, however, in women who have a heart lesion, with concomitant pulmonary or renal disease, one should advise against marriage. In view of the high death-rate of mitral stenosis, one should be very cautious in advising marriage for these women.

## New Mexico Medical Journal, Las Cruces

*March, VII, No. 6, pp. 187-214*

21 Tendon Work for General Practitioner. W. L. Brown, El Paso, Texas.
22 Thyroid and Parathyroid. L. G. Hust, Albuquerque.
23 Pancreatitis. W. G. Hope, Albuquerque.
24 Diagnosis of Malignant Disease. F. De la Vergne, Albuquerque.
25 Uncinariasis. J. W. Colbert, Albuquerque.

## St. Paul Medical Journal, Minn.

*April, XIV, No. 4, pp. 187-236*

26 *Pericecal Hernia with Report of Apparently Unique Epicecal Hernial Sac. A. Schwyzer, St. Paul.
27 Public Health and Morality. C. E. Smith, St. Paul.
28 Rural Tuberculosis Survey. E. B. Dauherty, Pine City, Minn.
29 Status Lymphaticus. A. R. Hall, St. Paul.

26. **Pericecal Hernia.**—Schwyzer's patient, a man, was operated on for a moderate soreness about McBurney's point. On lifting the cecum out of the small abdominal incision it seemed that the appendix suddenly became disengaged and free. This, however, was not very definite, as it was more a remembrance after the pocket had been found on the outer and lower surface of the rather bulky cecum. This pocket did not show any cicatricial portions; on the contrary, it was a most beautiful reduplication of the delicate peritoneum. A probe was put into it to get the exact extent of the cavity. A connection with the appendix seemed evident and was made very plausible; first, by the proximity of the two; second, by the sharply doubled-up form of the appendix, which was otherwise quite free; third, by the exactly sufficient size, width as well as depth of the pocket for the thus doubled-up appendix; fourth, by the sensation (though not very definite), as though the appendix suddenly was released from somewhere at the moment the cecum was raised out of the abdominal incision. In two other cases Schwyzer found the appendix lodged in such a pocket, out of which it could be lifted and where it had been resting free at least from any macroscopically evident adhesions. The more outspoken inflammatory state of both these appendices (though clincially not very acute) made things less definite.

### Ophthalmic Record, Chicago

*March, XXI, No. 3, pp. 113-170*

30 Influence of Electric, Acetlyene and Oil Headlights on Night Operation of Trains and Train Signals. J. R. Newcomb, Indianapolis.
31 New Cataract Knife. F. Brawley, Chicago.
32 Definite Resection of Outer Orbital Wall. H. Gifford, Omaha, Neb.

### Lancet-Clinic, Cincinnati

*March 30, CVII, No. 13, pp. 343-370*

33 Autopsies as Aid in Teaching Special Pathology. W. E. Moseley, Toledo, Ohio.
34 Correlation of Clinical Teaching and Physiology. R. G. Hoskins, Columbus, Ohio.
35 Early Diagnosis of Pulmonary Tuberculosis. B. F. Lyle, Cincinnati.
36 Surgical Cholecystitis. D. D. De Neen, Cincinnati.

### Philippine Journal of Science, Manila

*December, VI, No. 6, pp. 428-506*

37 *Influence of Philippine Climate on White Men of Blond and of Brunette Type. W. P. Chamberlain, U. S. Army.
38 *Systolic Blood-Pressure and Pulse-Rate of Healthy Adult Males in Philippines. W. P. Chamberlain, U. S. Army.
39 *Red Blood-Corpuscles and Hemoglobin of Healthy Adult American Males Residing in Philippines. W. P. Chamberlain, U. S. Army.
40 Occurrence in Philippines of Associated Spirochætæ and Fusiform Bacilli in Ulcers of Throat (Vincent's Angina), of Mouth and of Skin and in Lesions of Lungs (Bronchial Spirochætosis.) W. P. Chamberlain, U. S. Army.

37. **Influence of Philippine Climate on White Men.**—From a consideration of all the data at his command Chamberlain says it appears that blonds are quite as well able as brunettes to withstand the influences of the Philippine climate for a period of five and one-half years. In case of residence beyond the latter period he is not in a position to express an opinion based on any extensive personal observation. Exact observations continued for a period of one year on large numbers of blonds and brunettes in the military service showed no constant or material differences for the two complexion types. The amount of sickness occurring in the Philippines was larger among the blonds in the soldier group and among the brunettes in the Scout-Constabulary-Police-Group. In the latter group the proportion of men who had never been sick was much larger for the blond type. As regards disagreeable symptoms referable to climate the evidence was conflicting, but on the whole the blonds suffered more than the brunettes. Among the soldiers invalided home the brunettes were in much larger proportion than they were in the Philippine forces as a whole. In the Scout-Constabulary-Police-Group, which had an average of 5.5 years of tropical service, the proportion of blonds, as compared with brunettes, was probably as high as it ever had been. The military conduct of the blonds appeared to be as good as that of the brunettes, except perhaps in regard to alcoholism. In the United States the relative incidence of insolation was probably slightly higher among the brunettes than it was among the blonds. On the whole the blonds seemed fully as able as the brunettes to withstand Philippine service for a period of two years, and probably as able for a period of five or six years. The incidence of nervous diseases and insanity in the army during the last seven years has not been different in the Philippines from what it was in the United States. Chamberlain regards it as doubtful if the actinic component of the sunlight is a factor in tropical morbidity and deterioration.

38. **Systolic Blood-Pressure and Pulse-Rate.**—The mean blood-pressure in temperature climates for healthy males between 15 and 30 years of age lies between 115 and 122 millimeters of mercury when a 12.5 centimeter armlet is employed. When the 12.5 centimeter armlet is used the blood-pressure of American soldiers, serving in the Philippines, was found by Chamberlain to average 115 millimeters for the period 18 to 30 years of age, and 118 for the period 30 to 40 years. This indicates that the blood-pressure of Americans residing in the Philippines differs but little if any from the average at home. Usually the lowest readings for Americans living in the Philippines were obtained in the first three months of tropical residence, but there was no progressive tendency for the pressure average to rise or to fall with increased length of residence up to a limit of three years, beyond which our work did not extend. The blood-pressure of Americans was lower during the hottest part of the year, but the difference was very slight, only about three millimeters. There was a well-marked tendency for the blood-pressure of Americans to rise with increasing age. Neither complexion-type nor the use of underwear and hat linings of orange-red color exerted any appreciable influence on the blood-pressure of American soldiers. There was no well-marked tendency for the blood-pressure or pulse-rate to rise with increasing height and weight of the individual. As was to be expected, exercise raised both the blood-pressure and the pulse-rate.

39. **Red Blood Corpuscles and Hemoglobin.**—The erythrocyte counts obtained by Chamberlain among healthy young soldiers in the Philippines could not be considered as differing from the normal, as seen in Europe and America.

### Kentucky Medical Journal, Bowling Green

*March 15, X, No. 6, pp. 243-276*

41 After-Treatment of Abdominal Operations. L. S. McMurtry, Louisville.
42 Electro-Therapeutics. J. J. Moren, Louisville.
43 Albuminuria. J. R. Morrison, Louisville.
44 Treatment of Alcoholism. B. J. O'Connor, Louisville.
45 Future Preventive Medicine. J. N. Hurty, Indianapolis, Ind.

### American Journal of Diseases of Children, Chicago

*April, III, No. 4, pp. 209-275*

46 *Recurrent or Periodical Vomiting. J. P. Sedwick, Minneapolis.
47 *Etiology and Treatment of So-Called Hemorrhagic Disease of New-Born: Report of Cases. O. M. Schloss, New York and L. J. J. Commiskey, Brooklyn.
48 *Recent Developments in Pasteurization of Milk for General Market. E. H. Schorer, Boston.
49 *Juvenile Tabes. G. E. Price and C. E. G. Shannon, Philadelphia.
50 *Acute Glandular Fever in Children. S. V. Haas, New York.
51 Adjustable Metabolism Bed for Infants and Young Children. B. R. Hoobler, New York.

46. **Recurrent or Periodical Vomiting.**—Of Sedgwick's series of twenty-two cases of periodic vomiting twenty patients had adenoids or enlarged tonsils. Most of them had fever before or during the attacks. The posterior cervical glands were usually enlarged. A very common prodrome of the attacks was sore throat or nasal discharge. One "had bleeding nose at the times of the attacks." Chorea minor, rheumatism and endocarditis were complications in three cases. Geographical tongue and asthma were noted. Sedgwick directs attention particularly to the surprising result following removal of the adenoids in some of these cases. One patient had classical, frequent, recurrent vomiting from the latter half of his first year. Tonsillitis was a usual prodrome of the attacks. The tonsils and adenoids were removed. The child has been perfectly well since. A second patient had typical attacks from his second year. The adenoids were removed when he was 6 years old. He had no more attacks for a year. He had two light attacks during the eighth year. Then he developed

appendicitis, and has been perfectly well since his appendix was removed. In a third case rhinopharyngitis always accompanied the attacks. The attacks did not cease at once after removal of the adenoids, but became gradually lighter and less frequent. The patient has had no attacks for several years. The histories of all the remaining cases are similar to those cited.

47. **Treatment of Hemorrhagic Disease of New-Born.**—In the hemorrhagic conditions of the new-born Schloss and Commiskey found that the coagulation of the blood may be normal, delayed or absent. A deficiency or absence of thrombin or fibrinogen may give rise to imperfect blood coagulation and uncontrollable hemorrhage. In some cases of hemorrhage in the new-born in which blood coagulation is apparently normal, it seems probable that the hemorrhage is due to some localized vascular lesion or defect present only in the areas from which the bleeding occurs. The subcutaneous injection of whole blood is harmless and is of apparent value in the treatment of the hemorrhage. The authors have treated nine patients by means of the subcutaneous injection of whole blood. This procedure is simple, perfectly harmless, and so far as can be judged from a small series of cases, efficacious. The injected blood is quickly absorbed and apparently without harmful influence on the patient. One case, however, which was treated in the same way, terminated fatally, but in this case there was practically no external bleeding and it was impossible to determine whether the fatal outcome was due to hemorrhage or to some other cause. Another case also terminated fatally. This patient was in a moribund condition at the time treatment was instituted and died three and a half hours after admission to the hospital. The authors believe that the best results can be obtained from the injection of 10 to 30 c.c of blood, the injection to be repeated every four to eight hours as long as the hemorrhage continues. It can scarcely be expected that such a therapeutic measure will prove a cure for all cases. There are apparently a number of different conditions which may be responsible for hemorrhage in the new-born, and there is no indication that the pathologic condition of the blood is always the same. In the cases in which the hemorrhage is profuse and which are as a rule quickly fatal, it seems scarcely possible that any of the simpler measures could be of value. In the treatment of such cases an immediate transmission of human blood is probably the only means from which any result could be expected.

48. **Pasteurization of Milk for General Market.**—Basing his conclusions on observations and study of various pasteurizing devices and results obtained by them, Schorer says it is evident that the results derived in the laboratory cannot be transferred directly to the dairy. A routine of 140 F. for twenty minutes while efficient in the laboratory is not a safe one in the dairy. The safest method for pasteurizing is in the sealed bottle, allowing at least thirty minutes for heating to the temperature of pasteurization and then pasteurizing at 145 F. for thirty minutes—all done under official supervision. Laboratory men not acquainted with commercial conditions should refrain from advising on the new departure of pasteurizing in a bottle, so that milk producers and dealers will not needlessly have to expend as much money for these devices and systems as a result of what they regard as expert advice as they have for pasteurization devices in the past.

49. **Juvenile Tabes.**—The authors found that the course of this affection, like that of adult tabes, is chronic and the prognosis, therefore, is good as to life. The frequency with which optic atrophy and blindness occur, however, should cause one to be very guarded in the prognosis as to vision.

50. **Acute Glandular Fever in Children.**—A twelfth case of glandular fever is reported by Haas. He says that this disease, characterized by fever, prostration, acute, painful swelling of the lymphatic glands, chiefly those of the neck, running a characteristic course, contagious in character, often occurring in epidemic form, the failure to recognize which may lead to false and grave prognosis, is entitled to a place in all textbooks on pediatrics which at present fail to mention it, and a fuller consideration in most of those which do.

### Southern California Practitioner, Los Angeles

*March, XXVII, No. 3, pp. 93-146*

52 Enteroptosis and Altered Function of Diaphragm Resulting from Intrathoracic Inflammations. F. M. Pottenger, Monrovia.
53 Symptoms and Diagnosis of Tubal Pregnancy. H. A. Johnston, Anaheim.
54 Physical Examination of School Children, with Special Reference to Effect of Exercise on Heart. E. C. Beach, Los Angeles.
55 Feeding and Care of Infants of Poor. P. V. K. Johnson, Los Angeles.
56 Philippine Problem as Seen by Physician. I. W. Brewer, U. S. Army.
57 Altitudes, Latitudes and Platitudes. E. S. Goodhue, Hawaii.
58 For Whom Shall the Physician Vote? T. G. Davis, Los Angeles.

### New York Medical Journal

*March 30, XCV, No. 13, pp. 625-676*

59 Some Problems in Chemotherapy of Cancer. W. J. Morton, New York.
60 Inflammations of Endometrium and Endometritis. R. T. Frank, New York.
61 Ionic Surgery in Cancer of Rectum. G. B. Massey, Philadelphia.
62 Traumatism of Eyeball. F. P. Hoover, Jacksonville, Fla.
63 Social Worker as Factor in Solving Dispensary Problem. S. H Brown, Philadelphia.
64 Postgraduate Work in Vienna and Budapest. F. McMorrow, Syracuse, N. Y.
65 *Plea for Use of Metric System in Prescription-Writing. H Sicherman, Buffalo.
66 Duty of One Physician to Another. A. J. Huey, New York.
67 Sex Hygiene in Relation to Eugenics. I. Delany-Barbour, New York.

65. **Metric System in Prescription Writing.**—Sicherman outlines a plan whereby the size of the doses as remembered in grains or fractions thereof will help in writing entire prescriptions in the metric system. Take a prescription of a certain size, having a certain number of doses, as a unit, say a two-ounce mixture, a teaspoonful at a dose. This would make approximately fifteen doses. This number is close enough for practical purposes, and above all, makes a number that can easily be doubled, tripled or quadrupled, as necessity may require. Now, two ounces are approximately 60 grams and one gram contains approximately 15 grains. All one has to remember is the dose of the drug in grains to be able immediately and without any uncertainty to put down the number of grams for the entire 60 grams (or c.c.) mixture (the dose being one teaspoonful or approximately 4 c.c.). When the dose is less than a grain, it is just as easy. Simply take that decimal part of the gram which the dose, in parts of a grain, indicates. Gr. ¼ of codein sulphate would be 0.25 gram.

### New York Medical Journal

*April 6, XCV, No. 14, pp. 677-728*

68 Sex Mutilations in Social Therapeutics. G. F. Lydston, Chicago.
69 Diet in Nervous Disorders. T. A. Williams, Washington, D. C.
70 Regulation of Fees. H. Hays, New York.
71 Three Cases of Pubiotomy. A. J. Rongy, New York.
72 *Alcohol and Spirit of Camphor as Surgical Dressings. B. Robinson, New York.
73 Torsion of Uterine Annexa in Hernias of Nurslings. A. V. Moschcowitz, New York.
74 *Surgical Treatment of Hallux Valgus and Bunions. W. L. Kellar, U. S. Army.
75 Study of Physiology and Pathology of Skeleton on Oral Extremity of Thorax (Stethographic Method). C. M. Desvernine, Havana, Cuba.

72. **Alcohol as Surgical Dressing.**—As a surgical dressing, Robinson says he has not seen any equal to alcohol, or spirit of camphor and water, as a rule one part to three, but the former sometimes pure, with or without an impermeable covering of rubber tissue or oil silk. He also suggests to surgeons who still irrigate, the use of alcoholic solutions to wash out the abdominal cavity after cleansing, in cases of diffuse septic peritonitis from appendicitis.

74. **Surgical Treatment of Hallus Valgus.**—In Keller's method the primary incision exposes the first metatarsophalangeal joint. The capsular ligament is next incised and the structures at the base of the phalanx, including ligaments and periosteum, are pushed away from the articular surface; the phalanx is then disarticulated. With a Gigli saw, enough of the phalangeal head is removed to enable the distal portion to be placed in an overcorrected position medially, without impinging on the head of the first metatarsal. The exostosis on the metatarsal bone is now removed, but in order to pre-

serve the sesamoid area, so essential to the integrity of the tripod of the foot, the cut is made obliquely upward and outward along the length of the metatarsal. This cut extends from the inner edge of the sesamoid below, to a line above, which is well past the middle of the dorsum of the bone. The remains of the periosteum, capsular ligament, and other adjacent soft parts, are brought over the extremity of the resected phalanx by a figure of eight silkworm gut suture. A second and similar suture, placed posteriorly to the first, obliterates any remaining space and interposes some extra tissue. A gauze drain is introduced through a stab wound in the lower lateral surface; this goes to the joint space and is removed in forty-eight hours. A few figure of eight silkworm gut sutures bring the subcutaneous structures into apposition, and the wound is closed in the usual way. No catgut is used in any part of this operation. An overcorrected position is maintained by means of a well padded lateral splint or bandages, and after five days passive motion is instituted. The patient is not allowed to do much active walking until the end of the third week. Keller's experience with this operation covers a period of ten years, in which twenty-six patients have been operated on. The results in most of the cases were excellent.

### Old Dominion Journal of Medicine and Surgery, Richmond, Va.

*March, XIV, No. 3, pp. 141-203*

76 Diphtheria Carriers and Their Treatment. H. Page, Fort Moultrie, S. C.
77 Psychotherapeutics. A. Gordon, Philadelphia.
78 Hematogenous Infection of Kidneys. L. B. Wiggs, Richmond, Va.
79 Twenty-Four Consecutive Prostatectomies. L. T. Price, Richmond, Va.

### Boston Medical and Surgical Journal

*April 4, CLXVI, No. 14, pp. 511-546*

80 *Visceral Purpura and Angioneurotic Edema. C. F. Withington, Boston.
81 Short Account of Early History of Suprapubic Cystotomy. C. G. Cumston, Boston.
82 Freud's Psychology as Applied to Children. W. E. Paul, Boston.
83 Memorials to Oliver Fairfield Wadsworth, M.D. C. J. Blake, J. J. Putnam and M. Standish, Boston.

80. **Visceral Purpura and Angioneurotic Edema.**—Withington reports two cases of so-called Henoch's purpura, with abdominal distribution of the lesions.

### American Journal of Urology, New York

*March, VIII, No. 3, pp. 115-170*

84 Neglected Principle in Cystoscopy. W. F. Braasch, Rochester, Minn.
85 Treatment of Multilocular Kidney Cystoma (Congenital Cystic Kidney) by Means of Multiple Punctures. T. Rovsing, Copenhagen, Denmark.
86 Use of Ultra-Violet Ray in Diseases of Genito-Urinary Tract. J. R. Hayden, New York.
87 Bladder Tumors Treated by Fulguration. D. A. Sinclair, New York.
88 Present-Day Diagnosis of Acquired Cutaneous Syphilis. W. J. Heimann, New York.
89 Improved Urologic Examining Table. L. Buerger and A. Hyman, New York.

### Medical Record, New York

*April 6, LXXXI, No. 14, pp. 651-696*

90 Physical Examination a Requirement for Correct Diagnosis and Honest Treatment of Sick. A. M. Jacobus, New York.
91 Sexual Education of Child. R. Reed, Cincinnati.
92 Specific Treatment of Pyosalpinx. H. J. Farbach, Louisville, Ky.
93 *Fracture and Dislocation of Upper End of Humerus. J. B. Bissell, New York.
94 Salvarsan as Cure of Syphilis. J. M. Winfield, Brooklyn.
95 Clinical Technic for Enzymes. F. von Oefele, New York.

93. **Fracture and Dislocation of Upper End of Humerus.**—The trauma which produces dislocation of the shoulder joint is not usually a severe one. The injury producing fracture about the neck of the humerus may or may not be caused by great force. It would seem, says Bissell, that, however strenuous the exciting cause may be, after it had dislocated the shoulder it could hardly go on and fracture the bone, or vice versa, Again, if the head of the bone is broken off first, close to the upper extremity, as occurs most frequently in these cases, how is it possible for there to remain leverage enough to dislocate the joint surfaces? From the study of a number of these fracture dislocations Bissell has evolved a theory as to the probable causation, namely that the bone was fractured by the force used in trying to reduce the dislocation. The noise which the patient and the doctor heard, and the "slipping into the joint" which the physician feels, was nothing of the kind, but was due to fracture produced in this manner. Once having recognized the impracticability of restoring the injured parts to their proper position and function by manipulation there is nothing else for the surgeon to do except cut down upon the site of the injury, and properly and consistently adjust the distorted tissues to as nearly as possible their normal state. Operation naturally resolves itself into one of two methods of procedure. Either we endeavor to unite the fragments and keep them united until union takes place or we may be compelled to remove the upper fragment entirely. Here we use the lower fragment in the new joint. This latter variety of treatment is forced on us by any of the following conditions: The impossibility of proper adjustment of the two fragments to each other, comminution of the fragments, too wide displacement of the upper one, complete destruction of the circulation and nutrition of the upper fragment, smallness of the upper fragment, or destruction of the joint surface of the glenoid cavity. It is curious to see what good joint function may be had in the shoulder joint, in spite of the fact that the head of the bone has either been removed entirely from the joint surface and the human body, or that a false joint has been formed with a shortened or lengthened humerus, as the case may be. In such cases satisfactory shoulder joints are not infrequent with the glenoid cavity entirely out of business. The false joint in such cases not infrequently results in an almost normally acting shoulder, even with the glenoid fossa completely deprived of its function.

### Canadian Medical Association Journal, Toronto

*March, II, No. 3, pp. 173-268*

96 Low Percentages in Infant Feeding. R. D. Rudolf, Toronto.
97 Pulmonary Tuberculosis. O. Bruce Brompton, London.
98 Difficulties in Prognosis in Pulmonray Tuberculosis. W. E. Ogden, Gravenhurst.
99 Surgical Aspect of Duodenal Ulcer. F. N. G. Starr, Toronto.
100 Case of Accidental Extra-Genital Syphilis. H. B. Anderson, Toronto.

### Bulletin of Johns Hopkins Hospital, Baltimore

*April, XXIII, No. 254, pp. 97-126*

101 *Narcosis. M. Verworn, Bonn, Germany.
102 Felix Platter, with Extracts from His MSS. Memoirs Preserved at Library of Bale. C. G. Cumston, Boston.
103 *Tuberculosis in Infancy and Childhood. H. Koplik, New York.
104 *Effect of Prevention of Laking on Catalytic Activity of Blood. A. Strauss, Baltimore.
105 Pin Work Appendicitis; Report of Two Cases. G. C. Ney, Baltimore.

101. **Narcosis.**—Living tissues, says Verworn, even when their demand for oxygen has been raised to an extreme degree by fatigue or asphyxia, cannot, during narcosis, make use of oxygen, even when offered to them abundantly. Living tissue becomes asphyxiated during narcosis. The catabolic phase of metabolism continues in the form of a non-oxidative destruction, just as in asphyxia, and can also, as in asphyxia, be accelerated by exciting stimuli. Recovery from this asphyxia is, as in every asphyxia, only to be attained by supplying oxygen. In the depression of nerves in an oxygen-free medium we deal with a slow, while in narcosis we deal with an acute, asphyxia. The more rapid or slower onset of depression is solely dependent on the rapidity with which the oxidation processes are abolished. The factor which produces the characteristic symptom-complex of narcosis is under all circumstances the suppression of the power to carry on oxidations. When the fate of molecular oxygen in the normal metabolism of the cells is recalled, from the moment at which it enters the living substance to the moment at which it decomposes the oxidizable materials into carbon dioxid and water, it is found that the narcotic, which overflows the cell, could establish its inhibitory action on the oxidation at various stages of this process. In the first place one might conceive that the narcotic, when it has penetrated into the living substance, prevents in some way the entrance of molecular oxygen from the surrounding medium into the cell. Next one must consider the possibility that narcotics appropriate the oxygen which enters the cells, and use it for their own oxidation. A third possibility of the interference with oxidation is that the narcotic in some way

blocks the molecules of oxidizable material, perhaps by a loose chemical fixation, and thus renders them inaccessible to oxidation, and the oxidation will thus cease. Finally, it might be assumed that the narcotic renders the oxygen-carriers incapable of activating the oxygen, so that the oxidizable materials could no longer be oxidized and decomposition would proceed only in non-oxidative form. However, Verworn emphasizes that the conception regarding the nature of inhibition of oxygen metabolism in narcosis is of a purely hypothetic character. It is only an established fact that narcotics induce an acute asphyxia of the cells. Herein is the essence of narcosis. During sleep, restitution occurs. The irritability, which becomes reduced in the course of the day as a result of the fatiguing action of sensory stimuli, gradually rises again. The fatigue of the ganglion cells, which, as we know, depends only on a relative lack of oxygen, becomes completely dispelled. The supply of oxygen, which during constant activity was not quite sufficient to keep irritability at its maximum, is, after the cessation of functional demands, fully sufficient to banish the fatigue. In short, during sleep, restoration occurs principally by the action of oxygen. In the morning the ganglion cells are refreshed and possess their full capacity for work. In narcosis there is, on the contrary, a depression of the oxidation processes. Experiments show that even with a free supply of oxygen a fatigued ganglion cell did not recover at all during narcosis. There occurs, rather, a gradual asphyxia, and, although this process is only developed to a small extent in light narcosis, still it presents just the reverse of that which sleep brings to the ganglion cells. In the one case, recovery from fatigue by oxidation; in the other, prevention of restitution by inhibition of the oxidation process. There can be no confusion between sleep and narcosis.

103. **Tuberculosis in Infancy and Childhood.**—The prognosis of tuberculosis in infancy and early childhood, Koplik says, is bad on account of the tendency of the infection at this time to spread and become general. The acute course of fully 75 per cent. of the cases has been emphasized in the statistics on meningitis. The earliest age at which a tendency of tuberculosis to cure has been observed is 15 months. The older the child the better the prognosis. The best prognosis is beyond the age of 7 years and Koplik would say that the localized glandular and bone forms have a tendency to heal beyond this age limit. Koplik doubts whether the average physician, much less the layman, realizes the sacrifice of infant life through the contact of children with tuberculous persons. Children in the poor quarters of large cities, and small ones, for that matter, are always among the grown-ups. They are the hapless playthings of the old decrepit cougher and the young unsuspecting tuberculous mother. The intimate contact with the mother or father, who may be phthisical, is at once apparent. It is not uncommon, even in public prints of welfare agitators to find whole families who are tuberculous. Again, vendors of candies and cookies are seen, who, on the surface, are sufferers from tuberculosis. Added to this the universal habit among the poor of expectoration, raises the chances of infection among the children. In the face of all this it seems far-fetched to ascribe any marked influence in the causation of tuberculosis among children to milk from infected cows.

104. **Effect of Prevention of Laking on Catalytic Activity of Blood.**—The results of Strauss' experiments show that the prevention of the laking of the blood depresses its catalytic activity.

### Archives of Ophthalmology, New York

*March, XLI, No. 2, pp. 97-208*

106 Simplified Method of Extirpation of Lachrimal Sac. C. Barck, St. Louis.
107 Case of Retrobulbar Pneumococcic Abscess of Right Orbit. H V. Dutrow, Ancon, Canal Zone.
108 Unusual Case of Epibulbar Sarcoma. F. H. Verhoeff, Boston.
109 Additional Notes on Patient with High Astigmatism. B. L. Millikin, Cleveland.
110 Exceptional Causes of Failure in Operative Treatment of Strabismus. A. Bielschowsky, Leipsic.
111 Case of Incongruous Homonymous Hemianopsia. O. Schirmer.
112 Case of Antral Disease in Four-Months-Old Child, with Marked Orbital Symptoms. F. Krauss, Philadelphia.
113 Operation of Excision of Tarsus and Conjunctiva (Heisrath) in Old Trachoma. J. H. Claiborne, New York.

### Louisville Monthly Journal of Medicine and Surgery, Ky.

*March, XVIII, No. 10, pp. 289-320*

114 Blood Cultures as Aid in Early Diagnosis of Typhoid. L. K. Baldauf, Louisville.
115 Circumcision. C. Skinner, Louisville.
116 Importance of Proper Feeding After Celiotomy. J. H. Carsten, Detroit.
117 Treatment of Cerebral Hemorrhage. E. M. Hummel, New Orleans.

### West Virginia Medical Journal, Wheeling

*March, VI, No. 9, pp. 291-326*

118 Operative Treatment of Fractures. J. E. Cannaday, Charleston.
119 Should State Medical Society Have Increased Power? J. C. Irons, Elkins.
120 Vesical Urinary Retention. C. L. Holland, Fairmont.
121 Laboratory Methods in Diagnosis. H. L. Robertson, Charleston.

### Journal-Lancet, Minneapolis, Minn.

*March 15, XXXII, No. 6, pp. 141-168*

122 Use and Abuse of Carbohydrates in Infant-Feeding. C. G. Grulee, Chicago.
123 Abdominal Pain, Together with Aspects Relating to Diagnosis. A. T. Mann, Minneapolis.
124 New Public Health; Control of Non-Infectious Diseases. H. W. Hill, Minneapolis.

## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### British Journal of Children's Diseases, London

*March, IX, No. 99, pp. 97-144*

1 Syphilitic Affections of Bones Met With in Childhood. D. C. L. Fitzwilliams.
2 Ten Years as Dental Surgeon to Children's Hospital. S. F. Rose.
3 Morbilliform Rash in Child. J. Allan.

### Indian Medical Gazette, Calcutta

*February, XLVII, No. 2, pp. 49-88*

4 Proposed Bill to Consolidate and Amend Law Relating to Lunacy. M. J. Shaw.
5 Hypnotism and Psychotherapy. V. B. Green-Armytage.
6 Air Movement in Association Wards. W. G. King.
7 Intestinal Parasites in Wardha District. M. F. Reaney.
8 Sanitation in Plains. L. Reynolds.
9 Syphilis in Thibet. R. F. D. MacGregor.
10 Treatment of Aural Sepsis. L. G. Fink.

### British Medical Journal, London

*March 23, I, No. 2673, pp. 653-708*

11 Physician and Pathologist on Heart Failure. Sir T. C. Allbutt.
12 *Estimation of Heart Power: Blood-Pressure; Hypertension; Hyperpiesis; Hypertonus. W. Russell.
13 *Serum and Vaccine Therapy in Connection with Diseases of Eye. C. W. G. Bryan.
14 Case of Addison's Disease Treated with Tuberculin. J. M. H. Munro.
15 *Statistics of Eighty-Six Cases of Pneumonia; Alcohol in Treatment. A. T. Jones.

12. **Estimation of Heart Power.**—It is Russell's contention that when the artery wall is thickened, the thickening increases the resistance to compression, the resistance then becoming blood-pressure plus vessel wall. The difference between the thickness of the normal brachial artery, which collapses by its own weight when empty, and an artery thickened by sclerosis, that is, by muscular hypertrophy, is great. In addition, however, to the muscular thickening, the thickened muscular coat retains the power to contract and to relax. When it contracts the wall becomes still thicker, and the lumen becomes still smaller. To such a thickened vessel one must not only overcome the resistance of the blood-pressure, but of the hypertonic vessel wall in addition. The phenomena have passed from the physiologic to the pathologic, and therefore to the clinical. As it is true that the thick-walled vessel requires greater force to obliterate its lumen than the thin-walled vessel requires, it follows that when the thick muscular coat contracts beyond its normal tonus, the vessel wall is further thickened, and the lumen is further diminished, so that still greater pressure is required to obliterate the lumen and to stop the pulse wave. The hypertonically contracted sclerosed artery is more resistant to pressure than the tonically contracted one. It thus follows that in taking hemomanometer observations three factors of clinical importance have to be considered, namely, (1) blood-pressure; (2)

structural changes in the wall of the artery; (3) hypertonus of the muscular coat. On the correctness of the estimate of these separate factors will depend the correctness of the conclusions, and will determine the real value that this instrument will be in clinical work.

13. **Serum and Vaccine Therapy in Eye Disease.**—Chronic inflammations of the lacrimal sac, Bryan finds, offer a hopeful field for treatment by vaccines. Next in frequency to pneumococcus comes staphylococcus as infecting organism, and such cases can be treated with success by doses of 100 to 500 million of stock vaccine repeated once a week. *Staphylococcus aureus* is the cause of many varieties of chronic or recurrent disease of the lids, and such disease can be cured by vaccine in doses of 100 to 1,000 million. Blepharitis is due to such infection, and is usually associated with an error of refraction. Cases may be cured by means of staphylococcus vaccine, and if the refractice error be corrected there is no tendency to relapse. Chalazions and hordeola show great tendency to recur frequently in some patients; cure can be obtained by a three months' course of treatment by staphylococcus vaccine. Many varieties of acute conjunctivitis clear up so rapidly with antiseptics that there is no indication for further treatment. Acute gonococcal conjunctivitis is a disease of grave prognosis, and here vaccine is of great value. Of two severe cases which Bryan treated, in one a cure was obtained in ten days, in the other no apparent benefit resulted. He has treated three cases of gonococcal ophthalmia in new-born infants with doses of one-half to 1 million of vaccine; the disease became cured in each case without infection of the cornea.

In acute gonococcal conjunctivitis, Bryan says that if the treatment be commenced before the internal parts of the eye are affected, good results may be obtained with vaccine, but it is necessary to use very small doses repeated at short intervals, the object being to avoid as far as possible negative phases, and to obtain only rapid and repeated positive phases. Every effort must be made to increase the blood-supply of the cornea and to wash away discharge frequently. Free discharge is to be looked on as useful, as it is by this means that opsonins are brought through the diseased tissues. Of the more chronic forms of conjunctivitis, Parinaud's conjunctivitis is probably due to *Staphylococcus albus*. Bryan has treated one case with staphylococcus vaccine for some weeks, but was unable to make out any good effect from the treatment. Cases of conjunctivitis due to the diplobacillus of Morax, and others due to Friedländer's bacillus, have been benefited by vaccine treatment. It is difficult to prepare a vaccine from the diplobacillus, owing to its delicate growth; cultivation on peritonitic serum agar has given the best results in his experience.

In staphylococcal ulceration of the cornea vaccine treatment has given good results. In acute ulcer of the cornea, due to pneumococcus, treatment by vaccines has been followed by a fair measure of success, but it is necessary to begin the treatment early, as the disease usually progresses rapidly. Immediately the diagnosis is made 25,000,000 of polyvalent stock pneumococcus vaccine should be given; cultures of the patient's own organisms should be planted, and a specific vaccine made as rapidly as possible. Twenty million of this is a suitable dose to commence with, but may be increased in four or five days if the treatment is being regulated by estimations of the opsonic index and clinical appearances. A variety of acute streptococcal infection is the pseudomembranous ophthalmia of infants. Toxemia is intense and death is the usual result. In internal disease of the eye due to pyogenic organisms the obtaining of a bacteriologic diagnosis is difficult. In all such cases vaccines can be used with good hope of success, cultures being obtained from the primary focus of disease.

15. **Statistics of Pneumonia.**—Jones is convinced that it is unwise and unnecessary to prescribe alcohol in every case of pneumonia, for he says it is possible that it may, and does, do more harm than good in many cases. He has divided his series of eighty-six cases into two parts, those of his former treatment and those of his later treatment, and on comparing the result in each category it is as follows: *First Series:* Thirty-six cases with fourteen deaths, or 38 per cent. mortality. *Second Series:* Fifty cases with nine deaths, or 18 per cent. mortality. The result is better without the routine treatment by alcohol. In cases showing signs of cardiac failure by increase in pulse-rate and weakness thereof, Jones prescribes alcohol, but his observation was this, that cases requiring alcohol generally proved fatal notwithstanding.

## Journal of Laryngology, Rhinology and Otology, London

*March, XXVII, No. 3, pp. 129-184.*

16 Analysis of 123 Consecutive Cases in Which Operations Were Performed for Mastoid, Labyrinthine and Intracranial Complications of Suppurative Otitis Media. J. S. Fraser and J. K. M. Dickie.
17 Diagnostic Value of Suction-Syringe in Maxillary Antral Sinusitis. P. Watson-Williams.
18 Education of Medical Student and Specialist in Diseases of Throat, Nose and Ear, Germany. Position of Oto-Laryngo-Rhinology in German Medical Schools. von Eicken.

## Journal of Tropical Medicine and Hygiene, London

*March 15, XV, No. 6, pp. 81-90*

19 Blackwater Fever in Burma. L. G. Fink.
20 Salvarsan and Leprosy. T. L. Sandes.

## Lancet, London

*March 23, I, No. 4621, pp. 771-848*

21 Paratyphoid Fever and Meat Poisoning. F. A. Bainbridge.
22 Certain Phases in Evolution of Man. A. Keith.
23 Feeble-Mindedness and Measurement of Intelligence by Method of Binet and Simon. W. C. Sullivan.
24 Pharyngeal Suppuration; Course and Direction of Various Types. G. W. Badgerow.
25 Acute Myelitis with Optic Neuritis (Neuromyelitis Optica). E. F. Clowes.
26 Cosmetic Surgery (Plastic). W. H. Battle.
27 *Pharyngeal Diverticulum. E. B. Waggett and E. D. Davis.
28 *Dietetic Treatment of Diabetes. P. J. Cammidge.
29 *Immediate Results of Sanitarium Treatment of Tuberculosis. J. A. D. Radcliffe.
30 *Acute Intestinal Obstruction. E. Gillespie.
31 Crawford Williamson Long, the Pioneer of Anesthesia. D. W. Buxton.

27. **Pharyngeal Diverticulm.**—The patient, aged 40, complained of difficulty in swallowing. For the past five years he had always returned a small quantity of food after each meal. These symptoms gradually increased in severity, and for the last three months he had noticed a swelling on the left side of the neck, which increased in size after taking food. If he compressed the swelling about an ounce of food and saliva regurgitated into the mouth, and this had increased in quantity during the past few months. The difficulty in swallowing had become more marked toward the end of a meal, being distinctly noticeable after the first few mouthfuls. In addition he volunteered the statement that he was "short of breath" after food and on slight exertion. There was fulness and bulging of the left sternomastoid muscle immediately below the level of the cricoid cartilage, and the swelling became more marked after taking food. On giving the patient food he was able to swallow the first few mouthfuls without trouble, but in order to take more he had to turn the head to the right and to flex the neck.

The patient was examined by the esophagoscope. At the level of the upper edge of the cricoid cartilage the orifice of the esophagus was seen as a narrow slit, but on the posterior wall a large opening was seen through which the tube passed easily, but after this point the view was obstructed by frothy saliva. The tube could be passed another three inches, but was then obstructed. From this it was gathered that the pouch was about three inches in length. The tube could be passed into the esophagus and no stricture was observed. The radiogram taken after a bismuth meal showed the pouch on the left side of the esophagus and extending behind the clavicle. Waggett operated and invaginated the pouch. It was about the size of a hen's egg, and resembled a piece of small intestine with a net-work of veins on its surface. It was found to open from the posterior wall of the esophagus above the level of the cricoid constriction and opposite the cricoid cartilage.

28. **Dietetic Treatment of Diabetes.**—In the treatment of diabetes Cammidge says everything depends on systematic dietetic measures being instituted at as early a stage as possible, for the whole future of the case depends on its management at this period. It is exceedingly important that the diet should be prescribed quantitatively, as well as qualitatively, and this is true, not only of the well-marked cases, but also of the mild

forms, and even of transient glycosuria, which, if neglected, may pass later into typical progressive diabetes. To merely give a patient lists of foods that he may take, and must avoid, is less than half the battle. What he needs to be taught is how much of each permitted food he may, and must, take to keep up the supply of energy he requires. At first all his food must be weighed, but it is remarkable how quickly the eye can be trained to accurately estimate weights and measures, and after a time only an occasional appeal to the balance is necessary. One useful purpose that the preliminary experimental investigations serve is to provide an opportunity for such education, since observations of this nature can only be satisfactorily carried out in a nursing home or hospital, where the food is prepared under strict supervision, and both it and the excreta are accurately weighed and measured.

29. **Sanitarium Treatment of Tuberculosis.**—A review of recorded statistics by Radcliffe shows that with sanitarium treatment alone we can only reckon on 20 to 25 per cent. of all patients losing their bacilli as an immediate result of the treatment. When a combination of tuberculin with sanitarium treatment is adopted, at least 50 per cent. of the patients will lose their tubercle bacilli. The earlier the patients come under treatment the better the results. A comparison of the immediate results is so much in favor of tuberculin that Radcliffe finds it difficult to understand the opposition to its employment, both in treatment and diagnosis.

30. **Acute Intestinal Obstruction.**—Gillespie's patient, aged 10, complained of abdominal pain localized round the umbilicus. He also vomited. The pain and the vomiting continued until admission, the latter becoming more frequent. Six days after the onset of the trouble the patient had fecal vomiting. The chest showed nothing abnormal. The abdomen was distended. Coils of intestine could be seen showing through the abdominal wall, and giving the step-ladder appearance of small intestine obstruction. The abdomen felt tense, but had not the rigidity of an inflammatory lesion. There was no localized tenderness on palpation. The movements with respiration were deficient. The percussion note all over was resonant. Rectal examination revealed a distended empty rectum; nothing abnormal was felt in the pelvis.

The abdomen was opened. Coils of distended and congested small intestine at once showed. On introduction the examining hand could feel a loop of intestine tightly constricted by a band. The portion of intestine was isolated and brought to the surface. The strangled loop was found to be about 18 inches of the ileum close to its lower end. The band was also a piece of intestine, stretched, and thinned out. Further search showed that it was the appendix vermiformis. It had encircled the loop, passing at first over and in front of it, then downward behind. Finally, the tip appeared round the lower border and gained an attachment in front of the mesentery close to its junction with the gut. In addition the loop of intestine was rotated through about 90 degrees from right to left of the patient on an axis lying in the length of the mesentery and at right angles to the intestine. The appendix was freed and found to have a recent perforation close to the tip. The perforation had been sealed for the time being by the attachment to the mesentery. The patient died on the following day.

### Archives des Maladies de l'App. Digestif, Paris

*February, VI, No. 2, pp. 61-120*

32 Estimation of Digestion of Fat from Examination of Stools. (Recherches sur la digestion des graisses et coprologie clinique.) H. Labbé and P. Laure.
33 Roentgenoscopy of Hour-Glass Stomach. (Radiodiagnostic de l'estomac biloculaire.) G. Legros.
34 Case of Tabetic Gastric Crises Complicated by Colon Trouble. (Sur un cas de crises gastriques tabétiques combinées à des crises de réaction colique.) A. Mathieu.

### Archives de Medecine des Enfants, Paris

*March, XV, No. 3, pp. 161-240*

35 Tongue with Median Raphe. (La langue scrotale chez les enfants.) J. Comby.
36 Dementia Præcox in Children. (La démence précoce dans l'enfance.) P. Haushalter.
37 Mental Anorexia in Infants. (Anorexie mentale chez les nourrissons.) Buffet-Delmas.
38 Tracheo-Bronchial Lymphadenitis. (Les accidents de l'adénopathie trachéo-bronchique.) F. Maillet.

### Bulletin de l'Académie de Médecine, Paris

*March 5, LXXVI, No. 10, pp. 173-192*

39 *Internal Hemorrhage from Rupture of Graafian Follicle. (Inondation péritonéale par rupture d'un follicule de de Graaf.) D. J. Cranwell.

39. **Hemorrhage from Rupture of Graafian Follicle.**—The syndrome suggested ruptured tubal abortion but the severe hemorrhage was traced to a ruptured but otherwise apparently normal Graafian follicle and there were no signs of pregnancy.

### Bulletins de la Société de Pédiatrie, Paris

*February, XIV, No. 2, pp. 33-111*

40 *Early Treatment of Scoliosis. (Scoliotique traitée depuis l'âge de six ans.) Nageotte-Wilbouchewitch.
41 Skin Lesions in Child from Bromid Poisoning. (Bromides papulo-tuberculeuses géantes.) J. Hallé and Dorlencourt.
42 Laryngospasm in Infant from Intranasal Instillation of Resorcin in Oil. G. Railliet.
43 Appendicectomy in Five-Day Infant. (Observation de péritonite aigue probablement appendiculaire chez un enfant de cinq jours.) Canaguier and Hamel.
44 Serotherapy of Diphtheric Paralysis. (Paralysie des deux droits externes d'origine diphtérique. Traitement par la sérothérapie. Guérison.) F. Terrien.
45 Bronchoscopy for Foreign Body in Trachea or Bronchus, or Both. (5 cas de corps étrangers trachéaux et bronchiques, dont deux chez le même enfant traités par la bronchoscopie.) Guisez.
46 *Desiccated Milk in Infant Feeding. (Le lait sec dans l'alimentation des nourrissons.) E. C. Aviragnet, L. Bloch-Michel and H. Dorlencourt.

40. **Early Treatment of Scoliosis.**—In the case described the little girl of 6 had right dorsal scoliosis and severe deformity of the ribs but no signs of rachitis, although the glands in the neck were enlarged and the child presented otherwise symptoms of the "exudative diathesis." Vertical suspension according to Sayre, with lateral suspension to correct the hump and gymnastic exercises to develop the chest and strengthen the muscles were systematically applied for a year, supplemented then by an orthopedic corset removed only at night and during exercising. The use of a Lorenz bar at home effectually supplemented the exercises done under the physician's eye two or three times a week. The mother and child appreciated the necessity for the exercises, so they were done systematically and now, six years later, the child is apparently normal, standing erect with no protrusion of the spine and the sides of the trunk parallel, free from kyphosis or lordosis; the development of the chest surpasses that of ordinary children of her age. The contrast is striking, however, when she bends forward, the asymmetry of the spine and ribs then showing as a large hump which subsides as the erect position is resumed. The contrast is peculiarly instructive as one thinks of the disfiguring deformity in other cases of the kind in which such persevering measures have been neglected. Wilbouchewitch adds that the child's general health has benefited remarkably from the three mornings a week taken from school to devote to gymnastic exercises. The child has also had some weeks in the country each year. Wilbouchewitch says that the exercises are to be kept up until the flexibility of the spine begins to decrease, about the age of 16 or 17, when the lateral flexion exercises can be dropped but the exercises of the muscles are to be kept up and the orthopedic corset is still to be worn. The aim then will be to have the spine set permanently in the best attitude attained. Even after this is accomplished, a corset will be still advisable.

46. **Desiccated Milk in Infant Feeding.**—During the last three years milk powder has been given a thorough trial in infant feeding in the private practice and infant consultations of Aviragnet and his coworkers, and they here report the results with sick and healthy infants. Twenty case-histories are given to illustrate the various groups of cases in which this method of feeding was adopted. In mixed feeding of normal infants the effect was as good as, if not better than with other kinds of milk, while the milk powder has several superior advantages. For dyspeptic infants it also proved equal and sometimes superior to other means of milk feeding. In cases of gastric dyspepsia with much vomiting, the milk powder permitted ample nourishment with the minimum of fluids. A certain proportion of the dyspeptic babies seemed to

thrive better on the milk powder than on any form of cow's milk. The milk powder used in the tests contains less than 4 per cent. of water, and it keeps for a month or so after the box has been opened. There are three varieties on the market, that made with full milk, that with skimmed milk and with half skimmed milk. The last variety was the one used exclusively in the experiences reported.

### Journal de Chirurgie, Paris

*February, VIII, No. 2, pp. 113-232*

47 *Operation for Femoral Hernia Through the Inguinal Canal. (Cure radicale de la hernie crurale par voie inguinale.) C. Dujarier.

47. **Inguinal Access to Femoral Hernia.**—Dujarier has operated in thirty-one cases of femoral hernia by incising the skin over the inguinal canal and thus reaching and correcting the femoral hernia from the rear. He gives an illustrated description of the technic and commends it as the best for all such cases except when the patient is much debilitated or elderly and corpulent, when it is necessary to reduce the operation to the very least possible. A direct femoral operation is better also when gangrene is feared. But under other conditions the inguinal route has a number of superior advantages. The technic for repair of the femoral opening precludes all danger of a secondary hernia at the inguinal canal. One of his patients succumbed the tenth day; necropsy was not permitted. The omentum had been strangulated for twenty-four hours when the operation was done, but the wound had healed and all seemed to be doing well. Another patient had suppuration around a deep suture. All the others recovered without mishap or sign of recurrence of the hernia since. The inguinal mode of access permits better than any other technic the ligation of the sac high up and thus solid closure of the canal, he declares.

### Journal de Médecine de Bordeaux

*March 3, XXIV, No. 9, pp. 129-144*

48 *Glioma of the Brain in a Syphilitic. (Glioma du cerveau.) E. Bitot and C. Moutalier.

48. **Glioma of the Brain.**—Bitot and Moutalier call attention to the peculiar painfulness of pressure on the eyeball, in the case reported, on the side of the lesion. Both eyeballs were tender, but this one was much more so than the eyeball on the other side. The patient was a man of 37; mercurial treatment on the basis of the positive Wassermann reaction gave no relief to the symptoms, indicating a tumor compressing the brain. As a last resort injection of salvarsan was contemplated but the patient died suddenly before it had been done.

### Journal d'Urologie Méd. et Chirurgicale, Paris

*February, XXX, No. 2*

49 Pericarditis with Chronic Nephritis. (La péricardite des brightiques.) Widal and A. Weill.

50 Large Cyst in the Adrenal. (Note sur un grand kyste de la capsule surrénale.) P. Bourcy and F. Legueu.

51 Pathology and Surgery of Horseshoe Kidney. (Considérations sur la pathologie et la chirurgie du rein en fer à cheval.) G. Botez.

52 Exstrophy of the Bladder. (Etude anatomo-pathologique de l'exstrophie complète de la vessie.) Hovelacque. Commenced in No. 1.

### Presse Médicale, Paris

*March 13, XX, No. 21, pp. 213-220*

53 *Erythema with Malignant Syndrome in Infectious Diseases. V. Hutinel.

*March 16, No. 22, pp. 221-228*

54 *Primary Sarcoma of the Stomach. (Le sarcome primitif de l'estomac.) A. Gosset.

55 Gastric Cancer of Structure Suggesting Intestinal Tissue. (Cancer intestinal de l'estomac.) A. Gosset and P. Masson.

53. **Erythema with Malignant Features in Infectious Diseases.**—Hutinel states that the pernicious erythema described as accompanying typhoid fever was noted in thirteen of thirty-six typhoid cases in children in his service during 1890, and six soon died. He has encountered this same syndrome since in other infections and with intestinal derangement, and reports a recent typhoid case in detail. The syndrome includes an erythema affecting the knees, elbows, buttocks, etc., with vomiting, green diarrhea, retraction of the abdomen, pinched nose and general expression as in peritonitis, a sudden drop of temperature with great weakness and rapid loss of flesh. The characteristic erythema may develop in the course of an eruptive disease but distinct from the latter. The entire syndrome seems to be the result of involvement of the adrenals or of toxic action on them, and recent experiences suggest that epinephrin may prove the specific remedy for it. In the case reported a boy of 12 with this malignant syndrome, superposed on typhoid fever, showed marked improvement under epinephrin while conditions became aggravated whenever the epinephrin was suspended. Hutinel gives from six to ten drops a day of the 1 per thousand solution. In one case he kept up this dosage for several weeks with benefit and without by-effects. If it does not seem to be benefiting the child, he soon drops it.

54. **Primary Sarcoma of the Stomach.**—Gosset reports the recovery of a man of 61 after removal of most of the stomach involved in a myosarcoma. He has compiled seventeen other cases not included in Zesas' list of 154 published last year. The later history is known of only eleven of the thirty-two patients treated by gastrectomy; these were known to be living from three months to over seven years later.

### Revue de Chirurgie, Paris

*March, XXXII, No. 3, pp. 369-528*

56 *Tardy Removal of Bullet in Brain. (Indications de l'extraction tardive des projectiles intra-cérébraux.) S. Banzet.

57 The Veins in the Pyloric Region. (La valeur topographique des veines de la région pylorique.) P. Mocquot and L. Houdard.

58 Fracture of the Ankle. (A propos des fractures du cou-de-pied.) Destot.

59 *Tumors in the Cerebello-Pontine Angle. (Tumeurs de l'angle pontocérébelleux. Indications opératoires et traitement chirurgical.) G. Pascalis. Commenced in No. 1.

60 Advantages of Sterilization of the Hands with Alcohol Without Previous Rinsing or Soaping. (La désinfection exclusive des mains par l'alcool sans lavage ni savonnage préalables.) E. Marquis. Commenced in No. 2.

56. **Tardy Extraction of Bullet in the Brain.**—Banzet discusses the methods of treating gunshot wounds of the head, agreeing with Guinard that "the bullet is nothing; the route it has traveled is everything." The management of the case immediately after the accident is quite different from what is indicated when the operation is done months later; he reviews the literature on this latter subject. The most common mental symptom—when such exists—of a bullet within the skull seems to be loss of memory or modification of the character, inability to concentrate the attention—the brain has been impoverished by the traumatism, as Esquirol puts it, even when the patient seems to be tolerating it without harm. In a personal case described a girl of 17 fired a bullet into her right temple and left hemiplegia followed but subsided entirely in six weeks. After healing of the wound which had suppurated she had no further symptoms except occasional headaches in the left side. Four months after the accident the bullet was located by radioscopy, applied by an ingenious device described in detail, and was extracted from the left side, being found at a depth of over 3 cm. in the upper part of the temporal lobe. Recovery was prompt and complete except that the patient developed pure verbal deafness, that is, not accompanied by any other form of aphasia. The verbal deafness gradually subsided and the girl at present, nearly nine months later, shows no trace of disturbance from her injury or the operation.

59. **Tumor of the Cerebellopontine Angle.**—Pascalis' article is based on the material at the Salpêtrière and Necker hospitals at Paris and the cases on record, a total of 101 radical operations and twelve palliative. The data confirm the ease of enucleation of the tumor in most of the cases and the fatal prognosis when left undisturbed. The diagnosis is generally possible from the syndrome of pressure on the brain and the symptoms from compression of the nerves at the base of the brain. Removal of the tumor is imperative unless the patient is too much debilitated or there is more than one tumor or visceral metastasis suspected. When the growth can be definitely located only one of the fossæ need be opened, but under other conditions Cushing's decompressive technic is

preferable. The condition of the blood-pressure decides whether to operate at one or two sittings. Pascalis advocates making a square flap, sacrificing the bone but respecting the sinuses and doing as little harm to the cerebellum as possible, aspirating away the blood automatically to keep the field clear. The preliminary preparation of the patient and the postoperative care are extremely important for the outcome. The pressure can be relieved by a simple vertical incision over the fossa, not opening the dura. In one of the unpublished cases Pascalis obviated all trouble from hemorrhage by conducting the blood away automatically by continuous aspiration from a water jet, through a tube over nine feet long. The tumor was a sarcoma and was readily shelled out, restoring the patient, a man of 40, to health. Just as the tumor was being drawn out the tube on the faucet worked partly loose and water squirted, hitting the ceiling and falling back in spray directly on the field of operation which the surgeon strove to protect with his hands during the moment until the faucet was turned off. Notwithstanding this mishap, the wound soon healed, except for a little oozing which kept up for three weeks, during which time lumbar puncture showed the cerebrospinal fluid a little turbid and containing tetragenus microbes, evidently from contamination of the subarachnoid space with the unsterilized hydrant water. The automatic aspiration away of the blood was of the greatest assistance, keeping the field open and unobscured. In two other unpublished cases a palliative operation had been done to relieve compression; necropsy disclosed a fibrosarcoma in each case. In one it was as large as a hen's egg, but the patient had been entirely freed from pain and the wound had healed well, when he succumbed to postoperative aspiration pneumonia. In the other case the right lateral sinus was accidentally cut into during the decompressive operation according to Cushing, and the patient died on the table from the resulting hemorrhage.

### Semaine Médicale, Paris

*March 13, XXXII, No. 11, pp. 121-132*

61 *Cirrhosis of the Liver in the Young with Degeneration of Corpus Striatum. (L'hépatite familiale juvénile à évolution rapide avec dégénérescence du corps strié; dégénération lenticulaire progressive de Wilson.) J. Lhermitte.

*March 20, No. 12, pp. 133-144*

62 Treatment of Eclampsia by Decompressive Trephining. (A propos du traitement de l'éclampsie puerpérale par la trepanation: essai d'une nouvelle théorie nerveuse de cette affection.) R. De Bovis.

63 *Method for Reducing Dislocation of the Shoulder. (Un nouveau procédé de réduction des luxations de l'épaule.) Angelvin.

61. **Cirrhosis of the Liver with Degeneration of Corpus Striatum.**—A case is reported and compared with Wilson's classical description of the syndrome from progressive degeneration of the lenticula of the corpus striatum associated with cirrhosis of the liver. The findings indicate that this familial form of cirrhosis of the liver in children with degeneration of the corpus striatum is a complex syndrome, other viscera being liable to be more or less involved, demonstrating the pathologic relations between the glands with an internal or external secretion—the liver in this case—and the central nervous system. The literature on the subject further is reviewed. The syndrome in question is inevitably fatal; the patients survived at most only about four years in the few cases on record. In the present case the first symptoms had been noticed two years and a half before the death of the boy at the age of nearly 13. The case was remarkable for an unexpected improvement in the symptoms which occurred after a few months, but this improvement lasted only for four months and the motor incoordination and spastic contractures, mental weakness and epileptiform crises then resumed their progressive course. Nothing was observed during life to indicate derangement of any viscera, but necropsy disclosed nodules of cellular hyperplasia in the liver with stenosis and necrosis and microscopic cirrhosis in some of the other viscera.

63. **Dislocation of the Shoulder.**—Angelvin strives to retrace, step by step, the dislocation process, and gives an illustration of his method. The operator draws the patient's arm around his neck and holds it with his off hand while with the other hand he manipulates the head of the humerus, exerting leverage on the patient's arm by the back of his own neck. The operator is thus able to apply extension, counter extension or reduction. In one case the head of the humerus could be felt in the subcoracoid cavity, but it was reduced by this method at once without assistance and the patient could use his arm normally in a few minutes. The trauma causing the dislocation generally pushes the head of the humerus forward, downward, inward and upward in turn, and the leverage reduction simply retraces these steps in turn: first the arm is raised and the head of the humerus thus depressed, then it is pushed outward, then upward and then backward. The principle of the method can be applied in correction of dislocation of the elbow, fracture of the clavicle, etc.

### Berliner klinische Wochenschrift

*March 11, XLIX, No. 11, pp. 485-532*

64 Bacillary Dysentery. (Zur Kenntnis der Bacillenruhr.) H. Lüdke.

65 *Diagnosis and Treatment of Morbid Secretion in the Stomach. (Zur Diagnose und zur Therapie der Sekretionsstörungen des Magens.) R. Ehrmann.

66 Mouse Cancer. (Natur der Mäusegeschwülste.) H. Apolant.

67 Vital Staining and Chemotherapy. (Vitalfärbung und Chemotherapie.) W. Schulemann.

68 *Leukocyte Inclusions in Scarlet Fever. (Diagnostische Bewertung von Leukocyteneinschlüssen bei Scharlach.) M. Kretschmer.

69 Sugar Metabolism in Pregnancy. (Zum Zuckerstoffwechsel in der Schwangerschaft.) H. Schirokauer.

70 The Oxyuris in Pathology of the Appendix. (Zur Frage der Bedeutung der Oxyuren bei der Wurmfortsatzentzündung der Kinder.) Rheindorf. Commenced in No. 10.

71 Mortality During Great Heat of 1911. (Die Gesamtsterblichkeit und die Säuglingssterblichkeit während des Hitzevierteljahres 1911 im preussischen Staat und speziell im Stadtkreis Berlin.) R. Behla.

65. **Abnormal Secretory Conditions in the Stomach.**—Ehrmann says that patients soon cease to dread the introduction of the stomach tube when the importance of its findings is explained to them. When the tube slips in quickly they do not find it a very disagreeable procedure and may be induced to consent to its repeated introduction—this is particularly instructive as the findings may vary from time to time. The progress of the digestion, the degree of chymification when the stomach contents are siphoned out after a test-meal, is the index for the conditions in regard to secretion in the stomach. The essential point in treatment of secretory disturbances, both of nervous origin as well as from irritation of the stomach glands, is to spare the stomach all possible irritation, either mechanical or chemical. By his repeated application of the test-meal in numerous cases through years he has learned that the motor functioning has a marked influence on secretion and should be regarded more in the diet. Soup and milk, fluids in general which are usually regarded as extra digestible, are liable to stretch and drag down the stomach walls and hence should be reduced to the minimum. The food should be soft and warm and in case of hypersecretion should contain little salt, but should be mainly made up of albumin and fat. With atony of the stomach only three small cups of tea should be allowed during the day; meat should be steamed or roasted and served with abundance of unsalted butter. Raw eggs are useful as they take up the acid, but soft boiled eggs are more difficult to digest—notwithstanding their reputation to the contrary. In case of heart-burn he has his patients drink one or two raw eggs, as preferable to the usual sodium bicarbonate. With hypersecretion soft, salt-poor cheese is useful. He tries to keep the amount of starch dishes as low as possible, as they stimulate secretion and lack the ability to take up the free acid. He gives a sedative to reduce the irritation of the vagus, generally a combination of belladonna 0.5 gm. with pulverized and tincture of valerian *aa* 2 gm., made into 30 pills, one to be taken after a meal three times a day. He has found these measures useful for gastric ulcer. With deficient gastric secretion, starch dishes are useful as also vegetables, retaining the water in which they are boiled, all vegetables mashed soft. Meat should be chopped fine and freed from stringy fibers. Sauces, salt and spices are useful to stimulate secretion, as also lemon juice and strong bouillon, 3 or 5 tablespoonfuls before eating (more fluid would dilute the hydrochloric acid still more). A glass of wine or liqueur will aid in promoting secretion. The teeth should be in good order, and it should not be forgotten that chronic liquor drinking leads

to achylia. He adds that this diet to spare the stomach should gradually lead into a diet to exercise the stomach functioning (*Uebungstherapie*). The gastro-intestinal tract, more almost than any other organ, adapts itself to the tasks imposed on it. He cites the rapid retrogression of extreme dilatation of the stomach after stenosis of the pylorus has been corrected, and the restoration to place of the sagging stomach as soon as the intake of fluid is stopped. These examples and others he mentions show how necessary it is to keep the digestive tract up to its work after it has been freed from irritative processes by the above measures to spare it.

68. **Leukocyte Inclusions in Scarlet Fever.**—Kretschmer has examined the leukocytes in 70 cases to investigate Döhle's findings of inclusions in the protoplasm of the leukocytes as specific for scarlet fever. His findings in thirty cases of scarlet fever confirmed those of Döhle while the findings were negative in all but four of fifty cases of other diseases and twenty normal persons. He gives illustrations of the findings with the Michaelis' azure-blue method, emphasizing the diagnostic importance of these findings.

### Deutsche medizinische Wochenschrift, Berlin

*March 14, XXXVIII, No. 11, pp. 489-536*

72 Disintegration of Albumin, Anaphylaxis and Internal Secretion. (Eiweissabbau, Anaphylaxie und innere Sekretion.) A. Schittenhelm.
73 *Mechanical Factors in Gastric Ulcer and Its Relations with Cancer. (Ueber die mechanischen Momente in der Pathogenese des runden Magengeschwürs und über seine Beziehungen zum Krebs.) L. Aschoff.
74 *Technic for Roentgenoscopy of Secretion in the Stomach. (Einfache Methode zur röntgenologischen Ermittlung der Saftsekretion im speiseleeren Magen.) K. Fujinami.
75 The Stomach-Tube in Diagnosis. (Bedeutung des Magenschlauches für die Diagnostik.) M. Henius.
76 The Albuminoid in Orthostatic Albuminuria. (Natur und Rolle des durch Essigsäure fällbaren "Eiweisskörpers" bei orthostatischen Albuminurien.) H. Pollitzer.
77 *Inherited Morbidity. (Ueber Vererbung von Krankheiten.) B. Hirschfeld and F. Pick.
78 *Inflammatory Tuberculosis. (Zur Kenntnis der entzündlichen Tuberkulose—Poncet.) O. Reunert.
79 *Headquarters for Medical Reprints. (Zu den Reformen im medizinischen Publikationswesen: Eine Sonderdruck-Zentrale.) D. Berger.

73. **Mechanical Factors in Gastric Ulcer and Cancer.**—Aschoff has been studying for years the mechanical features and localization of gastric ulcers and their relation to the spine and neighboring organs. His assistants are soon to publish the reports of his research in detail. The data show that the general assumption of an embolus or thrombus in a gastric artery as the exciting cause of chronic gastric ulcer is incorrect, although such may be incriminated possibly in acute ulceration. The lesion becomes chronic from mechanical factors, especially the stagnation of gastric juice. It locates at certain points where the stomach wall is pushed in by neighboring organs, the liver, pancreas, spine, etc.—he lists six of these physiologic points where the interior of the stomach wall protrudes enough to hold back the stomach content to a greater or less extent. Other important factors are the traumas from mechanical rubbing and pushing, and chemical and temperature irritation from hot drinks. As these factors act mostly on the empty stomach, their action is felt most on the tops of the folds in the contracted stomach wall. Examination of these folds in the normal stomach wall throws light on the localization of gastric ulcers. The data presented show further that the so-called callous gastric ulcers, which the microscope reveals as cancer, are explained by the assumption that the cancer is the primary lesion and that the ulcer merely develops in the malignant lesion. The fact that the ulcer under these circumstances has the same conical shape as ordinary ulcer is an argument against the prevailing assumptions as to the probable cause of this special shape; vascular lesions cannot be responsible for it when it develops in a cancer.

74. **Gastric Secretion in Fasting Stomach as Sign of Cancer.**—Fujinami calls attention to the case with which the amount of secretion in the stomach outside of periods of digestion can be determined by means of the sinking and floating capsules containing bismuth. When the two are swallowed together they can be seen side by side in the fasting stomach under normal conditions, but if the stomach contains a pathologic amount of secretion the distance between the floating and the heavy capsule is an index of the amount. He gives the details of fifteen cases to illustrate various groups of stomach affections. His experience seems to suggest that the presence of secretion in the absence of food is a sign that gastric juice is being secreted. On the other hand, the lack of this parasecretion with known stagnation is a sign of lacking secretion of gastric juice, and hence, in connection with the deranged motor functioning, points to malignant disease. This supplies another symptom of gastric cancer, namely, the finding that after six hours there is no parasecretion. A great advantage of the floating capsule test is that the stomach contents do not have to be aspirated.

77. **Morbid Heredity.**—Pick and Hirschfeld discuss the application of Mendel's law to human families and relate a number of instances in which the working of the law seems to be strikingly apparent. Among the families thus studied is the Habsburg family, the reigning family in Germany, the line of which can be traced back for several centuries, while numerous portraits of the various members of the family through many generations are extant.

78. **Inflammatory Tuberculosis.**—Reunert gives a summary of Poncet's views in regard to the frequency of a tuberculous origin for many joint and other affections of which the true nature has hitherto been unsuspected. He then describes a case from his own experience in which a woman of 30 developed nephritis, and the course of the case, the success of tuberculin treatment and other features demonstrated that the nephritis was a pure inflammation of tuberculous origin. This throws light on other cases of kidney disease of obscure origin, and suggests the importance of tuberculin treatment not only for nephritis but for so-called articular rheumatism in many cases. No tubercle bacilli were found in his case, and the almost total retrogression of the nephritis at present—judging from the urine findings—confirms the lack of the usual specific lesions.

79. See Berlin Letter in The Journal, April 20.

### Medizinische Klinik, Berlin

*March 17, VIII, No. 11, pp. 429-470*

80 *Relative Gastric Insufficiency. (Die relativ Insufficienz des Magens.) A. Schüle.
81 *Psychosis from Choke-Damp Poisoning. (Psychose durch Kohlenoxydvergiftung.) F. W. Quensel.
82 Salvarsan in Syphilis. (Weitere Erfahrungen über Behandlung der Syphilis mit Salvarsan.) O. Rissom.
83 Computing Machine for Blood-Count, etc. (Der "Cytax"—die erste Zähl- und Rechenmaschine im Dienste der Medizin.) Tojbin.
84 Tube-Casts in the Urine. (Cylindroide im Urin.) L. Boros.
85 Is Life Possible Without Oxygen? (Das Leben ohne Sauerstoff.) E. F. Lesser.
86 *Bibliographic References. (Ueber Zitate und Register.) E. Ruediger.

80. **Relative Insufficiency of the Stomach.**—Schüle remarks in regard to the diagnosis of relative insufficiency of the stomach that conditions often right themselves spontaneously for a time if the patients stay in bed and diet, so that it is difficult to detect in a patient who has entered a hospital or sanatorium. Outside of the institution the insufficiency may be quite pronounced. Treatment should be the same as for anacidity and motor insufficiency in general, the food all mashed or chopped, the meals small and often; no cabbage. After eating, the patient should lie down for an hour with a cold compress on the stomach on which should be laid a hot water coil of tubing. Both motor and secretory functioning are generally benefited by the Scottish douche, massage and faradization from without. The intake of fluids should be restricted. Climatic resorts by their general tonic influence are useful, and long experience has confirmed the benefit of systematic lavage of the fasting stomach. Organic stenosis belongs to the surgeon, and he should be called in before the patient begins to suffer from undernourishment.

81. **Psychosis from Carbon Monoxid Poisoning.**—In Quensel's case the poisoning occurred in a mine from choke-damp, and the man was unconscious for five days during which he incessantly tossed restlessly. This was followed by a condition suggesting paralytic dementia. The Wassermann reaction was negative. The syndrome was similar to that in previously published cases of psychoses following carbon monoxid poisoning.

86. **Bibliographic References.**—Ruediger deplores the custom of citing a reference by the name of the author and of the periodical or book alone. The title of the article should always be given, he insists, to save the disappointment of finding that the article is on some subject foreign to our research when we take the trouble to refer to the original source. Even more exasperating, he remarks, is a general title as, for instance, "Diabetes Mellitus;" "A New Treatment for Asthma," etc. Why not specify the special features or the nature of the treatment, so that those particularly interested in this feature or special treatment can have their attention called to it and others waste no time over it. Inaccuracy in references, he says, is a common and annoying habit. He found one article recently with references to ten authors and the citations were inaccurate in nine of the ten. He says that J. Wolff in writing the second volume of his work on "Cancer," *Die Lehre von der Krebskrankheit*, cited 10,000 authorities and consulted the originals in nearly all. He found mistakes in fully 10 per cent. of all these references. In indexing, Ruediger adds, names containing *ü* or *ue* should be indexed naturally between *ud* and *uf*. Such names as Müller are often indexed as if written Muller, that is, between *uk* and *um*. Another source of confusion is when plurals of nouns are written according to the Greek or Latin style instead of the current terms. He does not approve of Roman numerals for designating volumes, saying that this becomes a common source of error when the number of volumes is high, as for instance for Schmidt's yearbook, the current volume of which is now CCCXIII. He advocates, instead, black-letter Arabic numerals of a little larger type than the page number. The year, volume and page are indispensable. He urges further a combination of the libraries of the different institutes connected with a university. The slight loss in convenience of access would be far outbalanced by the advantages of a uniform card-catalog arrangement of the books and reprints in the central library.

### Münchener medizinische Wochenschrift

*March 12, LIX, No. 11, pp. 539-624*

87 *Uremia an Acidosis. (Die Urämie eine Säurevergiftung?) H. Straub and Schlayer.
88 *No Benefit from Transfusion of Blood in Pernicious Anemia; Five Cases. (Ueber unsere Misserfolge mit der Bluttransfusion bei perniziöser Anämie.) H. Bennecke.
89 *Cobra Venom Hemolytic Test in Pregnancy and Malignant Disease. (Die Kobragiftpferdebluthämolyse in der Schwangerschaft und bei Karzinom.) E. v. Graff and J. v. Zubrzycki.
90 Improved Technic for Operative Treatment of Large Hernias. (Ueber Radikaloperation grosser Hernien, speziell der Bauchbrüche mittels Verlötung.) F. König.
91 Operative Treatment for Lime Injury of the Eyes. (Eine chirurgische Behandlung für Kalkverletzungen des Auges.) R. Denig (New York).
92 Negative Results from Milne's Eucalyptus Oil Treatment in Scarlet Fever. (Ueber die Eukalyptusbehandlung des Scharlachs.) E. Koerber.
93 Quinin as an Oxytocic. (Erfahrungen mit Chinin in der Geburtshilfe.) T. Müller.
94 Technic for Rontgen Exposures of Deep-Lying Tissues. (Technik der Röntgenbestrahlung tiefliegender Gewebe.) F. Janus.
5 *Gastric Ulcer from Surgical Standpoint. (Ueber Magengeschwür, vom chirurgischen Standpunkte.) H. Lindner.
6 Dry Powder Treatment of Vaginal Disease. (Die vaginale Pulverbehandlung.) M. Nassauer. Commenced in No. 10.

87. **Uremia an Acid Intoxication.**—Straub and Schlayer say at Haldane's method of determining the carbon dioxid ten- on of the air in the alveoles is proving a reliable means for timating the conditions in regard to the presence of acids. If e carbon dioxid tension falls below normal—which is a com- ratively constant figure—then acidosis exists, and the extent the fall is an index of the intensity of the acidosis. Repeated plication of this test in eight cases of uremia has confirmed e assumption of a direct connection between uremia and acid toxication.

88. **Negative Results from Transfusion of Blood in Pernic- us Anemia.**—Bennecke remarks that at the Jena clinic there re never more than one or two cases of pernicious anemia a ar for a long period, until last year, when twelve or thirteen ses were encountered. Five patients were treated with ravenous infusion of defibrinated blood, but no benefit was parent in any instance, and death seemed to have been stened by it in one case at least

89. **Cobra Venom Serodiagnosis of Cancer.**—This article reports the continuation of research on the activation of cobra venom by human serum and its application as a test for cancer. (Some previous work in this line was mentioned in THE JOURNAL, Dec. 18, 1909, p. 2132.) In the forty-three cancer cases a positive reaction was obtained in 81.2 per cent. while with serum from other patients or healthy individuals, the reaction was positive only in 10 per cent. At the same time, the positive findings cannot be utilized in the diagnosis of cancer as the reaction occurred in an intense form even in women who had had their cancers removed years before and were free from all signs of recurrence.

95. **Gastric Ulcer from Surgical Standpoint.**—Lindner summarizes his conclusions from years of experience in this line in the statement that it is better to resect the stomach once too often on suspicion of gastric cancer than to let an operable cancer escape removal. On suspicion of cancer the operation should be thorough and radical, but under other conditions gastro-enterostomy is sufficient, provided the opening is kept open. In future he intends to supplement the gastro-enterostomy by exclusion of the pylorus as a routine measure, thus practically ensuring the permanent permeability of the gastro-enterostomy. One can safely count on curing 60 or 70 per cent. of the patients and materially improving 12 or 15 per cent.

### Therapeutische Monatshefte, Berlin

*March, XXVI, No. 3, pp. 157-236*

97 Nature of Action of Digitalis. (Wesen der Digitaliswirkung.) W. Heubner.
98 *Calcium Salts in Treatment of Asthma. (Behandlung des Asthma bronchiale und verwandter Zustände mit Kalziumsalzen.) C. Kayser.
99 Pantopon Poisoning. (Ueber sogen. Pantoponvergiftungen nebst Bemerkungen über tabische Atemkrisen und über die Wirkung eines morphinfreien Pantopons.) H. Winternitz.
100 Gymnastics of the Diaphragm. (Zur Uebung des Zwerchfells.) J. Oldevig.
101 *Trade Names for Drugs. (Einiges über Wortzeichenschutz für Arzneimittel.) Rathenau.
102 *The Evils in the Drug Trade. (Allerlei Heilmittel-Unheil.) W. Heubner.
103 Importance of Prescribing by the Official Name of Drugs. (Der freihändige Verkauf von Medikamenten und die Heilwirkung des Rezeptes.) K. Beerwald.

98. **Calcium Salts in Treatment of Asthma and Allied Conditions.**—Kayser refers to the literature on calcium salts as sedatives for the nervous system, and describes thirteen cases of asthma and allied conditions in which he found calcium chlorid effectual in prophylaxis. He ordered it in the form of 20 gm. calcium chlorid ($CaCl_2$); 40 gm. simple syrup, and distilled water to 400 gm. The patient took a tablespoonful of this in milk every two hours for eight days. No untoward by-effects were observed in any instance, and the patients all said that after a day or so they could breathe and expectorate easier and their sleep was no longer disturbed. After the third day there were no further attacks in all but two cases, and the relief has been permanent to date in some. In one case there was a complicating heart defect but this did not interfere with the success of the treatment. In one of the two refractory cases, the negligence of the patient may have been responsible for the lack of effect from the medication.

101. **Proprietary Names for Drugs.**—Rathenau is a lawyer and his views on the selection of proprietary names for drugs closely resemble what the Council on Pharmacy and Chemistry has recently announced in regard to objectionable proprietary names (THE JOURNAL, March 30, 1912, p. 953), basing his arguments on the same grounds of the public welfare and legal equity. The German authorities (*Reichsgericht*) have recognized in recent years the possibility of the proprietary name of a drug developing in time to be the free trade name for the article, and Rathenau suggests that when this has become the case the proprietors of the drug should be given a period, two or three years, to adapt themselves to this new condition and adopt a new fancy name for their article or retain the old name with some addendum, the maker's name, for instance, hyphenated with the name of the drug. Among the reasons cited for the trade name's indicating the most potent ingredients is the danger that a physician might happen to prescribe a mixture of several drugs all containing arsenic but

with nothing in the name to suggest this ingredient; as an example of this possibility he mentions atoxyl, soamin, orsudan and hectine, each of which is a modern preparation of arsenic, and their combination would be liable to result in a fatal dose of arsenic.

102. **Proprietaries.**—Heubner recalls that suffering humanity has no other interest in drugs than to be relieved of its ills as rapidly, as certainly and as inexpensively as possible. The manufacturers of pharmaceuticals have no other interest than to make money. This obvious proposition is sometimes doubted, he adds, at least in respect to the larger houses. The talents and scientific or technical achievements of certain persons connected with the firm are generally regarded as guaranteeing that the character of these persons must have a controlling influence throughout the whole concern. The fact is overlooked, however, that enterprises in which large capital is involved are and must be conducted on a business basis and from a business standpoint alone. A reputation for scientific accuracy and good relations with the press and similar important factors are all assets for the business success of a firm. Heubner discusses various abuses in the proprietary trade, and says that physicians must exert their influence against objectionable names of proprietaries and against the protection by a trade name of already known drugs. They must further exert their influence to have the reports on drugs in the medical press written more in the interests of the readers and less in the interests of the manufacturers. He urges physicians to insist on one single name for each drug, and not to permit already known drugs to be given a new proprietary name. He quotes and lauds The Journal for its campaign against misleading advertisements in medical journals, citing in full the last half of the editorial in The Journal Dec. 23, 1911, p. 2807, on "Proprietaries—Fraudulent and Otherwise." Heubner adds that he does not see much prospect of effectual control of advertising of proprietaries until some central trial station is established by the authorities to pass on the various pharmaceuticals. He mentions a number of recent instances in which reprints from certain German medical journals have been distributed for advertising purposes to the lay public. A lay press trade journal in Germany is quoted as urging the lay press to revenge itself on physicians for their hostility to advertising by publishing, more than hitherto, instances of blunders on the part of physicians and of recoveries from sickness without the aid of physicians.

### Wiener klinische Wochenschrift, Vienna

*March 14, XXV, No. 11, pp. 404-438*

104 *Attenuated Criminal Responsibility. (Ueber krankhafte Triebhandlungen.) Wagner von Jauregg.
105 *Slow Pulse with Rupture of the Liver. (Bradykardie bei Leberrupturen.) H. Finsterer.
106 Indicanuria and Eye Disease. (Ueber Indikanurie und Augenkrankheiten.) S. Bernheimer.
107 Roentgenotherapy of Duodenal Ulcer. (Röntgenbeobachtungen beim Ulcus duodeni.) S. Kreuzfuchs.
108 *Bilateral Facial and Auditory Paralysis After Salvarsan. (Beiderseitige Fazialis-Akustikus—Kochlearis- und Vestibularis—lähmung nach Salvarsan.) R. Goldmann.

104. **Attenuated Criminal Responsibility.**—The fact that frequently several morbid impulses coincide in the same individual is emphasized by von Wagner as necessary to be borne in mind in estimating criminal action from perverse impulses. Another factor is the possibility of the morbid impulse being rendered uncontrollable by certain physical conditions such as the changes at puberty and during menstruation or pregnancy. Research into the dream life of the individual is also important in the study of morbid impulses. They are the product of a disordered mental functioning and almost invariably other manifestations of the same can be discovered in the workings of the brain and the nervous functioning. From the penal standpoint, the question is the irresistible nature of the morbid impulse. Evidence as to a morbid impulse does not attenuate the individual's responsibility, as many persons have morbid impulses which yet they have strength enough to control. The question is to determine in each individual case whether at the moment of the crime the consciousness was pathologically disturbed to a degree which rendered the individual unable to control the morbid impulse.

105. **Bradycardia with Rupture of the Liver.**—Finsterer states that a woman of 46 had a pulse of 76 forty-five minutes after an abdominal contusion and it gradually dropped to 54 but kept all the time full and strong. The pain gradually spread over the entire abdomen and the lower segment of the rectus muscles became rigid, with other signs of internal hemorrhage. The pulse gradually rose to 80 and the abdomen was opened four hours after the accident. A tear was found extending through the entire liver. Recovery was prompt and without mishap. Finsterer encountered in another case this remarkable slowing of the pulse with hemorrhage of the liver, and his experiments on animals confirmed its diagnostic value although it is a comparatively transient phenomenon. The experiences to date suggest that rupture of the liver with bradycardia has a better prognosis than with a rapid pulse from the start; this latter indicates profuse hemorrhage and requires immediate intervention.

108. **Bilateral Facial and Auditory Paralysis After Salvarsan.**—Goldmann says that the systematic affection of both the facial and vestibular nerves in the case reported occurred too late to be regarded as a Herxheimer reaction. The symptoms did not develop until eight weeks after two intramuscular injections of salvarsan six months after syphilis had been acquired. The patient was an otherwise healthy man of 30; the symptoms indicate total exclusion of the vestibular and cochlear nerves on one side and nearly total on the other. The deafness is complete on one side and there is merely a trace of hearing on the other. The facial paralysis has partly subsided but the other symptoms still persist unmodified. The patient says that his hearing and ears had always been normal before. Goldmann is convinced that the trouble is an arsenic neuritis.

### Zentralblatt für Chirurgie, Leipsic

*March 9, XXXIX, No. 10, pp. 313-344*

109 *Catarrh of the Mamma and Bleeding Mamma Premonitory of Cancer. (Zur Pathologie und prognostischen Bewertung des "serösen Katarrhs" der Brustdrüse und der "blutender Mamma.") W. Mintz.
110 *Experimental Exophthalmic Goiter. (Zur experimenteller Erzeugung des Morbus Basedowii.) M. Baruch.
111 Umbilical Hernia. (Beziehung zwischen der Entwicklung de Nabelgegend und der Disposition zu Nabelbrüchen.) R Wenglowski.

*March 16, No. 11, pp. 345-384*

112 Operative Treatment of Flat-Foot. (Bildung eines Lig. tibio naviculare durch freie Fascientransplantation bei Plattfuss. Momburg.
113 *Iodin Treatment of Surgical Tuberculosis. (Verwendung de Jodtinktur bei der Behandlung der chirurgischen Tuberku lose.) W. Wolf.

109. **Catarrh of and Hemorrhage from Mammary Gland.**–The Journal mentioned March 18, 1911, Mintz' eight cases c serous exudation from the breast, and he here reports seve cases of the hemorrhagic type, with microscopic examination i five after removal of the bleeding gland. He found proliferativ processes suggesting polypous growths, adenoma, cystadenom scirrhus or actual carcinoma in the various cases, imposing tl necessity for radical treatment in all such cases.

110. **Experimental Exophthalmic Goiter.**—Baruch has bee injecting ground human goiter material into the peritone cavity in dogs, rabbits and rats; this induced a syndrome many instances closely resembling exophthalmic goiter in ma His experiments were more successful with the ground materi than with the extract of the goitrous thyroid. In none of tl cases was the goiter material obtained from persons with tl exophthalmic type.

113. **Iodin Treatment of Surgical Tuberculosis.**—Wolf repor two cases in which the benefit from local application of tin ture of iodin was strikingly apparent. The first patient was young soldier with a tuberculous lesion on the right should After evacuating the abscess and curetting the focus, W swabbed it freely throughout with 10 per cent. tincture iodin and sutured the wound except for an iodoform gau wick. In the second case the trouble was an extensive tub culous lymphadenitis. The granulations were curetted aw and all the surfaces, nooks and crevices of the large wou were swabbed freely with the iodin. In the two cases t wounds healed entirely in seventeen and twenty-four da

and the patients resumed their military duties the fourth and fifth week without a trace of recurrence of trouble to date.

### Zentralblatt für Gynäkologie, Leipsic

*March 9, XXXVI, No. 10, pp. 289-320*

114 *Extragenital Septic Puerperal Infection. (Zur Kenntnis der septischen extragenitalen Infektionen im Wochenbett.) L. Nürnberger.

*March 16, No. 11, pp. 321-352*

115 *Complications from Ventrofixation of the Uterus. (Komplikationen nach ventraler Fixation des Uterus.) E. Geiser.
116 Attempted Abortion in Absence of Pregnancy. (Tentamen abortus provocandi deficiente graviditate uterina.) O. Klauber.
117 *Temporary Cap for Stump in Removing Cancerous Uterus. (Vorschlag zur Verhütung von Impfmetastasen im Paravaginalschnitt.) K. Czerwenka.
118 Pelvis Deformed from Infantile Spine. (Zur Kenntnis des Beckens mit mangelhafter Entwicklung der Wirbelsäule in der Längsrichtung—dyspygisches Becken.) A. Solowij.
119 Hypophysis Extract as Oxytocic. (Wehenerregung und Wehenverstärkung durch Pituitrin.) T. Nagy. (Pituitrin als Mittel zur Unterbrechung der Schwangerschaft bei Uebertragung der Frucht.) G. Hager.

114. **Extragenital Puerperal Septic Infection.**—In Nürnberger's case a woman of 40 who had borne several children and who had not been locally examined, developed fatal sepsis, the first symptoms observed the fourth day, with death the eighteenth day after spontaneous delivery. Necropsy revealed that the septic affection was a primary phlebitis of the internal saphenous vein with septic general infection but no connection with the genital organs. The trouble was evidently the result of accidental infection of some varicose enlargement of the vein. There had been no suspicion before the necropsy that the sepsis was anything but an ordinary puerperal fever. He summarizes from the literature a series of four similar cases and of three others in which appendicitis was the primary affection and four in which tuberculosis or typhoid was responsible for the sepsis. Freund has also reported a case in which an old osteomyelitic focus was responsible. The number of cases is much larger in which the extragenital accidental infection terminated in recovery, Döderlein having reported twenty-five cases of this character, the lochia being found sterile, as also in sixteen other cases of febrile puerperium. Thus 46 per cent. of his eighty-nine febrile parturients in 1.000 maternity cases traced their fever to some extragenital cause. These figures seem to show that thanks to the general use of rubber gloves we are entering on a new era of the pathology of the puerperium.

115. **Complications After Ventrofixation of the Uterus.**—Geiser reports a case of fibrosarcoma developing in the abdominal wall near where ventrofixation of the uterus had been done seven months before. In a second case fatal postoperative ileus developed; necropsy revealed incarceration of a loop of intestine by fibrous bands connecting the uterus with the abdominal wall. In a case of the kind published by Guggisberg an early operation saved the patient. The possibility of leus from this cause should be suggested when symptoms suggesting ileus or perforation peritonitis develop in a woman who has had ventrofixation done.

117. **Cap for Stump of Uterus.**—Czerwenka recommended ome time ago a rubber cap to enclose the stump of the uterus luring or after an operation for malignant disease. He now onfirms his previous statements but adds that the cap an-wers its purpose as a shield much better if an elastic cord run through its lower edges.

### Zentralblatt für innere Medizin, Leipsic

*March 9, XXXIII, No. 10, pp. 221-244*

20 Coagulation Time and Leukocytosis. (Blutgerinnungszeit und Leukocytose.) W. Schultz.
21 *Camphor-Phenol Mixture in Rheumatism. (Eine neue Behandlungsmethode von schweren rheumatischen Erkrankungen.) v. Chlumsky.

121. **Camphor-Phenol Method of Treating Rheumatism.**—hlumsky states that he has never had such good results in reatment of rheumatic affections as since he has been apply-ng externally a mixture of 2 parts ground camphor and 1 art phenol, adding 5 per cent. alcohol to the mixture. The sult is an oily fluid, sparingly soluble in water, and free om caustic action. Only very delicate skins feel a slight marting. He pours the mixture directly into old wounds, suppurating fistulas, etc., without the patients' complaining that it hurts them. It seems to be especially a poison for streptococci. He has used it to great advantage, he says, in hundreds of cases of erysipelas during the last few years. It causes a blue discoloration of the skin in some cases on external application, which he ascribes to liberation of the phenol. In a very severe case of articular rheumatism developing after a catarrhal affection of the nasopharynx, and rebellious to the salicylates and other measures, the pains keeping up for weeks and so intense that morphin was required, he applied the camphor-phenol mixture to the joints and in twenty-four hours the pains had materially subsided and with them the swelling; the temperature returned to normal the following day and the patient was quite cured by the end of the third week and has had no recurrence during the eight years to date. In two similar cases reported in detail the effect was equally good as also in a number of others; the effect was less marked in the chronic cases. Chlumsky's first communication on the subject was published twelve years ago, and he says that his further experience has only confirmed its value. The mixture may prove useful in scarlet fever and other diseases in which streptococci are concerned. For a mild external process he paints it lightly with the mixture and then applies a layer of cotton. With severely infected wounds and erysipelas, he dips the cotton in the mixture and applies it directly to the infected skin or wound with a layer of cotton above but no oil silk. In only a few cases, and then only when it was covered air-tight so that evaporation was impossible, did he observe a slight tendency to blister. In all other cases the only change was the scaling off of the diseased skin.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*March 5, XXXII; No. 28, pp. 289-296*

122 Trypanosoma Disease in Dogs. (La Leishmaniosi spontanea del cane a Catania.) V. Panto.

*March 7, No. 29, pp. 297-304*

123 Research on Experimental Nephritis and Glycosuria. (Sul rapporto tra i perturbamenti renali da uranio la glucosuria fluorizinica.) G. Gargiulo.

*March 10, No. 30, pp. 305-320*

124 Retroperitoneal Tumors in Small Pelvis. (Contributo alla conoscenza, diagnosi, cura dei tumori solidi retroperitoneali della piccola pelvi.) A. Poggiolini.

*March 12, No. 31, pp. 321-328*

125 *Hexamethylenamin in Typhoid. (L'urotropina nella terapia dell'ileotifo.) G. Malan.

*March 14, No. 32, pp. 329-336*

126 Anaphylaxis from Food. (Dell'anafilassi alimentare.) T. Silvestri.

*March 17, No. 33, pp. 337-352*

127 Serous Meningitis and Blunders in Its Diagnosis. (La diagnosi errata di tumore intracranico e la meningite sierosa.) A. Ceconi.
128 Syndrome Suggesting Syringomyelia from Arteriosclerosis. (Sindrome siringomieliche da arterosclerosi neuro-midollare.) E. Paganelli.

125. **Hexamethylenamin in Typhoid.**—Malan gave daily 1.5 gm. of hexamethylenamin, fractioned, to twenty-one typhoid patients during a recent epidemic of thirty-two cases. Two died of the treated and five of the untreated patients, but the outcome seemed to depend somewhat on the month of the epidemic, all the patients recovering during the latter month regardless as to whether they had been given the drug or not, and all the deaths occurring in a certain month. He calls attention to the necessity for discriminating in estimating the effect of a given drug whether it is given at the beginning, height or decline of an epidemic, and also for bearing in mind the genus epidemicus.

### Policlinico, Rome

*March 3, XIX, No. 10, pp. 337-372*

129 Modern Firearms from Surgical Point of View. (Le moderne armi da fuoco portatili da guerra sotto l'aspetto chirurgico.) P. Imbriaco. Commenced in No. 9.
130 Intravenous Injections of Mercuric Chlorid in Anthrax, etc. (Iniezioni di bicloruro di mercurio alla Baccelli nelle infezioni in genere e in quella carbonchiosa in specie.) C. D'Annunzio.

*March 10, No. 11, pp. 373-408*

131 *Sterilization of the Mouth. (Sulla disinfezione della bocca.) N. Pane and G. D'Agata.
132 *Severe Anemia in Pregnancy. (Anemia perniciosa da gravidanza.) T. Pontano.

131. **Sterilization of the Mouth.**—Pane and D'Agata state that three years of further research have confirmed their previous statements in regard to the sterilizing action on the mouth of a 1 per cent. hot solution of sodium oleate. They describe research with the microbian flora of the mouth, the results showing how it is modified by this disinfectant which yet is free from irritating processes. To remove the taste of the soapy water they rinse the mouth out afterward with some ordinary disinfectant, such as a 5 per cent. solution of potassium chlorate. They think that the stimulating effect of the latter hastens the cure.

132. **Extreme Anemia in Pregnancy.**—Pontano states that in the case reported the hemoglobin dropped to 25 per cent. and the reds to 870,000 with 7,000 whites, at the eighth month, but the blood picture returned to normal after the birth of the child soon after. In a second pregnancy the same pernicious condition recurred, hemoglobin 20 per cent., reds 735,000, whites 14,000, of which 5 per cent. were normoblasts and megaloblasts. After spontaneous abortion the blood picture rapidly improved anew. This patient had had malaria but was apparently free from it at this time. In a recent case of Botaffio's a woman who had had this pernicious anemia during one pregnancy had no return of it in a second pregnancy. Notwithstanding this, Pontano thinks it is wise to interrupt the pregnancy when the blood shows such serious changes early. However, he adds, no general rule can be formulated.

### Riforma Medica, Naples

*March 2, XXVIII, No. 9, pp. 225-252*

133 Anaphylaxis with Serum from Cold-Blooded Animals. (Ricerche sull'anafilassi con siero di animali a sangne freddo.) C. Ninni.

### Brazil-Medico, Rio de Janeiro

*February 22, XXVI, No. 8, pp. 71-80*

134 *The Apparent Cure of Gonorrhea. (A blennorrhagia e a sua cura apparente.) A. Pereira.

135 *Chronic Nephritis. C. Fraga.

*March 1, No. 9, pp. 81-90*

136 Congenital Stenosis of the Lung. (Caso de estenose pulmonar congenita.) J. M. Gesteira.

137 Syphilitic Kidney Disease. (Syphilis do rim.) A. Leitão.

134. **Apparently Cured Gonorrhea.**—Pereira says that he could cite hundreds of cases of patients apparently entirely cured of gonorrhea who had a return of symptoms after years of silence, and he describes a few typical experiences of the kind. The disappearance of threads from the urine cannot be regarded as a reliable sign of complete recovery. Instillation of silver nitrate does not affect all persons alike and cannot be relied on to show up lurking gonococci. Negative findings on bacteriologic examination of the urine cannot be relied on; the urethroscope is more useful; careful examination of each half inch of the urethral walls may reveal old lesions with a persisting trace of inflammation. Any change in the shape of the membranous orifice in the bulbar region signifies infiltration, and any signs of a reaction in the mucosa indicate trouble below. The most reliable sign of persisting trouble is the slight morning secretion even when it seems to be constantly sterile.

135. **Chronic Nephritis.**—Fraga concludes this brief general review by advocating with simple albuminous nephritis a mixed diet, with abstention from toxigenic foods, from liquor of all kinds and from albuminous articles, discarding the whites of eggs to refrain from overloading the kidneys with alien albumin. In nephritis with a tendency to dropsy, he advises restriction of salt, according to the individual indications, with cautious purging and restriction to 1,000 gm. fluid a day. A strict milk diet in this form is not necessary unless the kidney is impermeable; it may even do harm by increasing the edema from the overdose of fluids, fatiguing the heart by the obstacle in the peripheral and visceral circulation and increasing the albuminuria by the alien albumin it contains. On the other hand, a milk diet is extremely useful in nephritis showing a tendency to uremia. In the chronic cases he keeps his patients on a milk-vegetable diet with milk alone five days in each month, after a purge. If uremia is impending, nothing but milk should be allowed or in severe cases nothing but water for two or three days, and then the strict milk diet. Trinitrin for ten days, then potassium iodid for twenty each month give good results. On menace of uremia, a powerful purgative should be given and then the water and later the milk diet.

### Semana Medica, Buenos Aires

*February 15, XIX, No. 7, pp. 293-344*

138 Analysis of the Phenol Componnds. (Contribucion a la sistematica analytica de los compuestos ciclicos de funcion fenolica.) J. A. Sanchez.

139 *Serotherapy of Nephritis. (Seroterapia de la nefritis.) M. T. M. Bisso.

139. **Serotherapy in Nephritis.**—Bisso has been applying the serum of blood drawn from the renal vein of the goat and here relates her experiences in this line after reviewing the history of the subject and the previous trials in clinics in various countries. [One of the later articles on the subject was abstracted in The Journal Dec. 18, 1909, p. 2137.] Bisso reports four cases in which this serotherapy was systematically applied. The results encourage its further use in acute exacerbations of chronic nephritis, in all infectious diseases with threatening uremia, in cases of excessive arterial tension supposedly of renal origin, and whenever uremia is installed, regardless of its origin. She administered without by-effects from 10 to 110 c.c. as the daily dose but for fear of accidents from serum sickness never gave over 20, 30 or 40 c.c. at a time. In her first case the interstitial nephritis was in the terminal stage but under the serotherapy 1,500 c.c. of urine was voided and 3 per thousand chlorids, the headache and dyspnea subsided and the blood pressure dropped—effects which months of other treatment and dieting had not been able to obtain. The patient was a woman of 38. In two other cases the specific action of the serotherapy was manifest but the organism was so saturated with nephrolysins that no permanent benefit resulted. In the fourth case the patient was in uremic coma from transient deficiency of the kidneys, and venesection and other measures supplemented by the serotherapy safely tided him past the danger stage and he has been in good health since.

### Hospitalstidende, Copenhagen

*February 14, LV, No. 7, pp. 173-204*

140 Retrograde Incarceration in General; Report of Case. H. v. Thun.

*February 21, No. 8, pp. 205-236*

141 *Carbohydrate Days in Dietetic Treatment of Diabetes. (Om Virkningen af "Kulhydratdage" i Diabetesbehandlingen.) O. V. C. E. Petersen.

*February 28, No. 9, pp. 237-260*

142 Comparative Weight at Beginning and End of Scarlet Fever. (Om vore Skarlagensfeberpatienters Vægtforhold.) S. T. Sørensen and A. Levin.

*March 6, No. 10, pp. 261-292*

143 Two Cases of Otogenic Pyemia with Recovery. (Om otogen Pyæmi.) V. Them.

*March 13, No. 11, pp. 293-324*

144 Complement Fixation in Diagnosis of Echinococcus Disease in Man. (Paavisning af Ekinokok hos Mennesker ved Undersøgelse af den syges Blod—Komplementbindingsreaktion.) O. Thomsen and G. Magnusson.

141. **"Carbohydrate Days" in Dietetic Treatment of Diabetes.**—Petersen's tables show that the benefit for diabetic of restriction to a certain form of carbohydrate diet is no from any special substance in any special form of starch bu rather from the fact that the carbohydrate in question sup plies a very small proportion of calories. The benefit is thu from the partial starvation. The different carbohydrates ca be varied and combined or not—all that is necessary to ensur benefit from them is to have the patient's appetite appease with them while he is ingesting less calories than are use up on that day.

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# THANATOLOGY

## A QUESTIONNAIRE AND A PLEA FOR A NEGLECTED STUDY

ROSWELL PARK, M.D., LL.D.
Professor of Surgery, Medical Department, University of Buffalo
BUFFALO, N. Y.

Is it possible to watch the "vital spark of heavenly flame," as it quits "this mortal frame" and not be overcome by the mystery of death as the termination of that even greater mystery, life? Is there inspiration in the pagan emperor's address to his soul—those Latin verses which Pope has so beautifully translated?

To the speculative philosopher death may have a different significance, and one not altogether included in that given to it by the physiologist. To the former it is a subject for transcendental speculation; to the latter it is the terminal stage of that adjustment of internal and external relations which, for Spencer, constitutes life. For us its primary and immediate significance is purely mundane, yet it deserves such serious study from a practical viewpoint as it seldom receives.

What is death? When does it actually occur? How can it occur when the majority of cells in the previously living organism live on for hours or for days or, under certain favoring circumstances, retain potentialities of life for indefinite periods? These and numberless related questions constitute a line of inquiry that may well call for a separate department of science. Pondering in this wise, I long ago coined an expression which years later I found had been incorporated in the scientific dictionaries, though never before heard by me or encountered in my reading. "Thanatology" is this word, and it may be defined as the study of the nature and causes of death. Inseparable from it, however, are certain considerations regarding the nature and causes of life. Yet I would not introduce a compound term such as "bio-thanatology," wishing so far as possible to limit the study and the meaning.

Let us ask ourselves a few more questions. Does life nhere in any particular cell? In the leukocytes? In he neurons? Both are capable of stimulated activity ong after the death of their host. In fact, by suitable lectric stimulation, nearly all the phenomena of life may be reproduced after death, save consciousness nd mentality alone. Do these then constitute life, and heir suppression or abolition death? If so what about he condition of trance, or of absolute imbecility, congenital or induced—or, for that matter, what about the ew-born? If life inheres in the brain, how can an cephalous monster live for a moment after birth? Or, gain, how can a decapitated frog go on living for ours? Is it perhaps because the heart is *the* vital organ hat the hearts of some animals will continue to palpate or hours after their removal from the bodies? Yet the animals which have lost them certainly promptly die. Suddenly stop a man's heart-action by electrocution, or the guillotine, or a bullet, and he dies, we say, instantly. Let it stop equally suddenly under chloroform and there is a period of several minutes during which it may be set going. Let a man apparently drown and this viable period becomes even longer—say a goodly fraction of an hour. During the interval is he alive or dead, or is there an intermediate period of absolutely suspended animation? And if so, in what does it consist?

Is there a vital principle? If so what is it? Is such a thing conceivable? Can such a concept prevail among physicists? Can we consent even to entertain in this direction the notion of what is so vaguely called "the soul"? Of course, those who talk most lucidly about the soul know least about it, and no man can define it in comprehensible terms; but can consideration of the soul (whatever it may be) be omitted from our thanatology? Probably not, at least by many thinkers who cannot segregate their physics from their theology. Sad it is that theology, which might be so consolatory had it any fixed foundation, should be utterly impotent when so much is wanted of it. Theology, however, has little if aught to do with thanatology.

Is protoplasm alive? If so, then why may we not believe, with Binet, in the psychic life of microorganisms? He seems to have advanced good reason for assuming that we may do so, albeit such manifestations in either direction may be scarcely more than expressions of chemiotaxis. But if protoplasm be alive in any proper sense, as it would appear (else where draw the line?), just when does it so appear and whence comes its life? If it be alive, then life inheres in the nitrogen compounds composing it, or else is an adjunct of matter, imponderable, elusive, something *un*-conceivable if undeniable. The vitalists are of late perhaps attaining an ascendancy which for decades they had lost, since they maintain that life is not to be explained by chemical activities alone. And yet it is possible to set going in the eggs of certain sea animals the phenomena of life, or to liberate them by certain weak solutions of alkaline cyanids, without the pressure or assistance of fructifying spermatozoa. In such cases life or death are determined by ionization and certain chemicals, or by their absence. Where then, again, is the vital principle? Or is it inherent in the ion, and was Bion correct when he said "electricity is life"?

The life of a cell is then necessarily quite distinct from the life of its host, nor can the latter be composed simply of the total numerical lives of its components. Some lower animals bear semidivision, in which case each half soon becomes a complete unit by itself. Others seem to bear the loss of almost any individual part without loss of life, and it is hard to say just which is the vital part. The central pumping organ is perhaps the sine qua non, when it exists. But when non-existent, then what?

Again, while a living organism may be artificially divided into viable portions, no method seems known by which a series of separate cells may be, as it were, assembled or combined into one, of which a new unit may result from assemblage or combination. The more highly specialized or complex the cell, the more easily does it part with life, and the more difficult becomes its preservation and its reproduction. We may assume that after the death of a man his most specialized cells are the first to die, or more, that their death has perhaps preceded his own. In the ante-mortem collapse seen in many diseases and poisonings, has not this very thing occurred, i. e., that the patient has outlived his most important cells? Certainly when a patient dies of progressive gangrene he has outlived, perhaps, a large portion of his millions of component cells. Viewed properly; what a strange spectacle is here presented! Perhaps 20 per cent. of the cells actually dead, the rest bathed in more or less poisonous media, still their host endures yet a little while. "Behold, I show you a great mystery." About which of the poisoned cells does the flame of life still flicker?

The life-giving germ- and sperm-cells may exist and persist for some time after the body dies, as numerous experiences and experiments have shown. Ova and spermatozoa do not die the instant the host dies. And herein appears another great mystery, that cells from the undoubtedly dead body may possess and unfold the potentialities of life when properly environed. Among the lower forms of life, cells but slightly differentiated go on living and even creating new organisms, though the larger organism be dead. Moreover, in what way shall we regard the division of one ameboid cell into two, equally alive and complete? Here two living organisms are made out of one, without death intervening, and by permutation alone may one calculate, through how few generations cells need go in order to be numbered by millions, without a death necessary to the process.

Thus far we have had in mind life and death in the animal kingdom alone. But most of what has been said, and much that has not, is equally true in the vegetable kingdom. Even in the mineral kingdom — as some think—the invariable and inevitable tendency to assume definite crystalline form represents the lowest type of life. Indeed, it might fall in with Spencer's definition as evincing a tendency to adjust internal to external relations, though exhibited only after such ruthless disturbance as liquefaction by heat or solution. But then, is not every disturbance of relations "ruthless," because it follows inexorable habits of Nature? Even a crystal will reform as frequently as appear certain other phenomena of life, if made to do so. Were atoms alive they would suffer with every fresh chemical change, and who knows but that they do?

But in the vegetable world we certainly have all the features of life and death in complete form: fructification of certain cells by certain others, development in unicellular form or in most profuse and complex form, a selection of necessary constituents of growth from apparently unpromising soil, and the production of startling results. Does not the sensitive plant evince a contact sensibility almost equal to that of the conjunctiva? And who shall say that it does not suffer when rudely handled? Does not the production of the complex essential oils and volatile ethers which give to certain flowers their wonderful fragrance, indicating what strange combinations of crude materials have been effected within their cells, show as wonderful a laboratory as any concealed within the animal organisms? Yet death comes to these plants with equal certainty, and presents equally perplexing mysteries. When dies the flower? When plucked and separated from its natural supply or when it begins to fade (a period made more or less variable by the care given it), or when it ceases to emit its odor? And is then death a matter of hours? When the floral stem was snapped what else snapped with it? At what instant did the floral murder occur?

Every seed and every seedling possesses marvelous potentiality of life, and so long as it does we say it is not dead; nor yet is it alive. It resists considerable degrees of heat, will bear the lowest temperature, will remain latent for long periods, and still its cells will instantly respond to favoring stimuli. Its actual life is apparently aroused by purely thermic and chemical (electrionic?) activities environing it. In what do its life and its death consist?

But life and death are influenced—we say "strangely" only because it all seems strange to us—by uncommon or purely artificial conditions. Radium emanations have always an injurious effect on embryonic development. Under their influence, for example, the eggs of amphibia become greatly disturbed. Cells that should specialize into nerve, ganglion and muscle fail to develop, and consequently there may be produced minute amphibian monsters, destitute of nerves and muscles, but otherwise nearly normal. Hertwig has submitted the sperm-cells of sea urchins to these rays, without killing them, but invariably with consequent abnormal development.

The effect of cathode or *x*-rays is even more widely recognized and has been more generally demonstrated. They seem to possess properties injurious to most cell-life and even fatal to some.

Still more puzzling, and weird in a way, are the results of experiments, now widely practiced, which have to do with juggling, as it were, with ova, larvæ and embryos, by all imaginable combinations of subdivision and reattachment of parts, so that there have resulted all kinds of monstrosities and abnormalities. To such an extent has this laboratory play been carried that almost any desired product can be furnished — living creatures with two heads, two tails, or whatever combination may be decided.

Among the most remarkable of these efforts have been those of Vianney, of Lyons, who has shown that it is possible to remove the head end of several different insect larvæ without preventing their development and metamorphosis into the butterfly stage. In *Bomby* larvæ, for example, the butterflies arrived at the matur stage, with streaked wings and beautiful coloration, bu almost headless. These anencephalous insects lived fo some time.

Few animals survive exposures of any length to temperature much over 150 F., and most of them ar killed by considerably less heat. Freezing has alway been considered equally fatal. Gangrene is the commo result of freezing a part of the human body, and tha means local death. Extraordinary pains must be take with a frozen ear or finger if its vitality is to be restore And so even with the hibernating, or the cold-blood animals, a really local temperature has been general regarded as fatal.

But the recent experiments of Pictet, who did so much in the production of exceedingly low temperatures, freezing of gases, etc., have shown some startling results in the failure to kill goldfish and other of the lower animals by refrigeration. For instance, goldfish were placed in a tank whose water was gradually frozen while the fish were still moving therein. The result was a cake of ice with imprisoned supposedly dead fish. This ice was then reduced to a still lower temperature, at which it was maintained for over two months. It was then very slowly thawed out, whereupon the fish came to life and moved in apparently their normal and natural ways as if nothing had happened.

This confirms Pictet's early experiments and convictions, that if the chemical reactions of living organisms can be suspended without causing organic lesions the phenomena of life will temporarily disappear, to return when conditions are again usual. It is worth relating that his fish frozen in this way could be broken in small pieces just as if they were part of the ice itself.

How often during these recent decades when events have seemed to move faster, when discoveries and inventions have been announced at such frequent and brief intervals that we fail to note them all for lack of time, when haste and rush characterize habits alike of life and thought, do we find that we simply must stop, as it were for breath, while we unload a large amount of accumulated mental rubbish and clear a space in our storage capacity for up-to-date knowledge! It is a decennial mental house-cleaning process.. We must unlearn so much of that which ten to forty years ago we so laboriously learned. We must adopt new and improved reasoning processes. But it is hard to do all this. For instance, as a boy I learned the old chemistry quite thoroughly. During a subsequent interval, when I did not need to study it, came the new chemistry and when I again required it I had not only to study a practically new science—which was not so bad—but to rid my brain of much that had really found firm lodgment there, and this was difficult or impossible. So it is with one who, having been brought up on Euclidean geometry, finds himself confronted with the comparatively new non-Euclidean, and who has then not merely to forget, but to unlearn all those fundamental axioms which seemed so plain and so indisputable, that is, if he would accept the teachings of Bolyai and others. For example, that a straight line is not necessarily the shortest route between two points shocks our Euclidean orthodoxy, and is at the same time, *to us,* inconceivable; as also that parallel lines indefinitely prolonged *may* touch, and the like; likewise the concept of four-dimensional spaces, or worse yet, *n*-dimensional. And now, in somewhat like manner and to a certain degree, must we revise our previous conceptions of death, at least to this extent: Not that we yet know much better than we did what it really is, but that we know more about what it is not. Even save, perhaps, in its instantaneous happening it is *but a step* toward dissolution, usually not the first, certainly not the last, but yet the most conspicuous.

Death is in many respects a biochemical fact. It is so intertwined with the ionic changes in the arrangement of matter that we may hope for more information regarding some of its aspects as knowledge of the latter accumulates.

But, evidently, we need to clarify our notions as we rearrange our facts. Somatic death is, after all, a most complex process. It may be shortened by instant and complete incineration, but scarcely in any other way. Even dynamite would scarcely simplify the problem. As to conscious death, that is *probably* (though not certainly) a matter of seconds only or possibly fractions of a second. While we have no accurate appreciation of what constitutes consciousness, nor even just where it resides, the central nervous system appears to be its most probable seat. But conscious death may occur almost instantly without injury to this system, as when a bullet passes through the thorax and the heart, without injuring the spine.

But what is it that suddenly checks all concerted and interdependent activity? Or does something or some controlling agency suddenly leave the body?

A recent theory having features to commend it is to the effect that life is a property or a feature of the ultimate *corpuscles* which compose the atom. Since these corpuscles bear to their containing atom a relative size comparable to that of the tiniest visible insect winging its way in a large church edifice, the intricacies of this particular theory readily appear. But it does seem as though among ourselves life has much to do with the hitherto neglected and despised nitrogen atom or molecule, since life inheres *par excellence* in nitrogen compounds. Moreover, vitality is conspicuously a feature of those chemical elements which have the lowest atomic weight, while at the other end of the table of atomic weights stands radium, of whose destructive emanations I have already spoken.

Another phase of the general subject of thanatology was suggested especially by Osler, who a few years ago called attention to the fact that but few, if any, patients really die of the disease from which they have been suffering. This is not a paradox, and needs only reason and observation to confirm it. His statement was a preliminary to the consideration of terminal infections and toxemias, which of itself would be sufficient to erect thanatology into a dignified special study. Take, for instance, a patient who has long suffered from diabetes. The end is characterized by coma, i. e., an evidence of profound toxemia, and is in large measure due to acetonemia. A patient with chronic Bright's disease dies of uremic poisoning, or one with pneumonia dies of genuine heart-failure. The terminal stage of cancer is, again, toxemia of one kind or another, according as it has interfered with digestion, with respiration, or some other vital function, or has broken down, thus saturating the patient with septic products.

This aspect of the subject will bear any amount of study and elaboration, and its mention here should be sufficient for my purpose. Accordingly as it is properly appreciated, it will be recognized as having an important practical bearing, since, if we may foresee the direction from which the final danger threatens, it may be the better and the longer averted.

Another very important and practical subject is wrapped up in this one, namely, the utilization of apparently dead, or at least of only potentially living material (tissue) in the various methods of grafting or transplantation, which are to-day a part of the surgeon's work. The methods are themselves a transplantation of experiences gained by work in the vegetable kingdom. What wonder that the marvels revealed in one department should have incited work along parallel lines in the other? That flowers and fruit of one kind may be made to grow on a tree of a very different kind excites but a small amount of the astonishment it deserves, mainly because it is now a common occurrence, though properly regarded it might seem a miracle.

Differing only in minor respect is, for example, the removal of thyroidal tissue from one human being and its implantation into another, with functional success. One may ask just here, how is this matter concerned with thanatology? And the reply is: If this tissue were taken from a fresh corpse it would be by most people regarded as dead tissue. If so, does the dead come to life? Without violating the proper scientific use of the imagination one may fancy something like the following: Let a healthy young woman meet accidental and instantaneous death. It would be possible to use no inconsiderable portion of her body for grafting or other justifiable surgical procedures. The arteries and nerves could be used, both in the fresh state, and the former even after preservation, for suitable transplantation or repair work on the vascular and nervous systems of a considerable number of other people. So also could the thyroid, the cornea, the ovaries and especially the bones. All the teeth, if healthy, could be reimplanted. With the thin bones, ribs especially, plastic operations—particularly on the noses—of fifty people could be made. And then the exterior of the body could be made to supply any amount of normal integument with which to do heterologous dermatoplastic operations, or would furnish an almost inexhaustible supply of epidermis for Thiersch grafts, which latter material need not be used in the fresh state, but could be preserved and made available some days and even weeks later. A portion of the muscles might possibly be made available for checking oozing from bleeding surfaces of others, if used while still fresh and warm, and possibly portions of the ureters or some other portion of the remains might be utilized for some unusual purpose. Then what extracts or extractives might be prepared from other parts of the body, pituitary, adrenals, bone-marrow, etc.? The tendons might also be prepared for sutures. Every one of these procedures would give promise of success, the technic being in every respect satisfactory.

But the possible limit is not yet reached, since with each kidney might be carried out experiments like those feats of physiologic jugglery such as Carrel has shown us, by implanting one, say in the neck, connecting up the renal with the carotid artery, and the renal vein with the jugular, while some receptacle would have to be provided as a terminal for the ureter.

This is, after all, not a fantastic dream, nor such an extreme picture as would at first appear, since every organ or tissue above-mentioned—and more—has been used as indicated, and with success.

But imagine the dead body affording viable products, even indirectly life itself, to (possibly) so many others! Does this complicate the study of death? And what must become of the simple credulous faith of the zealot who believes in the actual and absolute resurrection, at some later date?

There is something more than mere transcendentalism in the science of thanatology; it has a plausible medicolegal and pragmatic import. Right glad should I be if I might arouse a deserved interest in it.

How may I more fittingly conclude than by quoting a few lines from our own Bryant's "Thanatopsis":

> "Earth that nourished thee, shall claim
> Thy growth, to be resolved to earth again,
> And, lost each human trace, surrendering up
> Thine individual being, shalt thou go
> To mix forever with the elements."

Though were I minded to rehearse certain difficulties met in the preparation of this paper, which I have long had in mind, I might also add the following lines from the same poet's "Hymn to Death":

> "Alas! I little thought that the stern power
> Whose fearful praise I sung, would try me thus
> Before the strain was ended."

One may well quote, at this point, Lamartine, who asked, "What is life but a series of preludes to that mystery whose initial solemn note is tolled by death?" (On this theme Liszt built up that wonderful symphonic tone poem "Les Preludes.")

Even infinity is now questioned by the mathematicians. This being the case, where shall we, where can *we* stop?

Note.—While writing the foregoing paper there came to my notice the recent book "Death; Its Causes and Phenomena," by Carrington and Meader (London, 1911). It is interesting, but save that it contains a helpful bibliography, is of little assistance to one wishing to pursue the study from its pragmatic aspect. One of the authors is committed to a personal theory that death is caused by cessation of the vibrations which during life maintain vital activity; the other that death is, as it were, the culmination of a bad habit of expectancy that something of the kind must occur, into which we have fallen, in spite of the fact that other living beings below man undergo the same fate, though not capable of expecting anything.

510 Delaware Avenue.

# ANGIONEUROTIC EDEMA

## A SERIES OF CASES WITH CLINICAL OBSERVATIONS *

HARRY I. WIEL, M.D.
SAN FRANCISCO

It is the purpose here to present a short series of cases which have come under my observation, with a brief summary of the views of others on the subject, and to note any salient features which the cases here published may suggest.

Case 1.—This case has been previously reported,[1] but since the time of its publication new features have arisen. A summary of the history as far as the year 1908, the date of the last publication, is as follows: A man, single, aged 24, was seen in 1905. At that time, with a previous history of no import with the exception of the acquisition of gonorrhea, he was seen with a typical macular luetic rash over the trunk. No primary lesion had ever been detected, but an intraurethral chancre could not be excluded. Under treatment the patient ran a devious and at times most intractable course. Complications and setbacks were numerous and severe, but the most striking one was the onset and persistence of a most profound psychasthenia, accompanied by vague gastro-intestinal disturbances.

In January, 1908, he suddenly felt as though some insect had bitten him on the scrotum, and in the course of about an hour the scrotum became red, swollen many times the natural size, and the seat of a tremendous edema. The condition persisted under, and in spite of, treatment for a week, and then quickly subsided. A few weeks thereafter a similar sensation was felt by the patient, and this time the foreskin as well as the scrotum shared in the symptoms and appearance, which, to be appreciated, must be likened to the size of the edemas of those parts as seen in advanced cardiac or renal insufficiencies. This second attack subsided more rapidly than the first. There followed, at intervals of several weeks, three further attacks in one of which the skin of the face around the eyes shared i the edema and itching. In all of these attacks antilueti measures were of no avail, and indeed, some of the seizure were so transitory that any extended measures were not indicated.

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* Read at the general meeting of the San Francisco Count Medical Society, Jan. 9, 1912.

[1] Wiel, H. I.: The Journal A. M. A., May 16, 1908, p. 1608.

*Course.*—The subsequent course has been extremely interesting. The patient was free from further attacks for a long period, and at the same time gradually recovered from any manifestations of the psychasthenia, from which he finally emerged apparently absolutely well. In 1909 he married and in 1911 his wife gave birth to a normal and exceptionally fine child. Before the birth of the child the patient's Wassermann was taken and found to be negative.

In August, 1911, the patient came to the office to say good-bye before leaving on a journey. In the course of conversation he complained of a backache, which seemed so similar to that with which he had suffered during his many gonorrheas years ago that he said if he were not married and knew his wife to be well, he would take an oath that it was "that old clap backache." He had further assured himself that it was of no moment, because he had discovered no discharge of any kind, though his search had been merely casual. He absolutely denied exposure, and he was of such a character that his statements could be absolutely relied on. Nevertheless, he thought that as he was in the office I should examine him, which I did. To the surprise of both of us, a drop of greenish-yellow pus could be expressed from the meatus, and under the microscope a goodly number of gonococci were found. Further inquiry developed that about a week previously, after becoming overheated at exercise, the patient had wiped his genitalia, which were perspiring freely, with a towel he had picked up from the floor of a toilet. This toilet was one frequented by chauffeurs, and investigation showed that many of them were the victims of florid gonorrheas. The three-glass test of the patient's urine allowed the diagnosis of an acute anterior urethritis. The patient at once gave up his planned journey and remained to submit to treatment for the gonorrhea. Usual routine measures were employed, to which the disease responded slowly, so that after three weeks, though he was not well, it appeared as though he would be shortly. At that time there reappeared, for the first time in over a year, an attack of the angioneurotic edema of the scrotum. The skin of the left side was the site of a brawny edema, which had begun but a few hours previously, and which was itching severely. The patient then remained at his home for six days, making local applications of various antipruritics and using the ice-bag generously, which last measure seemed really the most effective in giving temporary relief. The itching was of a character so profound that it not only kept him awake, but if something did not bring immediate relief the patient would be reduced to a state of hysteria.

Sept. 18, 1911, there was a sudden exacerbation on the foreskin, and as by this time the patient had lost considerable weight and strength from the constant nervous strain, he was removed to the hospital, where a special male nurse was assigned him. Here he remained two weeks. Local applications of argyrol, calamin lotion, liquor alumini acetatis and other appropriate local measures were used with only a degree of success. In the meanwhile a severe erythema of the inner aspect of the thighs and of the region of the buttocks had appeared, accompanied with urticaria and similar eruptions. A dermatologist was called in consultation, and finally we hit on a mixture of anesthesin, zinc oxid and oil of sweet almond, which seemed to be the most effective of anything tried in giving relief. Further treatment consisted of free purgation, bland diet, with bromids and alkalies internally. The only sleep obtained was by the use of the milder hypnotics in full doses.

At the end of two weeks the patient was sufficiently comfortable to return to his home, but he left the hospital physically and mentally exhausted. The angioneurotic edema had not completely disappeared, but was subsiding, and the most intense itching was gone. The gonorrhea, however, was very active. By October 11 the skin manifestations had disappeared, over one month from the time of onset, and treatment of the urethritis was renewed.

Within one week there was recurrence of the trouble, which this time appeared as an edema and redness of the inner surface of the left thigh. During the last part of November, at a time when the patient was particularly overwhelmed with business troubles, the scrotum and foreskin again were attacked, but by this time the patient had learned how to treat the matter himself, and both of these attacks, though exactly similar in character to the severe one in the hospital, lasted but a few days each. The patient now carries in his home a full stock of antipruritics, particularly the anesthesin mixture. He reports the gonorrhea as completely well, but as he has not been seen in some weeks, that is a matter of conjecture.

Case 2.—This patient, a married woman, aged 37, was first seen in the early winter of 1909. She complained of great pain and redness of her right little toe. The member was found on examination to be the seat of an infection, and a small pocket of pus was located around a corn and evacuated. The other toes were affected with what looked like chilblains. Following this slight operation the right foot showed in a few days an erythematous eruption which itched intensely and which spread up the leg, and was finally followed by quite a general eruption which affected particularly the other foot and the genitalia. Diagnosis was made of a pyogenic eczema. The trouble was persistent and subsided only after six weeks of great suffering.

In December, 1910, I saw the patient again, this time complaining of attacks of abdominal pain located particularly in the epigastrium, going through to the back, and sometimes seeming to have a sort of relation to eating. This pain was at times so severe as to double her up, and after lasting a few hours, would suddenly leave. Neither discretion nor indiscretion in diet seemed to have any effect on the frequency or severity of the attacks. Complete examination, clinical and physical, revealed nothing more than some tenderness in the midepigastrium, but in the light of the history, gastric ulcer and gall-bladder or duct trouble were borne in mind. The patient was put on a suitable diet and given the usual medication directed at hyperacidity or possible gastric ulcer. Urine, blood and feces had been examined and, with the exception of a slight leukocytosis during one attack (12,000), no abnormalities had been detected. Gastric analysis was refused by the patient, who was an extremely neurotic person and feared the procedure.

Four days after this examination I was called to the patient at midnight because of her lips having begun to swell during the day, and by that time having reached a size sufficient to disfigure her. This had alarmed her to such an extent that she had become hysterical and was suffering not only from that but from a sensation as though there was a ball in her throat which she feared would suffocate her. At a glance it could be seen that there was a large edema of both lips, and as one looked at them it was quite plain that their size varied from moment to moment. In the light of her extreme neurotic habitus (a condition fostered by her environment) and her present state of hysteria, the diagnosis of an angioneurosis seemed justified, especially since other sources of the edema, such as cardiac, renal or inflammatory, could be eliminated. The patient was reassured as to her condition, hot compresses applied to the throat, thorough purgation instituted, and alkalies used internally. In four days an urticaria developed on the arms and around the vulva, which cleared up in a few days. This development strengthened the confidence in the correctness of the diagnosis. It was, furthermore, strongly suggestive that the attacks of abdominal pain were of angioneurotic origin, and that this was a case strongly similar to the group emphasized by Osler.

The patient then remained free from discomfort for two months, though at no time during this period did she feel in the best of health. After this interval, on April 27, 1911, I was called to see her; she complained of "gas pains" and considerable soreness in the upper abdomen. For the first time the rectus over the gall-bladder region was found to be somewhat rigid. The leukocytes were then 5,000. The following day her lips were again the seat of a large edema and accompanying it was an erythematous eruption on the arms and fingers. Succeeding this there came an edema of the vagina; there was a slight rise in temperature (100 F.); the pains became sharper around the right costal margin, and a slight jaundice became evident, with the concomitant finding of considerable bile pigment in the urine. At this period the leukocytes were 15,000.

These troubles subsided, but during the following month she suffered a violent attack of colic with jaundice, fever and intense itching of the skin. She was warned of the imminence of surgical interference, and on June 25, 1911, after a fulminant attack of biliary colic, the abdomen was opened. The gall-bladder was found to be shrunken and hour-glass shaped, owing to a band of organized tissue the result of old inflammation, and each portion of the hour-glass was further divided into loculi by bands of a similar character. Most of these loculi contained very small mulberry stones, and at the bottom of the lower compartment were found several larger ones of a similar type, the largest about 1 cm. in diameter and wedged tightly into the opening of the cystic duct. The common duct was explored as far as possible and found to be free of stones. The patient made an uneventful recovery and in three weeks was again on her feet.

Her improvement, subjectively and objectively, after the operation was remarkable. All attacks of abdominal pain vanished, and she was apparently well. Sept. 28, 1911, three months after the operation, she had an attack of what seemed to be a giant urticaria on the chest and fingers. Her menstruation was delayed some days at the time, and with its onset the next day this symptom disappeared. Other than that whisper of trouble, the patient has been in perfect health and is apparently permanently well of her various symptoms.

Case 3.—This patient, a married man, aged 29, with a previous history of no importance, was first seen in 1908, a few hours after having been awakened by a most severe attack in the lower portion of the abdomen. Examination disclosed nothing more than some definite tenderness on deep palpation in the right iliac fossa. The temperature was normal and the leukocytes around 10,000. A tentative diagnosis of appendicitis was made, the patient given starvation treatment with rest in bed, and in a few days he was well. There was no further trouble for two years; then he complained of dysuria and polyakyuria. Another examination disclosed absolutely nothing. Two months later I was called to see him again, another attack of severe abdominal pain being in full swing. This time there was some rigidity of the right rectus accompanying the tenderness in the right iliac fossa, but the temperature was 98.6, the pulse 72, and the leukocytes 10,000, so operation, though advised, was not insisted on. Recovery from this illness was rapid.

Shortly after this the patient was seen several times with urticaria, and it should be mentioned that, his habitus being extremely neurotic, amounting to at times a neurasthenia, a factitious urticaria of extreme grade could always be easily elicited.

Three months after the attack of colic above mentioned, I was called one night to see the patient, who had become extremely alarmed over the appearance that morning of great enlargement of his lips, which had by that time become many times their normal size and gave considerable discomfort. Their appearance was exactly that described in Case 2. He was assured that the trouble was of nervous origin, the proper local and general treatment was instituted and in a few days he was well, with the exception of herpes which had become superimposed on the edema.

Since then there has been no recurrence of either the angioneurotic edema or the abdominal pain, but we were inclined to regard the two as being of the same origin.

Case 4.—The patient, a man aged 26, single, was seen in December, 1910, who almost, if not entirely from birth, had been a victim of von Recklinghausen's disease (multiple neurofibromatosis) and presented typically the characteristic triad, viz., multiple neurofibromata, pigmentation of the skin, and mental deficiency. He complained at this time of loss of weight and strength, at times spitting blood, and the presence of distressing cough. Examination disclosed the presence of advanced pulmonary tuberculosis, and outdoor treatment combined with the intravenous administration of Old Tuberculin (bovine), was instituted. Gastro-intestinal symptoms were prominent in this case, and the course run, combined with frequent examination, made it almost certain that there was inflammatory trouble in the region of the appendix, very possibly tuberculous in nature.

Throughout this history it must be remembered that the patient's mental deficiency was such that, though it made him backward in comprehension, it made him all the more querulous, whiny and concerned about himself, so that he was in a constant state of worry and fear.

Under treatment the patient made most satisfactory improvement for six weeks, gaining many pounds in weight, looking infinitely better and pulmonary symptoms making great progress. This continued until April, four months after the beginning. There then occurred a most severe herpes zoster on the right side of the chest, the symptoms of which were most intractable to any treatment, so that the patient was half crazed with the suffering. This gradually subsided but left the patient in poor condition, he not only having lost all the improvement originally gained, but even more than that. His condition at that time was not one to inspire hope.

One month later he noticed that his scrotum was itching. One night, on arising to walk to the lavatory across the hall, he was seized with violent abdominal pain and fainted. I was called at once. Rigidity and tenderness over the appendix region were extreme, pulse was 108, temperature was normal. The entire genitalia were enlarged tremendously with an edema so great so as to deform the penis almost beyond recognition. The regions nearby were the seat of a papular eruption and the whole area in the vicinity burned and itched severely, the itching on the genitals being fulminant. He was given scopolamin (hyoscin) hypodermatically and was removed to the hospital. There the leukocytes were found to be 20,000, and the abdominal signs persisting, consultation was held as to the advisability of operation. His general condition being at that time so low, and the appearance of the edema of the genitals and presence of von Recklinghausen's disease making it possible that the whole thing might be neurologic, operation was deferred, and the patient gradually recovered from the acute abdominal condition. During the recovery he ran a typically tuberculous temperature and the mental condition retrograded so as to amount at times to a mild delirium. The edema ran an obstinate course and subsided only after two weeks, being accompanied with varied erythematous, papular and urticarial eruptions of other portions of the body.

As soon as the patient was in condition to be removed he was taken to a southern sanatorium, where he since ran a devious and downhill course indicating general tuberculosis, death occurring Dec. 14, 1911.

Case 5.—The patient, a man, aged 25, married, had been seen by me on several previous occasions during the past year, complaining of dull abdominal pain associated with general malaise and some loss of weight. Complete physical and laboratory examinations had been made. Physical examination had disclosed some tenderness on deep palpation over the appendix region. Leukocytes had never exceeded 12,000; there had been no fever, and clinical examinations disclosed nothing further than a delay in the cecum emptying, shown by a series of radiographs.

On this occasion, Sept. 20, 1911, his penis in the morning had become tremendously swollen. There had never been any venereal trouble and the present examination revealed none. The skin of the penis below the glans was the seat of an advanced and marked edema, red and quite painful. The puffiness of the skin was so extensive as to curve the penis into an S-shape. Examination elsewhere revealed nothing abnormal with the exception of point tenderness above the left groin, where, however, there was nothing to be felt, but where the skin was red and slightly edematous. This shortly became affected similarly to the penis, and a like edema appeared on the inner surface of the upper right thigh. The next day the skin of the right hypogastrium, in an area about 5 cm. in diameter, became red and markedly swollen with edema, and in this situation could be felt a freely mov able tender subcutaneous nodule about 1 cm. in diameter. There was nothing of further interest to note concerning the findings in the case. The patient was put on calcium lactate, thoroughly purged, ordered a bland diet, calamine lotion locally, and in a week the manifestations had disappeared. There had been no history of the eating of any of the rash-producing foods, such as shellfish, strawberries, etc. The patient having been recently married and indulging in almost daily intercourse it was thought that there might have been a mechanical etiologic factor in the edema of the penis, but naturally that would not have accounted for the edema elsewhere.

A bird's-eye view of these cases proves of great interest. Case 1 presented angioneurotic edema, urticaria, erythema and allied eruptions in a psychasthenic with a history of lues, with indefinite gastro-intestinal features and complicated by the presence of gonorrhea. This, however, could not be determined to play a definite part in the angioneurosis, as similar attacks had occurred before the advent of the urethritis. It could almost certainly be excluded that lues was the *causa peccans*, for antiluetic measures were of no avail, and the last attacks occurred in the face of a negative Wassermann (which, of course, is not absolutely conclusive), and some years after any other manifestation had occurred.

Case 2 was perhaps the most interesting of the group. It presented angioneurotic edema, urticaria, erythemata and allied eruptions in combination with severe abdominal colics. It might well have been considered that the colics were abdominal manifestations of the erythema symptom-complex, similar to the large series of cases which Osler[2] has brought under one head. This was the view taken, but when the abdominal features later became localized to the biliary tract, the diagnostic problem became more involved. It was even possible to conceive of an angioneurotic edema of the bile-ducts, in the light of the intestinal edemas found in some of Henoch's[3] cases, and in a case reported by Briggs.[4] This was the only case of the series in which operation allowed of a certainty in illuminating the pathology.

In Case 4 we had angioneurotic edema in a patient suffering from von Recklinghausen's disease and pulmonary, if not general, tuberculosis. The edema was associated with severe colic, as in Case 2, these features being localized clinically and physically to the region of the appendix. It is reasonable to suppose, however, that an actual acute appendicitis, with the blood-picture and of the severity here present, would have progressed rapidly to a fatal end. The diagnostic problem in this case was urgent, for it was a question of surgical interference. Events proved that non-interference was justified from a clinical standpoint, but it seems questionable whether the pathologic reasoning will ever be proved.

In Case 3 the patient presented angioneurotic edema, urticaria and allied eruptions, combined with a history of colic of obscure etiology. The appearance of the edema was considered of sufficient moment to contraindicate operation, or at least to make its postponement justifiable, and the future course of the case points to that decision having been reasonable.

Case 5 was quite similar to Case 3, in that the patient presented angioneurotic edema in combination with indefinite abdominal symptoms, with a remotely possible mechanical factor for the edema.

Taking these cases as a group, one finds angioneurotic edema, urticaria and allied skin manifestations associated with gastro-intestinal symptoms, most particularly abdominal pain. In three of the five cases (Cases 2, 3 and 4) the association was quite definite, and in Case 2 the abdominal pain was quite clearly shown not to be an angioneurosis, but of inflammatory origin. The definiteness of the association in this case would reasonably lead one to conclude that the angioneurotic edema in this case rested on the presence of gall-stones.

Another feature which the group had in common (with the exception of Case 5) was that each patient was of an extremely neurotic habitus, Patient 1 being profoundly psychasthenic, Patient 2 being definitely if only moderately so, Patient 3 being what is usually termed neurasthenic and Patient 4 being at times actually beyond the border-line of sanity.

Furthermore, one is struck by the angioneurotic edema appearing in patients suffering from a variety of conditions: von Recklinghausen's disease, tuberculosis, lues and gonorrhea, and cholelithiasis. One is almost forced to the attitude that the skin manifestations, instead of being a clinical entity were merely symptoms, or at most complications of other pathologic entities.

Fitting in with the experience of others who have published reports of similar cases, the angioneurotic edema here met with was characterized, furthermore, by its tendency to recurrence, its involvement, for the most part, of the skin of the face and genitalia, and by intense itching which proved most intractable to treatment. Along therapeutic lines, what struck me most forcibly was that a measure which might be successful in one case would be totally ineffective in another, and what might bring considerable relief in one patient during one attack might completely fail in the next. The measure found of greatest use externally were compresses respectively of solution of aluminum acetate, argyrol (20 per cent.), boric acid, calamine lotion. In Case 1 a certain preparation had such marked and immediate benefit that for the sake of those who may have to treat these conditions, and have run the gamut of the pharmacopeia in their efforts (and our therapeutic inefficiency is shown by our often having to run that gamut), the composition is here given:

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|---|---|
| Anesthesin | 1 part |
| Zinc oxid | 1 part |
| Lime-water | 8 parts |
| Oil of sweet almonds | 16 parts |

M. Sig. Local use in generous quantity.

Cases similar to the above are reported in the literature singly and in groups. The original description of the symptom-complex is usually accredited to Quincke,[5] and the name "Quincke's disease" is often used in and out of print in this connection. His description is the first conscious one of the disease and he regarded the condition as a vasoneurosis during which the permeability of the vessels is increased. This, of course, is merely paraphrasing the term "angioneurotic edema." A very clear description of the condition, which antedates that of Quincke, is from the pen of Graves,[6] whose name we know so intimately elsewhere in medicine. He describes a typical case of angioneurotic edema of the forehead and eyelids in a gouty individual. Apparently Graves did not recognize the nature of the phenomenon, for he speaks of it as a most remarkable instance of fugitive inflammation occurring in a person suffering from a gouty diathesis. He lays particular stress on the occurrence of sudden death — an observation common also to other authors — and, when occurring, being due to angioneurotic edema of the larynx. Osler's most masterly and systematized collection of cases presents, besides the abdominal manifestations, the familial tendency. One of the most excellent accounts in the textbooks is that by Joseph Pratt (in Osler's Modern Medicine, Vol. IV), who sums up the prevalent conception of the disorder as follows:

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[2] Osler, William: Am. Jour. Med. Sc., 1895, cx, 629, and 1904, xxvii, 1.

[3] Henoch: Berl. klin. Wchnschr., 1874, No. 51.

[4] Briggs: THE JOURNAL A. M. A., Feb. 15, 1908, p. 528.

[5] Quincke: Monatschr. f. prakt. Dermat., July, 1882.

[6] Graves: Clinical Lectures, Dublin, 1848, i, 462.

> Angioneurotic dermatoses are characterized by a marked disturbance of vascular tonus in addition to a more or less pronounced inflammatory condition of the skin. . . . This sensitiveness of the skin and the abnormal reaction are the result of a general angioneurotic disturbance.

Most of the writers who have concerned themselves with this matter have regarded the angioneuroses as a disease, and in many of the cases reported it appears conceivable that it may be so. In the group here reported it seems clear enough that the angioneurotic edema was not the disease in each instance, but an accompaniment and complication of other diseases of a varied nature, but all characterized by gastro-intestinal disturbance of some sort. In that light one might well think, with some of the observers, that a toxemia of intestinal origin might be at the bottom of the whole matter.

All certainty in the solution of this problem must wait on some exact means of approaching the subject clinically or experimentally, and it may be that working along the lines of anaphylaxis we may approach something definite. Until we can have something more exact than at present on which to proceed, the putting forth of any conclusions in the matter can be nothing more than "arm-chair philosophy," but nevertheless the recognition of the condition is of great interest and of considerable importance when the cases, as often happens, approach the surgical domain.

Butler Building.

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# THE VALUE OF PERIODIC PHYSICAL EXAMINATIONS *

HENRY WIREMAN COOK, M.D.
MINNEAPOLIS

The ordinary case history begins with a statement of the complaint of the patient, following this is a detailed account of the family and personal history, the physical examination and the result of chemical and microscopic analyses, serum and toxin reactions, and bacteriologic findings. The incentive, the key, is the insistent complaint of the patient.

Medical science has long been active in the prevention of disease in connection with public health measures, but has been notably negligent in prophylaxis as applied to the individual. The fields of the various specialties of practice have in this individual relationship been restricted to diagnosis and treatment of disease only when the disease has reached such a grade of seriousness as to produce pain or unpleasant symptoms.

The case records of internists, surgeons and other specialists, as well as the general practitioner, contain no data of observation or investigation prior to this period of symptom-onset. This condition is destined to change, for by the time symptoms demand treatment, the records should show the results of repeated examinations, with special attention directed to any variation from normal as revealed by answers of the patient or the findings in the successive routine examinations.

The lack of such periodic examinations is partly due to the carelessness and ignorance of the laity, but, I believe, primarily to the indifference of the medical profession to this most important branch of practice. The inspiration for such prophylactic routine must come from the medical fraternity primarily, and cannot be expected to originate with laymen who could not, unless instructed, appreciate its importance. Against the argument that no matter how strongly it was urged, people would not come to physicians for examination until compelled by symptoms, we need only consider the example set us by one school of specialty—the dentists.

Nothing could have been cruder than the attention paid by the laity prior to forty years ago to dental prophylaxis. Until the aching tooth became unbearable, nothing was done, and then it was usually too late to save it; and when pyorrhea loosened the teeth until they fell out, a false set was put in. Now we all think it serious neglect not to have our teeth looked over once in six months and the smaller cavities filled. The patients of the more advanced dentists are presenting themselves once a month, and have the necessary attention before the cavity starts. There are many young people now, from 20 to 30 years of age, who have had the benefit of such service from the more advanced dentists, who have not a flaw in their enamel. These people will keep their teeth in excellent condition till old age, provided their medical advice is as sound, and the degenerative changes in heart, blood-vessels and kidneys as wisely averted. Their problem is not, as with former generations, to preserve a masticating surface as long as they live, but to live as long as their teeth keep in good condition. An advanced dentist regularly advises his patients to present themselves and to bring their children to him at frequent intervals without regard to toothache or evident disease. Few physicians give their patients the benefit of similar protection. This neglect of proper prophylaxis is nowhere so frequently seen or more strikingly illustrated than in the course of routine insurance examinations. In this work we do not ordinarily see applicants who are at the same time patients under active treatment for some symptom. Those constitute the small percentage of attempted fraud cases, and are not of serious moment to the companies. But how frequently we see men in their prime, or what should be their prime, in active business, in apparently robust health, in whom we find a high blood-pressure or albumin and casts! These men may even have been within the year to their medical adviser, who made light of their complaint of headache or dyspepsia, and dismissed them with a prescription, but without a urinalysis; or again, a young clerk or teacher, with an evening temperature of 99.5 to 100.5 F., who, on close questioning, admits perhaps that he did go to a doctor complaining of feeling tired, but the "tonic" so promptly prescribed did not seem to be of benefit.

Most of these persons, however, have not consulted a physician in years—never thought of it. Some have dropped into the doctor's office and had themselves laughed at and called neurasthenics. Many people have great hesitancy in consulting a physician unless they have a compound fracture or have vomited blood. This does not reflect credit on their medical adviser. The man who speaks slightingly of the number of neurotics he has to see daily and satisfy with a placebo (unless he is a popular nerve specialist), is undoubtedly overlooking with great regularity many cases of organic disease which will return to him after serious damage has been

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* Read before the Interurban Academy of Medicine at Duluth, Minn., Jan. 31, 1912.

done, or more likely go to some one else better equipped in judgment or training to meet their needs.

When we consider the large number of men in our profession who have graduated from cheap commercial schools without requirement of preliminary education and whose diplomas carry no guarantee of medical knowledge, is it any wonder that many phthisical patients have been treated as dyspeptics, or soaked with quinin until the curable stage was passed; that many cases of disturbed renal function have drifted without any treatment into chronic Bright's disease; that many gall-stone and chronic appendicitis cases have been treated for biliousness, until the gall-bladder was irreparably damaged or the appendix ruptured?

Let us not on this occasion dwell further on the unpleasant theme of the just accusation brought against us of the sins of omission. Let us turn to the broadening field of service which lies before us.

Within a week I have heard the dean of one of the best medical schools in the country express discouragement at the opportunities for the large number of physicians who are being graduated every year in this country. There is no excess of well-trained physicians; there is instead a dearth of them. We are overrun with a multitude of incompetent practitioners of drugging, but there is a great want of competent practitioners of medicine in the broad sense of the word. Viewed from the point of view of supplying a curative antidote, and excluding surgery, the scope of medicine might seem at first glance to be contracting through its own efforts. One at once argues for quinin in malaria—but how many years will malaria remain in this country or any civilized country? Certainly its life is limited to a few decades. Or mercury or salvarsan in syphilis; are we too optimistic in believing that the development of a higher social standard will limit even this scourge? Antitoxin in diphtheria; serum and vaccine therapies in general—these are apparently only applicable to infectious diseases, and surely our hope is not unfounded that the day of their control and elimination is coming.

How far public health measures will limit the scope of the surgeon can only be surmised. Certainly the stamping out of typhoid will reduce gall-bladder inflammation, and some bone conditions. The end of the white plague will further limit the field of orthopedic, neck and abdominal surgery. Clean, dustless streets will play havoc with aural surgery.

With the elimination of infectious disease, where will the physician find his field? He will then be compelled to fill the position for which he is primarily intended, and which some of our colleagues are filling to-day. He will be the guardian of the health of his families, not a last resort in disease; a therapeutic agent who finds himself employed to overcome structural changes beyond the reach of any help.

The modern attorney of our more advanced institutions is not a last resort in time of trouble; he is the constant adviser of the firm, employed to keep them out of trouble. When an actual law-suit is brought, the wise lawyer often admits the inadequacy of the law to obtain justice, and advises compromise. If while waiting in a dentist's anteroom one was surrounded by patients toothless, or with broken, decayed teeth, one would not be apt to wait one's turn. The general practitioner of the coming generation will be the family counsellor in matters of health. He will know each individual in their physical, moral and mental aspects. He will know the hereditary influences which he cannot alter, and will be conversant with the environment which he can largely determine. This physician will be notable by the number of healthy families for which he is adviser, not, as at present, by the number of diseased individuals who surround him.

Much can still be done toward the prevention of infectious diseases in the individual, but that field is comparatively shortlived. Public hygiene in able hands will make individual precautions unnecessary; but in preventing, forestalling, postponing the onset and development of the chronic degenerative changes which finally determine the fate of all who escape the infectious diseases, there will always be a fertile field for the most highly developed training, judgment, and forceful ability.

The chance insurance examination is now about the only safeguard enjoyed by the average man against the progress of organic changes to a degree of seriousness such that they force themselves on his attention.

The limits and purpose of this paper do not permit a full discussion of the benefits which would accrue to the individual from an intimate relation, throughout his lifetime, with a wise medical adviser. Yet even antenatal care deserves at least a word, as it is receiving such wide attention at this time under Holt's stimulus.

During pregnancy proper medical advice along the lines of general hygiene, particularly a restricted diet, and sufficient exercise for the well-to-do, and a full, nourishing diet and sufficient rest for the working woman, will play no small part in the health and longevity of the offspring.

From the hour of birth children struggle against the errors of ignorance on the part of mothers, and we must confess that the family physician could do far more than he does to prepare the mother for this central duty of her life, of which she often knows least. When we talk, as we all talk now, of the fearful toll in infant mortality paid to ignorance, how much of the blame for this should be laid at the door of the medical profession, not as a class—for we are a unit in the fight against dirty milk, etc.—but as individual practitioners? Is the mother as carefully and patiently taught the dangers which the coming summer holds for the baby as she should be? Does she know that even if clean milk is not obtainable, she still can probably prevent a serious disorder by nursing her child, by pasteurizing or sterilizing dirty cow's milk, by regular feeding of proper dilutions and proper substances? The mother is more anxious than any national association can be to prevent infant mortality in her own family, but she is not a physician—and we are so busy with sick people that we have no time to teach her.

We must pass over the period of childhood and adolescence, when the constant advice and guidance of a well-trained physician would be so invaluable in the establishment of that personal physique and that knowledge of hygiene by which success in life must be largely measured, whether as a man in the pursuit of material advancement, or as a woman in home and family development, or for either sex that moral and temperamental control which is so largely dependent on normal organic structure and function. Yet consider a moment the prevention of venereal disease, which is a live question to-day, the crucial difficulty being a practical method of instruction; how largely this would be solved if the boy were accustomed to regular conferences with the family physician and eager for his guidance in matters of physical development, in which all normal boys are interested!

Although infectious diseases are on the decline, some being already extinct in civilized countries, and many having ceased to be a serious problem, and although the present century will probably see properly conducted communities largely rid of their menace—people continue to die, and our attention is being more and more forcibly directed to the increasing incidence of the chronic degenerative diseases which shall some day practically monopolize the field. As the chances of an early death from an infectious disease diminish, normal life expectancy will increase, and a death at 60 or 65 of Bright's disease or heart disease will be regarded as far more premature than it would be to-day. So many die of infectious diseases before 45 that, relatively, 65 seems an advanced age. We must remember in this connection that not only are infectious diseases responsible for their immediate fatalities, but in many cases they are primarily responsible for the inauguration of chronic changes which may not result fatally for some decades. Syphilis, for example, reaps its richest harvest two to four decades after the primary infection; typhoid has been shown by Thayer to produce permanent arterial changes; tuberculosis causes renal irritation; and many "cured" of phthisis die of Bright's disease begun during the tuberculous toxemia. Scarlet fever, rheumatism, tonsillitis—in fact, probably all infectious diseases—leave, in many instances, structural changes which persist and develop long after the febrile period is forgotten.

Without further consideration of the other varied causative factors, we do know that in many individuals there begin to appear, not often before the fifth, more often during the fifth or sixth decade, certain, at first very slight, evidences of chronic degenerative changes which presage the death of that individual. A careful examination will reveal these signs usually long before any symptoms have obtruded themselves.

It is the evidences of chronic degenerative changes which could be noted early by routine semi-annual examinations, before serious damage was done, and which are so often found in insurance examinations, in all stages, from the slightest traces to such gross findings that one wonders how the man can continue at his work — on which I would lay emphasis. A further restriction is also necessary, and we will consider here only such signs as are presented by a few elementary methods of urinalysis and cardiovascular examination.

As individuals there is no constant factor in occupation, in locality of residence, in habits, in general health, in personal appearance, to which we can ascribe the difference in clinical findings. They may be men in active careers, in vigorous health. What does it signify that in one we find soft arteries, a low pulse tension, a normal area of cardiac dulness, regularity in cardiac rhythm, clear, normally accentuated heart sounds, no trace of albumin in a twenty-four-hour specimen, no casts on microscopic examination? These are but seven factors in a clinical examination, and yet they speak forcibly for a cardiovascular and a renal system which shows no evidence of impairment after five decades of service—good material, we may venture, and not subjected to intoxication or undue strain.

In another man, with equal health and equal vigor, we find a thickened artery; in a third, high tension; in a fourth, cardiac hypertrophy; in a fifth, an occasional break in cardiac rhythm; in a sixth, an accentuated second sound or an impure first sound; in a seventh, a trace of albumin; in an eighth, a few hyaline and granular casts. These signs may be single or combined in any variation. Usually, at least two are present in any one case. They argue for impairment of cardiovascular or renal structure, and we know well the dictum: "A man is as old as his arteries." These men have no complaint—they are not patients; and yet we cannot avoid the conclusion that a structural change has been inaugurated which, unless arrested, will seriously shorten the expectancy of this group. An advance in age of from ten to fifteen years would in all probability not more than cover the shortened expectancy.

The individual, however, can in many cases regain practically his normal expectancy provided he institutes proper measures, and provided the tissue-change has not proceeded too far. The following case is such an example:

> A successful business man, aged 48, in apparently robust health, just accepted by another company for $50,000 insurance. At examination, blood-pressure was 160 mm. of mercury; area cardiac dulness increased to nipple line; faint trace of albumin, an infrequent hyaline and granular cast. The application was postponed. The man at once put himself in the hands of a well-trained physician, and under proper diet, exercise, elimination, less mental fatigue and worry, his blood-pressure returned to 135; albumin and casts entirely disappeared and have not returned during the year; the area of cardiac dulness has retracted at least half an inch. This man would be pronounced normal to-day, and should have regained practically his normal expectancy, barring a possible tendency to a recurrence.

No man should be passed by an examining physician as a first-class insurance risk in whom any of the above-mentioned seven signs remain constant. As a corollary, every man should submit himself at least twice a year to a searching examination for the discovery of any of these signs of cardiovascular or renal impairment. If they are found, the indication should be followed by a proper regimé aimed at a restitution of structure, or at least an arrest of the degenerative changes.

Northwestern National Life Insurance Building.

# THE DIETETIC AND THERAPEUTIC VALUE OF FERMENTED MILKS PREPARED FROM COMMERCIAL FERMENTS

P. G. HEINEMANN, Ph.D.
Associate in Bacteriology, University of Chicago
CHICAGO

The optimism of Metchnikoff in regard to the value of fermented milks seems to be shared by recent writers. Yoghurt, the Bulgarian sour milk, has been given special notoriety, and manufacturers, taking advantage of public sentiment, have flooded the market with preparations, good, bad and indifferent. These preparations are supposed to produce a milk which is similar to Bulgarian milk in palatability, nutritive value and health- and life-preserving properties. Exact scientific investigations are scarce and it is difficult for practitioners to decide on the merits and demerits, not only of the commercial preparations, but also of the therapeutic value resulting from the use of these milks. Some of the articles published appear to be written in the interest of the manufacturers and it would seem that an impartial discussion may be of practical value.

The subject may be considered from three points of view: (1) the nutritive value of fermented milks for adults and infants; (2) the therapeutic value; (3) the efficiency of commercial ferments.

Fermented milks may be divided into two classes, namely, those which have been subjected to acid and alcoholic fermentations and those which have been subjected to acid fermentation only. The chief representatives of the first class are kefir and koumiss. They are the result of the combined activity of several bacteria and yeasts. The milk-sugar is fermented, and alcohol and carbon dioxid are produced, with enough acid, chiefly lactic acid, to impart a pleasant sour taste. The casein and albumin are precipitated and partly split into soluble compounds. A sour, effervescent beverage is produced. The milk constituents are rendered more digestible, although there is loss of nutrient substance by the formation of gases and acids. These preparations are used to a considerable extent as food for invalids and for babies unable to digest fresh milk. Many favorable accounts of success are recorded in the literature; still objection can be raised against the validity of these statements, since the observations have not been controlled, and, in truth, control observations are difficult to obtain. Kefir contains very little alcohol, but koumiss contains often more than 3 per cent., and it is at least doubtful if the presence of alcohol is advantageous in the nourishment of invalids and babies. It is advisable, therefore, to use these fermented milks with caution.

Of greater importance are those milk beverages and foods in which an acid fermentation is the chief factor. The acid fermentation in some cases is accompanied by aroma formation and slight changes in the milk-fat. Such fermented milk is used in Asia, Africa and the eastern countries of Europe. In this country ordinary butter-milk is popular and the Scandinavian people have a thick fermented milk called *Tätemelk* (*Kjernemelk*). The most interesting of these milks is yoghurt, which has been recommended by Metchnikoff and by many others recently. Yoghurt originated in Bulgaria and is prepared in the following manner: Milk is evaporated in a clean vessel to about one-half its volume over a slow ire. It is then cooled to 45-50 C., and inoculated with he ferment "Maya," which is a small remnant of a previously prepared lot. The ferment is thoroughly mixed by stirring and the vessel wrapped in skins and loths so as to maintain the desired temperature. At ower temperature abnormal fermentations cannot be voided, since the ferment contains many microorgansms. The chief agent is the Bulgarian bacillus, whose ptimum temperature is about 45 C. The milk is ripe fter from ten to twelve hours. The finished product as the consistency of pudding and is eaten mixed with round bread or sugar. The milk, having been evaporated to one-half its volume, contains twice the original mount of solid constituents. There is nearly 10 per ent. milk-sugar which imparts a sweetish taste to the milk. The acidity is 0.8 to 0.9 per cent. The milk has sweetish-sour taste and a pleasant aroma. It is claimed y some analysts that about one-half of the protein is endered soluble. This is probably exaggerated, since here is hardly time enough during the short period of rmentation to accomplish this as the Bulgarian bacillus as feeble proteolytic properties. The digestibility, however, is probably enhanced by the precipitation of the sein, the coagulum consisting of extremely fine parcles and the curd being smooth and liquid.

Yoghurt as prepared in Bulgaria is rarely met with in is country and western Europe. The "yoghurt," or Bulgarian milk," sold in these countries is prepared om sweet whole milk or from partially skimmed milk. enerally the milk is boiled, cooled and inoculated with tablet or a liquid culture as the case may be. The temperature of incubation varies, used by different producers, from 75 to 105 F. The sanitary advantage of boiling the milk is obvious, and abnormal fermentations are avoided. The "cooked taste" is covered up by the acid formed during the fermentation. The finished product is a smooth, white, rather thick and somewhat viscid fluid of pleasantly acid taste and peculiar aroma. The taste appeals to many who do not care for ordinary buttermilk.

The nutritive value of this milk is nearly the same as that of sweet milk of the same fat content. A small amount of milk-sugar is lost by acid formation. The casein, forming a fine, smooth liquid curd, is easily digested. This fact and the palatability render the Bulgarian sour milk superior to ordinary buttermilk.

As food for infants and invalids Bulgarian milk and ordinary buttermilk have the advantage over sweet milk of somewhat higher digestibility. Too much stress, however, should not be laid on this, as the difference is but slight. It seems that the fat in cow's milk is the most objectionable constituent and frequently the cause of digestive disorders in infants and invalids. It is probable that sweet skimmed milk will be tolerated as well as sour milk prepared from skimmed milk. The successful assimilation of sour milks in place of sweet milk has been reported by many, but it may be due to the diminished fat content as much as to the altered condition of the milk.

The chief interest centers about Metchnikoff's assertion that the presence of *B. bulgaricus* in the digestive tract prevents premature senility, auto-intoxication and other disorders. This claim has been augmented by other workers and commercial producers of sour milk and ferments. According to repeated statements, stomach troubles, scarlet fever, whooping-cough, anemia, scrofula, gall-stones, diabetes, chronic rheumatism, dysentery, appendicitis and tuberculosis can be cured by the use of yoghurt. This is but a partial list of the diseases mentioned as curable by Bulgarian milk. It is not surprising that with such statements in scientific and semiscientific articles, manufacturers are advertising their products with extravagant claims of benefits derived from the use of yoghurt. It is stated that the explanation of the wonderful accomplishments of the Bulgarian bacillus lies in its power to destroy all pathogenic germs in the digestive tract, that colon bacilli and putrefactive bacteria are restrained or destroyed and that with the destruction of these organisms auto-intoxication is impossible and premature senility will be prevented.

On the other hand, we find articles which are cautious and conservative. Luerssen and Kühn[1] often missed Bulgarian bacilli in commercial tablets and have arrived at the conclusion that the possibility of altering the bacterial flora of the intestinal tract by the use of tablets or Bulgarian sour milk is highly improbable and that the bacilli cannot be located permanently in the colon. Sewerin[2] also failed to find Bulgarian bacilli in lactobacillin. Spiegel[3] stated that the therapeutic value is at least doubtful and that the evidence of the therapeutic value of Bulgarian milk or tablets is insufficient. Oehler[4] has published the results of a series of feeding-experiments with mice and monkeys. The animals were fed with Bulgarian sour milk for eight days and the author was unable to detect any difference in the intestinal flora before, during and after the treatment, excepting that

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[1] Luerssen and Kühn: Centralbl. f. Bakteriol., Part 2, 1908, xx, 234.

[2] Sewerin: Centralbl. f. Bakteriol., Part 2, 1908-9, xxii, 3.

[3] Spiegel: Reichsmedizinal Anzelger, 1911, p. 664.

[4] Oehler: Centralbl. f. Bakteriol., Part 2, 1911, xxx, 149.

Bulgarian bacilli were found while the animals were fed with sour milk. Two or three days after feeding was discontinued, however, Bulgarian bacilli could not be found. This is in contrast to repeated statements, according to which the intestinal flora is changed and Bulgarian bacilli are permanently located in the digestive tract. Some investigators do not seem to realize that with modern bacteriologic methods only living bacteria in feces are demonstrated. More than 90 per cent. of all bacteria leaving the intestinal tract are dead and we cannot expect to find even approximately the same number from day to day by bacteriologic technic. The reduction in numbers reported by some authors and ascribed by them to the influence of the Bulgarian bacillus has no significance.

In an extensive study of commercial ferments[5] I found that most commercial preparations do not contain Bulgarian bacilli and are worthless for the preparation of Bulgarian sour milk. These findings are in accord with our knowledge of the fate of bacteria when dried. Although they may resist desiccation for considerable periods, which vary in length with different species, bacteria are more or less inactivated in time and are then easily overgrown by contaminating organisms. Commercial ferments should bear a stated time, after which they should be considered useless. There is no difficulty in determining the time limit of efficiency.

Descriptions given by some authors seem to show that they have not worked with the true Bulgarian bacillus. The following characteristics may serve as a criterion for those interested: The Bulgarian bacillus is a long bacillus of varying thickness. It stains readily with all dyes and retains the Gram stain in fresh cultures. Old cultures lose the stain by Gram's method. If the Gram stain with a red counterstain is applied, filaments may be composed of blue Gram-positive and red Gram-negative members. The filaments often intertwine so as to give the appearance of a leptothrix. With methylene-blue granules can be demonstrated, which serve to differentiate this organism from many others. It grows well on mediums containing milk constituents, particularly well in sterilized milk. On beerwort growth is poor and on the usual laboratory mediums there is no growth. This accounts for the fact that the organism has been overlooked frequently. It can be cultivated in beef-broth containing dextrose and some carbonate to neutralize the acid, which is formed rapidly. Some strains produce more than 3 per cent. acid, chiefly lactic acid. Slimy consistency of milk is observed frequently, and a slow proteolytic action occasionally takes place. The best temperature for cultivation is about 45 C., although the bacillus multiplies readily up to 50 C. The Bulgarian bacillus is a facultative aerobe.

In summarizing the subject it may be stated that sour milks are probably of value as food if used with discretion. They should be taken as part of the usual diet rather than in addition. One quart of milk contains about the same nutritive value as a pound of beef. If a quart of milk is consumed daily the amount of other food should be reduced proportionately. It is a significant fact that the warmest advocates of the use of Bulgarian sour milk emphasize the necessity of regulating the diet by reduction of meat and increase of carbohydrates and vegetables. Metchnikoff has stated that premature senility can be prevented by regular diet, decrease of meat and regular consumption of Bulgarian sour milk. There is much reason in this statement, but it should not be concluded that Bulgarian milk is a panacea and that intestinal putrefaction will be reduced unless moderation in diet is practiced. In the preparation of Bulgarian sour milk previous boiling is advisable to insure the absence of pathogenic germs and to avoid abnormal fermentations. Of prime importance is the choice of a suitable ferment. The Council on Pharmacy and Chemistry of the American Medical Association has examined a number of commercial preparations and has recommended those which were found efficient.

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# CONTRIBUTION TO THE SURGERY OF BONES, JOINTS AND TENDONS

JOHN B. MURPHY, A.M., M.D., LL.D.
President of the American Medical Association
CHICAGO

(Continued from page 1189)

### TRAUMATISM OF JOINTS

The subject of traumatism of joints can be more easily and more clearly considered by adhering to the following synopsis:

- I. Contusions: Strains, bruises, overwork, occupations, etc.
  - A. With effusion.
    - 1. Transient.
    - 2. Permanent.
    - 3. Hemophilia with hydrops genu.
    - 4. Autotoxic effusions.
    - 5. Serosanguinous fluid.
  - B. With hematogenous infection.
- II. Penetrations: Punctures, stabs, bullet wounds, etc.
- III. Lacerations:
  - A. From within, as fractures and dislocations.
  - B. From without, as foreign bodies, accidents, etc.

### *I. Contusions*

Following contusions, sprains, etc., certain changes take place in the capsule of the joint which demand surgical recognition. The effusion which follows even simple contusions may be great, produce high tension in the joint and much discomfort. It is usually transient and rapidly disappears, if the joint is placed at rest, but if the patient persists in the use of the joint, the effusion may become permanent and the condition of chronic hydrops results, which finally impairs the function of the joint, limits its motion, and while not particularly painful becomes a source of hazard and annoyance to the patient. The treatment of this condition will be considered in the management of chronic hydrops.

A still more serious type of pathologic change occurs following comparatively mild traumas of the joints—most common in the elbow, next in frequency in the shoulder, then in the ankle, knee and hip, in the order mentioned. This change is a fibrous arthritis. It is rarely associated with fracture. It presages its results by continued pain after trauma, gradually increasing in severity, limitation of motion following a contusion. If the injury is in the elbow, the patient can flex the elbow fairly well for the first five days, less in ten days, and in twenty to thirty days there is practically immobilization of the joint. In from ten to twenty weeks a bony ankylosis results without the least exostosis or thickening around the joint.

In all of my cases the patients have been free from elevations of temperature during the entire course of the ankylosis, leading me to the conclusion that the pathologic change in the synovial membrane is not due to the metastatic infections following the trauma, but to a hyperplasia of the fibrous tissue of the synovial membrane, resembling a keloid, with subsequent ossification of this thickened and infiltrated tissue. As an example I cite the following case:

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[5] The Journal A. M. A., Jan. 30, 1909, 372

Case 15.—Miss E. entered the hospital in September, 1898. Six weeks previously she had fallen backward out of a hammock that was suspended 3 feet from the ground, and struck on her elbow, with the forearm flexed at a right angle. It gave her considerable pain at the time, and when examined by a physician all motion could be executed perfectly, and there was no deviation of conformation and no evidence of a fracture. The traumatic pain subsided in a few days, but in six to eight days pain on motion began to increase in severity and persisted until complete fixation resulted.

This was her condition when she came to the hospital for examination. Careful examination at the time, and a subsequent skiagram, showed that there was not the slightest change in the conformation of any of the bony structures, and that there was complete ossific bony union. The physician who treated the case was severely criticized for the result, a matter over which he did not have the slightest control.

The shoulder is less likely to a bony ankylosis, but is more subject to a fibrous fixation. I know of no means of avoiding this evil outcome or foretelling in the early days what is going to follow, but if one is on one's guard, the outcome may be estimated on the tenth or fifteenth day following the accident.

In hemophiliacs slight injuries of the joint lead to arge hemorrhagic effusions into the joint cavity. The lood is very slowly absorbed, and the joint is left with thickened capsule, some limitation of motion and a arge knuckle joint. Slight traumas cause recurrence of he bloody effusion. Operations in this class of cases re very hazardous, as they are associated with profuse, f not fatal hemorrhage, followed by hemorrhagic infilration and great inflammatory thickening.

Autotoxic effusions are more common and will be reated under the head of infections. Serosanguinous ffusions, following trauma, have no special significance. hey are more often associated with fracture or fissures to the joint.

A secondary bloody effusion coming on weeks after e trauma and associated with enlargement of one of e bones of the joint is an indication of a malignant sease. Hematogenous infection of the joint following auma is a rare condition clinically, although experientally it has been demonstrated. Trauma is not frequently the etiologic factor in localizing tubercusis and other infective conditions in the joint.

In tuberculosis of the joint, of hematogenous origin, calized by trauma, the symptoms do not manifest emselves before three to seven weeks after the primary jury. *There is always a period of from three to seven eks of well-being in the joint, between the symptoms sulting from the injury and the symptoms announcing tuberculous infection in the joint.*

Direct infection of the joint with tubercle bacilli questionably occurs and may cause symptoms conuous with those of the primary trauma as shown in following cases:

Von G. Middledorf, in 1886,[1] reported a case of direct ection of the synovial membrane by a penetrating und inflicted with a hatchet. Excision of the kneent six weeks later showed a typical miliary tubercus of the synovial membrane without involvement of bone.

Pfeiffer reports an infection of the synovial membrane of the finger-joint following a penetrating wound received in the dissection of a tuberculous cow. The wound was not sucked and the patient had no evidence of tuberculosis previous to this.

Verneuil and Barner[2] reported tuberculosis as occurring in their assistants from wounds incurred in postmortem work.

My associate, E. W. Lee, in 1896, had a case of tuberculosis of the knuckle of the middle finger following a trauma incurred by striking it against the teeth. The tuberculosis developed before the primary wound had healed and advanced rapidly, demanding an amputation of the finger. Krause developed an infection in guineapigs by the injection of cultures into the knee-joint. He does not say whether or not he traumatized the joint in making these injections.

Direct infection of joints, without trauma, is not easily produced by pus microorganisms, as shown by our experiments. We did not make experiments with cultures of the tubercle bacilli. When pus infections are focalized by trauma, they manifest themselves usually with symptoms of acute septic infection, such as chills, high fever, great pain, effusions, delirium, great local sensitiveness to pressure and involuntary immobilization of the joint within sixty hours after the trauma. The surgical treatment of these cases will be considered under the heading of treatment of joint infections. The primary focus which gives rise to the metastasis producing the joint lesion can usually be located in the mouth, throat, respiratory and alimentary tracts, and not infrequently on the skin and external wounds.

### II. *Penetrations*

The penetration of a joint is one of the most serious accidents that can occur. These wounds may be divided into three classes: those made by (1) stabs; (2) bullets, and (3) blunt instruments. When not followed by infection, and when no gross lesion of the bone occurs, the inflammatory symptoms of effusion, pain and swelling rapidly subside and the joint returns to its normal condition.

Infection is the rule following penetration of the joint in civil practice, while in military practice infection is much less frequent. The order of pathologic sequences following penetrations of the joint, with infection, is:

1. Hemorrhage with rapid effusion into the joint.
2. Great pain and sensitiveness.
3. Local swelling.
4. Constitutional manifestations of septic intoxication.

These infections must be treated on exactly the same principle as hematogenous infections of the joints. There is associated, however, the additional danger of a fracture of the bone communicating with a septic process in the joint which is a dangerous combination. The indications are:

1. To reduce the tension of the effusion in the joint by aspiration.
2. At the same time and through the same needle to render the joint contents sterile and antiseptic.
3. To relieve the intra-articular pressure of the joint that is caused by involuntary muscular contraction.
4. To keep the external openings sealed to avoid the admission of air.
5. To avoid direct drainage of the joint.

The following example illustrates the manner in which we have treated these cases in the past seven years:

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[1] Fortschr. d. Med., 1886, p. 249

[2] Deutsch. Chir., Lieferung A.

CASE 16.—Master B., aged 11, was admitted to Mercy Hospital Aug. 29, 1906, with the following history: In the evening, a needle penetrated the knee-joint just below the patella. Patient himself removed the needle and slept well all night. The next morning he was unable to stand on his right leg on account of the severe pain in the knee; it was swollen and the limb was flexed to an angle of 45 degrees. There was no sign of superficial cellular infection, but there was a swelling, large effusion, and marked tenderness about the joint, and enlarged glands in the groin. His temperature on admission, four days after the accident, was 102.4 F.; pulse 116. He was delirious that night and showed severe general intoxication.

The morning after admission the patient was taken to the operating-room and with an aspirating syringe 10 c.c. of purulent material was removed and through the same needle 10 c.c. of 2 per cent. dilution in glycerin of liquor formaldehydi was injected. Patient was put to bed with Buck's extension on the leg and hot fomentations applied to the knee. That night he was quite comfortable; slept five to seven hours.

Three days following the first aspiration and injection the knee was again aspirated, this time removing about 50 c.c. of a serosanguinous fluid containing many flocculi of pus and fibrin, and the joint was again injected with 10 c.c. of the formaldehyd solution in glycerin. This procedure was repeated after another three days.

After the first aspiration and injection the temperature immediately dropped to 99.8 F. and at no time following this was the temperature above 100.2 F. Ten days after the first aspiration and injection the temperature became normal and remained so throughout the convalescence. Four weeks after the injury the patient was allowed to get up, and massage of the knee was instituted. Patient left the hospital eight weeks after the first injection with a perfectly functionating knee-joint.

I have had similar results with this treatment following injuries caused by meat- and freight-hooks, adze wounds and nail and wire penetrations. In none of these cases, unassociated with fracture, was a drainage-tube necessary in order to overcome the infection.

It is my conviction *that penetration infections of a joint should never be treated by free or tubal drainage when unassociated with a fracture.* A joint that is opened and freely drained for infection has in 96 per cent. of the cases, as a final result, ankylosis or synechiæ of its synovial membrane. *I have stated this law, that all the serous lined surfaces will not tolerate exposure to air or contact with foreign bodies for any considerable length of time without destruction of their endothelial cells.* Adhesions follow and ankylosis results. Therefore, when the operator determines to open and drain a joint, he agrees with himself that the best result he can hope to obtain is a bony or fibrous ankylosis and this is about the worst result that the patient could get (except death), even without surgical intervention, which was not very flattering to the previous plan of treatment.

### *III. Lacerations*

Compound lacerations from without inward are much more frequently followed by infections of the joints, as the foreign body carries into and implants within the joint the infective material. In these cases the field of injury, but not the wound, should be immediately swabbed with tincture of iodin. The opening should be enlarged with the scalpel and the traumatized, lacerated and soiled zone should be dissected out carefully with the aid of the chisel, forceps and scissors. Care should be taken not to handle, rub, sponge or touch any uninjured tissue of the joint, particularly the synovial membrane. The abraded surface of bone should be covered with the thinnest possible layer of a Moorhof plug. The capsule of the joint should then be accurately sutured, covering the entire opening of the joint, if possible, otherwise a flap of fascia and fat or muscle should be transposed so as to cover it completely.

An immediate injection of 10 to 20 c.c. of 2 per cent. dilution in glycerin of liquor formaldehydi that has been mixed at least twenty-four hours before, should be made through an exploratory needle inserted from the opposite side.

This produces an immediate local immunizing response against infection:

A. By rendering the effusion not only aseptic but antiseptic—an unfavorable culture medium.

B. By producing a cellular infiltration on and in the synovial membrane, coffer-damming its lymph-spaces and protecting the tissue against bacterial invasion.

C. By producing an immediate pronounced polymorphonuclear leukocytosis (1) in the synovial membrane, and (2) constitutionally. These cells increase from 20 to 90 per cent. within forty-eight hours after the injection.

This latter I believe is the most important factor in the prevention of infections of the joint. I have demonstrated this leukocytic response by aspirating the fluid twelve, twenty-four, forty-eight and seventy-two hours after injection. The synovial infiltration has been demonstrated by experiments to be cited later. The ligaments and freshened margins of the skin should be approximated; a rubber tissue drain without gauze should extend down to but never into the joint.

If the effusion and tension in the joint are great, it should be aspirated in from twelve to twenty-four hours. If the temperature is high, it should be followed by a second aspiration and formaldehyd in glycerin injection. The joint should not be kept open or drained. It must be immobilized completely by an extension adequate to produce a separation of the articular surfaces of the joint.

To show the advantages of the immediate closure of the joint and injection treatment following lacerations, I cite the following case:

CASE 17.—Mr. R., aged 24, entered the hospital Jan. 8, 1911, with the following history: While working in an entrance way to a tunnel, a railroad engine approached him at a rapid rate and was so near he could not escape. On the spur of the moment he caught hold of the driving rod of the wheels of the engine and was dragged a considerable distance, jerked up and down with the motion of the driving rod and sustained the following injury to his right knee: A deep lacerated wound on the outer side of the knee-joint exposing the entire half of the patella, tearing the capsule and laying the joint open. On examination it was found that the entire wound and joint cavity were covered with dirt and small particles of cinders. The wound was cleansed with tincture of iodin, care being taken not to apply the solution to the exposed joint surface. There was no scrubbing of the wound but a dry sterile dressing was applied. Patient was given 1,500 units of the anti-tetanic serum and put to bed.

About twelve hours after entering the hospital the patient was taken to the operating-room where the wound was freely swabbed with tincture of iodin, care being again taken to avoid its application to the joint surface. With sterile scissors and tissue forceps all the loose fragments and muscles were removed, and the ragged edges of the skin, fascia and capsule were trimmed off. The capsule and fascia were sutured with phospho-bronze wire, and the skin was sutured with horsehair. A small strip of rubber tissue allowed the drainage of the subcutaneous structures, but did not extend into the joint.

Another application of iodin was made over the entire surface and 10 c.c. of 2 per cent. dilution in glycerin of liquor formaldehydi injected into the knee-joint with the regular injecting needle, and the punctured wound sealed with collodion. A dry dressing was applied and the patient was put to bed with a Buck's extension of 25 pounds on the leg.

The temperature on the following day ranged from 98.6 to 99 F.; on the second day from 98.2 to 99.6 F.; on the third day from 98.2 to 99.2 F.; on the fourth day the temperature was normal and remained so until the patient left the hospital. The small tissue drain was taken out on the third day and the stitches were removed on the fifteenth day, with primary union of the skin. It was found unnecessary to aspirate or inject the joint subsequent to the first injection at the time of the operation.

The extension was taken off at the end of four weeks and the patient was allowed to be up and about. Five weeks after the injury the patient left the hospital with a perfectly functionating knee-joint.

Contrast this result with the following case, which shows the evil effects of drainage. In the bullet wound cases and after disinfecting and freshening of the external portion of the tract, and the removal of the foreign body, if indicated, the closure of the joint should at once be effected, and the joint filled with the formaldehyd in glycerin immunizing solution. The same rules for subsequent action should be observed regarding the temperature and synovial tension as in the other joint infections or exposures.

Case 18.—In 1886, Officer B., of the Pinkerton Detective Force, was shot through the right knee-joint with a 38 caliber Smith & Wesson revolver. The internal tuberosity of the tibia was fractured. The track of the bullet was freshened with tissue forceps and scissors witnout washing, the wound enlarged down to and including the synovial membrane, and the capsule and canal accurately sutured. The skin orifice was also closed and a Buck's extension of 15 pounds applied to the leg. The temperature reached 104 F. on the following day. The joint was aspirated without injection and the temperature dropped two degrees. The second day the temperature rose to 103.2 F. Following aspiration it dropped to 101.5 F. The fourth day it reached 102 F.; following aspiration it dropped to 99.6 F. At no time subsequently did it exceed 101 F. Convalescence was complete without further aspiration and the functional result in the joiint was perfect.

In the same period in my Cook County Hospital service, we had numerous bullet wounds of joints treated by drainage, flushing, disinfectants, etc., and in the great majority of cases the patients were intensely ill, the process of repair and convalescence was slow, the functional results in the enormous majority of cases was imperfect, and in several ankylosis resulted. We had not then learned the evil significance of surface trauma to serous membranes, nor did we avoid sponging, rubbing, handling, flushing or unnecessary drainage. Neither did we fully appreciate the significance of the avoidance of ntra-articular pressure from involuntary muscular contractions in acute infections.

Compound lacerations of joints may take place from within outward by fracture, luxation, over-extension or lexion. When these occur, if the fragments of bone are driven out through the boot or clothing, they may ecome seriously infected and death may follow such nfection in a very short time.

In 1879, during my internship in the Cook County Hospital, a patient was admitted with a compound posterior dislocation of both knee-joints. The internal ondyle had been driven out through the skin behind. The openings were only buttonhole in size and there was no fracture. This occurred in the pre-antiseptic period. The following day the patient had a chill, followed by a temperature of 104 F., great swelling of the joints and a seropurulent discharge from the opening. The high temperature continued and the patient died from acute sepsis seventy-six hours after the injury.

So serious were the compound dislocations and fractures at that time that Billroth, in his masterly work on "Surgical Pathology and Treatment," edition of 1876, advised immediate amputation in all of these acute cases. Contrast that line of treatment and its result with the present management and the favorable sequences. It must be borne in mind, however, that the same virulent microorganisms exist as formerly; that the same opportunity for infection exists, and that the bones and joints have the same susceptibility to infection, and that there is now no greater constitutional or local resistance, and we must conclude that the favorable results are due to the present line of treatment. That carries with it the significance of the immediate and exact exercise of each and every step in the treatment of these cases. They are vital to the outcome, and the overwhelming force of numbers of good results make their fulfilment in each case obligatory on the profession.

In the management of this class of cases the essential points are:

1. The field should be rendered sterile without washing the area with solutions or disinfectants of any kind. All of the disinfectants used in the neighborhood of any wound tend to infect it. Tincture of iodin renders it sterile without danger of infection.

2. The protruding bone should be cleansed with tissue forceps, scissors and chisel, not with solutions. Care should be taken not to touch any portion of bone or joint with sponge, fingers or foreign bodies.

3. The reduction should be made with the least possible trauma.

4. The opening into the joint should be closed with accurate sutures of the capsule, ligaments and skin, preferably with wire sutures, and without drain; the joint should be injected with 10 to 20 c.c. of formaldehyd-in-glycerin solution and completely immobilized, with extension in the case of the hip, knee, elbow and shoulder injuries. For two or three days following, there will probably be some elevation of temperature, but unless it is very high and the pain in the joint great, the dressings should be undisturbed.

When the temperature is high and the effusion great, aspiration of the joint through the needle should be resorted to and the formaldehyd injection repeated. The aspiration may be repeated in from twelve to twenty-four hours if the pain is severe, but the injections should not be repeated before twenty-four or forty-eight hours unless the temperature continues high. By repeated aspirations and occasional injections the case can be conducted to an aseptic process of repair.

If the sutures give way and the joint will not hold the solution of formaldehyd in glycerin, the effect of the treatment is greatly diminished, and the case should be treated as a compound open infection of the joint. In extensive fractures, associated with compound injuries of the joint, it must be borne in mind that the freshened bony surfaces are much more susceptible to infections with serious constitutional results than the synovial membrane, and, further, that the fractured bony surface has no such non-absorbing fibrous capsule beneath it as the synovial membrane possesses; in other words, that the danger to the life of the patient is greater than from infections of the joint, and may demand early drainage when symptoms appear. The individual injury equation and the experience of the surgeon must guide him in the decision when and where drainage should be instituted.

The limb should be placed primarily in the best position for subsequent usefulness should ankylosis result. The anatomic conformation of the limb after these injuries is entirely within the control of the surgeon, if he gives it adequate attention in the initial days of the infection. These compound fractures should never have a foreign body support inserted at the time of injury, such as wire, plate or nails, as such a procedure greatly increases the danger of infection.

In the management of all these cases the simplest conduct meeting the positive indications produces the best results and may be summarized as follows:

1. Disinfection of the outer surface of the wound area with tincture of iodin.
2. The enlargement of the wound and mechanical disinfection down to the synovial membrane, with the removal of all the traumatized and lacerated structures.
3. Accurate suture of the synovial membrane and overlying structures, with possible capillary drainage of the latter.
4. Immediate closure of all openings in the joint. If tissue has been torn away a flap should be used to cover the exposed joint.
5. Immediate and complete immobilization of the joint.
6. All chemical disinfecting solutions and isotonic salt solutions should be avoided in this work.
7. Early extension to prevent articular contact for days or weeks after the injury.
8. Passive motion should be undertaken early and frequently, and should be painless.

### FRACTURES INTO OR CLOSE TO THE JOINTS
### (NOT COMPOUND)

The changes that take place in fractures near the joint are:

1. Hemorrhage.
2. Effusion into the joint, with the development of infiltration and thickening of its synovial membrane; the coffer-damming of the lymphatic and intercellular spaces with lymphocytes.
3. Absorption of fluid contents and infiltrating products in the substance of the synovial membrane.
4. The formation of exostoses from the periosteum and bone ends.
5. Ossification of the periosteum and the periarticular fibrous capsule combined. The latter occurs only in spirochetic or tabetic cases.

The local immunity effect of trauma against infection is produced by the elements mentioned above. Advantage may be taken of this local tissue immunity in all operative procedures on joints following injuries. It reaches its maximum between the eighth and twelfth days. We first recognized its surgical import in fractures of the patella.

In the fifteen years, between 1880 and 1895, operations for fractures of the patella were done *immediately* after the injury under antiseptic (after Lister) and later under aseptic precautions, with a too common resultant infection of the joint. Then it was gradually learned by observation that joints operated on late, on the tenth to the fifteenth day, were much less likely to become infected, or have large effusions following the wiring of the patella, than those operated on early.

The explanation for this immunity lies in the changes or inflammatory reaction induced by the trauma and blood in the joint, as observed macroscopically and demonstrated microscopically in fragments of synovial membrane removed under these circumstances. This led me seven years ago to the adoption of the prophylactic or chemical irritation of the joint immediately after the injury preparatory to surgical intervention. In the knee and hip I injected 5 to 15 c.c. of the formaldehyd-in-glycerin solution immediately after the injury, and operated seven to ten days following the injection. Since the adoption of this plan I have not seen a case of joint infection following the repair of fracture of the patella or any other type of fracture not previously compound or involving the joint. With this procedure there is not even a perceptible hydrops following the operation. In late operation for fracture of patella I always use the local immunizing injection.

### ARTHRITIS—INFLAMMATION OF THE JOINTS

The factors of destruction of tissue in infections of the joints are similar to those causing destruction in other tissue infections, with the exception of the variations in vascularity in the synovial membrane and the comparative absence of vascularity in the fibrous capsule. They may be enumerated as follows:

1. Virulence of the microorganisms producing the infection.
2. The minus resistance of the patient.
3. Retention of infection products—pus under pressure, causing ischemia of the synovial surface thus favoring the biotic and toxic necrotizing effects of the microorganisms.
4. The intra-articular pressure of the inflamed joint surfaces by the involuntary muscular contractions in its effort to immobilize the inflamed and painful joint.

The rôle played by each of these elements may vary in different joints and under different circumstances, but they essentially control all the destructions resulting from infections, whether (a) these occur as a result of lacerations and penetrations and direct infection admitted into the joint from without—traumatic infections, or whether (b) they are carried through the blood and lymph streams into the joint—hematogenous and lymphatic infections.

There are only two tissues in and at the joint that are the seats of primary infection, whether traumatic or hematogenous, and these are the synovial membrane and the bone. The cartilage and fibrous capsule are never the seats of primary infection.

In the traumatic cases, penetrations, punctures, etc., the infection is of the subendothelial layer after the endothelial cells have been destroyed by trauma or erosion. The hematogenous infections of the joint *never take place on the synovial surface,* but in the capillary and lymph layers of the synovial membrane, always beneath the endothelial layer.

In infection of the joint, either synovial or osseous, effusion takes place into the joint from the periarticular infarcts, long before microorganisms appear on the synovial surface or in the fluid, as in the following:

1. In tuberculosis of a bone in the neighborhood of a joint, effusion is present weeks or even months before the tubercle bacilli appear in the fluid of the joint cavity.
2. In metastatic osteomyelitis near a joint, effusion occurs and remains for weeks and months without the microorganisms ever appearing in the joint.

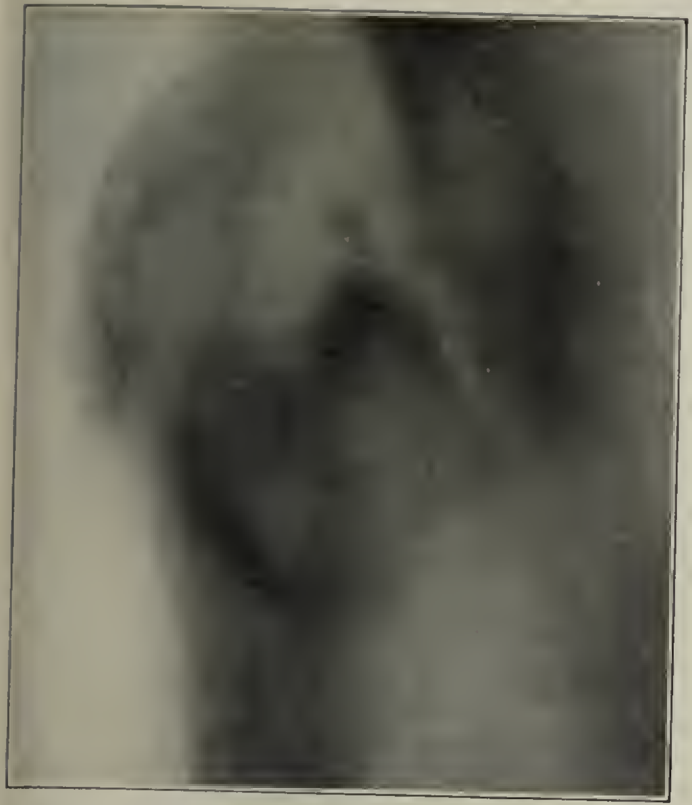


Fig. 81.—Charcot hip with fracture of neck of femur and a large mass of bone near anterior superior spine of ilium, representing ossification of capsule.

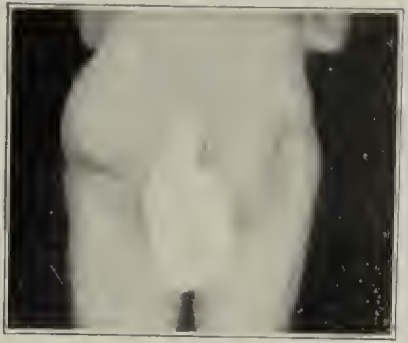


Fig. 82.—The large mass over the left hip is very evident.

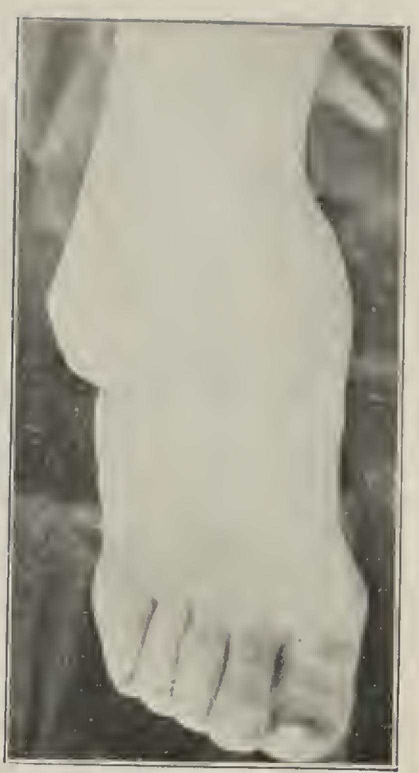


Fig. 83.—Charcot ankle with great lateral displacement outward.

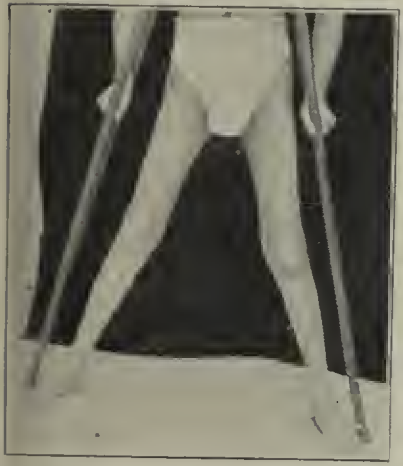


Fig. 86.—Showing range of voluntary abduction in same case and ability to bear weight on hip. Same case as Fig. 84.

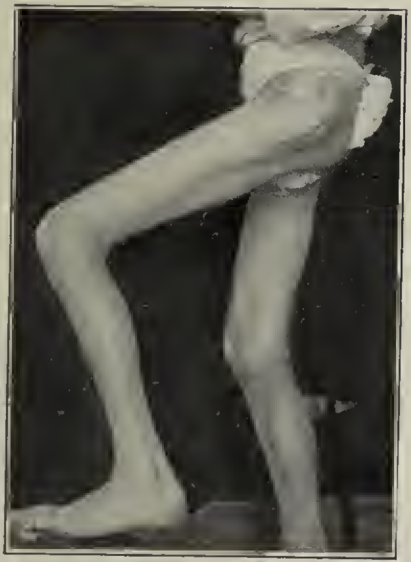


Fig. 87.—Voluntary forward motion in hip. A considerable degree of rotary motion was also present. Same case as Fig. 84.

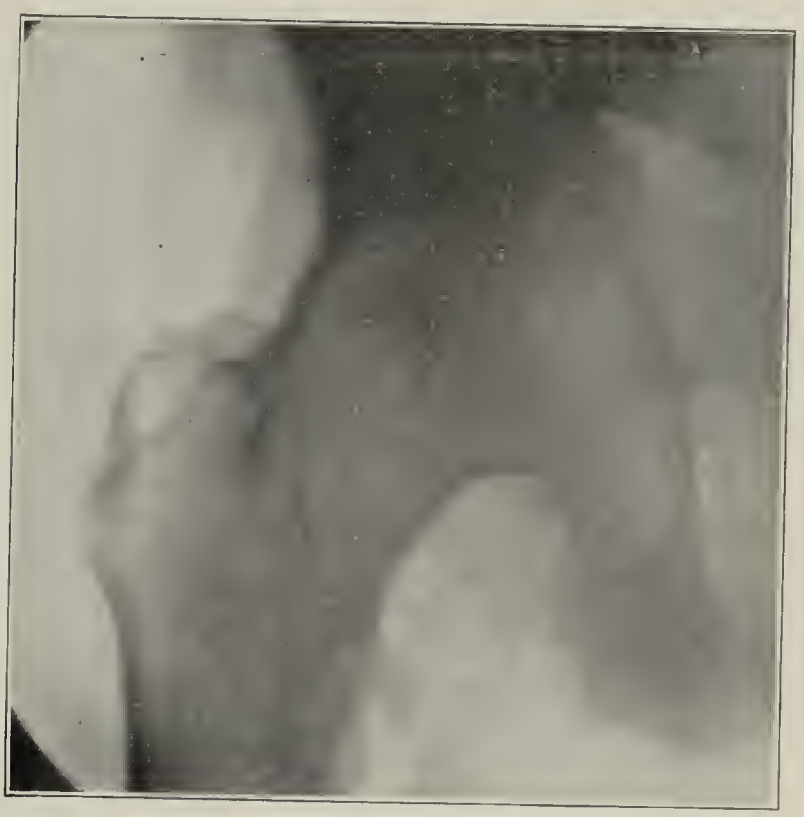


Fig. 84.—Complete bony ankylosis of hips of eleven years' duration, result of metastatic gonorrheal arthritis.

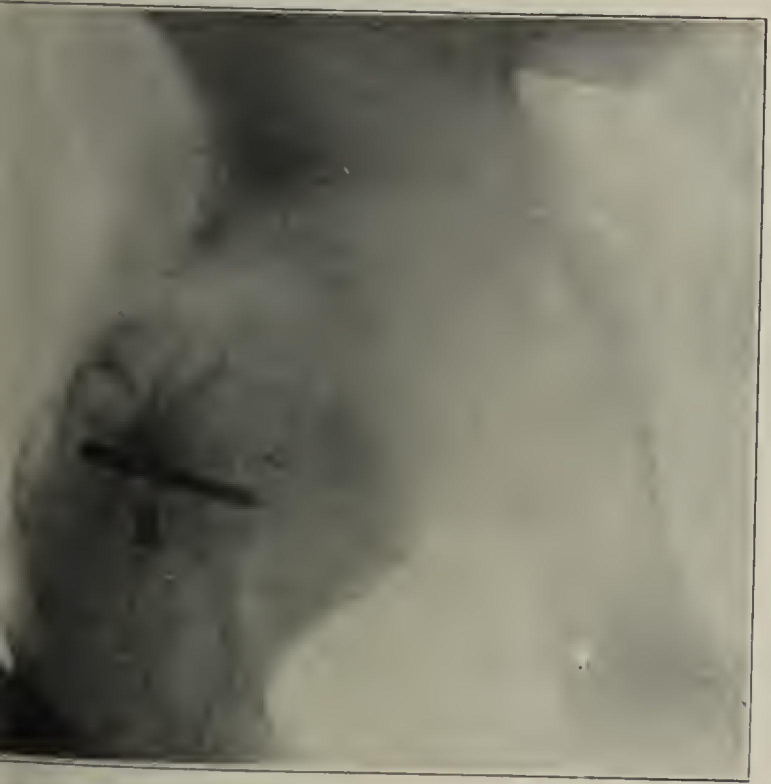


Fig. 85.—Left hip shortly after operation. Fascia lata ap interposed; anatomic conformation of joint restored. ail is driven through great trochanter, which was removed ring the operation.

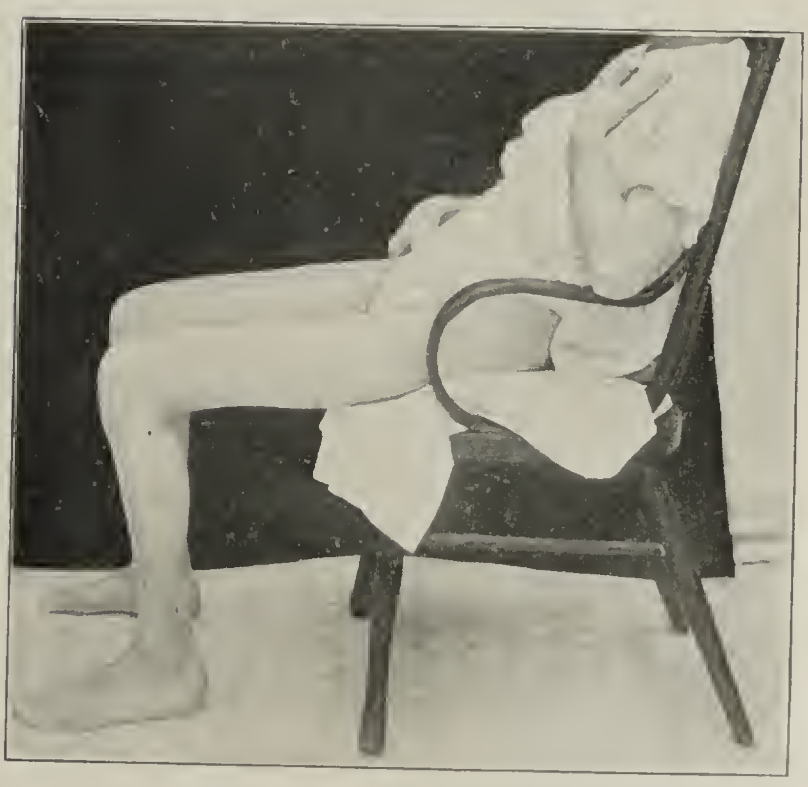


Fig. 88.—In semisitting position for first time in eleven years.

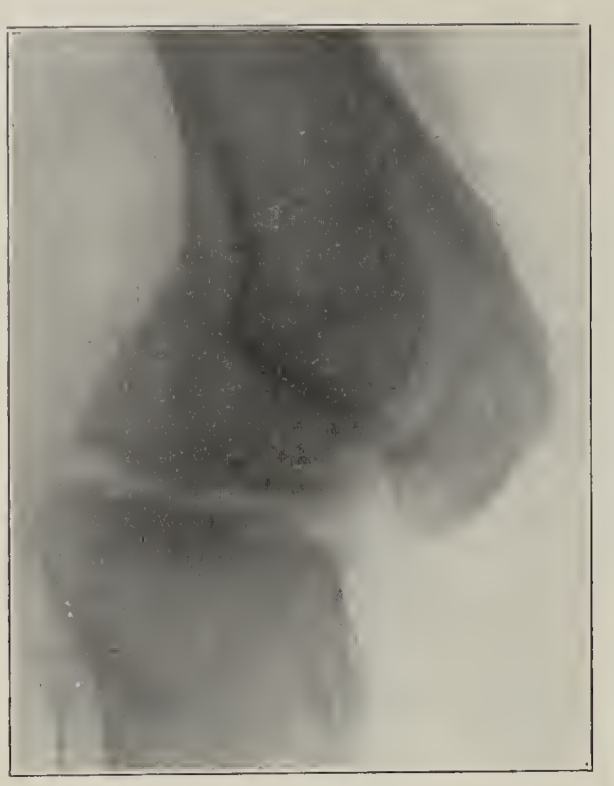


Fig. 89.—Bony ankylosis between tibia and femur and patella and femur of eighteen months' duration, with considerable flexion of knee.

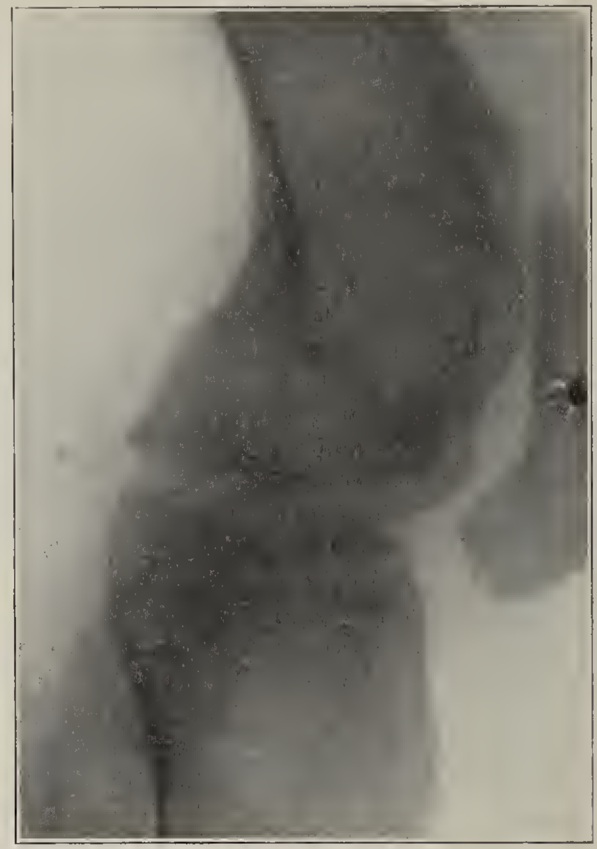


Fig. 90.—Same, one month after operation.

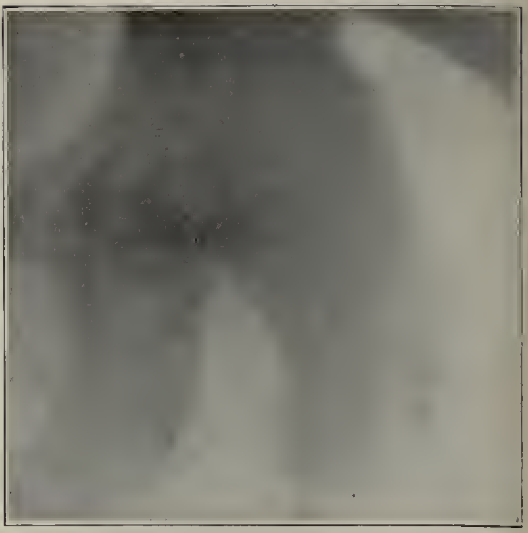


Fig. 92.—Bony ankylosis of right hip, of four years' duration, result of pelvic infection.

Fig. 93.—After the arthroplasty, two nails being used to replace the trochanter. In this case a hematoma developed. The patient made a splendid recovery.

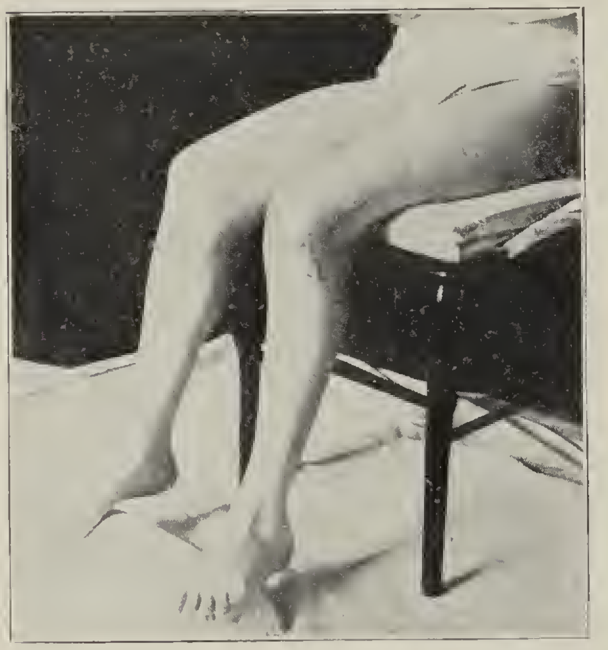


Fig. 91.—Voluntary flexion fourteen months after operation.

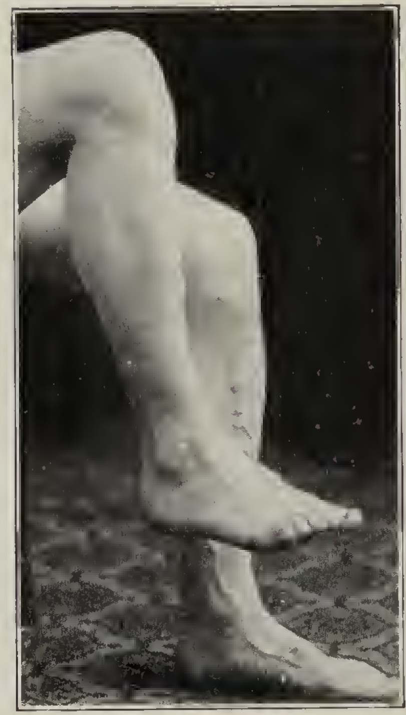
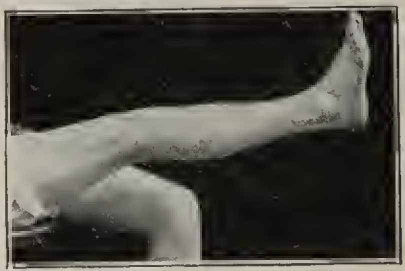


Figure 96.



Figs. 96 and 97.—Removal of patella; perfect flexion and extension.

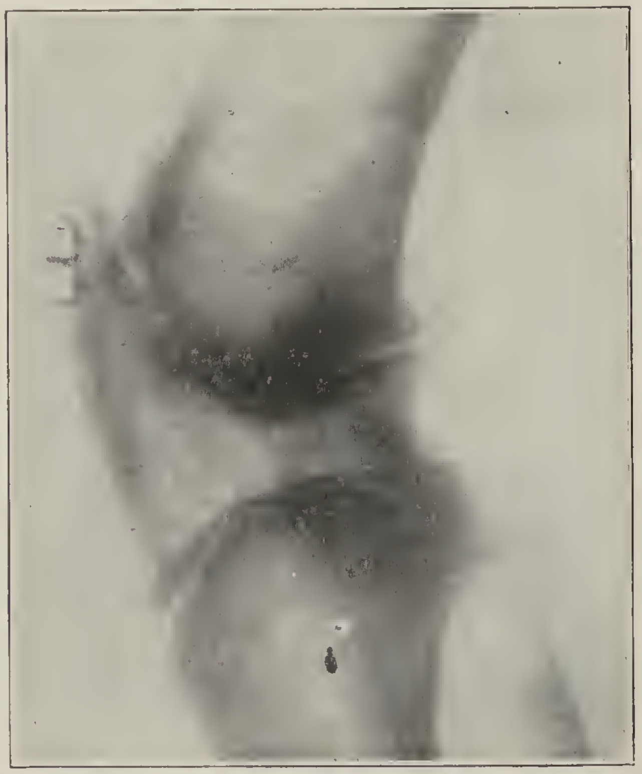


Fig. 98.—Bony ankylosis of tibia and femur with fusion of patella and femur and considerable flexion at knee and displacement of lower leg outward.

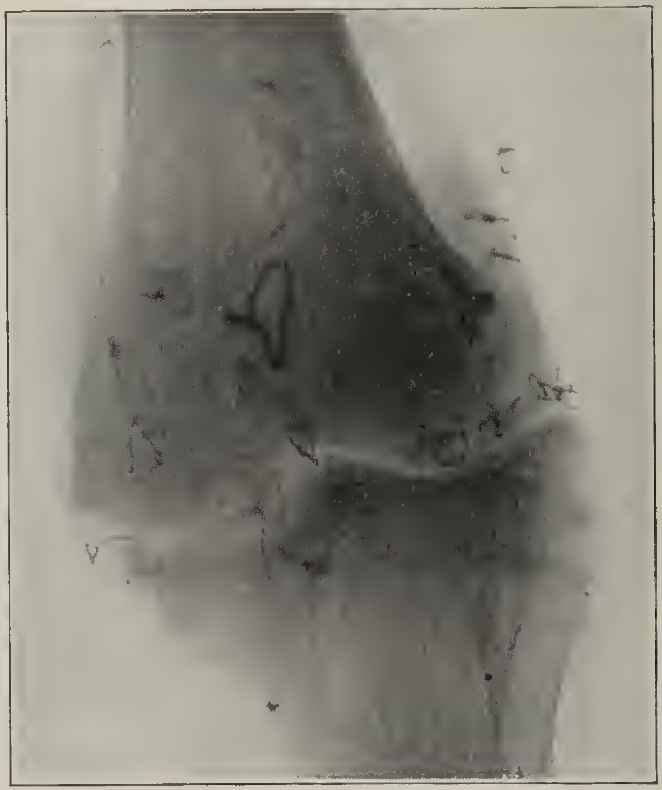
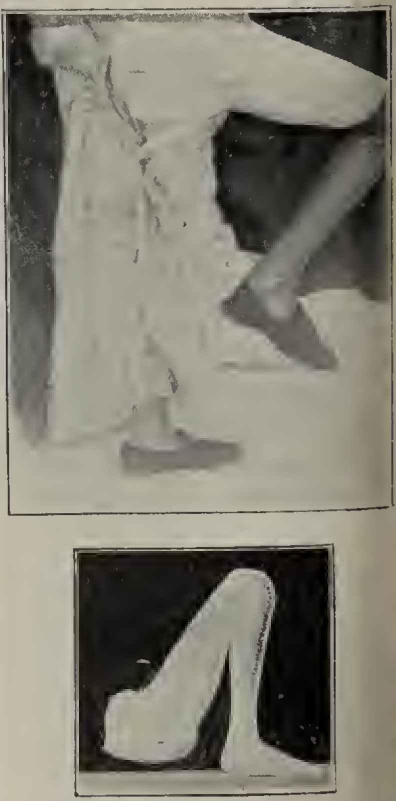


Fig. 99.—Same knee about six weeks after operation; anatomic restoration of joint.



Figs. 94 and 95.—Four months after operation there was great latitude of voluntary motion.

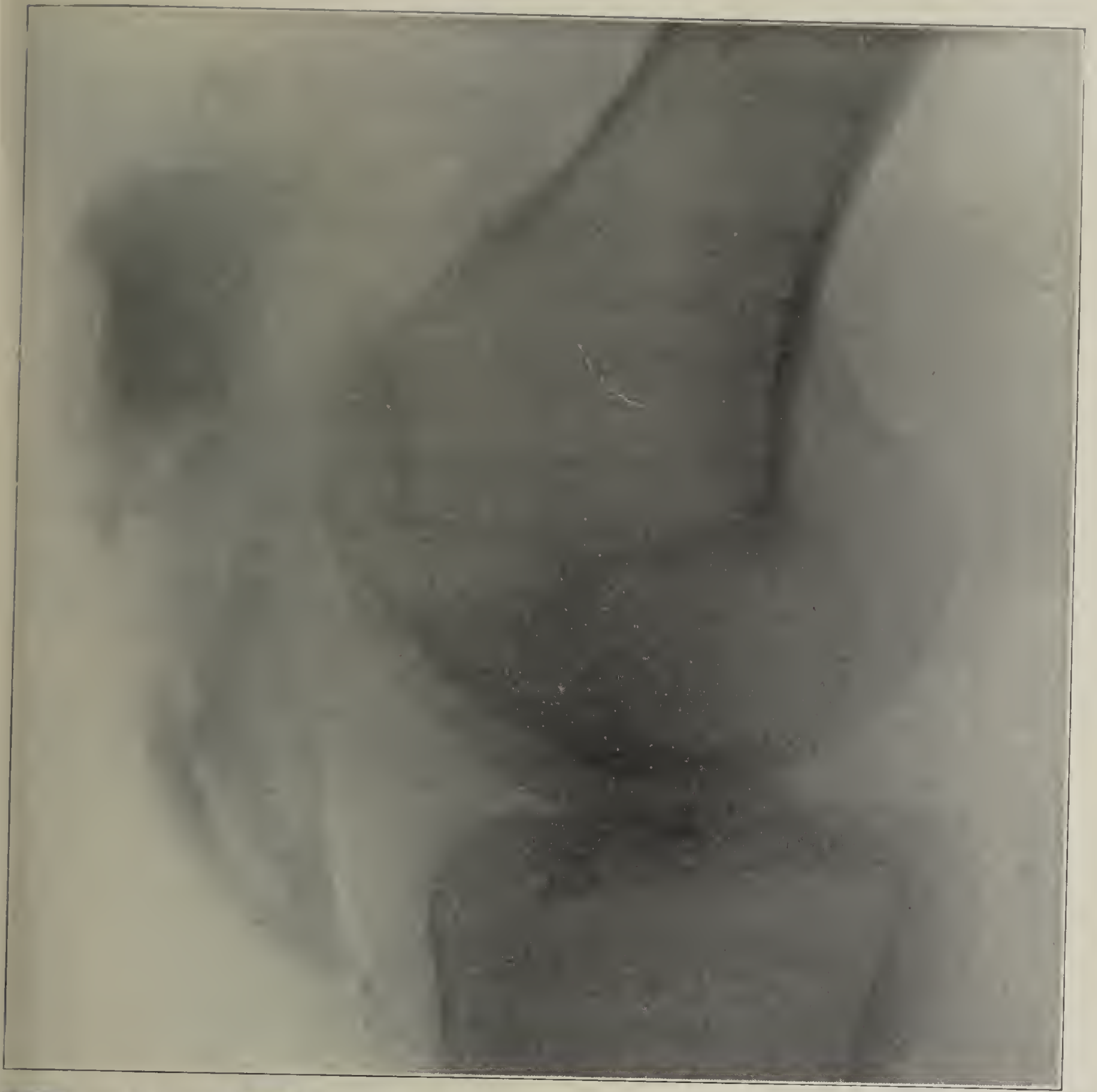


Fig. 101.—Tuberculosis of the patella with pathologic fracture. No involvement of joint. The patella with its bursa was removed.

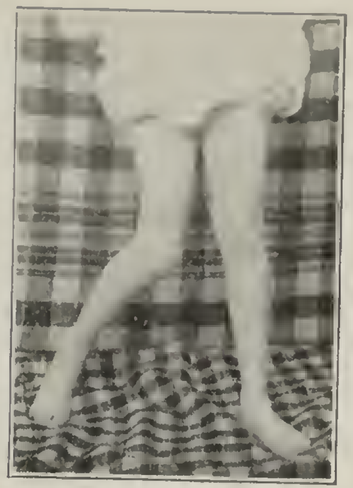


Fig. 100.—Position of leg in this case (Figure 99) before operation.

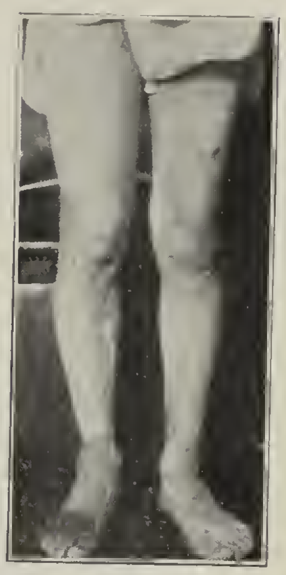


Fig. 102. — Same case. Perfect symmetry of legs; no deformity; no loss of function.

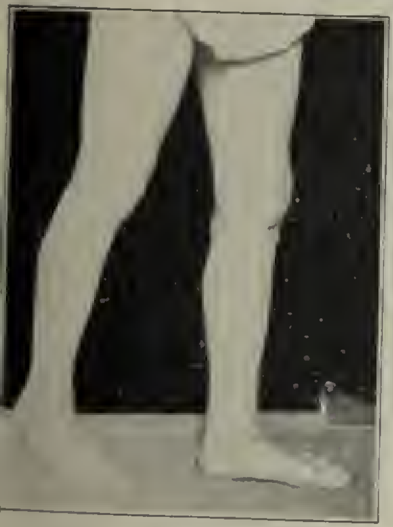


Fig. 104.—Full weight of body placed on left leg after removal of semilunar cartilage.

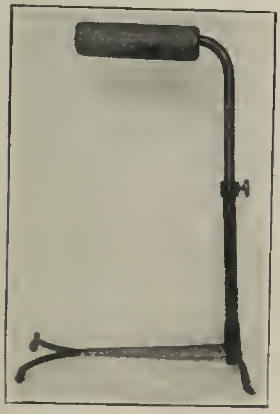


Fig. 103.—McCauley adjustable apparatus for instituting early passive motion after arthroplasty on the knee-joint. The height of the stand is adjustable. The leg is laid on the wooden roller and a weight is attached to the foot or the leg can be bent at the knee otherwise.

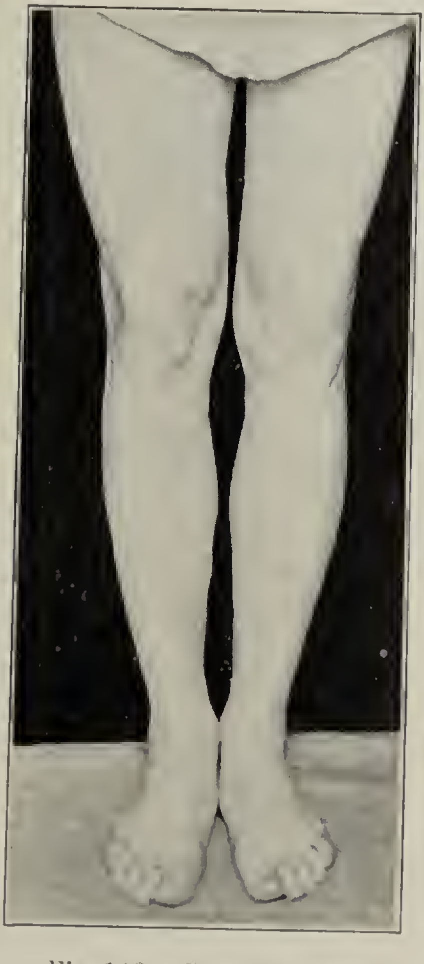


Fig. 106.—Symmetry of both knees in same case; no deformity. (In this connection, see Figures 107 and 108 on page 1263.)

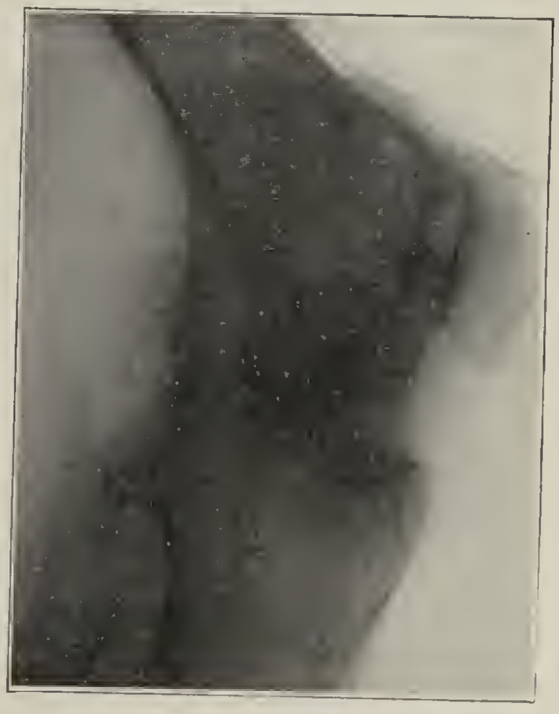


Fig. 109.—Bony ankylosis of right knee with flexion of ten months' duration, the result of an infection of a finger.

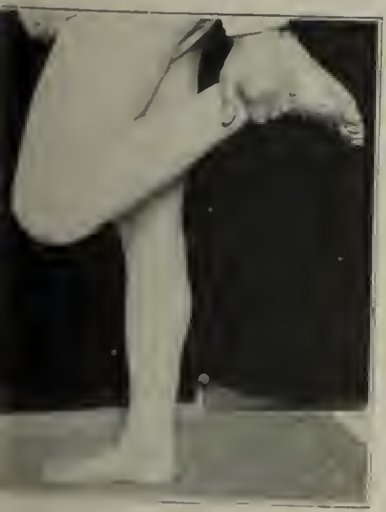


Fig. 105.—Perfect flexion.

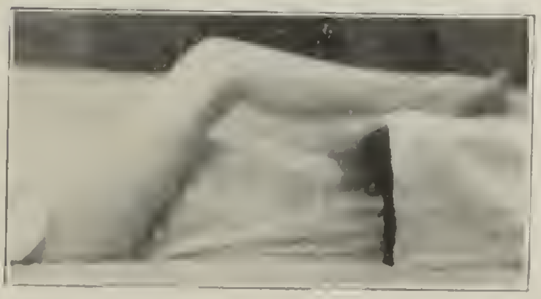


Fig. 110.—Position of leg in this case.

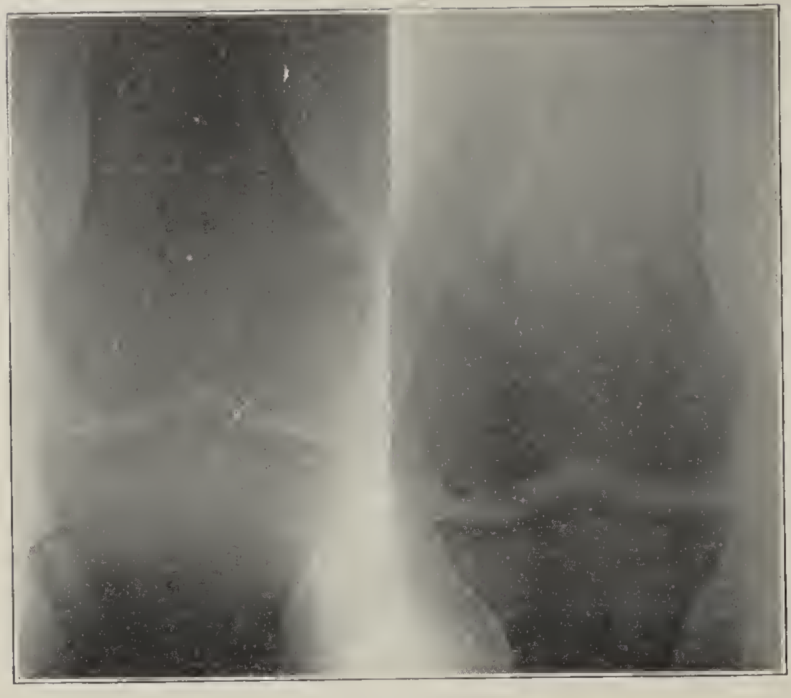


Fig. 111.—Both knees from behind. On the right, the knee operated on. The anatomic conformation of this knee is perfect, as comparison with the normal knee shows. The knee operated on can be distinguished by the fact that because of the chiseling done on the upper extremity of the tibia the head of the fibula has been brought nearer the articular surface.

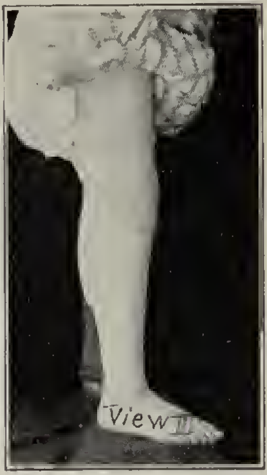
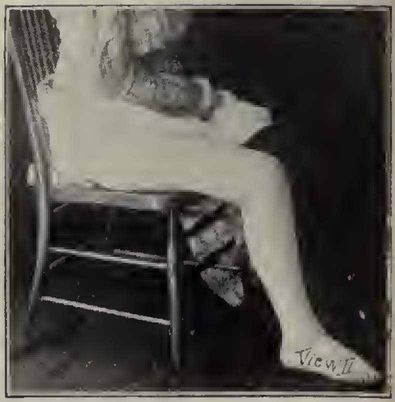


Figure 112.



Figs. 112 and 113.—Perfect extension and flexion eight weeks after operation.

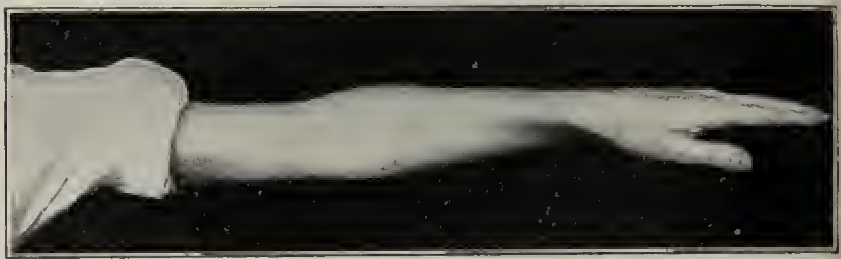
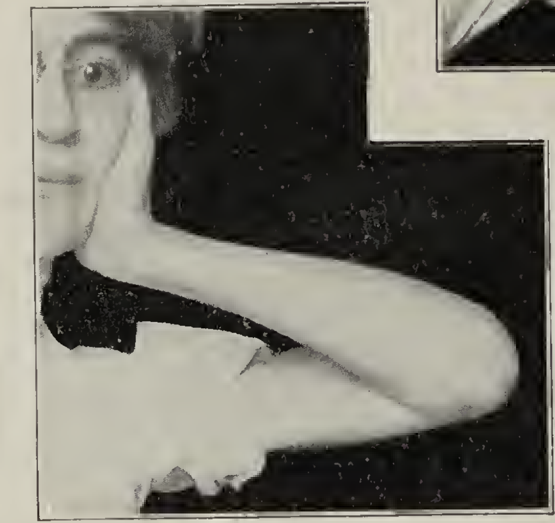


Figure 116.



Figs. 116 and 117.—Full extension and flexion of arm with perfect pronation and supination eighteen months after operation. No return of ankylosis.

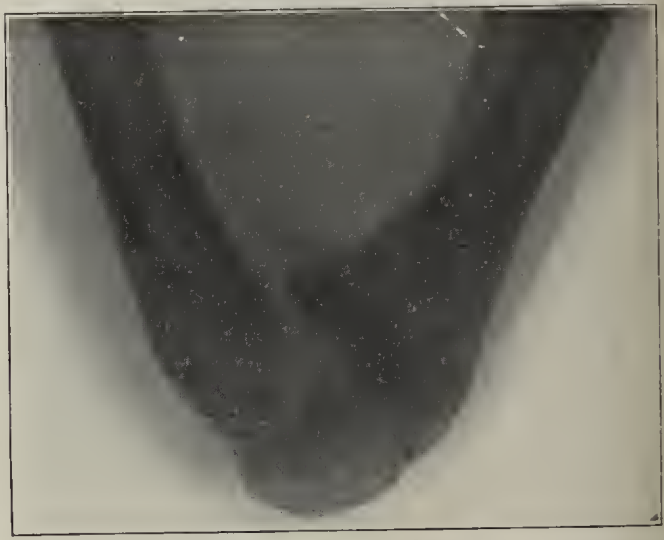


Fig. 115.—Eighteen months after operation; full flexion of arm with an anatomically as well as functionally normal joint.

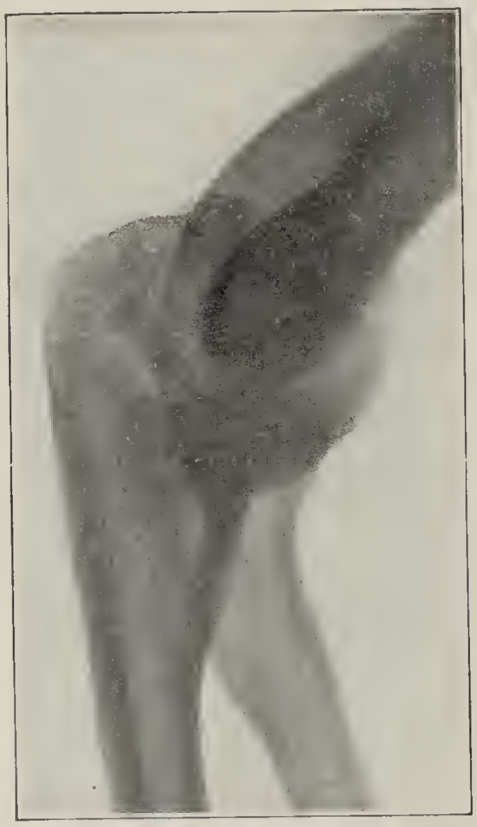


Fig. 114.—Bony ankylosis of ulna and humerus and radius and humerus of two and a half years' duration following intranasal operation. Arm flexed at acute angle.

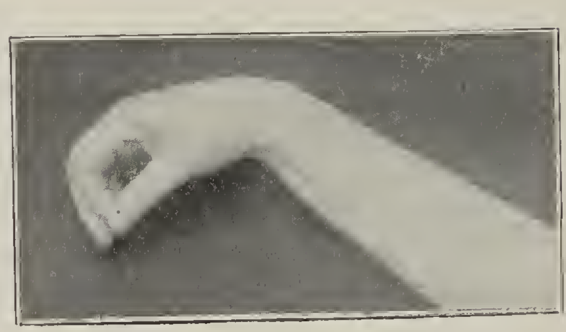
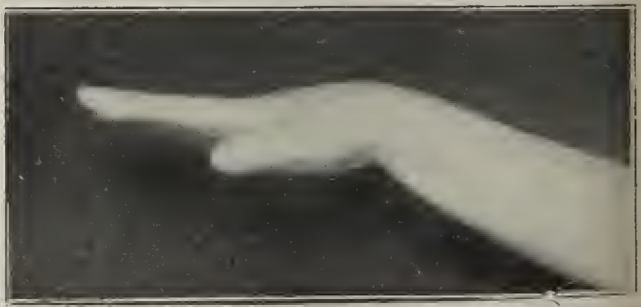


Figure 119.



Figs. 119 and 120.—Flexion and extension of wrist shortly after operation.

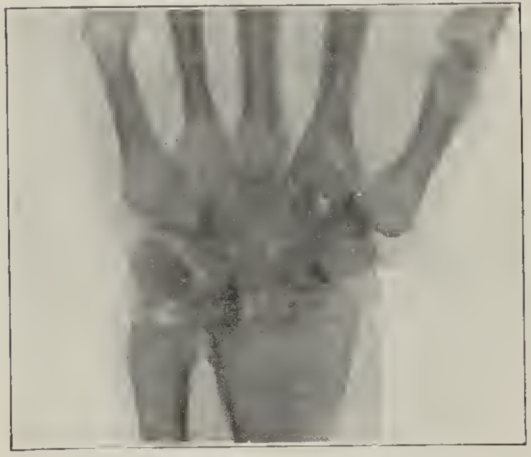


Fig. 118.—Bony ankylosis between radius and scaphoid of one year's duration. One-third inch of articular end of radius was removed and flap interposed.

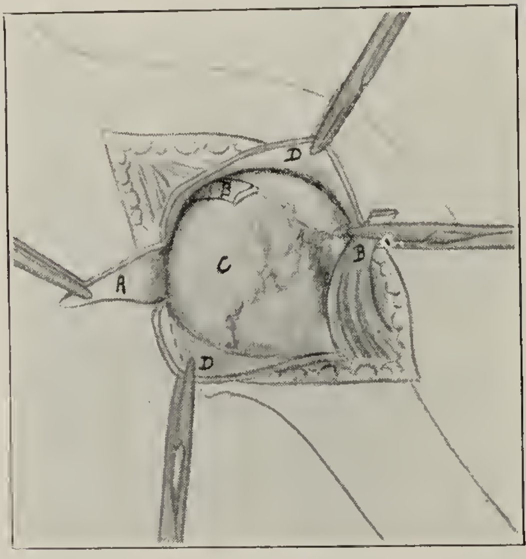


Fig. 121.—Diagram of shoulder arthroplasty. A. Triangular sector or flap capsule to be sutured into surgical neck of humerus for the purpose of helping to retain the head of the bone in the glenoid cavity. B. Long head of biceps, cut. C. Head of humerus. D. Capsule, split open and slipped into glenoid cavity under head of bone to serve as interposing flap.

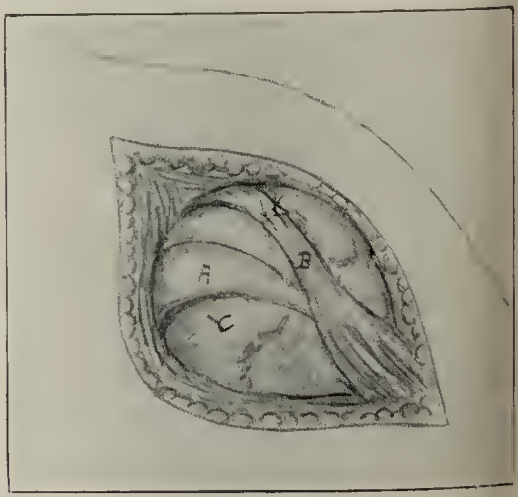


Fig. 122.—Operation completed. A. Capsule flap. B. Long head of biceps. C. Head of humerus. Ready to close wound; the deltoid muscle will be sutured over the exposed parts and also aid in maintaining retention of head of bone in glenoid cavity.

3. Periarticular infections of the pneumococcic type in children are accompanied by great articular effusion, but no pneumococci are present in the fluid.

4. In practically all metastatic infections of the joint the subendothelial layer is primarily involved and holds the microorganisms for hours or days before they gain entrance to the fluid in the joint cavity. Streptococcic infection is an exception to this rule, as the cocci run freely through the lymph spaces and enter the fluid of the joint early.

5. Cultures and smears made from fluid aspirated from inflamed joints give negative results in the early stage, notwithstanding the great quantity of fluid present.

### MULTIPLE ARTHRITIS

Case 19.—*Patient.*—Mr. W., aged 32, was admitted to hospital April 23, 1906. Family history was negative. He had had the ordinary diseases of childhood, and four attacks of specific urethritis between 1891 and 1897. There were no local complications. He had lues in 1895. He was treated regularly for four years, and had no recurrence of symptoms.

*Present Trouble.*—In 1897, while currying a horse, patient accidentally stubbed the index-finger of left hand. This caused considerable pain in the metacarpophalangeal articulation. It was somewhat swollen and tender. This occurred just about the time patient was recovering from last attack of specific urethritis. There was not a great deal of pain in the joint but it continued to feel sore and slightly enlarged. There were no further symptoms until 1902, at which time patient began to feel a slight pain and soreness in left knee. At first he felt soreness only when getting in or out of his buggy. In about a month it began to pain him quite severely, but he did not go to bed. Almost immediately after or simultaneous with the acute onset of pain, the knee became stiff and swollen. The swelling was so great that the patella could not be seen. There was no redness of the skin but tenderness was excessive. There was no constitutional disturbance except loss of weight. The stiffness in the limb would leave after walking a few blocks, but would come back after a few minutes rest. Within two weeks after the onset of acute symptoms in the left knee, the right knee became involved similarly. Seven or eight months afterward both elbows became involved similarly, but the swelling was not so marked. Shortly afterward both shoulders were affected and in the course of about a year both ankles were similarly affected; then the temporomaxillary joints, and there was some tenderness in the seventh cervical vertebra and the dorsal down to the second lumbar. For the first four or five months after the involvement of the joints, the pain would be intense, most severe about 3 a. m. During the past year the symptoms have been practically stationary with the exception of an occasional pain in the ankles. There was none in the other joints except on motion. Until the last year the patient lost 45 pounds in weight.

*Examination.*—This revealed, first, an almost continuous ain of subacute character in knees, ankles and elbows; econd, stiffness and limitation of motion in the joints menioned; third, very severe pain and sensitiveness on motion; ourth, some swelling and marked tenderness.

*Treatment.*—The left knee, ankle and elbow were injected ith iodoform, formaldehyd and glycerin solution. This aused excruciating pain for about two or three days. Hot omentations were applied. Buck's extension was applied on e limb for about three weeks. After about three days the ght knee, angle and elbow were injected. Hot fomentations d extensions were applied.

*Results.*—At the end of seven days after the joints were jected, they were free from pain and soreness; tenderness pressure practically gone, stiffness disappearing, range of otion gradually increasing. By May 1 there was no stiff-ss, no tenderness, no pain of any kind in the joints. Range motion in all the joints was improved as follows:

| | | |
|---|---|---|
| Left elbow before injection......... | 31 | degrees |
| Left elbow after injection.......... | 50 | degrees |
| Right elbow before injection........ | 31 | degrees |
| Right elbow after injection......... | 50 | degrees |
| Left knee before injection.......... | 6 | degrees |
| Left knee after injection. .......... | 29 | degrees |
| Right knee before injection......... | 6½ | degrees |
| Right knee after injection.......... | 31 | degrees |

Notwithstanding the age of the patient and the prolonged period of swelling and infiltration, one of the striking features was the early relief of pain after the injection. At that time we were using liquor formaldehydi with the iodoform and glycerin. Iodoform is not so good a stimulant to the production of polynuclear leukocytes as is liquor formaldehydi. It is a greater stimulant to the production of fibrous connective tissue. For that reason the iodoform was dropped from the solution when used in the arthritides other than those of tuberculous origin.

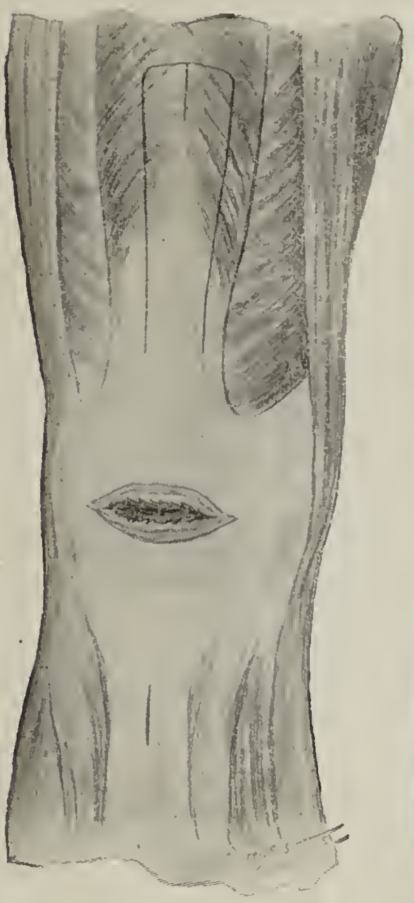


Fig. 107.—Utilizing a flap from the quadriceps tendon to strengthen a fractured patella or a joint after removal of the patella. A flap about one inch wide and six inches long is excised from the quadriceps tendon.

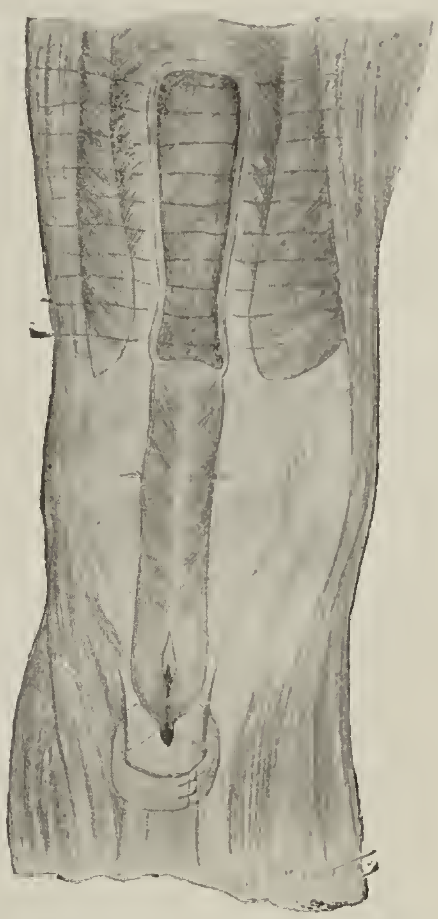


Fig. 108.—This flap is turned down over the patella and is inserted into a slit in the ligamentum patellæ, the end of the flap having been slit so that each half is slipped around the ligament, passing from behind forward. The halves meet in front of the ligament and are sutured with catgut.

Aspiration of fluid in known Neisserian arthritides gives negative finding in from 20 to 93 per cent. of the cases, depending on the period of time that has elapsed between the appearance of the synovitis and the date of aspiration. This retention of the metastatic organism in the subendothelial layer accounts for the early negative bacterial findings in so many joint inflammations. In many of the arthritides, we are with our present knowledge unable to locate the primary atrium of infection. They are termed cryptogenetic arthritides. In the majority of these cases the primary infection can be demonstrated clearly and unmistakably in some distant portion of the body.

The veterinary surgeons are also aware of the connection between peripheral infection and arthritides. This is clearly shown in Circular No. 13, April, 1910, Agricultural Experimental Station, University of Wisconsin, where navel infections are clearly demonstrated to be the etiologic factors in the production of equine arthritides in new-born foals in the fetlock, stifle, hip, knee, elbow and shoulder. Many of these processes go on to abscess formation and ankylosis, and a large number terminate in early death from general sepsis, diarrhea, anorexia, emaciation, hematuria, etc.

*It is my conviction that every type of non-traumatic joint inflammation is a metastatic manifestation of a primary infection in some other portion of the body. It is my further conviction that there is no idiopathic rheumatic arthritis, any more than there is an idiopathic peritonitis.*

### METASTATIC ARTHRITIS

CASE 20.—*Patient.*—Miss H. P., aged 30, was admitted to Mercy Hospital Jan. 18, 1911. She had two sisters, with whom she lived for 14 years, who died of tuberculosis. The patient herself had the diseases of childhood. At the age of 21 she had an ulcerated tooth with a chronic alveolar sinus discharging all the time until her joint conditions were manifested. She did not have it attended to for one year, at which time she had it filled. Since then she has had no trouble with it. She always has had a slight leukorrhea.

*Present Trouble.*—Began ten years ago, three years following her ulcerated tooth, with pain in the right wrist and shoulder. Pain was increased on motion, and within two or three days the wrist and shoulder became inflamed and tender. This attack lasted a month, following which joints were stiff but she had some movement. About a month afterward, she had another attack in the left shoulder, then involving the hips, knees and feet. These attacks all occurred within two years, the last attack being eight years ago and involved all the joints together. After this attack subsided, the knees were flexed at an acute angle, but could be moved some. Also all the fingers, both wrists and shoulders were stiffened. Since this time the stiffness in all the joints has improved a little, except in the right wrist which is entirely stiff. Joints involved were both knees and ankles partial; all the toes, both hips, both wrists; fingers partial; both shoulders.

This was a typical illustration of the chronic type of metastatic arthritis that occurs as the result of alveolar suppuration or pyorrhea.

*Treatment.*—The joints were injected with 2 per cent. dilution of liquor formaldehydi in glycerin solution, but she was benefited only slightly by the treatment, as the superlative degree changes had taken place in the joints at that time. However, she was relieved of her pain. The motility of the joints was not increased materially.

One of the reasons why the profession has been so tardy in recognizing the connection between the primary infections, as of the nose, pharynx, tonsils, skin, gallbladder, typhoid ulcer or urethra, and the secondary arthritides, is that a long period of time elapses between the primary infection and the secondary arthritides in a large percentage of the cases. In my analysis of hundreds of these cases I find that the Neisserian arthritis does not occur until eighteen to twenty-two days after the primary ocular, urethral or vaginal infections, or a secondary exacerbation of the same. The influenzal infection of joints occurs between the tenth and the fourteenth days after the manifestation of the primary infection. Furuncular infections, usually of the staphylococcus type, show their metastases in the joints in the ninth to the eleventh days. Infections of the hand or foot of the mixed varieties, not streptococcic, usually show the joint metastasis about the tenth day, while the streptococcic infections can cause metastatic arthritides within forty-eight to seventy-two hours, as shown in the following case in the practice of my former colleague, Dr. J. M. Neff, now of Spokane:

While lighting his cigar, a patient had a sliver from the match run into his finger on the right hand. This occurred in the morning, about 8:30. That evening he felt ill, and on the following morning he had a chill, with a phlegmon appearing in the subpectoralis fascia of the axilla. The second morning he had another chill and his left knee joint began to swell. Cultures from his blood, from the subpectoral seropurulent fluid and from his knee-joint all showed streptococci and colon bacilli in 60 hours. There was only a local induration without suppuration in the finger. The reddened lymph-channels on the forearm and upper arm were easily recognized. Later a number of other joints became involved. All were opened without drainage by the surgeon in charge, and the man recovered fully without ankylosis. This case shows the speed of metastasis in streptococcic infections even when associated with the colon bacilli.

The scarlatinal arthritis infections usually occur from the eleventh to the sixteenth day after the onset of symptoms. These are usually of streptococcic origin and make their appearance about the time the original symptoms disappear. This period corresponds with many of the original infections of unidentified infective flora.

In contrast with these we have the very late manifestation of the arthritic and osseous infections occurring in typhoid. These come on from the fourth to the eighth week, or about the time that the ulcers are healing or healed. The pneumonic joint metastases occur in about the middle of the time element, that is, from ten to sixteen days after onset, i.e., in period of pulmonary lysis. With the exception of the streptococcic group, the arthritides do not occur in the early stage of the primary infection, but always in the lytic or convalescent stage, or after the primary lesion has apparently healed.

Many of the joint localizations of the constitutional infection are associated with or are the results of (1) trauma (most common of all), and (2) exposure, as wetting of the feet, playing in the snow, chilling of the general surface of the body, exposure and chilling in swimming, over or long-continued exertions and other factors so commonly recognized as focalizers of constitutional infections.

The term "rheumatism" should be expunged from medical nomenclatures and a name given to indicate in itself, at least, some of the pathologic or etiologic elements in the joint. I prefer the term "metastatic arthritis."

In the traumatic infections, class A, the infective microorganisms are admitted to the surface of the synovial membrane by direct penetration. They do or do not produce a local infection early, dependent on whether the endothelial cells are disturbed by the trauma or whether the infective material is held by the synovial membrane sufficiently long to erode the endothelial cells, which are shingles of protection and must be disturbed to admit the microorganisms into the subendothelial lymphatic and capillary zones, as was shown by the experiments conducted for me by Dr. Victor L. Schrager and Dr. Kellogg Speed.

In traumatic infections unassociated with fractures, the first indication in the lacerated ones is to close the joint capsules as accurately as possible without drainage. The subcutaneous cellular tissue down to the joint may be drained with a gutta-percha tissue. The joint, depending on its size, should immediately be injected with 10 to 20 c.c. of liquor formaldehydi in glycerin. A Buck's extension should be applied, and the joint should be aspirated and reinjected in twenty-four hours, if the tension is great, or if the temperature is ascending, even without tension on the capsule. The injection or aspiration should be repeated in two, three or four days.

depending on the constitutional manifestations of the presence or absence of infection.

Usually three or four injections suffice to sterilize the joint completely. In puncture wounds exactly the same details are followed, except that the aspiration, on account of recurrent tension in the joint, may need to be repeated more frequently, but the injection should not be more frequent.

The treatment should be instituted immediately after the injury if the best results are to be obtained. *No fluid and no treatment will restore joint structures that have already been destroyed by infection. Time is, therefore, an element of great importance.*

Hematogenous acute arthritides (acute rheumatism), from a surgical standpoint, and they are all primarily surgical, may be divided into (a) monarticular, biarticular and triarticular types, with readily demonstrable primary foci of infection; (b) the polyarticular type, often of cryptogenetic origin. The first is usually initiated with a chill, followed by diffuse arthritic and muscular pains, and in twelve, twenty-four or thirty-six hours there is severe pain and swelling in one or a few joints.

It is a clinical fact that this type often leads to a bony ankylosis of the joints involved, and the initial chill must be accepted as a warning that such a result is likely to follow. The microorganisms here are of the virulent pyogenic type, which destroy the synovial membrane and the cartilage, and finally lead to ankylosis —unless scientifically managed, from a surgical standpoint.

It is also a clinical fact that the polyarticular variety is rarely initiated with a chill, attacks many joints simultaneously and rarely leads to bony ankylosis. It s the result of the milder types of microbic infection, *Diplococcus rheumaticus,* etc., and subsides in the course of six to eight weeks, leaving the joint in apparently as good condition as before. This result, however, is not uniform. Occasionally in the polyarticular variety, nitiated with a chill, we have ankylosis of many of the arger joints, as the hip, knee, ankle, etc., and less requently some of the small joints. Both of these arieties are, we believe, cryptogenetic infections, and n the great majority of cases we have been able to emonstrate the primary atrium of infection.

The *synovitis resulting* from these infections in joints may be classified as follows: (a) simple, serous transudative; (b) fibroid, infiltrating, cicatrizing, contracting; (c) serous, necrotizing, malignant, ankylosing; d) rheumatoid, absorbing, infiltrating, hyperplastic, eriarticular, ossifying; (e) suppurative; (f) tuberculous, luetic, etc.

ULTIPLE ARTHRITIS; RESULT OF TUBERCULOUS CAVITY IN LUNG

CASE 21.—*Patient.*—Mr. B., aged 35, electrician, was lmitted to Mercy Hospital Sept. 7, 1911. Family history as negative. He had had typhoid at the age of 30 and ade a good recovery. He denied venereal infection, but on amination of the urine *Tripper-Faden* were found.

*Present Trouble.*—August, 1902, the patient suffered from hat the physicians called typhoid (?). He lost 15 pounds weight during the 14 weeks he was ill. He resumed his rk but never regained his former strength and weight. Dur- the three years following he suffered almost continually om pain in the chest, which the physicians called pleurisy, d began to have a productive cough which has persisted to the present time. Repeated examinations of the sputum owed the presence of tubercle bacilli. In 1905, the patient taken to a farm. He had severe night sweats and an ernoon temperature of 101 F. with continuous cough. In e year he had improved sufficiently to allow him to resume his former work. He worked until March, 1909, when the severe cough and afternoon temperature began. One day he noticed some tenderness in the right wrist following severe exercise. This was continuous for about one month, when it became very excruciating but without rise of temperature or chills. About the same time the patient noticed a soreness in the right ankle with swelling and tenderness. Several weeks later the left elbow became sore and swollen. In April, the right knee began to swell and there was marked tenderness on motion for several weeks. About this time the patient was taken with a severe attack of laryngitis with a temperature of 103 F. and was confined to his bed for three weeks, during which time his right knee became swollen and painful.

*Examination.*—The range of motion in the right knee was limited to about 4 degrees and in the left knee to about 8 degrees. He could not flex his elbow at all and both wrists were fixed.

*Treatment.*—Sept. 8, 1911, both knees were injected with 15 to 20 c.c. of a 2 per cent. dilution of liquor formaldehydi in glycerin, and Buck's extension with 15-pound weight was applied to each leg. He was also given tuberculin regularly for his lung trouble. September 11 and 23 the knees were again injected. November 18 both knees, left elbow (10 c.c.) and left wrist (7 c.c.) were injected.

*Result.*—Before injection the range of motion in the right knee was about 4 degrees and very painful. After injection the range of motion in the right knee was about 80 degrees with scarcely any pain. Before injection the range of motion in the left knee was about 8 degrees and after injection (two months after the first injection) limb could be brought to a right angle without the least pain. On leaving the hospital Jan. 1, 1912, patient was up and about and walked without pain with the aid of a crutch and a cane.

In addition to these, we have extensions into the joint from local bone diseases, as tuberculous osteitis and osteomyelitis—the former frequent and the most common cause of tuberculosis of the joint, the latter rare.

Infections of the joint from periarticular, communicating or contiguous phlegmons are uncommon. In one of my cases there was an infection of the subdeltoid bursa which subsequently involved the joint.

The suppurative and simple serous arthritides are the manifestations of the acute varieties of infections, as acute pharyngitis, paranasal sinus infections, paratonsillitis, acute gastro-intestinal disorders, influenza, acute genito-urinary disorders, etc. The necrotizing, malignant and ankylosing complications are the superlative degree of either of the preceding conditions in their advanced stages.

The fibroid, infiltrating, cicatrizing and contracting variety are from the lower types of infection of the large intestine, gall-bladder, etc., and usually by the organisms of the colon group. The rheumatoid joints are most commonly metastatic from *chronic* infection of the alveolar processes, posterior nares, paranasal sinuses, tonsils, pharynx, genitalia and sigmoid.

We had at one time in Mercy Hospital four cases of rheumatoid arthritis, so-called, with sinuses or ulcers in the alveolar processes, each bearing practically the same causal relation to the metastatic arthritic condition.

In this work I do not include the tumors of the synovial membrane, as the lipomata, arborescent tuberculosis or hypertrophic synovial villi; nor do I intend to treat of the tuberculous infection of joints, acute or chronic, except primary synovial without bone involvement, which is rare, except in children.

(To be continued)

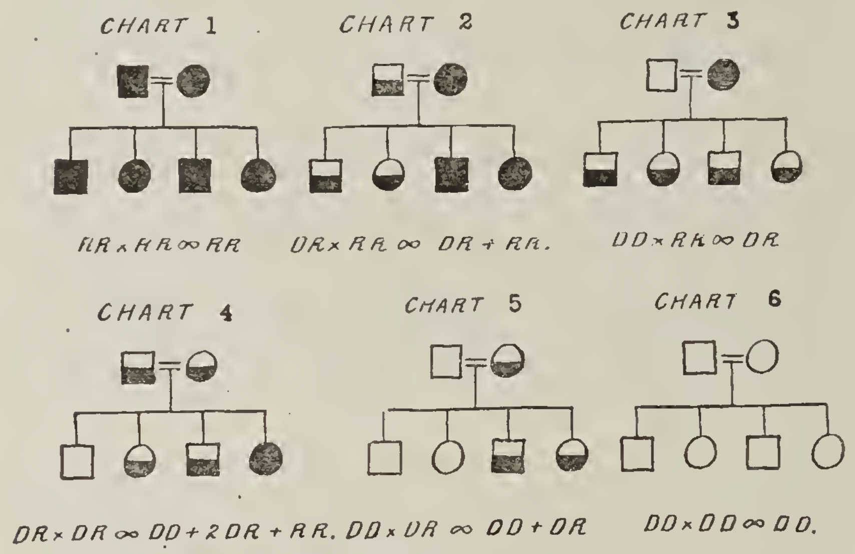
# THE INHERITANCE OF THE NEUROPATHIC CONSTITUTION *

A. J. ROSANOFF, M.D.
KINGS PARK, N. Y.

## I. MENDEL'S THEORY AND NEUROPATHIC HEREDITY

The application of Mendel's theory in recent studies of heredity in feeble-mindedness,[1] epilepsy,[2] insanity,[3] and other neuropathic conditions,[4] has furnished results which seem to justify the assumption that the full development and normal function of the mental faculties are dependent on the presence of a special determiner in the germ-plasm.

An individual may inherit this determiner from both parents, or from only one, or he may fail to inherit it from either parent. In the first case we would have an instance of duplex inheritance, in the second, one of simplex inheritance, and in the last, one of nulliplex inheritance.



Charts 1 to 6.—Various theoretically possible matings and their offspring. A square is used to represent a male and a circle a female; a plain square or circle represents a normal person; solid black, a neuropathic person; half black, a normal person of simplex inheritance. The letter D indicates a dominant trait and the letter R a recessive trait. In the present connection a normal subject of duplex inheritance is accordingly represented by the symbol DD, one of simplex inheritance by DR, and a neuropathic subject, that is to say, one of nulliplex inheritance, by RR.

Chart 1.—Both parents neuropathic, all children neuropathic.

Chart 2.—One parent normal, but with neuropathic taint from one grandparent, and other parent neuropathic, half the children will be normal but capable of transmitting the neuropathic constitution to their progeny, and half will be neuropathic.

Chart 3.—One parent normal and of pure normal ancestry and the other neuropathic, all children will be normal but capable of transmitting the neuropathic constitution to their progeny.

Chart 4.—Both parents normal but each with the neuropathic taint from one grandparent, one-fourth of the children will be normal and not capable of transmitting the neuropathic constitution, one-half will be normal but capable of transmitting the neuropathic constitution, and the remaining one-fourth will be neuropathic.

Chart 5.—Both parents being normal, one of pure normal ancestry and the other with the neuropathic taint from one grandparent, all the children will be normal; half of them will not be capable and half will be capable of transmitting the neuropathic constitution to their progeny.

Chart 6.—Both parents being normal and of pure normal ancestry, all the children will be normal and not capable of transmitting the neuropathic constitution to their progeny.

In cases of duplex inheritance — cases, that is to say, in which the individual inherits the determiner for complete mental development from both parents — we find no abnormal mental traits, but, on the contrary, a most striking stability and a resistance to the severest strains imposed by environment.

In cases of simplex inheritance — cases, that is to say, in which the individual inherits the determiner for complete mental development from only one parent — there is, as a rule, curiously enough, a similar mental stability; the normal mental disposition overshadows or conceals the neuropathic taint. In Mendelian terminology we would say that the normal disposition is a dominant trait and the neuropathic disposition a recessive one. Individuals of simplex inheritance differ from those of duplex inheritance merely by the power which they have of transmitting under certain conditions the neuropathic constitution to their offspring.

In cases of nulliplex inheritance—cases, that is to say, in which the individual fails to inherit the determiner for complete mental development from either parent — we find arrests of development, epilepsy, insanity or mental instability.

From these general principles it is possible to predict the proportions of the various types of offspring that would result from any combination of mates. Charts 1 to 6 have been prepared to illustrate the various theoretically possible matings and their offspring.

As these charts and formulas show, expectation in accordance with the Mendelian theory is to be stated as follows:

1. Both parents being neuropathic, all children will be neuropathic.
2. One parent being normal, but with the neuropathic taint from one grandparent, and the other parent being neuropathic, half the children will be normal, but capable of transmitting the neuropathic constitution to their progeny, and half will be neuropathic.
3. One parent being normal and of pure normal ancestry and the other parent being neuropathic, all the children will be normal, but capable of transmitting the neuropathic constitution to their progeny.
4. Both parents being normal, but each with the neuropathic taint from one grandparent, one-fourth of the children will be normal and not capable of transmitting the neuropathic constitution to their progeny, one-half will be normal but capable of transmitting the neuropathic constitution, and the remaining one-fourth will be neuropathic.
5. Both parents being normal, one of pure normal ancestry and the other with the neuropathic taint from one grandparent, all the children will be normal: half of them will not be capable and half will be capable of transmitting the neuropathic constitution to their progeny.
6. Both parents being normal and of pure normal ancestry, all the children will be normal and not capable of transmitting the neuropathic constitution to their progeny.

Let us now turn to observed facts. Table 1, which has been copied from a recently published study of heredity in insanity,[3] shows the closeness of correspondence between actual findings and theoretical expectation according to the Mendelian theory.

The question might arise, what degree of correspondence may be properly assumed to be requisite. Here it should be borne in mind that the proportions of theoretical expectation are but an expression of probability of chance analogous to the expectation that in flipping a penny the head and tail will be turned up, respectively, half the number of times. In other words, according to

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* Read at a Quarterly Conference of State Hospital Superintendents with the State Commission in Lunacy, held at the Middletown State Hospital, Middletown, N. Y., Feb. 15, 1912.

[1] Goddard, H. H.: Heredity of Feeble-Mindedness, Bull. No. 1, Eugenics Record Office, Cold Spring Harbor, N. Y., 1911.

[2] Davenport, C. B., and Weeks, D. F.: A First Study of Inheritance of Epilepsy, Jour. Nerv. and Ment. Dis., 1911, xxxviii, 641.

[3] Rosanoff, A. J., and Orr, F. I.: A Study of Heredity in Insanity in the Light of the Mendelian Theory, Am. Jour. Insan., October, 1911.

[4] Davenport, C. B.: Heredity in Relation to Eugenics, Henry Holt & Co., New York, 1911.

the theory of probability, actual findings will approach theoretical expectation only in proportion as infinity is approached.

As far as our data are concerned, other points must further be considered. Some subjects who are theoretically expected to be neuropathic figure in the statistics as normal owing to their not having reached the age of incidence of the psychosis. In other subjects neuropathic traits may have been overlooked by the untrained informants, and it is also possible, on the other hand, that temperamental traits which are not related to the neuropathic constitution have been erroneously interpreted and counted as neuropathic.

On the whole, taking into consideration the limited amount of material, as well as the various sources of possible error, the correspondence between actual findings and theoretical expectation, as shown in Table 1, must be regarded as strikingly close.

### II. THE NEUROPATHIC AS A CLASS

The expression, "neuropathic constitution," is used in this paper to designate a vast class of nervous and mental conditions. In this class we are able to distinguish more or less clearly a number of groups which we have been accustomed to regard as representing independent clinical conditions. Family histories show, however, that these various clinical conditions are often found in members of the same family and that they are therefore not wholly independent but somehow related to one another. The question thus arises, What is the nature of this relationship? We shall have much to learn before we shall be able to answer this question fully, but the data which we now possess seem to indicate two types of relationship — that of conditions of different degrees of recessiveness and that of neuropathic equivalents.

TABLE 1.—CLOSENESS OF CORRESPONDENCE BETWEEN ACTUAL FINDINGS AND THEORETICAL EXPECTATION ACCORDING TO THE MENDELIAN THEORY

| Types of Mating | Neuropathic Offspring | | Normal Offspring | |
|---|---|---|---|---|
| | Actual Findings | Theoretical Expectation | Actual Findings | Theoretical Expectation |
| 1. RR×RR∾RR ............ | 54 | 64 | 10 | 0 |
| 2. DR×RR∾DR+RR ....... | 190 | 214½ | 239 | 214½ |
| 3. DD×RR∾DR ........... | 0 | 0 | 45 | 45 |
| 4. DR×DR∾DD+2 DR+RR.. | 107 | 80½ | 215 | 241½ |
| 5. DD×DR∾DD+DR ....... | 0 | 0 | 77 | 77 |
| 6. DD×DD∾DD ........... | 0 | 0 | 0 | 0 |
| Totals.................. | 351 | 359 | 586 | 578 |

As to the first type of relationship, some of the facts which are before us make it necessary for us to assume that the hypothetical germ-plasmic determiner for complete mental development is not a unit but a group of units out of which one or more may be lacking, and that the amount of this germ-plasmic defect determines in a large measure the type of clinical disorder. It appears in particular that manic depressive insanity, while recessive to the normal condition, is dominant over epilepsy. This relationship is illustrated in Charts 7 and 8, which have been constructed from the pedigrees of some patients at Kings Park.

As to the second type of relationship, that of neuropathic equivalents, the principle, as all know, is by no means a new one. It has long been the practice of clinicians to classify as epileptic equivalents such manifestations as delirious attacks, brief absences, spells of automatism, periodic dipsomania, and the like, and in more recent years, progress in psychiatry has been marked, under Kraepelin's leadership, by a far-reaching extension of the conception of clinical equivalents which resulted in bringing together many apparently dissimilar conditions into the two large groups of dementia præcox and manic depressive insanity. The only new point, in this connection, that has been derived from heredity studies is the indication that many conditions which have hitherto hardly been suspected of being related to one another are really neuropathic equivalents. As the most striking instance of such a relationship may be mentioned that of fainting spells or convulsions in childhood as an equivalent of dementia præcox.

Before leaving this topic it might, perhaps, be well to point out that it is not assumed that members of the same family or even the children of the same parents, if neuropathic, will necessarily present clinical equivalents.

CHART 7 CASE No. 4215.

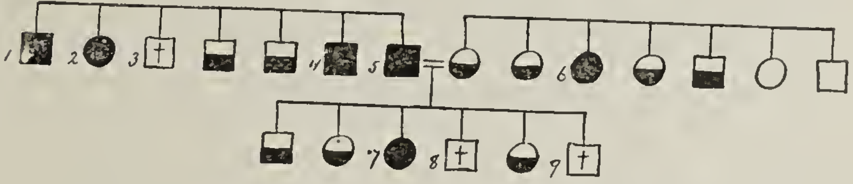
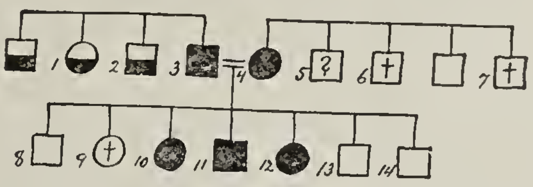


CHART 8 CASE No. 6432.



Charts 7 and 8.—Pedigrees of some patients from King's Park State Hospital.

Chart 7.—1. Nervous prostration; in sanatorium four weeks; recovered. 2. Manic depressive insanity. 3. Died in childhood. 4. Manic depressive insanity. 5. Manic depressive insanity. 6. Epilepsy. 7. Manic depressive insanity. 8. Died in childhood. 9. Died in childhood.

Chart 8.—1. Daughter has fainting spells. 2. Son, queer and feeble-minded. 3. Fainting spells. 4. Recurrent attacks of depression. 5. Data unascertained. 6. Died in childhood. 7. Died in childhood. 8. Twenty-two years old. 9. Died in childhood. 10. Recurrent attacks of depression; several suicidal attempts. 11. Manic depressive insanity. 12. Attack of depression with suicidal tendency; recovered. 13. Twenty years old. 14. Fifteen years old.

On the contrary, there is very strong reason to believe that in most cases they are likely to have neuropathic conditions representing not equivalent defects but defects of different degrees of recessiveness. Theoretically it is easy to demonstrate that neuropathic offspring from matings of the fourth type only (DR × DR) will necessarily have equivalent defects.[3]

### III. NEUROPATHIC CONDITIONS IN RELATION TO THE SCIENCE OF PSYCHIATRY

Let us now consider the influence that these new facts may have on the science of psychiatry.

In the first place, it seems obvious that our conception of the nature of neuropathic conditions must eventually undergo considerable modification. The conception of these conditions as disease processes, though it has proved to be of immense benefit in the past and has contributed perhaps more than any other factor to the progress of psychiatry, appears no longer tenable except in relation to organic affections. From the new point of view we are led to look on neuropathic conditions as a group of features characterizing special biologic varieties of our species, analogous in their mode of origin and in their mode of transmission by heredity to such features as blue eyes, fair skin, light hair and the like. If they happen to possess greater sociologic importance, their biologic relationships are thereby in no way altered.

In the classification of neuropathic conditions we may gain new criteria for our guidance. Clinical facts, such as symptomatology, course, outcome, etc., or purely practical considerations, such as legal responsibility or need of enforced custody, will still be utilized, but it may be anticipated that the natural basis of classification in the future shall be a better knowledge of the biologic position of each distinguishable variety and of the conditions under which such varieties are produced, and on such a basis, as already indicated, we may be able to bring together widely differing manifestations as being merely neuropathic equivalents.

From the new point of view diagnosis shall mean the identification not merely of special types of reaction, such as necessitate commitment to custody, but of inborn, basic traits characteristic of the several neuropathic varieties. As is well known, attempts have been made to describe the various types of abnormal make-up which constitute the characteristic soil on which dementia præcox, manic-depressive insanity and other psychoses develop, but a need now arises for more than that; the need is for exact measurements and the definition of the neuropathic constitution in terms which will enable the physician to diagnose it with sufficient certainty for practical guidance even in the absence of strikingly antisocial manifestations. In other words, we shall introduce biologic methods into the study of the neuropathic varieties; we shall make in a large number of cases every possible physical and mental measurement directly or indirectly pertaining to neuropathic characteristics and compare them with standards established by similar measurements made on normal subjects.

Such, we may expect, shall be the influence of the light shed by the Mendelian theory on scientific problems in psychiatry. But still greater may be the influence on our practice as regards prevention and treatment, for prevention becomes largely a matter of eugenics and treatment a matter of palliative measures to combat antisocial manifestations.

I would venture, before closing, to consider the relation of studies in heredity to practical eugenics.

### IV. HEREDITY AND PRACTICAL EUGENICS

One hears a great deal from all sides about the rapid increase of insanity. The alarm is caused mainly by the fact that in the past seventy or eighty years there has been a progressive though somewhat irregular increase in the annual number of admissions to institutions for the insane and that this increase has been proportionately greater than that of the general population. The real significance of this fact is, however, not fully understood.

It has been demonstrated over and over again that migration of populations from rural into urban districts results invariably in an increase of the alcoholic and syphilitic insanities and to that extent the apparent increase of insanity must be regarded as real. There are, however, other factors which operate to cause, not a real increase in the incidence of insanity, but merely an increase in the number of hospital admissions. One of these factors was demonstrated by Dr. Edward Jarvis in an admirable study published nearly fifty years ago.[5] He observed that the number of patients committed from any locality to a hospital for the insane depends in a large measure on the distance and on the means of transportation between that locality and the hospital. This principle was very convincingly demonstrated between the years 1843 and 1865 by the admission rates to the Utica State Hospital from all the counties of the state excepting New York and Kings, which had hospitals of their own. Dr. Jarvis divided all the counties into four districts: the first district was Oneida County, in which the hospital was situated; the second district consisted of eleven counties, namely, the first tier surrounding Oneida County, which were mostly within 60 miles of Utica; the third district included seventeen counties which were from 60 to 120 miles distant; and the fourth district included the most distant counties, being between 120 and 350 miles from Utica. From these four districts the average annual admission rates during the years mentioned were as follows: from the first district 1 to 2,772 in the general population; from the second district 1 to 5,820; from the third district 1 to 7,351, and from the fourth district 1 to 11,535. A thorough study of this question as it presented itself in a number of other states and in some parts of Canada furnished similar results in all cases without a single exception. Dr. Jarvis then studied the effect of multiplying hospitals in states.

> "This principle has been remarkably manifested whenever and wherever a second hospital has been opened in any state and placed in a district remote from the one previously in operation. The people who sent a few patients to the distant institution, now sent many to the hospital which was brought to their neighborhood. The number of lunatics that found a place of healing was suddenly and permanently increased."

From this it is easy to deduce one great cause of the apparent increase of insanity, namely, the increase in the number of institutions and the improvement in facilities for transportation.

It is not the object of this paper to treat exhaustively the question of the increase of insanity, but another distinctly appearing factor may be pointed out which may produce an illusion of such an increase, namely, fluctuations in the economic conditions of the country. Following the financial crises of 1903 and 1907 the number of admissions to the New York state hospitals in proportion to the general population increased by 8.4 per cent., and 7.4 per cent. over the admission-rates of the respective preceding years. Patients were admitted, who had for years been cared for at home or who had been themselves employed when the demand for labor was high, simply owing to the sudden change in the financial affairs of their relatives or to the falling off in the demand for labor, and not by reason of any real increase in the incidence of insanity.

Aside from the alcoholic and syphilitic psychoses, we do not really know to what extent, if any, the apparent increase of insanity indicates a real increase. Hospital statistics alone are hardly sufficient to give us an indication of the total prevalence of the neuropathic constitution in the general population. Times change, conditions change, and with them change the relations between the hospitals and the communities in which they are.

In a recent study of heredity[3] an attempt was made to estimate roughly by an indirect method the prevalence of the neuropathic constitution in the population of the Kings Park State Hospital district. That district is fairly representative, being partly urban and partly rural and showing on comparison with other state hospital districts an incidence of insanity not far from the general average. It was found that about 2 per cent. of the population were actually neuropathic, 30 per cent. were normal, but carried the neuropathic taint in their blood, and the remaining 68 per cent. were normal and without the neuropathic taint. Assuming for the moment that these various elements in the population will intermarry freely without the interference of selective influences or of any other disturbing factor, then it may be found by calculation that in the next generation the percentage of neuropathic subjects would rise to 2.89, that of those who are normal, but carry the taint, would fall to 28.2, and that of those who are normal and without the taint would rise to 68.89. In other words, insanity would increase, but at the same time a process of purification would take place through the segregation of normal traits and of neuropathic traits in separate elements of the population.

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[5] Jarvis, E.: Influence of Distance from and Nearness to an Insane Hospital on Its Use by the People, Am. Jour. Insan., 1865-66, xxii

The influence of selective forces is difficult to determine. On the one hand, the higher death-rate among neuropathic subjects and some amount of elimination through sexual selection must tend to reduce chances of propagation. On the other hand, the lack of moral inhibition among them not infrequently leads to early marriages, rearing of large families, or illegitimate propagation. One thing would seem certain, namely, that those modern conditions which have the effect of increasing the admission rates and the permanent populations of hospitals for the insane must be regarded as forces which aid in the elimination of defective germ-plasm and which are, therefore, salutary.

Without doubt this process of elimination could be hastened by a well-organized eugenics movement, but it would seem that matters have come to such a pass that we may have the burden, not of spreading a propaganda, but of holding back enthusiasts from premature and ill-considered action. Laws providing for the sterilization of degenerates, defectives, lunatics, etc., have already been passed in Indiana, California, Washington, Connecticut, New Jersey, Iowa and Nevada. They have everywhere remained practically a dead letter and we are already having to deal with the reaction of alarmed conservatism. In other words, the net result of such legislation has been so far no good and much harm.

Even if it were possible not only to enact laws for the sterilization of neuropathic subjects, but also to enforce them, nobody to-day would be in a position to tell whether or not it would be desirable or on the whole profitable for the human race to do so.

It is now many years since Lombroso with his far-seeing vision was led to observe the kinship between the neuropathic constitution and genius. Whether we agree with him fully or not, the fact is that in dozens of cases the very highest types of human activity have been associated with neuropathic traits, and in many more they have been the products of subjects of neuropathic descent. Among those who have been frankly insane may be mentioned, in the sphere of literature, Swift, Cowper, Shelley, Lamb, Burns, Keats, Byron; in the sphere of musical composition, Schumann, Wagner, Glinka; and in the sphere of science and natural philosophy, Sir Isaac Newton and Auguste Comte. If it is true that genius, which, as Lombroso says, is "the one human power before which we may bend our knee without shame," is a neuropathic manifestation, then it must be obvious to every right-thinking person that wholesale sterilization would be hardly a measure of wisdom; on the contrary, genius must, at any cost, be allowed to thrive and is no matter for mediocrity to meddle with. But it may be that only certain types of the neuropathic constitution are related to genius, or that any existing relationship is not essential, but incidental. Who knows? The point is merely made that the time has not yet come for radical action. The immediate need is for further investigation.

Mainly through the efforts of Dr. C. B. Davenport the State Board of Charities has created a bureau for the investigation of pauperism, feeble-mindedness and epilepsy. At the present time, Dr. Gertrude Hall is at the head of the bureau. But steps have been taken to seek a legislative appropriation to provide for ten field workers to be employed in the work of tracing all pauperism, feeble-mindedness and epilepsy to their sources throughout the state, county by county. The State Board of Charities has nothing to do with insanity, yet it would add but comparatively little labor, in going over the field, to record the equally necessary data concerning insanity, while at the same time the project would gain energy from a union of the interests of the State Commission in Lunacy with those of the State Board of Charities.

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# MYOCARDIAL DEGENERATION

E. FLETCHER INGALS, M.D.
CHICAGO

Various terms, such as fatty degeneration, fibroid degeneration, myocarditis, weak heart, chronic cardiac insufficiency and senile heart, are sometimes applied to fairly distinct conditions, as for example, senile heart; but the symptoms supposed to indicate different forms of the disease may be caused by the same pathologic conditions. Again, various pathologic conditions may cause the same symptoms, and therefore an exact classification becomes impossible.

These affections are found more often in men than in women. Fatty degeneration is, as a rule, a disease of old age or at least of people past middle life; and fibroid degeneration also occurs much the most frequently in those past their prime, but it is commonly observed five or ten years earlier than fatty degeneration.

Fatty and fibroid degenerations of the heart-muscle are also classified clinically as myocarditis, which may be either acute or chronic. I wish, however, especially to call attention to conditions, commonly chronic in character, although the symptoms may be very acute — so acute indeed that not infrequently no warning is given before the person is seized with a sharp precordial pain, with a feeling that pulsation of the heart has ceased, or with faintness and dizziness, and he sinks back in his chair or falls to the floor and expires before any one can render assistance. Symptoms indicative of cardiac degeneration occur several years before the fatal termination in a few, but in the majority the symptoms extend over a period of only one to two years.

These degenerations seldom occur until after middle life, and they are commonly found either in the aged or in those prematurely senile, and are, therefore, sometimes considered under the head of senile heart. By many physicians they are all grouped under the head of myocarditis; but this name is so suggestive of a more active process that I think myocardial degeneration the better term.

Although there is pathologically a sharp line of demarcation between acute inflammation, fibrosis and fatty degeneration of the heart-muscle, in the majority of cases there is no way by which these various conditions can be distinguished from each other clinically. On this account it appears best to consider them together, for not only the symptomatology, but also the prognosis and the treatment, with few exceptions, are essentially the same. These exceptions, whenever well marked, will be indicated.

Fatty degeneration of the heart includes two conditions, one in which the action of the organ, as a whole, is impaired by superimposed fat which does not necessarily interfere directly in any way with the muscular fibers; but the fatty deposit may penetrate between the muscular fibers so as to impede their action mechanically, to impair nutrition and ultimately to cause destruction of the fibers themselves by fatty degeneration. This occurs in general obesity and has been termed "fat heart." In well-marked cases it may be recognized clinically with a fair degree of accuracy.

In the other condition, owing to some obstruction or inflammation of the coronary arteries, nutrition is interfered with and the muscular fibers become more or less replaced by fat. This constitutes true fatty degeneration.

In fibroid degeneration the muscular fibers, owing to inflammatory action, are more or less completely supplanted by connective tissue. This usually occurs in limited areas, which are found most frequently near the apex of the left ventricle, in the posterior part near the auricle, in the interventricular septum, or in the papillary muscles.

Not infrequently the heart-muscle becomes hypertrophied in the early stages of any of these conditions in an attempt to overcome obstruction in the peripheral blood-vessels; but later, owing to disease of the coronary arteries with resulting deficient blood-supply to the heart-muscle, or to inflammation, with proliferation of connective tissue, which, contracting, diminishes the nourishment of the muscular fibers; these fibers then degenerate, the heart-wall becomes weakened and dilated, and incompetence follows. After death from myocardial degeneration, the microscope may reveal in the muscular fibers either fatty or fibroid degeneration or both combined in the same case.

## ETIOLOGY

Fatty degeneration of the heart is due in most cases to the same causes as atheroma of the aorta, with extension to the coronary arteries. It is one of the natural results of advanced age, and is also attributed to gout, alcoholism, the toxic effects of tobacco, coffee, etc. Chronic diseases of the kidneys that increase the resistance in the arterioles throw increased work on the heart and lead to general arteriosclerosis, coronary sclerosis and myocardial degeneration. This degeneration may be caused also by protracted wasting diseases, exhausting discharges, or repeated loss of blood, anemia, etc.

Acute fatty degeneration may be caused by phosphorus poisoning, by the toxins of diphtheria, and by other acute infectious processes.

Fibroid degeneration which results from inflammation of the heart-muscle, when acute, is commonly of septic origin as in pyemia or as in diphtheria, typhoid and other infectious diseases. The chronic variety is often merely a continuance of the acute affection; but in other cases it is caused by rheumatic endocarditis with arteriosclerosis, or by obstruction of the coronary arteries by thrombosis or embolism which cuts off the blood-supply to certain portions of the heart-muscle. Thus it may have the same origin as fatty degeneration. Fibroid degeneration may result from excessive or protracted physical effort or even protracted mental strain and worry. In some cases it is undoubtedly one of the late effects of syphilis, and in many others it apparently results from the excessive use of tobacco, alcohol or coffee. It may also be due to chronic venous congestion of the heart as found in protracted emphysema, fibroid phthisis or mitral lesions, with consequent overgrowth of the connective tissue which causes pressure-atrophy of the muscle fibers.

## SYMPTOMATOLOGY

The most important symptoms and signs of degeneration of the myocardium are: irritability of temper; melancholia; some loss of memory or hesitating speech; pain over the precordia or over the upper part of the sternum following exertion or mental excitement; palpitation of the heart; dyspnea on exertion and even without exertion (the so-called cardiac asthma); diminished endurance, physical and mental; alterations of the pulse, which may be either faster or slower and is often intermittent; and slight edema of the ankles. These are attended by more or less change in the physical signs over the heart due at first to some hypertrophy and increased force of the muscular action, but later to weakness of the contractions. There may or may not be appreciable enlargement of the organ, but often the signs are not at all distinctive until late in the disease. If the pulse varies from normal, being either strong or weak, slow or fast, and regular or intermittent according to the strength of the myocardium, a similar condition is found in the cardiac pulsations excepting that feeble cardiac pulsations do not always communicate an impulse to the radial artery, so that not infrequently there is intermission of the radial pulse when the heart is beating regularly, although some of its contractions are feeble.

When the symptoms are first noticed, the heart is usually of normal size, or slightly hypertrophied; but with degeneration, its impulse becomes enfeebled to a greater or less degree. In uncomplicated cases, on auscultation, no valvular murmur will be heard until late in the disease when the feeble walls have dilated so as to cause relative insufficiency. But when the degeneration has been caused by aortitis and disease of the coronary arteries, a more or less distinct sytolic murmur may be heard over the roughened aorta comparatively early. The most important signs at this time are feebleness of the heart-sounds and diminution of the force of the impulse against the chest-wall with lessening of the muscular element in the first sound of the heart. The muscular element of the first sound of the heart is the same as the sound produced by other contracting muscles, which may be readily recognized by listening with a stethoscope over the base of the thumb while its muscles are contracting. I call special attention to these symptoms and signs because often physicians hearing no endocardial murmurs and perhaps finding the action of the heart regular and of nearly normal frequency are led to think that there is no disease of the heart.

Not infrequently the degeneration progresses without symptoms, and no signs are discovered until an attack of dyspnea or fainting or a paroxysm of angina pectoris proves immediately fatal; but in most cases some of these prominent symptoms or signs precede the fatal termination several months or two or three years; yet any or nearly all of them may be absent. As a result of feeble circulation and passive congestion, or of emboli formed by vegetations or clots carried from the heart or aorta, many other symptoms and signs may appear in individual cases, most of which can readily be traced to their true source. Another significant symptom of fatty degeneration that sometimes occurs is pseudo-apoplexy, an attack in which the patient suddenly becomes unconscious and falls; this may be attended by paralysis, but the symptoms pass off within a few minutes or hours or at most a few days. The well-known Cheyne-Stokes respiration is also an occasional early symptom. Other symptoms frequently noticed are: comparatively rapid loss of weight after a person has been fleshy, pallor and a swollen appearance of the surface with congestion of the ears and lips, weight or pain in the head and disturbance of the stomach and bowels.

There are no symptoms or signs by which we can surely distinguish between the various forms of degeneration; but certain combinations may justify a fairly positive diagnosis in a considerable number of cases. For example, in a fleshy subject the occurrence of unusual dyspnea with irregular action of the heart or an abnormally slow, full and regular pulse, a weak impulse of the apex, feeble intensity of the heart-sounds and absence of most of the other symptoms and signs are presumptive evidence of fatty deposit on the heart which mechanically interferes with its dilatation and contraction. These symptoms are illustrated by the following history (65,196):

Case 1.—A man, aged 68, consulted me on account of irregular action of the heart and some shortness of breath, which he attributed to excessive smoking. He was not sick but had noticed the symptoms first three years previously and they had been gradually increasing. He weighed 248 pounds and ad been at one time up to 270 pounds. He had some dyspnea nd a little edema of the ankles; but his chief symptoms were rregularity of the heart's action and palpitation at times. I ound the pulse irregular and only 44 per minute; he comlained of frequent eructations of gas from the stomach and noderate dyspnea, but there were no other symptoms. Physial examination of the lungs yielded only negative results. he heart was slightly enlarged, its impulse almost imperceptible, action slow but galloping, sounds only about onefth as intense as usual in healthy men, and no endocardial murmurs. These symptoms and signs seemed to indicate that he action of the heart was interfered with mainly by deposit f fat. The patient had already given up smoking but he rank three cups of coffee daily. This was interdicted and e was given strychnin arseniate and stomachic tonics with igestive agents.

Pain over the aorta following exertion, relieved by st. and dyspnea with muscular weakness and more or ss alteration of the frequency and rhythm of the heart, ith feeble impulse and heart-sounds, and sometimes sence of the first sound of the heart with absence of gns of valvular disease speak strongly for fatty degenation of the muscular fibers due to disease of the ronary arteries, following or associated with atheroma the aorta. These are illustrated in the following story (47,919):

Case 2.—A woman, 65 years old, came to me complaining iefly of pain in the precordia, rapid action of the heart, and spnea. Her symptoms began about six months previously l her physician told me that she had asthma about that ie, which appeared to be of cardiac origin. She complained frequent attacks (two to four daily) of great weakness, ntness and nausea. Some of her pain was in the epigasum and the dyspnea was present even without exertion. had some rheumatic pains in both arms, but had not fered from a frank attack of rheumatism. She had had rs previously, both malarial and typhoid fever. She sufd from headaches and was quite nervous. She weighed pounds, but had lost 12 pounds within a few weeks. There e varicose veins in the legs and some edema of the feet. nperature normal, urine normal, appetite and digestion poor. arteries were stiff, the pulse weak and irregular, varying from 92 to 156 during the examination. There was no endocardial murmur, but the dulness extended half an inch to the left of normal. Pulmonary signs were negative.

Usually also well-marked attacks of angina pectoris without many other symptoms speak for the same condition; later in the disease dilatation of the heart is commonly shown by the physical signs.

A certain group of symptoms occurring in persons near 70 years of age, or in those prematurely old, have been considered by Balfour under the name of senile heart. This class is illustrated by the following history (83,115):

Case 3.—In 1907 I saw in a neighboring state a man whose life had been prolonged by good care for over four years, when I last heard of him through his family physician. At the time I was called to see him he was 69 years old and had been suffering for two months with weakness, much dyspnea, a sensation of tightness in the chest and dizziness if he moved quickly. There was nothing in heredity or previous disease to account for the trouble; but he dated his symptoms from a fall that had occurred two months previously. He had used tobacco moderately until two weeks before I saw him and was still using tea and coffee moderately. He had not used alcoholics. He had a little pain over the sternum and precordia; weighed 135 pounds; slight edema of ankles; two degrees subnormal temperature; digestion fair; urine normal; pulse full and soft, but only 37 per minute. Physical signs over lungs, liver and spleen were negative. Heart was normal size, pulsations 37 per minute, regular except one imperfect contraction about once a minute. There were no valvular murmurs, but a ventricular murmur not heard at base of heart and not transmitted beyond ventricles. The subnormal temperature and the slow pulse have continued for four years, but the patient has improved somewhat in other respects.

A strong probability of fibroid degeneration of the heart-muscle is established when the patient suffers from dyspnea and pain over the heart on exertion, and the signs indicate that the organ is enlarged by hypertrophy and dilatation or simple dilatation, especially if the history points to a remote cause of myocarditis in such affections as malarial or typhoid fever, scarlatina or diphtheria, syphilis, gout or alcoholism. This class of cases is illustrated by the following history (50,577):

Case 4.—A man, 53 years old, complained of pain on exertion over the base of heart and aorta which had troubled him for a week. A year previously, after lifting a heavy weight, he had considerable pain over the aorta. This soon passed off, but returned while he was walking a couple of hours afterward, so that he had to stop and rest until it disappeared. Then it returned off and on for a week or ten days on exercise, but subsequently it did not trouble him until a few days before he saw me. I found that he had suffered a severe attack of scarlatina followed by nephritis when a boy, and that all his life afterward he had been subject to irregular action of the heart, and he had noticed some gouty nodules nine years before he first experienced aortic pain. I learned that at times he tired very easily. His temperature was normal, arteries stiff and the pulse, regular and full, ranged from 82 when quiet to 90 or 100 on exertion. There was little dyspnea on exertion. The signs over the lungs and abdominal organs were negative, and the heart normal in size and action, but there was a slight increase in the area of dulness over the aorta with a feeble systolic murmur and some accentuation of the second sound of the heart. The heart-sounds were not so loud as normal and the force of the impulse was diminished, but there were no endocardial murmurs. All coffee and stimulants were given up and under the influence of arsenic, strychnin and moderate doses of potassium iodid with care about exercise, he improved, although occasionally there would be some pain and shortness of breath. This continued for four months, when he suffered a mild attack of angina pectoris. At this time no aortic murmur was present, but other signs, continued the same. A few days later a sharp attack of angina proved fatal in about twenty minutes. Necropsy revealed atheroma of the aorta with slight dilatation, and marked sclerosis of coronaries with thickening of heart walls and extensive fibrosis. There were no valvular lesions.

In most cases the different forms of degeneration cannot be distinguished clinically, and in fact the fibroid and fatty degeneration are often combined; therefore, it is hardly worth while to try to draw a sharp line of demarcation between them. Usually the symptoms and signs merely point to weakness of the myocardium and many of them result from venous congestion due to setting back of blood from the right ventricle. Edema of the skin, particularly about the ankles, and some cyanosis are among the first manifestations of this condition. Obstruction to the flow of blood from the renal veins causes scanty, dark-red urine of high specific gravity, containing an excess of urates, small amounts of albumin and hyaline tube casts. Congestion of the hepatic veins causes enlargement of the liver, which is apt to be sensitive on palpation or which may cause the patient to complain at other times of a sense of weight, tension, or actual pain in that organ. Extension of venous stasis to the portal veins causes disturbance of the digestive organs manifested by eructations of gas, flatulence of stomach and bowels, loss of appetite, nausea, vomiting and irregular action of the bowels, or by the development of hemorrhoids. The spleen also becomes enlarged and hard and perhaps painful, and ascites may occur. Stasis in the intrathoracic veins causes obstinate bronchitis and hypostatic pleurisy, or pneumonia, and may be attended by hemoptysis. The jugular veins may be enlarged and tortuous, and hypostatic catarrh of the upper air-passages and throat is not uncommon.

Congestion of the cerebral veins and poor arterial circulation in the brain, both of which result from the weakened condition of the myocardium, give rise to various cerebral symptoms such as headache, dizziness, faintness, insomnia, mental hebetude, slow speech and an irritability of temper that often calls for explanations by the physician in order that friends may be patient and charitable with the sufferer. In some cases it is very interesting to note the prompt effect of heart tonics in improving the mental condition.

Severe paroxysmal cardiac pain termed angina pectoris is generally associated with atheroma or sclerosis of the aorta and coronary arteries and resulting fatty degeneration. The paroxysm itself is supposed to result frequently from an embolus. Cutting pains sometimes felt in the heart appear to be of rheumatic or gouty origin.

## DIAGNOSIS

As already stated, the differential diagnosis of the various forms of cardiac degeneration is most difficult. There may be no alteration whatever in the size or force of the heart, and commonly there are no endocardial murmurs; therefore the diagnostician must rely largely on the history and personal peculiarities of the patient and the presence of a few of the numerous symptoms that may attend such cases, together with the exclusion of other affections. Fatty and fibroid degenerations of the heart are liable to be mistaken for functional affections, especially when occurring in those who have not yet reached middle life. Symptoms of heart weakness developing in a young person are likely to be functional; but in a person past 50 years of age they usually result from some organic change.

The most important differential feature is shown by the effect of exercise, which has but little immediate influence on functional affections, but which increases the pain, dyspnea and cardiac disturbance when the myocardium is degenerated. The age of the patient, the precordial pains, the condition of the arteries, the blood-pressure, the position and force of the apex-beat and the heart's rhythm are the most important factors in establishing the diagnosis; but the symptoms referable to the brain, kidneys, liver and other vital organs must be carefully weighed, and other diseases should be systematically excluded.

## PROGNOSIS

The prognosis will depend largely on heredity, the age and strength of the patient, his ability and willingness to take proper care of himself and his response to judicious treatment. Other things being equal, the patient whose ancestors were long-lived has the best chance to improve. The younger the patient, the better his outlook. If his general strength is good it indicates a condition of the myocardium susceptible of improvement. If he is able and willing to follow proper instructions it is greatly in his favor. So long as the myocardium responds to heart tonics, betterment may be expected; but when degeneration has progressed to such a degree that digitalis and nux vomica have but little effect, no reasonable hope can be entertained that the patient will live long, and a few months, or at the most a year or two will generally finish the history.

Fatty deposit and infiltration, while *per se* much less serious than fatty or fibroid degeneration, may produce either or both of these conditions by mechanical pressure unless efficient measures be taken to check them; however, restriction of diet and suitable exercise may nearly or quite remove the difficulty. Yet these subjects are very liable to succumb to pneumonia, bronchitis, or any acute exhausting disease, and they occasionally die by syncope.

Often in fatty degeneration death comes suddenly from syncope, or a little more slowly from angina sine dolore, or from agonizing attacks of angina pectoris. In the latter, death may follow the first symptoms in from half an hour to two or three hours during the first attack; or it may be delayed until the second or third seizure, which is likely to occur within a few months or at most a couple of years. With care, however, appropriate management and good luck the patient may possibly hold out for several years. In degeneration due to permanent interference with the blood-supply repair is impossible, although life may be prolonged by proper care; but in the acute affection resulting from general blood conditions it is possible for complete recovery to take place.

Fibroid degeneration may terminate in the same way as fatty degeneration, but usually the symptoms of cardiac failure are more prolonged and the patient is liable to suffer for a year or two or even longer with the pronounced symptoms of the affection, such as pain, dyspnea, palpitation, dizziness, digestive disturbances, edema and physical and mental weakness. Finally, the disease commonly terminates in sudden death, or by a paroxysm of angina pectoris of several minutes' or a few hours' duration. Myocarditis which only causes arhythmia is considered more favorably than other types. In myocarditis attended by sclerosis of the coronaries (which may be suspected from atheroma of the palpable arteries or of the aorta, with angina pectoris) sudden death may be expected at any time. Myocardial degeneration associated with diabetes or chronic nephritis has a very bad prognosis. Intercurrent bronchitis or influenza is always a grave complication in this disease, and pneumonia is almost surely fatal.

### TREATMENT

Fatty deposits on and in the heart call for restricted diet and regular exercise, that will vary much with the persistence and tractability of the patient and the judgment and force of the physician. Fat-producing diet should be diminished and at the same time care must be taken that nitrogenous foods are used only in proper amount and that the ingestion of fluids is not excessive, especially at meal time. I am firmly convinced that obesity depends less on the quality than the quantity of food and drink. Most fleshy people claim to be small eaters and we may admit that such is sometimes the case; but so far as my own observation goes, nearly all fleshy people are great eaters. For such patients the most important factor in getting rid of their excess of fat is reduction of the quantity of their food. At the same time a reasonable amount of exercise should be demanded; but it is useless to require exercise to "work off the flesh" while the patient is eating all he wishes, for the exercise increases the desire for food and for liquids so that more flesh is apt to be gained than is taken off, except with the very few people who will faithfully follow instructions in limiting the amount of food ingested.

The treatment of fatty and fibroid degeneration and of chronic myocarditis is essentially the same; therefore in this respect we are not hampered by the difficulties of diagnosis. If the heart-muscle is weak from either of these conditions the causes of such weakness must, if possible, be removed; the work demanded of the organ must be diminished and persistent and protracted efforts must be made to increase the strength of the myo- ardium.

The general treatment is essentially the same as that r valvular disease with broken compensation, consisting f cardiac and general tonics and the elimination of all njurious factors.

Patients should be cautioned to do nothing that nduces dyspnea, and to rest immediately whenever hortness of breath appears. In severe cases the patient hould be kept in bed until the heart has rested and ecuperated. Excessive efforts of all kinds, mental and hysical, must cease. If the affection is the outcome of me infectious disease, of pneumonia, or of protracted ever or of syphilis, treatment should be directed first the causative disease. If it has resulted from excesses f any kind these should at once be abandoned. Alco- lics, tobacco and coffee should be interdicted in prac- cally all cases. Contraction of the arterioles should be lieved by iodids or nitrites and high blood-pressure ay be further reduced by proper diet and the proper e of saline laxatives and diuretics. The skin must be pt active by baths, friction and occasionally diaph- etics. Mental and physical exercise must be regulated cording to the patient's strength and in severe cases olute rest may be required. The digestive and cretory organs should receive the physician's careful d constant attention. The myocardium must be engthened by appropriate resistance-exercise, mas- ge, or moderate walking; and also by heart tonics, ief among which are digitalis and nux vomica. These combination will often give much better results than her by itself; and either or both often have to be given much larger doses than are commonly prescribed. At first, they should be given in moderate doses, but the quantity may be steadily increased, while the effects are carefully watched, until the desired results are obtained, or until the beginning of toxic symptoms shows that a maximum dose has been reached. One need not fear the cumulative effects of digitalis when only three doses are being given daily so long as the stomach is not disturbed and the kidneys are acting freely; but nausea and vomiting or diminution in the amount of urine indicate that the dose must be decreased or the remedy discontinued. Similarly there is no danger from gradually increasing doses of nux vomica, but the occurrence of spasmodic contractions of the muscles or of insomnia call for suspension of the drug, or reduction of the dose. Iodids, especially those of potassium and sodium, in moderate doses and usually long continued are most beneficial in relieving pain and in dilating the arterioles. Nitroglycerin, amyl nitrite or sodium nitrite may be employed in similar cases for quick action. Arsenic is often found most beneficial in relieving pain and at the same time it may strengthen the heart-muscle. Other drugs commonly recommended for strengthening the heart-muscle are generally most disappointing, although they occasionally answer the purpose and therefore should be tried when for any reason the more effective medicines cannot be used. Caffein citrate has properties similar to those of digitalis, although it is much less reliable. Theobromin, in doses two or three times as large as those of caffein, acts similarly but has an advantage in not causing contraction of the arterioles and in not causing so much insomnia. Theobromin is especially useful for its diuretic action. Spartiene sulphate in doses of from half a grain to 2 grains appears to have considerable influence in regulating the rhythm of the heart and increasing the flow of urine. Strophanthus is thought to act in the same way as digitalis, but from prolonged observation it appears to me useful only in controlling the action of the heart when nervous symptoms predominate. The other remedies in common use for strengthening the heart's action, such as adonis vernalis, convallaria majalis, cannabis, etc., have appeared to me utterly unreliable. Severe pain must sometimes be relieved by morphin and atropin or chloroform, and distressing dyspnea or general discomfort and nervousness may require the same remedies; but opiates should not be used, if they can be avoided, until it becomes clear that nothing else will give sufficient relief, and until our main efforts are directed to promoting euthanasia. Chloroform may be inhaled with perfect safety and with great relief, provided it is given properly. The best way to administer it in such cases is to place about a dram on a sponge large enough to about fill one-third of a two- or three-ounce wide-mouthed bottle. This should be held by the patient, who should inhale deeply and freely from the mouth of the bottle until relieved. Before an excess of chloroform can be obtained in this way, the bottle will be dropped and roll away.

15 East Washington Street.

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**The Nature of Fear.**—We may say then that fear is a phylogenetic fight or flight. On this hypothesis we recognize no reverberation through the body as suggested by James, but all of the organs and parts of the entire animal are integrated, connected up or correlated, for self-preservation by activity of its motor mechanism. We fear not in our hearts alone, not in our brain alone, not in our viscera alone, but we fear in every organ and tissue of our body—each organ or tissue is stimulated or inhibited according to its help or hindrance in the physical struggle for existence.—Crile in *Med. Herald.*

# ACNE VULGARIS TREATED BY AUTOGENOUS VACCINES

## REPORT OF ONE HUNDRED CASES AND METHOD OF PROCEDURE

ORVALL SMILEY, M.D.
INDIANAPOLIS

The essentials of success in the administration of vaccines in the treatment of acne are the knowledge and experience necessary so to determine the dosage and intervals between inoculations as to elicit the desired immunizing response. In giving the dosage it is necessary to take into consideration the general condition of the patient, together with the degree of virulency of the infecting organism, also the reaction and resistance of the patient to most efficiently bring the resulting antibacterial substances which are carried by the blood into the focus of infection.

From the many factors modifying the dosage it is quite evident that no rule can be laid down and adhered to; the accompanying table, however, shows the beginning average dose.

TABULATED REPORT OF ONE HUNDRED CASES OF ACNE VULGARIS TREATED BY AUTOGENOUS VACCINE

| Variety of Secondary Infections | No. of Cases. | Average Initial Dose of Accompanying Organism (Million) | Average Initial Dose of Acne Bacillus (Million) | No. Patients Cured | No. Improved. Not Cured, Treatment Not Finished or Unsatisfactory |
|---|---|---|---|---|---|
| *Staphylococcus albus*..... | 86 | 100 | 5 | 81 | 5 |
| *Staphylococcus albus* and *aureus* together ...... | 10 | 120 | 5 | 8 | 2 |
| *Staphylococcus aureus* ... | 3 | 150 | 5 | 3 | 0 |
| *Staphylococcus albus* and *staphylococcus citreus*.. | 1 | 100 | 5 | 1 | 0 |

The staphylococcus vaccine is increased by the addition of one-eighth or one-fourth of the initial dose every other day until a response is elicited, after which the dose is held stationary as long as the patient is improving, the interval between dosage is then governed by the length and degree of the negative phase. The acne baccillus vaccine is given separately from the accompanying organism, although at the same time.

The acne pustule is formed by the secondary infection or implantation of the accompanying pus-forming organism on the sebaceous material or comedo which is evidently one of the products of the excessive stimulation of the sebaceous glands by the acne bacillus or its toxin. The depth of the pustule and the extent of the induration depends on the duration of the infection together with the depth and character of the comedo. Comedones that penetrate deep are of soft consistency and small in caliber and are associated with the so-called acne indurato or deep-seated acne pustule.

The many classifications of acne are modifications of simple forms produced by the various types of secondary infections at some time in the course of the disease, which depends on its virulency and its saprophytic power together with the variation and combination of the types of organism present.

### ACCESSORY TREATMENT

In all cases of acne it is essential to watch and modify the coagulability of the blood one way or the other, to produce immediate results. In case the coagulability of the blood is rapid or the viscosity increased, the patient is given three or four 40-grain doses of sodium citrate. On the other hand, where the coagulability is slow and they do not start off with improvement, they are given six or eight 10-grain doses of calcium lactate. I find that of the two drugs, a greater number of the patients require calcium lactate. Most cases require a general tonic.

The patients are instructed to take a mild laxative such as they are accustomed to or that which to them is the most efficient and that only when it is necessary to produce one movement a day.

As regards the diet, unless they have some fad or craze for some particular injurious article, it is not modified, otherwise they are left to their own discretion and usual mixed diet. They are instructed to discontinue the use of coffee, tea, alcohol and tobacco if used to excess.

The patient is instructed to use liberal quantities of soap and water while the process is active. All the comedones are removed and all mechanical means possible are used to prevent the extensive accumulation of pus. After the active process quiets down so that there is no likelihood of scattering the infection, the patient is instructed to have daily massage in order to break up the scar tissue and to increase the local blood-supply.

### BACTERIOLOGY

The acne bacillus is present in all cases. In some cases, however, it is very hard to isolate and grow, yet with patience and perserverance I am able to grow it in every case.

The surface of the infected area is cleansed with soap and water; then a number of the blackheads or comedones are squeezed out and with these some of the superficial epithelium is gently curetted off. This epithelial débris is mixed with the comedones, the whole is heated for one hour to 60 C., then planted, or rather daubed, on 1 per cent. oleic-acid agar incubated at 37.5 C., on which the growth appears in from five to ten days.

In 86 per cent. of my cases the accompanying organism was the *Staphylococcus albus*. In 10 per cent. the accompanying organism was the *Staphylococcus albus* and *aureus* together; in 3 per cent. the *Staphylococcus aureus* alone. In 1 per cent. the *Staphylococcus albus* and *Staphylococcus citreus* together.

### THE PREPARATION OF THE VACCINE

With following exceptions the routine of preparation is essentially the same as that outlined by Wright.

The culture is taken in the ordinary way, grown at 37.5 C. until a growth appears, each organism isolated, then quickly highly rejuvenated either by running through a series of different media generally first to gelatin, blood-serum then to glycerin agar from which the vaccine is made, or better, by inoculating the original pure culture accompanying the acne bacillus into the blood-stream of a guinea-pig. After a few hours (as a rule ten to fifteen) the guinea-pig usually succumbs, at which time, or just previous to it, a culture is taken from the blood of the pig on glycerin agar.

This gives a highly virulent culture, however; grown at 37.5 C. it causes a most marked reaction which is very undesirable and irksome to the patient. I have found that this highly virulent organism grown at 36.5 C. does not produce so violent a reaction as when given in the same dosage as those of the same virulency grown at 37.5 C.; they are also apparently more efficient.

### THE EFFECTS OF THE ACNE BACILLUS OR ITS TOXINS

The acne bacillus apparently gives off a toxin that is in turn thrown into the blood which renders the patient more susceptible to the effect of any indiscretion in diet. This toxin in women lowers their resistance to the organism accompanying the acne bacillus during the drain of menstruation thus causing an aggravation of the local symptoms during this time.

This same acne bacillus toxin is no doubt to a very marked degree responsible for the poor circulation, malaise, mental and physical lassitude, anemia, chlorosis, headache, constipation and the nervous irritable condition so often found associated with acne infections.

I am convinced that such is the case because invariably patients treated with autogenous acne vaccine, when given in small enough doses not to produce a prolonged or permanent negative phase, were gradually, partially or wholly relieved of the associated symptoms above referred to. The constipation and headache are first to disappear, the feeling of mental and physical lassitude slowly improves and the nervous irritable disposition is in turn modified. The musculature of the skin regains its normal tone and color.

My results have not been satisfactory in regard to clearing up the sequelæ or complications when using a stock acne vaccine.

### CONCLUSION

The results are so uniformly good that where one can control the patient, a cure of the condition can be promised in every case. The sequelæ are either greatly modified or entirely disappear; hence I believe that the acne bacillus or its toxins are responsible for the associated symptoms and conditions occurring in acne infections.

229 Newton Claypool Building.

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# THE PERIURETHRAL COMPLICATIONS OF STRICTURE

MELVILLE SILVERBERG, M.D.

SAN FRANCISCO

Every organic stricture of the urethra, with the possible occasional exception of the traumatic variety. is ssociated with some form of chronic inflammation due a persistent cryptic state of infection. Indeed, it may e confidently asserted that the ordinary type of stricure. the so-called inflammatory type, is primarily merely phase of chronic urethritis. Owing to the overshadowng significance of its mechanical effect on the upper rinary tract, stricture is too frequently regarded as a omplete morbid entity. The rôle of local infection is y no means a minor one, however, when the possible esults are considered. The danger lies not in the rethra itself, but in the propagation of the infection nto the surrounding tissues. Depending on conditions, here may occur here a variety of states of inflammation, rom a pea-sized sclerotic nodule, discovered only by alpation on a sound, to the most acute, rapidly spreadg, gangrenous phlegmon.

The scope of this paper will not permit of details. nor eed it be encumbered by references to cases coming nder my observation. It will suffice for its purposes present certain deductions gathered from personal perience, supplemented by a study of important conibutions to the literature on the subject.

To comprehend readily the periurethral conditions ising during the course of a stricture a knowledge of certain relevant features connected with the pathologic anatomy of the strictured urethra is at least helpful. Posterior to the stricture dilatation of the urethra is the rule. The view was formerly held that this dilatation is merely a mechanical effect of increased urinary pressure, caused by the stream of urine being forced against an obstruction. According to the view now generally accepted, there is some stagnation of urine behind a stricture, a kind of urethral retention and this condition, as retention elsewhere, predisposes to infection, which, being chronic, invades the subepithelial tissues of the urethra, causing a loss of tone of its musculature.

The classical researches of Halle and Wassermann and of Finger on the microscopic anatomy of chronic urethritis have demonstrated that the pathologic changes largely reside in the urethral glands and the periacinar tissues. They consist of the slow evolution of a sclerotic process, frequently involving the spaces and trabeculæ of the erectile tissue. That the seat of these changes should be mainly in and about the glands of the bulbous and membranous urethra follows from the anatomic fact that these regions are particularly rich in glandular structures. Motz and Bartrina have described three distinct groups, glands of Littré in the membranous urethra, Cowper's glands and a group of intrabulbar glands. The remarkably persistent chronic infection of these glands plays an all-important part in periurethral suppurations in the perineum. It is through them that the organisms are transmitted to the surrounding tissues.

The inflammations which originate in the urethra and extend without may be classified on a broad basis, partly clinical, partly pathologic, as follows:

I. Acutely exudative.
  1. Perineal abscess.
  2. Perineal phlegmon.
    A. Without urinary extravasation.
    B. With urinary extravasation.
    C. With gangrene.
II. Chronic exudative.
  1. Periurethral nodes.
  2. Progressive perineal sclerosis.

The perineal abscess needs no special comment. Its origin is usually in the periglandular tissues, sometimes situated quite deeply in the perineum. Alexander, noting recurrence after simple incision and drainage, has ascribed his failures to neglect of these deeper foci. He now carefully seeks them by rectal palpation and has so extended the operation on perineal abscess as to include an external urethrotomy and provide for free drainage into the abscess cavity of all suppurating recesses, for which simple incision of the abscess would not suffice.

Perineal phlegmon, generally, but somewhat misleadingly, called urinary infiltration or extravasation, is a condition well known to the older writers. John Hunter had a very precise conception of it, a conception which, even without the aid of bacteriologic knowledge, quite accords with that entertained to-day. Hunter appreciated the dominant part played by the extension of inflammation from the urethra. In the latter half of the last century, however, a different aspect was cast on the causation of periurethral phlegmon by Voillemier. An attempt was made to explain it on wholly mechanical grounds in the sense that the presence of urine in the tissues was the effective cause. The patient was represented as making strenuous efforts to urinate, when suddenly his agony was relieved with a sharp pain in the perineum, and, though he felt quite aware of having emptied the bladder, no urine passed from the meatus.

Instead the perineum presented a sudden swelling, the beginning of a severe, rapidly spreading phlegmon. In other words, the patient had urinated into the tissues.

Now it cannot be denied that there is some mechanical force at play. For example, a case has been described, the conditions having been actually witnessed (Tedenat). As the patient was about to mount the operating-table, on which he was to be cut for stricture, he made a violent effort to urinate. This was immediately followed by a swelling of the perineum, which on incision proved to be caused by urine. But while the mechanical factor cannot be ignored, the cause of periurethral phlegmon must be ascribed in the large majority of instances to the mere extension of an inflammatory process through a tissue, which, at one time serving to protect the healthier tissues beyond, has undergone devitalization owing to a gradual failure of its blood-supply. Its vessels have become contracted owing to an endoperiarteritis. Infection is then the main, if not the sole, cause of the condition under discussion.

The degree of inflammation depends on the infecting organisms far more than it does on the presence or absence of urine. The experiments of Menzel, Tedenat and Partridge have demonstrated the innocuousness of sterile urine, when injected into the tissues, experiments that have received clinical confirmation in uncomplicated cases of bladder rupture. Yet, contrary to the opinion of some writers, I believe that urine slowly leaking into tissues invaded by most virulent organisms must play something more than an innocent part. Though severe enough, even in the absence of urine, the inflammation is more severe, more rapidly spreading and more destructive, when urine is present. Just why this should be becomes a matter for speculation. The urine itself, apart from the involvement at the site of urethral perforation, may be septic, it may act purely mechanically by rapidly opening up unprotected tissue spaces, or it may so devitalize the tissues as to make them an easy prey to the organisms taking part in the process.

Albarran and Banzet, and several years later Albarran and Cottet, have worked out the bacteriology of periurethral inflammations. Beside the colon bacillus and streptococcus, anaerobic organisms have been found in the severer cases. The presence of these anaerobic organisms is of decided significance. They account for the violent character of the inflammatory process, which frequently terminates in gangrene.

The treatment of these acute conditions is so well known as to make it unnecessary to refer more than casually to it. It must be remembered, however, that the phlegmon may spread well up on the abdominal wall and that the incisions made to cope with it must be long and generous.

Like the acute inflammations of the periurethral tissues, the chronic also begin about the urethral glands. But here a definite wall of new connective tissue, constituting the important clinical feature, surrounds the inflammatory zone. This develops insidiously, possibly in response to an attenuated infection, often without the patient being aware of the presence of any swelling. It may remain quite stationary, without further development, forming a periurethral nodule. Generally, however, the inflammatory process progresses by slowly encroaching on the connective tissue defences. More connective tissue is laid down at the periphery until gradually, perhaps in the course of months, a mass of considerable size fills the perineum. From the fact that it sometimes reaches such proportions as to suggest a tumor, the term "urinoma" has been applied to it. The developing mass may be said to propagate along two general directions, in a forward direction following the course of the urethra from the site of its usual origin about the bulb, passing beneath the pubic arch to the penoscrotal junction, and in a downward direction toward the skin covering the perineum.

This irregular mass of firm tissue, exhibiting little or no tenderness and characterized by an apparent indolence, is nevertheless subject to more or less frequent attacks of acute suppuration. The abscess may rupture into the urethra, or, becoming attached to the skin, may rupture externally. If rupture takes place in both directions, a fistulous tract results. Subsequent attacks of acute inflammation may determine fresh fistulas.

The problem of dealing with the larger mass is well settled. I believe it better surgery, before attempting to remove it, to incise and drain for a week or two any abscesses which may be present. In the case of the periurethral nodule, however, the problem is not so simple. One is forced to resolve an answer to the question of the expediency of operation. Shall the stricture be dilated with instruments progressively increasing in size in the hope, that, as dilatation progresses, the inflammatory focus may become resorbed? Or, on the other hand, bearing in mind that from just such a small focus a serious phlegmon may arise, is it not more advisable to operate and drain or excise the focus, at the same time performing an external urethrotomy? The answer will be suggested by the circumstances surrounding each case and the judgment of the surgeon as to what extent he will permit himself to be governed by the element of chance or probability.

### SUMMARY

1. The periurethral complications of stricture are of an infectious nature.

2. Inflammation may be acute, leading to a circumscribed abscess, or hyperacute, leading to a phlegmon rapidly involving the perineum, scrotum and abdominal wall.

3. In the latter event the presence of urine is of secondary significance.

4. Inflammation may be chronic and is then characterized by a progressive development of new connective tissue, possessing little resistance to infection, and therefore frequently the seat of limited suppuration.

1018 Head Building.

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## A CASE OF PANCREATIC GLYCOSURIA *

J. Morrison Hutcheson, M.D., Richmond, Va.
Physician to the Johnston-Willis Sanatorium

Although numerous theories have been evolved in explanation of diabetes mellitus, that it occurs as a result of pancreatic derangement seems a well-established fact. Experiments have shown that when the pancreas is extirpated diabetes results and that the glycosuria bears a direct relation to the amount of gland removed. It has been further shown that cessation of the flow of pancreatic juice is not the causative factor, as diabetes does not follow when the duct is ligated or when the juice escapes externally through a fistula. The conclusions of Opie tend to prove that the groups of cells known as the islands of Langerhans constitute the portion of the pancreas concerned in the production of pancreatic diabetes and that these islands are not only involved in organic diseases of the gland, but are also subject to a peculiar hyaline degeneration.

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* Read before the Adjunct Faculty of the Medical College of Virginia, Feb. 15, 1912.

In recent years the work of pathologists and experimental investigators has been amplified and added to by the surgeons, and to them, perhaps, more than to any other class of workers, is due the credit for our practical knowledge concerning diseases of the pancreas, their causation, extent and results. Moynihan[1] states that the close relation between the common bile-duct and the pancreatic duct and pancreas accounts for the frequent association of pancreatic disease with infections of the gall-bladder and ducts. Also that in the earlier stages pancreatitis may disappear after the removal of a cause, such as gall-stones. He makes the point, however, that there is a stage in pancreatitis from gall-duct disease beyond which drainage has no effect and the process is progressive.

Robson[2] in an interesting article on "Surgical Treatment of Certain Cases of Glycosuria,". makes the following observations: By far the greater number of cases of glycosuria due to pancreatitis are dependent on inflammation of the catarrhal type, in which the gland is invaded by way of the ducts from varying causes, such as gall-stones, pancreatic calculi, duodenal catarrh from ulcer, typhoid fever, etc., and a considerable proportion of these cases may be relieved by removing the cause. At a later stage an interstitial inflammation is produced which may be arrested, though the damage already done to the pancreas cannot be repaired. At a still later stage, cirrhosis of the gland takes place and if the islands of Langerhans have been extensively involved, surgical means are useless. He remarks further that the early recognition and treatment of interstitial pancreatitis or of pancreatic catarrh by drainage of the bile-ducts, and thus indirectly of the pancreatic ducts, and the removal of the cause, whether that be gall-stones, duodenal ulcer or other conditions, may be the means of averting diabetes. In certain cases even after the appearance of glycosuria, surgical treatment is well worth considering, as in a number of instances it has led to a complete disappearance of sugar from the urine by arresting the disease causing the glycosuria.

I have had the opportunity of observing the following case:

*History.*—Miss E. L. P., aged 45, was first examined July 26, 1910. She complained of weakness and nervousness; family history was unimportant. Past history shows that she had suffered considerably with distention and belching, and had been subject to attacks of terrific pain in the right lower abdomen. The longest attack lasted ten days and was associated with extreme local tenderness and she could not straighten out the right leg or lie on the left side. The attacks were always associated with vomiting, pain radiating beneath the right lower ribs, and on one occasion the attack was followed by jaundice. Physicians who saw her disagreed as to whether her trouble was appendicitis or biliary colic. Appetite was good, at times ravenous; thirst was excessive. Two years prior to this examination sugar was found in her urine and at that time she was voiding large quantities, as much as 7 pints in twenty-four hours, but was passing smaller quantities at the time of the examination. She had lost 20 pounds in weight in the previous eighteen months. For the previous few months she had been feeling weak and tired in he mornings, and was very nervous and unable to sleep.

*Examination.*—Tenderness on pressure was noted over McBurney's point. There was also a tender point above and o the right of the navel and a suggestive gall-bladder block. The urine at the time of the first examination was slightly increased in quantity and showed 0.97 per cent. sugar, or .27 gm. in twelve hours. The patient was then put on a restricted diet and three successive examinations of the urine t intervals of two weeks showed it to be sugar-free.

In September, 1910, she was seen by me in an attack of acute abdominal pain, accompanied by chills, fever and vomiting. The pain radiated to the right shoulder and back. There was pronounced tenderness and rigidity over the whole right side of the abdomen. Following this attack, sugar reappeared in the urine, to disappear again shortly after the attack subsided and the patient had resumed her diet. Subsequent examinations over a period of several months showed absence of glycosuria. It was thought that this patient's trouble lay in a gall-bladder disease with an associated pancreatitis, and operation was advised in the hope of averting future attacks and also of relieving the glycosuria.

*Operation and Postoperative History.*—She was operated on by Drs. Johnston and Willis, Jan. 14, 1911, the gall-bladder drained and a diseased appendix removed. The pancreas was enlarged and indurated and the gall-bladder showed a chronic inflammation with no stones. Following operation, sugar reappeared in the urine, although it had been absent for several months previous, even with the patient on a fairly general diet. Specimens examined during the next two months varied, some showing a trace of sugar, others being sugar-free. Since April, 1911, specimens obtained at irregular intervals were sugar-free.

The patient steadily improved in health since the operation and had no return of colics. She was last heard from in January, 1912, and at that time was said to be in better health than for several years previously.

The above case presents several interesting points. At the time the patient was first examined, the cardinal symptoms of so-called "true diabetes"—glycosuria, thirst, polyphagia, polyuria and emaciation—were all present. This condition not only showed a tendency to fluctuate under an indifferent plan of treatment, but the patient afterward passed through a heavy abdominal operation without the slightest intimation of lack of healing or infection on the part of the tissues. The glycosuria apparently bore a direct relation to pancreatic involvement, increasing after an acute attack and after operation, and decreasing with the disappearance of abdominal symptoms. Operation resulted not only in relief of the gall-bladder disease, but apparently exerted a favorable influence on a glycosuria of several years' standing.

Although the pancreas is perhaps the most important gland in the human economy, we have little knowledge as to the early pathology of its diseases. It has been found that the gland is often involved in mumps and typhoid fever, and perhaps this may be the case in many other of the acute infections, including catarrhal jaundice. What relation, if any, such incidents bear to the later onset of diabetes we cannot tell, but it seems not improbable that when we do arrive at a clear understanding of the earlier phases of pancreatic disease, the problem of the causation of diabetes will be explained. As regards treatment, the case here cited would lend emphasis to what has already been written concerning prophylaxis by prevention of pancreatitis. It shows also the inefficiency of our present methods of handling such cases, and exposes the fallacy of depending on diet and drugs as curative measures.

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[1] Moynihan, B. G. A.: Pathology of the Living, W. B. Saunders Company, 1919, p. 33.

[2] Robson, A. W. M.: Surgical Treatment of Certain Cases of Glycosuria, Brit. Med. Jour., April 23, 1910.

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## A NEW PRESERVATIVE FOR PICK-KAISERLING SPECIMENS*

JOSEPH MARSHALL FLINT, M.D., AND CARL KELLNER
NEW HAVEN, CONN.

In experimenting with a number of samples of oils for the purpose of preserving Kaiserling specimens, we have found an inexpensive and colorless neutral oil which can be used as a substitute for the unsatisfactory glycerin mixtures so much in vogue during the last few years. This product is known as Russian Mineral Oil No. 2. It can be obtained in barrel lots much below the market price of glycerin or glycerin and water, which is so frequently used. In testing the Pick-Kaiserling specimens preserved in glycerin which have lost their color to a greater or less extent, we have found that the reaction of the glycerin preserving fluid has become markedly acid. The advantages of the oil preservation seem to lie in the fact that there is a mechanical displacement of the heavier glycerin by the oil, which, owing to its neutrality and greater stability, does not decolorize the specimen by permitting the reduction of the blood pigment following a change in the reaction of the medium. Moreover, the clarity of the oil, while not greater than pure glycerin, is about the same, but does not become opaque or cloudy on standing.

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* From the Surgical Laboratory of Yale University.

The series of steps for the mounting of specimens which has given us the best results is as follows:

Solution 1—

| | |
|---|---|
| Carlsbad salts | 5 gm. |
| Liquor formaldehydi 40 per cent. dilution | 5 c.c. |
| Water | 95 c.c. |

The length of time that the specimen remains in the fluid depends naturally on its nature and size. We have allowed specimens to fix for varying periods from eighteen hours to seven days, with good results.

Solution 2—

| | |
|---|---|
| Alcohol | 80 per cent. |

As a rule a few hours is sufficient in this solution. Prolonged treatment with alcohol decolorizes the specimen.

Solution 3—

| | |
|---|---|
| Glycerin | 50 c.c. |
| Water | 50 c.c. |

In placing soft or elastic specimens directly from Solution 1 or from alcohol into pure glycerin, we have noticed a tendency for them to shrink and become distorted. If the dehydration is made more gradual after controlling the color restoration in alcohol the specimens tend to retain their form and original size with a minimum of shrinkage.

Solution 4—

| | |
|---|---|
| Glycerin | 100 per cent. |

Specimens are allowed to remain in this bath until they sink, which indicates that the impregnation with glycerin is complete, after which they are ready for transfer to the final preserving oil.

Solution 5—
Russian Mineral Oil No. 2.

The displacement of the glycerin does not take long, but varies with the size of the specimen. The glycerin falls to the bottom of the jar, from which it can be pipetted off, or else the impregnation may take place in a stock jar and the specimen transferred to the permanent museum jar after the oil has replaced the glycerin.

In the preservation of our pathologic surgical specimens we have found that cysts can be fixed with the maintenance of their original form if they are aspirated and filled with the solutions as they are transferred. This is particularly true of thin-walled cysts, making this step particularly important in the transfer into the final preserving oil.

While we have not been able to restore the color to old specimens that have turned brown, their condition has been much improved by the transfer from the glycerin preservative to the oil preservative. Experiments are now under way to determine the effect of the oil preservative on the histologic picture, but it must be obvious that where good histologic sections are desired pieces should be removed from the original specimen and preserved after fixation in suitable fluids.

321 Cedar Street.

## A CASE OF TRUE HERMAPHRODISM

E. M. Prince, M.D., Birmingham, Ala.

*Patient.*—A girl, aged 18, came to my office for examination, stating that she had never menstruated and that she suffered a great deal with headaches which were supposed to be due to the above cause.

Her past history was negative as to illness, except measles and whooping-cough when a child. She had been a student and had returned home from college on account of the severe headaches which were worse about every twenty-eight days.

*Examination.*—Patient was a healthy-looking, robust girl, refined and very intelligent. Her color was good; there was a heavy growth of hair on the head. Her voice was soft and effeminate; breasts well-developed, rather larger than ordinarily seen in a girl of her age. Her hips were typically feminine; mons veneris scantily covered with hair; labia majora normal; no enlargement of clitoris; hymen unruptured. On rectal examination no mass or uterus could be felt. A vaginal examination was then made and the vagina found to be about 2 inches deep, terminating in a blind pouch. In the upper part of the labia majora two glands could be felt which were very freely movable, and could be pushed low down into the labia majora, or up into the canal of Nuck or inguinal canal. Her chest and blood were negative; urine contained some albumin.

A diagnosis of "no uterus" was made, with hernia of both ovaries, as she complained of the inconvenience incident to the abnormal location of the supposed ovaries. An operation was advised in which we proposed to replace these in the abdominal cavity and determine what abnormality existed.

*Operation.*—The abdomen was opened in the median line. The broad ligaments were seen to come together, forming a small mass which was about the size of a pecan. On the left side of this mass an ovary could be felt which was about normal in size. Lying near this ovary was what seemed to be an imperfectly formed tube. Nothing was removed from the abdominal cavity, as the family did not wish anything removed. There was no excuse for removing anything unless it was the supposed tube, which would have been interesting from a histologic standpoint. The abdomen was then closed. After much deliberation and consultation with the patient's mother we decided to remove the glands on either side of the labia majora. These were submitted to Dr. Dowman, whose report is below appended.

*Pathologist's Report.*—Microscopic examination of sections from the "tumors" removed from the labia of a young girl shows each to be a well-developed testicle with a rudimentary epididymis.

1127 South Twelfth Street.

## SPONTANEOUS TYMPANOMASTOID EXENTERATION

Emil Amberg, M.D., Detroit

Mr. I. K. K. T., aged 38, gives the following history: The patient's left ear began to discharge, as nearly as he can remember, when he was about 7 years old. It received no treatment at that time so far as he knows. When he was about 14 years old he had in this ear a severe attack of earache that grew worse day by day. The mastoid appeared to be involved; there was considerable swelling behind the ear and the pain became general over the side of the head and face. The patient kept his head bent over toward the right shoulder. A local physician (in Texas) was consulted and he said an operation might be necessary, but hesitated to attempt it because of inexperience. The pain became almost unbearable until at the end of about ten or twelve days the pus burst through. The pain and swelling gradually subsided. A few weeks later a polyp was removed by this physician. He did not succeed in stopping the discharge. During the next four years the ear was treated off and on by several local physicians. Two or three more polyps were removed during that time. Occasionally the patient had severe pain. The hearing was practically destroyed so far as the right ear was concerned. The treatment consisted mostly in syringing the ear with a diluted antiseptic solution. Occasionally the boric acid treatment was tried. All forms were unsuccessful.

In 1892 the patient's physician recommended him to see a specialist in Dallas, who removed another polyp and in the course of about six months succeeded in getting the ear dry.

For the next four or five years he had no trouble at all, so far as he can remember. He thinks it was dry all that time. In Detroit, about twelve years ago, the discharge reappeared subsequent to a cold. A local specialist checked it after a few weeks' treatment. Probably once or twice a year the discharge would again occur, but always yielded rather promptly to treatment. The patient consulted me about six years ago. At no time in the last six years has there been a discharge for more than a very brief period. In the last three years there has been absolutely no discharge at all, says the patient. There never was any pain since it was treated twenty years ago.

The configuration of the destruction which we see in the patient's temporal bone corresponds practically to that created by the surgeon during a tympanomastoid exenteration. The tympanum, aditus ad antrum, antrum and the remnants of mastoid process form one cavity. The facial ridge, the region of the horizontal semicircular canal, the medial, and posterior border of the antrum are plainly visible. The length of a line extending from the tragus backward and upward to the corner between the posterior and medial wall of the cavity is by actual measurement 1 7/16 inches.

The little inconvenience which the patient experiences, aside from his hardness of hearing (a' fork is not heard by air conduction), and the comparative freedom from treatment is remarkable.

It is said that Politzer, when speaking of the temporal bone, expressed himself in the sense that death lurks on all sides of it save one. Nature has so far been very kind to my patient. It must be admitted that this unusual condition is so exceptional that it must be regarded as a curiosity and that it must not be cited in support of hesitancy concerning surgical interference in similar affections.

270 Woodward Avenue.

## A CASE OF PELLAGRA IN NEW ENGLAND

Davenport White, M.D., New York

The following case of pellagra is the first case reported in Connecticut[1] and the second in the New England states.[2] It occurred in New Canaan, Conn., a town which is unusually healthy.

*History.*—Family history was negative save that one sister is a deaf-mute, from infancy.

The personal history is negative throughout. Patient was always considered the perfection of health.

Maize or cereals in any form were never eaten; white bread alone was her only food derived from grain. She was passionately fond of all tropical fruits. Her entire life was spent in New Canaan, and she never left it save for an outing of a day, and then within a radius of eight miles.

Menstruation began at 13 years; regular in all respects up to 15 years of age, then irregular in amount and periods for nine months, when it stopped completely. Her moral standard was above reproach.

In the spring of 1907, the patient, then a girl of 15, while attending the local school, began to suffer with lassitude, anorexia, and loss of weight. Soon there appeared a bright-red edematous condition on the backs of both hands and wrists; a few scattered vesicles were present, and a burning itching sensation was noted. No gastro-intestinal disturbance or fever symptoms.

The patient imagined herself to have been poisoned with "three-leaf ivy" *(Rhus toxicodendron)* or perhaps sunburned, and thought no more of it after the swelling had subsided and the parts had sealed. Her condition improved somewhat as summer progressed, although she lost her brilliant coloring and had not regained her normal weight of 120 pounds or her strength when she returned to school in the fall. Then her attention was called to her hands because of their dirty brown, thickened appearance, particularly noticeable on wrists and knuckles. As colder weather came these parts would often crack and bleed. There was a steady loss in weight, an ever-increasing weakness in the lower extremities, and her color faded to a pallid hue.

Finally, in the spring of 1909, she stopped school because of nervousness and physical weakness. Her disposition, from a bright cheery one, had become morose and sullen, and she spent much of her time alone. As time progressed she sank deeper into this melancholic state, and was more and more difficult to arouse. She would fly into a rage without the slightest provocation.

About the middle of June, 1911, she suddenly developed persecutory delusions and became so violent that she was removed to a hospital. After being restrained for ten days the acute mania was superseded by a low-muttering melancholic condition. Food and medicine were refused and water alone was taken. Soon alternating attacks of diarrhea and constipation developed, which on her removal home had become continuous diarrhea; stools from six to eight daily, frothy fluid, foul-smelling, with a small amount of mucus, was the general rule. She was incontinent of urine and feces at night, and had developed a bed sore some 2½ inches in diameter.

She now complained of indefinite cramp-like pains in the abdomen, and soreness (to touch) of leg and thigh muscles. Her sleepless nights were partially relieved, but she still complained of auditory delusions when I first saw her on July 20, 1911. She could be easily aroused, talked sensibly for a short time, only to relapse into a sullen apathetic state. Repeated calling for water and indigestible fruits formed her only voluntary conversation.

*Examination.*—The patient was a girl, aged 19, of moderate frame, emaciated, hunched up with knees flexed on abdomen; facies, dull and apathetic; a well-marked acne vulgaris on face; saliva drooling from mouth, and a dull-gray leaden hue to complexion.

Eyes: Normal, save for beefy-red appearance of mucous membranes.

Ears: Both drum-membranes slightly thickened.

Mouth: Tongue clean, swollen with tooth indentations, slightly dry on dorsum, but having a peculiarly velvety feel. It was bright-red in color, as also the gums, roof and sides of mouth, and pharynx. The gums showed a moderate Riggs' disease.

Heart: Somewhat rapid (112); sounds clear, but having a valvular quality. No murmurs, accentuations, or enlargement.

Lungs: Negative.

Abdomen: Symmetrical, slightly distended, no rose spots; tympanitic into flanks; no localized points of tenderness, although somewhat generally tender on deep palpation. No masses and no rigidity.

Liver: Dull in fourth, flat in sixth; does not percuss large; edge not felt.

Spleen: Does not percuss large; edge not felt.

Kidneys: Lower poles just palpable; no tenderness.

Extremities: Lower: Flexed on abdomen; slightly tender on deep pressure over muscles; no contractures; Babinski, absent; ankle-clonus, absent; no discolorations or thickenings on dorsum of feet. Upper: Dorsal aspect of hands and wrists show a well-marked thickening, especially on knuckles and wrists. This is rough to the touch, of a dirty-brown color, and shows cracking, with slight serous exudation in places. No evident muscle-tenderness.

Glands: Negative throughout.

Vertebral Column: No points of tenderness, no rigidity of neck.

Bed-sore: Two and one-half inches in diameter, over sacral region.

Romberg's Sign: Absent.

Vaginal Examination: No caruncules myrtiformes; mucous membrane, beefy-red; no exudation. One-finger examination showed cervix *not* lacerated; uterus, small and retroflexed; adnexa, negative.

Sensation: Pin-point pricks, scratching, blunt objects, heat and cold, were all recognized, but delayed.

Temperature, 99.2. Pulse, 112. Respiration, 22.

*Course of Disease.*—From July 31 to August 6 the patient's condition underwent a decided change for the better. This was accomplished through forced fluids, high rectal saline retained enemas, and increased sleep (through opiates). The mental condition became brighter, auditory delusions subsided completely, the frequency of movements dropped to two slightly formed stools daily, the appetite improved, the urinary output increased, the bed-sore healed completely, the abdominal pain and tenderness subsided, together with gas formation and fetid stools; and there was a decided gain in weight. Suddenly, however, on Aug. 6, 1911, nausea and a distaste for food developed and three days later vomiting began for the first time. With the nausea the stools became more frequent until they became almost continuous, also mucus in fair amount. The patient became incontinent of urine and feces day and night. Two days prior to death a fibrillary twitching of tongue began. later involving in order hands, face, upper extremities, and finally the whole body. This increased in severity until these athetoid movements became so marked as to amount to almost clonic spasms. The abdominal pain returned, but not so the pain in lower extremities.

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[1] So far as shown by a search of the Index Medicus.

[2] The first was reported in Jour. Cutan. Dis., incl. Syph., 1910, xviii, 42

Death came from physical exhaustion on Aug. 9, 1911. The mind remained absolutely unclouded. There were no convulsions, the patient sinking into a quiet sleep with all spasms of muscles allayed, and death came one hour later. The temperature gradually rose to 106 F., pulse 180, and respiration 40. There were no paralyses or contractures.

Urine (catheterized specimen, Aug. 5, 1911): Clear, amber, 1016; albumin, none; sugar, none; indican, moderate amount; microscopic showed a few desq. sq. ep. cells, many amorphous urates, few leukocytes, no casts.

Blood Examination (Aug. 5, 1911): White blood cells, 9,400; red blood cells, 4,200,000; hemoglobin (Fleischl) 65 per cent. Differential; white blood cells, polymorphonuclears, 56.2 per cent. Large lymphocytes, 26.2 per cent. Small lymphocytes, 7 per cent. Large mononuclears, 1.4 per cent. Small mononuclears, 6 per cent. Eosinophils, 4.4 per cent. No malarial organisms, no nucleated red blood cells. Red blood-cells showed a well-marked secondary anemia.

Feces (Aug. 5, 1911): No ova of any kind; a trace of blood; no amebas.

No sputum at any time.

### CONCLUSIONS

1. By a series of elimination pellagra seems to be the only diagnosis possible.

2. Marked improvement consequent to the eliminative treatment would point toward a condition gastro-intestinal in type.

3. The maize theory here would be exploded, with the possibility of infection through tropical fruits.

In closing I wish to thank Dr. James A. Miller of New York for his kind help.

447 West Fifty-Ninth Street.

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## OXALIC ACID POISONING

O. H. BROWN, M.D., ST. LOUIS
Assistant Professor of Medicine, St. Louis University, and Visiting Physician, St. Louis City Hospital

AND W. G. SCOTT, M.D., ST. LOUIS
Intern, St. Louis City Hospital

The following report is presented as a basis for a discussion of a point in oxalic acid poisoning that we have not been able to find mentioned in the literature.

*History.*—J. R., a white man, aged 32, entered the hospital at 4 p. m., Aug. 24, 1911, and stated that about one and one-half hours previously he had taken, with suicidal intent, one ounce of a solution of oxalic acid intended for cleaning straw hats which he had purchased for 5 cents. The patient was well oriented as to time and place, had no hallucinations or delirium and appeared entirely rational in both speech and action. He admitted having been despondent for the past week and thought that he must have been temporarily insane when he took the acid.

*Treatment and Result.*—Thorough stomach lavage was accomplished and 100 c.c. of a saturated solution of magnesium sulphate were administered and this was followed by 90 c.c. of olive oil. The patient was then transferred to the ward. He was somewhat asthenic and rather somnolent. Pulse was 78; respiration, 24; temperature, by mouth, 96 F. The skin was cool, especially that of the hands and feet. The patient had slight pain in the abdomen but did not complain thereof; the abdomen was not tender to pressure. He took water freely. During the afternoon he vomited 6 ounces of sanguinous material. The bowels moved freely. In general, the patient's condition improved during the afternoon and at 5:50, nearly two hours after admission, his pulse was 88; respiration 24, and rectal temperature 98.2 F. At this time emergency treatment was discontinued, the prognosis was considered good and the patient was transferred to the regular ward for attention. His condition continued good until 9 o'clock when it was noticed that he was restless. At 9:30 his pulse was 100; respiration 24; at 11:20 pulse was 136; respiration 36, and temperature was 99.4 per rectum. From this time on, notwithstanding the use of digitalis and camphorated oil. the patient's condition gradually grew worse, except for a few hours after active stimulation began, at which time he responded slightly to the drugs. The patient died about thirty hours after swallowing the poison.

*Remarks.*—In discussing oxalic acid poisoning, Brundage says in his "Manual of Toxicology" that "death has occurred in from three to ten minutes but usually occurs in about an hour. Death has occurred as late as the fourteenth day."

Dwight and Pedersen in their "Toxicology," after detailing the symptoms of oxalic poisoning (without mentioning, however, the danger of venturing a good prognosis), rather suggestively state that there are none among the irritant poisons whose symptoms vary so much as those of oxalic acid. Eleven standard works on toxicology, and pharmacology were inspected. No reference was found to the dangers of apparently good prognoses in those cases that are not early fatal.

Cushny says in his text-book on pharmacology: "In mammals there is first. apparently, a stimulation of the medullary centers—the arterial tension is first increased through stimulation of the vasomotor center. Later, the movements are wanting in coordination, the respiration becomes slow and dyspneic, the heart is weak, and the animal becomes comatose and dies, sometimes in convulsions. . . . In cases of oxalic acid poisoning in man, the early symptoms are great muscular weakness, twitching of muscles, especially those of the face, more rarely convulsions; later there follows collapse, with a weak, fluttering pulse, pallor or cyanosis, coma and death."

That treatment of these cases may be efficacious is shown by a case reported by Dr. F. J. L. Hart.[1] A boy 15 years of age took 12 drams of oxalic acid. Severe symptoms came on promptly. Stomach-washing and hypodermic injection of apomorphin were used; there were also used brandy, digitalis and strychnin. The patient made a good recovery.

The solubility of oxalic acid is 1 part to 15.5 parts at 50 F. In this particular case then, if our facts were correct, the man had taken in the neighborhood of 35 grains of oxalic acid.

The lesson to be learned from the case herein reported is plain and is that even in the face of an apparently good prognosis, active emergency treatment should not be discontinued early when one is dealing with oxalic acid poisoning. At any rate, we feel that had active treatment been continued a few hours longer in this particular case, a life might have been saved. The treatment of the next case of oxalic acid poisoning should be improved and would consist of the following points: (1) stomach lavage, (2) free elimination of the bowels with magnesium sulphate, (3) drinking copiously of water, (4) calcium lactate by stomach, (5) calcium lactate intravenously, (6) the use of digitalis and strychnin or other heart tonics to preserve the proper blood-pressure.

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## A TREATMENT OF GASTRIC ULCER

C. S. MINNICH, M.D., PALMER, NEB.

In the treatment of gastric ulcer I have long taken advantage of the reversal of the fact that the ulcer is caused by the corrosive action of the gastric juice on the gastric mucosa.

All will agree that the gastric juice is made up of the secretion of the peptic glands and hydrochloric acid and we know that neither of these will act as a digestant without the other. We cannot stop the secretion of either one of these constituents of the gastric juice but we can stop the action of both of them by neutralizing the hydrochloric acid. I believe that if this is done a gastric ulcer will usually heal quickly and kindly. I refer to good-sized and repeated doses of chalk, enough to neutralize the hydrochloric acid and keep it neutralized all the time during treatment.

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[1] Hart, F. J. L.: Lancet, London, Oct. 1, 1898.

The treatment of gastric ulcer with alkalies is not new, but I believe that such treatment has not been properly applied and that the alkali has not been properly chosen or properly used. Soluble alkalies will not answer, as they are at once washed away into the bowel. Chalk, of course, is not an alkali but acts as such in the presence of hydrochloric acid. I apply this line of treatment in acute cases as my experience with chronic cases has been limited.

The treatment may begin as soon as the diagnosis is made, except in the face of hemorrhage or some other very evident contra-indication. Little or no restriction in diet has been found necessary except that the food be finely chewed or minced, or taken in the form of soup, which I prefer, so that the food can easily enter the bowel from the stomach where it meets the alkaline intestinal juices. Small meals oftener taken do not seem to do as well as the three-times-a-day feeding, as the stomach appears to need a period of rest aside from the action of the chalk treatment.

This treatment cuts out the stomach as a digestive organ for the time being and the work of digestion is thrown on the intestines, which seem entirely equal to the occasion even with a practically unrestricted diet.

No untoward effect seems to be caused by the treatment, no "dyspepsia" nor weight is felt more than would be accounted for by the ulcer. It seems that the ulcer is not much irritated by the neutral stomach contents and seems to heal quickly under this neutral reaction of the stomach juices. It is the active, biting gastric juice that causes the pain and prevents the healing as well as having caused the ulcer in the first place.

A dose of 4 or 5 gm. should be given in a little water during meals and repeated for about two doses an hour or two apart after eating. An excess does not seem to cause any trouble. The idea is to stop the action of the gastric juice entirely by neutralizing the acid so that the ulcer can have a chance to heal. I use precipitated chalk but see no reason why the prepared chalk would not answer as well or better.

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## MALFORMATION OF FEMALE GENITALS

R. L. Rhodes, A.B., M.D., Roanoke, Va.
Resident Surgeon, Jefferson Surgical Hospital

*Summary of Condition.*—Double uterus (didelphys) and double vagina (vagina septa) with left hematocolpos, hematometra, hematosalpinx, and hematocyst of ovary due to atresia vaginæ lateralis with consequent damming back of menstral flow.

*Patient.*—H. C., aged 15, Hospital No. 790, was admitted Sept. 21, 1910, in the service of Dr. Hugh H. Trout, being referred by Dr. A. L. Wolfe, the tentative diagnosis of stenosis of os having been made. On account of the patient's age, no pelvic examination had been made. There was complaint of severe dysmenorrhea. Family history was unimportant. The patient had always been a healthy girl, never had any serious illness. About two years before admittance she began having a good deal of pain during the acts of defecation and micturition; the bowels were constipated. The present illness began five months previously. Patient had one normal menstrual period prior to this, a rather free flow with but slight inconvenience; at this time, however, she had a second period, which was accompanied by a good deal of pain but scanty flow. Since then periods had been regular, every four weeks; each succeeding period, however, had been associated with more and more pain, until the last one which was associated with agonizing pain, requiring ½ gr. morphin hypodermatically for relief. Flow had been scanty since the first period; color bright red. Painful defecation had continued since onset two years ago. There had been some frequency of micturition during the past five months. Appetite had been poor during past two or three months; digestion unimpaired. Patient thought that she had lost some weight.

*Physical Examination.*—Patient was sparely nourished; color fair (hemoglobin 65 per cent.), temperature 101, pulse 124. In lower left portion of abdomen an indefinite mass could be felt, and patient complained of tenderness and pain on palpation of lower abdomen, especially in left iliac region. Pelvic examination made under an anesthetic on the operating table showed normal vaginal outlet, hymen intact, vagina straight tube, no "H" shape. When the finger was introduced into the vagina, a large mass was felt on the left side, and extending down to the left labia. Cervix could not be located. Bimanually a large mass filling entire left side of the pelvis was made out. It was decided to do an exploratory laparotomy.

*Operation.*—There was found a large left ovarian cyst, about 10 cm. in diameter, and filled with blood, and a bicornute uterus, the left horn being the larger, about 8 cm. in longest diameter. The right horn was rudimentary, about 3 cm. in longest diameter. Below the left horn, and continuous with it was a large mass 8 or 10 cm. in longest diameter. In the attempt to dissect this mass free it was ruptured, allowing about a liter of retained menstrual flow to escape. The entire mass with uterus, tubes and ovaries was removed because it was found impossible to establish a permanent opening for menstrual flow.

*Specimen.*—Examination of the removed specimen showed a double uterus with light coalition between the two cervices and the two vaginas. The right tube and ovary were normal.

On opening the right uterus the cervix was 3½ cm. long, the vaginal portion not so prominent as normally, there being a sudden thickening in the region of the cervix (uterus parvicollis) instead of the usual protrusion of the cervix into the vagina. The uterus was small, its cavity being the same length as the cervix. Endometrium appeared normal.

On the left side the uterus, cervix and vagina presented something of a dumb-bell appearance, though, of course, not so dilated since rupture and escape of contents. On opening this side the vagina presented a thick wall, 0.5 to 1 cm., was considerably dilated, and had no traces of rugæ. As on the right side, the change from vagina to cervix consisted merely in a gradual thickening of the wall. Septum between vaginas was from 5 to 7 mm. in thickness.

In this then we have a case in which each Müllerian duct formed a tube, uterus and vagina, coalition consisting in a mere union of the walls of the two vaginas and cervices, there being no evidences of even a thinning of the septum at any place.

*Course.*—Convalescence was marred by a vesicovaginal fistula as a result probably of dissecting free the left vagina. November 6, three weeks after her discharge, the patient returned to the hospital for closure of the fistula, which was done a few days later. It is (March 21, 1912) eighteen months since first operation and patient is enjoying the best of health.

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## RUPTURED TUBAL PREGNANCY WITH OPERATION

Bernard L. Wyatt, M.D., and Kossie L. Buckner, M.D.
BRIDGEPORT, TEXAS

*History.*—Patient, A. B. B., aged 32, married; family history negative; previous personal history of no importance with reference to her present condition.

Menstruation began at the age of 16, was always regular, although somewhat painful, and the periods were from five to six days in duration. There was no history of gonorrhea. The patient is the mother of two children, aged 9 years and 19 months, respectively. Both labors were normal. There was no history of miscarriage or abortion. The bowels had always been regular and general health good.

*Present Illness.*—Dec. 14, 1911, the patient began menstruating, and the flow continued for two or three days. The menstrual period being expected at this time, no suspicion of any trouble was entertained. The flow, however, returned in three or four days, lasted a day or two, and then disappeared. This metrorrhagia recurred at varying intervals until Jan. 9, 1912. On the afternoon of January 9, while in bed, the patient was suddenly seized with a severe agonizing pain over the hypogastric and left iliac regions. The pain came on without any premonitory symptoms and was excruciating in character. There was at the same time a severe hemorrhage from the uterus, and within a few minutes the patient was in a state of collapse and the family physician was summoned. The patient made a good recovery, but from this date until February 4, when she came under our observation, she suffered from colicky pains in the lower portion of the abdomen, ran a daily temperature which would reach 100 F. to 101 F. in the afternoon, and had some discomfort on evacuating the bowels. Also a mass was noticed on the left side. During all this time the patient regularly performed a large part of her household duties, and in coming to the sanatorium was obliged to travel nearly 200 miles.

*Physical Examination.*—The physical examination was negative except in so far as the pelvic organs were concerned. Both vagino-abdominal and recto-abdominal examination revealed considerable enlargement of the left tube, and a large mass in the culdesac of Douglas. There was extreme sensitiveness of all the pelvic organs, which made the examination somewhat difficult.

*Operation.*—The patient was given 2 ounces of castor oil and prepared for an abdominal section, which was performed on the morning of February 6. On opening the abdomen a greatly enlarged fallopian tube was found which showed an ampullar pregnancy of about ten weeks' duration. The posterior layer of the broad ligament was greatly distended by the hemorrhage, which had occurred between the layers of this structure, and there were extensive adhesions between the gestational sac and the rectum. Salpingo-oöphorectomy was performed, two handfuls of blood-clots removed, and after an examination of the right tube and ovary, which were found to be normal, the abdomen was closed. On account of the great amount of oozing, a glass drainage-tube, surrounded by iodoform gauze, was introduced, the gauze being removed on the third day, and the tube on the fourth day after the operation. The convalescence of our patient was uneventful, and she was discharged from the sanatorium at the end of eighteen days.

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## REPORT OF CASE OF DERMATOBIA NOXIALIS IN MAN

A. O. Singleton, B.S., M.D., Galveston, Tex.
Demonstrator of Surgery, University of Texas

*History.*—O. S., German, aged 24, a laborer, came from Mexico to Galveston three weeks before the time of examination. He had lived in Mexico for six months previously and during this time had had little work to do and lived as a tramp, sleeping out of doors. He said that the flies were very bad, and that many times he was bitten by them; while bathing in a stream he was bitten on the end of the penis a little over a month prior to his visit. A little blood exuded from the bite and swelling soon followed. Since that time there had been a slight swelling of the dorsum of the penis, just behind the corona of the glans. A small scab would form over the bite and then come off, with a brown fluid exuding. This was repeated at frequent intervals. He had suffered continuous pain in the part.

*Examination.*—There was a slight abrasion just in front of the corona of the glans on the dorsal surface of the penis, and on pressure a drop of pus was expressed. Just behind the glans was a hard swelling about the size of a pecan, which felt very much like scar tissue. A sound was passed into the urethra, showing it to be free from the tumor mass. The penis was dressed and the patient requested to return the following day, but did not for two days. Then there was found only a little inflammation about the parts and no pus coming from the opening, but the swelling remained the same. On pressure a white gelatinous-appearing body showed in the opening of the sinus. With a pair of skin forceps this was grasped, and with traction the body elongated and was pulled through the small opening.

*Diagnosis.*—It was readily seen to be a larva of some fly, alive and actively moving. It was ¾ inch in length, club-shaped, and slender posteriorly. Its body was in segments with rows of black hairy bristles or spines on the borders of the upper segments encircling the body. It was glistening white in color, and had two hooked mandibles and anal breathing pores. The larva was placed on fresh beef and at the end of ten hours was active and alive, but at the end of twenty-four hours was dead, showing that it must have living tissue in which to thrive. It was evidently the larva of *Dermatobia noxialis,* known as the "macow worm" (*ver macaque,* monkey worm). It is of the family *Oestridæ* (warble flies) which are found from Brazil to Mexico, and as described in Daniel's "Laboratory Studies in Tropical Medicine," is "of large size, thick set, and often very hairy. The larvæ live under the skin of men, apes, cattle, and dogs as a rule."

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## PROSTATIC CARCINOMA IN A YOUTH

S. J. Gardner, M.D. and W. T. Cummins, M.D.
SAN FRANCISCO

*Patient.*—L. P. R., aged 17, American, machinist apprentice, was admitted Oct. 2, 1911. Family history negative. Previous history: no recorded illness except diphtheria when 8 years old. The present illness began about seven weeks before admittance, with colicky pains in lower left side of abdomen accompanied by vomiting. Pains radiated to left testicle. There was incontinence of urine affected by posture; no hematuria. After four weeks the pain shifted to right side of lower abdomen and radiated to right testicle. The patient lost much weight.

*Examination.*—Well-nourished, fairly well-developed young man. Pulse and respiration normal. Eyes normal. No eruption. Tongue clean. Heart and lungs negative. Rectal examination bimanually showed hard, lobulated enlargement of the prostate, which was particularly painful on palpation. Urinalysis: Clear; specific gravity 1018; acid; no sugar nor albumin; no casts (on admission).

*Clinical Diagnosis.*—Sarcoma of the prostate. Death occurred Jan. 12, 1912.

*Post-Mortem Record.*—Markedly emaciated body. Lividity and rigidity moderate. No eruption, scars, or bed-sores. Peritoneum smooth, moist, glistening and no increase of fluid. Position of abdominal organs normal. A large, firm, pale, nodulated mass completely filling pelvis. Spleen somewhat increased in size but of normal shape; capsule stripped with some difficulty. Markings of fibrosis on cut surface. Color brownish-red. No evidences of tumor metastasis. Liver of normal size and shape, showing typical "nut-meg" markings. No evidences of tumor metastasis. Gall-bladder, stomach, intestines and pancreas normal. Both kidneys somewhat larger than normal. Capsules strip easily. Color brownish-red. Considerable dilatation of calyces as well as pelves. Both ureters dilated throughout their continuity to size of lead-pencil. Both adrenals soft, yellow and cystic.

The bladder was moderately dilated and contained approximately 200 c.c. of urine. Its wall was considerably thickened and varied between 0.5 and 1 cm. The mucous membrane was moderately congested, thickened and rugose, but presented no evidence of ulceration. In the prostatic region there lay a firm, pale, nodular mass which had exerted considerable pressure on the rectum, as dilatation was seen above the area of stenosis. This mass included the neck of the bladder and as far back as the openings of the ureters. Two small masses projected into the bladder. On sectioning these masses were firm and pale with whorls and bands of tissue apparently of connective-tissue type. There were no evidences of congestion nor hemorrhage. The prostatic urethra was stenosed and the mucous membrane of this as well as the membranous portion was moderately congested.

Mesenteric nodes were enlarged, firm and pale, their average size being about that of a soup bean. The retroperitoneal group were enlarged to the size of chestnuts with the same general consistency and appearance as the mesenteric group. Near the splenic flexure of the colon there was a pedunculated lymph-node somewhat larger than a horse-chestnut (6 by 5 by 4 cm.). Its tissues were identical in appearance with the other nodes. Though very pale, this was at first mistaken for an accessory spleen.

Permission for a partial autopsy only was granted so that an examination of the thoracic organs and central nervous system could not be made.

*Histologic Examination.*—Spleen: Capsule and trabeculæ showed moderate fibrosis. Sinuses in places were considerably dilated. Large quantities of hemosiderin were seen. Liver: There was no abnormality except for a moderate passive congestion and hemosiderosis of parenchyma near the midlobular areas. Kidneys: Capsule was moderately fibrosed. Much of the cortical epithelium showed degenerative and necrotic changes. In some of the tubules the epithelium had desquamated. There were numerous areas of connective tissue overgrowth. Adrenals: There was marked vacuolation of the cells of the fascicular and reticular zones. Pancreas: A moderate fibrosis was evident. Prostate: There was considerable overgrowth of connective tissue. The epithelium of many alveoli showed marked proliferation and penetration of the basement membrane. In some places evidences of alveoli were seen but in many other places the epithelial masses were solidly formed. Retroperitoneal lymph-nodes: All of these were of the same general structure. The connective tissue showed some overgrowth and between these trabeculæ there were large and small masses of cells with vesicular nuclei resembling closely the above-mentioned alveolar epithelium of the prostate.

*Pathologic Diagnosis.*—Carcinoma of the prostate and retroperitoneal lymph-nodes; chronic interstitial splenitis and hemosiderosis; passive congestion of the liver; chronic parenchymatous nephritis; hydronephrosis and hydro-ureter; chronic interstitial pancreatitis.

# RELATION OF VARIETIES OF STREPTOCOCCI

## WITH ESPECIAL REFERENCE TO EXPERIMENTAL ARTHRITIS *

DAVID J. DAVIS, M.D.
CHICAGO

It is the purpose of this statement to call attention to certain facts observed in connection with a series of animal experiments on the relation of various kinds of streptococci to experimental arthritis. Injection of *Streptococcus hæmolyticus* intravenously into rabbits practically always gives rise to arthritis and tenosynovitis which may be monoarticular or polyarticular. This is true regardless of the source of the organism as I have shown in a previous paper.[1] When given in moderate doses rarely do the streptococci localize elsewhere. In large doses they are prone to produce myocardial abscesses and hemorrhages and occasionally also typical vegetative endocarditis. The latter lesion, however, is not common, probably because sufficiently large doses cannot be given without quickly killing the animal by general septicemia.

A streptococcus recently isolated from cases during an epidemic of sore throat in Chicago,[2] has been tested on animals and in every instance (four strains used) arthritis was produced. In one animal a vegetative endocarditis of the aortic valve resulted. Through the kindness of Dr. Fabyan of Boston I received four strains of streptococci isolated during the Boston epidemic of sore throat a year ago. Two of these strains have been injected into rabbits and both, in moderate doses, produced multiple arthritis. The other strains have not yet been tested. These cocci appear to be identical with the Chicago streptococci mentioned.

Six strains of typical *Streptococcus mucosus* were injected intravenously into rabbits. Without exception all localized in or about joints producing multiple arthritis. Acute pericarditis and peritonitis occurred in some instances. These organisms are highly virulent especially when first isolated and minute doses should be given; otherwise the animal is quickly overwhelmed with the infection and dies in twenty-four to forty-eight hours without definite localization of the organisms.

*Streptococcus viridans* is often encountered about the throat and occasionally in the tonsils especially in certain cases of endocarditis.[1,2] These organisms, in contrast with the three types above mentioned, rarely produce arthritis even in very large doses. On the other hand, they tend to localize in the heart valves, giving rise to endocarditis. These organisms have been found by Rosenow[3] in the blood and lesions in many cases of chronic infective endocarditis. He finds that they almost never localize in the joints of animals; on the other hand endocarditis is readily produced. The *Streptococcus viridans* would therefore appear to be rather sharply differentiated from other streptococci in this respect. From the above facts the suggestion is made that the occurrence of arthritis on animal inoculation may be of value in differentiating varieties of the streptopneumococcus group.

TABLE OF THE RELATIONS OF THE ORGANISMS

| No. | Organism. | Hemolysis on Blood Agar. | Green Colonies on Blood Agar. | Capsule. | Experimental Arthritis | Experimental Endocarditis. |
|---|---|---|---|---|---|---|
| 1 | *Streptococcus hæmolyticus.* | +++ | 0 | 0 | +++ | ± |
| 2 | *Streptococcus epidemicus* * | ++ | 0 | + | +++ | ± |
| 3 | *Streptococcus mucosus....* | ± | ++ | +++ | ++ | ± |
| 4 | *Streptococcus pneumoniæ (pneumococcus)* | 0 | +++ | + | ± | + ? |
| 5 | *Streptococcus Viridans....* | 0 | +++ | 0 | ± | +++ |

* This streptococcus is the organism which caused the recent epidemic in Chicago, and apparently also in Baltimore and Boston.

This leads one to a consideration of the classification of organisms of this group. This may perhaps best be presented in the accompanying table which is designed to bring out certain relations, but is not intended to be a complete classification. Nos. 1, 2, and 3 may be considered as belonging to the streptococcus group; Nos. 4 and 5 to the pneumococcus group. It will be noted that the transition from one member to another is more or less gradual. No. 2, the organism causing the recent epidemic in Chicago, lies between the *Streptococcus hæmolyticus* and the *Streptococcus mucosus*, but apparently resembles the former more closely than the latter.

1416 Indiana Ave.

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* From the Laboratory of St. Luke's Hospital.

[1] Davis: Jour. Infect. Dis., 1912, x, 148.

[2] Davis and Rosenow: An Epidemic of Sore Throat Due to a Peculiar Streptococcus, THE JOURNAL A. M. A., March 16, 1912, p. 773.

[3] Rosenow: Jour. Infec. Dis., 1909, vi, 245.

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[*For other information see second page following reading matter*]

SATURDAY, APRIL 27, 1912

## RACE DECAY AND SOCIAL HYGIENE

The cry about "race suicide" which is so frequently heard nowadays is taken by some to represent a serious sociologic problem demanding earnest consideration on the part of far-seeing nations. There can be no doubt that a fall in the birth-rate has been spreading in Europe for several decades; but the question arises whether the undeniable statistical facts justify the alarmist statements and protests which have gone forth from time to time. Are the nations involved and the world at large threatened with dire consequences from the failure of certain classes to replenish the earth with successors of their own kind?

The propagandists assert that bad stocks are tending to replace good ones because the good stocks of the upper social class are decreasing in fertility, whereas the bad stocks of the lower social class are not. To this the reply has been made that "the soundness of a stock, and its aptitude for performing efficiently the functions of its own social sphere, cannot, indeed, be accurately measured by any tendency to rise into a higher social sphere. On the whole, from generation to generation, the men of good stock remain within their own social sphere, whether high or low, adequately performing their functions in that sphere. They remain, we may say, in that social stratum of which the specific gravity is best suited for their existence."[1]

Discussions of this sort are primarily of interest to the sociologist rather than to the physician. But they can be eliminated only with difficulty from the more distinctly biologic aspects of the talk about "race decay." The scientist must take a position toward this question, and the physician in particular is often expected to contribute an illuminating opinion on such topics. Shall he champion the cause of those whose motto is "increase and multiply," or shall he pause to examine the ideals of the modern study of eugenics which embraces those agencies by which the human race may be improved?

One answer to this is boldly formulated by Havelock Ellis, the well-known English writer on the psychology of sex. "A female salmon," he says, "it is estimated, lays about nine hundred eggs for every pound of her own weight, and she may weigh fifty pounds. The progeny of Shakespeare and Goethe, such as it was, disappeared in the very centuries in which these great men themselves died. At the present stage of civilization we are somewhat nearer to Shakespeare and Goethe than to the salmon. We must set our ideals toward a very different direction from that which commends itself to our salmonidian sciolists. . . . The vulgar aim of reckless racial fertility is no longer within our reach and no longer seems worthy to us. It is not consonant with the stage of civilization we are at the moment passing through. Ours is now the higher task of the regeneration of the race; or, if we wish to express that betterment less questionably (since the word regeneration implies that there has been degeneration — which cannot be positively affirmed), the *aggeneration* of the race."[2]

Obviously the betterment here advocated must center in part about the control of reproduction. This in itself is by no means the sole essential for social progress, since it does not necessarily involve any mode of improving the race by a direct selection of the stock. The limitation of offspring is often charged with being an egoistic measure; but Ellis insists that it is imperatively demanded in the altruistic interests of the individuals composing the race. "It may not improve what we abstractly term the race, but it immensely improves the individuals of which the race is made up. Thus the limitation of the family renders it possible to avoid the production of undesired children. That, in itself, is an immense social gain because it tends to abolish excessive infantile mortality. It means that adequate care will be expended on the children that are produced, and that no children will be produced unless the parents are in a position to provide for them. Even the mere spacing out of the children in a family, the larger interval between childbirths, is a very great advantage. The mother is no longer exhausted by perpetually bearing, suckling and tending babies, while the babies themselves are, on the average, of better quality."

In the past the efforts to elevate mankind were largely fostered by various types of social reform which aimed to improve the conditions of life, to perfect our environment. The future calls for a program which will be directed toward the very sources of life. Our generation carries heavy and complicated social burdens which are inflicted on it in the form of an increasing dependent class typified in the feeble-minded. It is to be expected that this load can be raised by some movement to control life. This is work for the social hygiene of the future. Ellis remarks in this relation: "It would be clearly undesirable to breed men, as animals are bred, for single points at the sacrifice of other points, even if we were in a position to breed men from outside. Human breeding must proceed from impulses that arise voluntarily in human brains and wills and are carried out with a human sense of personal responsibility. The compulsory presentation of certificates of health and good breeding as a preliminary to marriage forms no part of eugenics, nor is compulsory sterilization a demand made by any reasonable eugenist. Certainly the custom of securing certificates of health and ability is excellent, not only as a preliminary to marriage but as a general custom. Certainly, also, there are cases in which sterilization is desirable, if voluntarily accepted. But neither certification nor sterilization should be compulsory; they only have their value if they are intelligent and deliberate, springing out of a widened and enlightened sense of personal responsibility to society and to the race. . . . We cannot indeed desire any compulsory elimination of the unfit or any centrally regulated breeding of the fit. Such notions are idle, and even the mere fact that unbalanced brains may air them abroad tends to impair the legitimate authority of eugenic ideals. The two measures which are now commonly put forward for the attainment of eugenic ends — health certificates as a preliminary to marriage, and the segregation or sterilization of the unfit — are excellent when wisely applied; but they become mischievous, if not ridiculous, in the hands of fanatics. . . . Domestic animals may be highly bred from outside, compulsorily; man can be bred upward only from within, through the medium of his conscience and intelligence and will, working together under the control of a high sense of responsibility."

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[1] Ellis, Havelock: The New Social Hygiene, Yale Review, 1912, i, 365.

[2] Ellis, Havelock: Yale Review, 1912, i, 367.

A suggestion along this line is made by a New Zealand writer, A. N. Field.[3] He advocates, indeed, a compulsory medical examination as a preliminary to marriage, but, as its results are to be confidential, Ellis' objections would not, we imagine, extend to this form of "compulsory certification." As Field remarks, while it is easy to pick out a few extreme cases of degenerates on the one hand and of exceptionally sound and healthy young people on the other, no one is at present competent to divide the mass of possible candidates for marriage into the fit and the unfit. It would, however, have a good effect if men and women contemplating marriage were compelled, before taking that step, to consider seriously their fitness for parenthood. Private initiative, like that of the Chicago clergyman[4] who refuses to marry any couple not provided with medical certificates of health, might in time create a force of public opinion which would make disease a mark of social bad form—a thing to be ashamed of in oneself and certainly not to be tolerated in one's children. This may seem utopian; yet within a few generations social ideals have undergone greater transmutations than this would involve. One thing is certain: the creation of public sentiment may seem a slower method of racial improvement than the enactment of laws, but it is a far surer and more thorough one; and it avoids the dangers involved in hasty sweeping legislation based on crude generalizations from insufficient data.

## DR. WEIR MITCHELL'S NEW RESEARCHES ON HARVEY

In 1907, Dr. Weir Mitchell published a volume of interesting "Memoranda" on Harvey, dealing mainly with certain stray references to him in various memorials of the time, such as Harvey's autograph medical directions and prescriptions written in the "Commonplace Book" of Heneage Finch, afterwards Lord Chancellor of England, or the verse in Alexander Smith's satire on London physicians (*circa* 1611):

> "What ho! Dr. Harvey, that are ranked among parvi,[1]
> Are you still dissecting?"

— the whole concluding with a reprint of William Roberts' essay on the portraits of Harvey. The new volume of "Miscellanea," which Dr. Mitchell has just published (1912[2]), has a deeper biographical interest, containing, in effect, the substance of his interesting Harvey lecture of last year. The first part consists largely of certain hitherto unknown letters of Harvey recently published in a volume of state papers by the Royal Historical Manuscript Commission, of which Dr. Mitchell obtained advance proof copies, with permission to print, through the courtesy of Sir William Osler. These letters were written to Lord Feilding, English ambassador at Venice at the time of Harvey's travels through Germany and Italy (1636) as physician to Lord Arundel's suite (1636). The first two letters, written from Linz, contain interesting references to the effect of the Thirty Years' War on "that ruined desolat country of Germany," and indicate that Harvey could hold his own at need in a drinking bout. The real Harvey, however, comes out in the Italian letters, all but one written from Treviso, where, through some mischance, he was detained in quarantine (the plague was then rampant) for about forty days. The podesta of Treviso was not satisfied with the traveler's certificate of health (*fede di sanita*), and "honest little Hervey" (as Lord Arundel styles him) waxes very wroth at his unjust confinement in the Lazaretto. "Heare I am to lye for ought I see in the open base feilds, God knows how long. The Podesta refuseth to see or reade my passes, and I cannot cum att him to speake and use my reasons. I am afraid this lying in the feild will doe me hurt in my health. I beseech you Eccelency to lament hereof." This is the tenor of a remarkable series of testy epistles to the ambassador, importuning him to "procure with all expedition my freedom from this barbarous usadg." The last letter of the series, written from Florence, shows Harvey happily on his journey again and somewhat appeased by the many courtesies which he received at the court of the Grand Duke Ferdinand II, who was a patron of science and an inventor of thermometers. The Harvey of these letters is undoubtedly the Harvey of Aubrey's famous description, short, swarthy, raven-haired, choleric, nervously fingering the handle of his dagger, and reminds us of the old German proverb about the high courage of little people (*Kleine Leute haben grosse Herzen*). Dr. Mitchell notes the amusing effect of Harvey's hot temper on his spelling, the latter improving after he had regained his freedom, when his letters were not written at such white heat or in presto time.

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[3] Practical Eugenics—Medical Marriage Certificates, Eugenics Review, 1912, iii, 306; abstr. in The Journal A. M. A., April 13, 1912, p. 1129.

[4] Health and Marriage, The Journal, A. M. A., April 6, 1912, p. 1019.

[1] "Parvi" refers to Harvey's short stature.

[2] Some Recently Discovered Letters of William Harvey, with Other Miscellanea. By S. Weir Mitchell, M.D., LL.D., F.R.S. Transactions of the College of Physicians of Philadelphia. Paper. Pp. 59, 1912.

Dr. Mitchell concludes his work with the following estimate of Harvey's genius and character.

"Intellectually he was in many ways remarkable, for even in the youth of his brilliant discovery, he had none of the abrupt conclusiveness of youth nor any of the raw haste of our own day. He must slowly and deliberately have invented and perfected methods of research which made him the fertile father of modern physiologic science.

"One may say of his moral qualities that he had two tempers. Concerning scientific differences and hostile comment on his discovery, he was charitable, magnanimous and well-mannered in his replies, a model for those men of science who bitterly resent opinions contrary to their own. In small every-day matters, he was probably, as Aubrey says, choleric. The letters in Italy reveal his impatience under what in his day was not a rare annoyance to travelers.

"That he attracted the love of his fellows and had warm friendships is plain, and that he was largely and thoughtfully generous is as clear. Of his politics we know enough. He was a royalist, and that he regretted the change of government he himself, or rather Ent, makes plain. Of his form of religion we learn little beyond the inference from Lord Arundel's jest, that he was known as a Protestant. He could not, I presume, have been elected warden of Merton College unless he had been of the Church of England. That he was a reverently religious man is written in many a page of his works — surely, taking him for all in all, a noble-minded model of what is best in the physician and the gentleman."

We congratulate Dr. Mitchell on the production of a work which should be read by every admirer of Harvey and which will undoubtedly become a standard source of reference for future biographers of the greatest physiologist of his time.

## PROPOSED AMENDMENTS TO THE IMMIGRATION LAW

Mention has been made in a previous issue[1] of the relation obtaining between mental defectives and immigration, and also of a certain legal decision[2] which prevents the deportation of a fairly large class of insane aliens. The New York State Board of Alienists has given much study to the problem of remedying the admitted defects of the present law and now recommends certain amendments to the immigration act of Feb. 20, 1907, which it feels are practicable and would go far toward relieving the existing conditions.

The first of these recommendations is to the effect that it should be unlawful for any transportation company to bring insane persons into the United States. This adds the insane to the list of persons (idiots, imbeciles, epileptics, and those afflicted with a loathsome or dangerous contagious disease), whose exclusion is mandatory, and for bringing whom the transportation company is fined $100. This is in accordance with the idea of Mr. Williams, Commissioner of Immigration for the Port of New York, who believes that bringing excludable aliens into the United States should be made to inflict the greatest possible financial loss on the steamship companies.

Another provision is for the employment of qualified alienists connected with the Public Health and Marine-Hospital Service at all large ports of entry, these alienists to be men who have had special training in the diagnosis of mental diseases, and to be directly responsible for the mental examination. As conducted at present, the mental examination is not considered a special part of the general examination, and no effort is made to have it conducted by officers specially trained for the work. The Board of Alienists rightly considers this the most important of its recommendations.

Another amendment suggested is that aliens who have entered this country in violation of law, or who have become public charges from causes existing prior to landing, can be deported within five, instead of three years as at present. This change would afford each state more protection against the unlawful entry of aliens.

Any measure which leaves any discretion to the steamship companies, or which trusts to their humanity or consideration for the helpless and incompetent in the steerage, will leave the way open for serious abuses in the case of the insane. Hence it is recommended that when the mental and physical condition of a deportable alien is such as to require personal attention and care, a suitable person shall be employed at government expense, to accompany the alien to his final destination.

The last provision is for a new section making it a misdemeanor for a steamship company to refuse passage to any alien from a public institution, provided that the alien was originally brought in by that company, that it is certified by the proper medical officer that the alien can travel without danger to himself or others, that if necessary there shall be a suitable attendant, and that no part of the expense shall fall on the steamship company. Cases to which this amendment is applicable are those of such persons as desire to return to their own country and friends, but cannot, because the steamship company refuses them passage. Two hundred and four such patients were returned last year by New York State, and two hundred and thirty-five others at the expense of friends, but many more were arbitrarily refused passage

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[1] Mental Disorders and Immigration, THE JOURNAL A. M. A., March 30, 1912, p. 938.

[2] A Legal Decision on a Medical Question, THE JOURNAL A. M. A., March 23, 1912, p. 861

The situation is that insane and mentally defective aliens are allowed to come to this country freely by the steamship companies, but only those aliens are accepted for return who are in good physical and mental condition. This works great injustice to the aliens concerned, as well as a grievous wrong to this country.

In spite of the interests which would undoubtedly be arrayed against them, these proposed amendments should be enacted into law. They originate from a group of expert students of the problem, and would be practical and efficient in operation.

## CUTANEOUS REACTIONS IN SYPHILIS AND GONORRHEA

Noguchi, whose successful cultivation of the *Spirochæta pallida* has attracted much attention, called attention in our last week's issue[1] to the intradermic test for syphilis of which he published a preliminary account some time ago.[2] It is analogous in every way to the von Pirquet reaction for tuberculosis. The antigen, which Noguchi calls "luetin," is prepared by grinding the culure containing large numbers of spirochetes in an agate nortar, diluting the residue to a fixed strength, killing he organism by heat, then adding 5 per cent. phenol. After testing for sterility by animal inoculation, this "luetin" is injected intradermally in the surface of the rm, in doses of 0.05 c.c. As a control an uninfected ulture medium prepared in the same way is injected n the skin of the other arm. The positive reaction, hich is obtainable only in syphilis, begins as a small rythematous area surrounding the point of injection, sually within twenty-four hours. This area may remain ithout further change for several days or may become apular or pustular according to the severity of the action, which reaches its height in four or five days, nd usually subsides without further symptoms. In ome cases a slight rise in temperature occurs, lasting day or so, and this may be accompanied by malaise, ss of appetite, and diarrhea. Occasionally in individuals suffering from tertiary syphilis, the control jection causes a mild reaction, due probably to the sceptibility of the skin to traumatic irritation. This sceptibility has been noted frequently by syphilogphers, and is described by Neisser as the pathologic ndition of the skin itself.

Noguchi gives in tabular form his results from 400 ses, comprising 177 syphilitics, seventy-seven paraphilitics, and 146 controls, including forty-six normal dividuals and 100 cases representing a wide variety of n-luetic affections. In the non-syphilitics the reaction s absent without exception. In the primary and ondary stages of the disease the reaction was of a ry mild grade; in about 50 per cent. of these cases no ction was observed. In the hereditary and tertiary es the reaction was more severe in form, and was present in 100 per cent. of the manifest tertiary affection, in 94 per cent. of latent tertiary, and in 96 per cent. of hereditary syphilis.

Noguchi does not assume that this test will replace the Wassermann reaction, and the relative merits of the two tests remain to be determined by further experience. It appears probable that the Wassermann reaction is more constant in the primary and secondary, and the cutaneous reaction in the tertiary and latent forms of syphilis. Moreover, it appears that the Wassermann reaction is more directly and immediately affected by antisyphilitic treatment than is the cutaneous reaction. It seems, however, that our resources in the management of syphilis have been enriched by the addition of a test which can be applied without special training and laboratory equipment.

Directly parallel to the skin reaction in syphilis is a test for gonococcal infection recently described by E. E. Irons.[3] In his experiments Irons used glycerin extract of gonococcus cultures; otherwise the same general method was followed as above described and with analogous results. It is of interest to note that diagnostic tests of great promise in typhoid, syphilis, and gonococcal infections have recently been discovered, and that they are based on the same biochemical phenomenon, namely, allergy.

We recently published a comprehensive discussion[4] of the various phases of this subject. Practicing physicians will await with impatience further reports of the clinical use of these reactions, and will welcome the opportunity to try out in practice such tests when reliable antigens can be obtained.

## NICOTIN AND THE ADRENALS

Any light on the physiologic action of an article as widely used as tobacco, or its active principle nicotin, is of medical interest even if it cannot be immediately applied to problems of practical medicine. Hence attention may be called to some recent experiments[1] in which it is clearly shown that a very small amount of nicotin administered to an animal causes increased activity of the adrenals: within a few minutes after the administration of the nicotin an increased amount of the active principle of these glands, epinephrin, could, by physiologic tests, be detected in the blood coming from the glands.

Such a result is in harmony with what has been learned within recent years as to the innervation of the adrenal on the one hand and the general action of nicotin on the other. It has been shown that the secretion of epinephrin is under the influence of sympathetic nerves and that nicotin has the property of stimulating (and in large doses of paralyzing) sympathetic ganglia.

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[1] Noguchi, H.: The Journal A. M. A., April 20, 1912, p. 1163.
[2] Noguchi, H.: Jour. Exper. Med., 1911, xiv, 557.

[3] Irons, E. E.: The Journal A. M. A., March 30, 1912, p. 931.
[4] Hektoen, L.: Allergy or Anaphylaxis in Experiment and Disease, The Journal A. M. A., April 13, 1912, p. 1081.

[1] Cannon, Aub and Binger: Jour. Pharmacol. and Exper. Therap., March, 1912, p. 381.

Many attempts have been made to establish a connection between certain conditions of high blood-pressure and an overactivity of the adrenals; both nicotin and epinephrin are suspected by some of being factors in the causation of arteriosclerosis. The question naturally arises if tobacco may have not only a direct action on the blood-vessels, but also an indirect one exerted through its effects on the suprarenal glands; this question cannot be answered at present.

These experiments of Cannon and his co-workers are also of interest as another illustration of how drugs may affect the activities of some of the organs of internal secretion—organs which until recently were supposed to be rather independent of the action both of drugs and of the nervous system. We may recall in this connection the experiments which show the effect of emotions on the activity of the adrenals,[2] and others which show that some of the physiologic effects of iodin and probably some of those of diet[3] are exerted through another organ of internal secretion (the thyroid).

The activities of the organs of internal secretion are thus becoming of increasing interest not only in physiology and pathology, but also in pharmacology and practical medicine.

## THE FEDERAL CHILDREN'S BUREAU AND ITS FIRST DIRECTOR

An act creating a Child Welfare Bureau was recently placed, with the President's approval, on our national statute-books. This legislation had been earnestly and continuously advocated for several years by progressive men and women, and during its pendency in Congress no reasonable argument was ever advanced against it. Certain conservative statesmen were shocked that "children were to be treated like pigs," but they were silenced by the retort of the more enlightened that, as a matter of fact, pigs were being better treated by the federal government than children, since the government has for years gathered and disseminated information concerning the welfare of pigs, but the questions relating to the life, health and welfare of children it has left almost untouched.

The new bureau will be part of the Department of Commerce and Labor. Its duties and functions will be wholly educational. It will make investigations, collect information, classify, digest and publish it, and furnish it on application to state, municipal and other authorities, as well as to private bodies or persons. It will study laws and ordinances bearing on child-labor, education, play, discipline, juvenile courts and like institutions, and all measures or proposed measures designed to protect, reclaim or healthfully develop childhood. Such studies will in turn suggest and influence further legislation.

It was in the highest degree important to give this new and largely experimental bureau a good start, and President Taft has done this, rising fully to his opportunity and surprising many politicians by appointing as the director and chief of the institution Miss Julia C. Lathrop of Chicago. She will be the first woman to direct a federal bureau. Her fitness for the position is quite exceptional; indeed, there are few whose qualifications, both natural and acquired, could be fairly compared with those of Miss Lathrop.

Her natural qualifications comprise administrative ability, tact, fidelity to ideals, industry and common sense.

The experience which fits her for her new position is the result of a public career that began in 1893, when she was appointed a member of the Illinois State Board of Charities. This board had supervision of all the insane of the state, and during the eight years of her connection with it Miss Lathrop made several trips to Europe to study different methods of caring for mental disease. She has always urged the adoption in this country of the system of boarding out in chronic cases and of psychopathic hospitals for the study and care of acute cases.

It had always been nominally the duty of the State Board of Charities in Illinois to visit every county almshouse and industrial school in the state, and Miss Lathrop made this her duty, in the performance of which she discovered shocking neglect of the children who were the wards of the state, dependent children in almshouses, delinquent children in common jails. As a result of this investigation she became one of the far-sighted workers for a juvenile court act. The law, however, only established the court; the payment of probation officers and the care of the children pending their commitment remained the task of those who had worked for the law.

Miss Lathrop was one among those who succeeded in obtaining the best juvenile court building and detention home for children in the United States. She has been of late years vice-president of the Juvenile Protective League, which now, since the county has assumed the control and payment of the probation officers, devotes itself to preventive work of all kinds. She is also chairman of the Juvenile Psychopathic Institute, an organization which undertakes the scientific study of juvenile delinquency in relation to physical defects and is pledged to the principle that a physician as well as a judge is needed in every court dealing with children.

## SALVAGE

One misshapen consolation, it seems, we can pluck from the waves that engulfed the unfortunate *Titanic*. No lives will ever again be imperiled precisely as were those of the *Titanic's* passengers. Where Death walks softfooted, choosing his victims delicately—as with the consumptive—no one is startled and few protest. He may keep on his way unhindered, though the roll of those victims mount up to the thousands for every one that he seizes in some dramatic, heart-rending catastrophe which startles the world at once into protest and preventive action. Let the disaster only be great enough to stir the souls of men with horror and shame, and it will be a safeguard for later years.

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[2] Cannon and de la Paz: The Journal A. M. A., March 11, 1911, p. 742.

[3] Hunt, R.: The Journal A. M. A., Oct. 19, 1907, p. 1323, and Sept. 23, 1911, p. 1032.

Hardly had the icy water closed over the heads of the lost sixteen hundred before horrified nations proposed to make such amends as might be for their former remissness by international agreement to provide that no vessel shall put to sea without a supply of life-boats adequate to carry all on board. At once steamship officials were electrified into repudiation of the "all-for-speed" policy, and swung the ocean lanes southward. At present (or is it possible that we shall forget?) it seems probable that never again will an ocean liner, equipped with life-boats insufficient to accommodate half of those on board, endeavor to break a record by steaming at full speed through the ice-floes off the Grand Banks of Newfound-and.

As the Iroquois disaster, which unlocked theater doors all over the world, has tended toward the safety of the musement-seeking public — as the *General Slocum* alamity demonstrated the impolicy of allowing life-preservers to be stuffed with lead—so the *Titanic* wreck will have rendered ocean travel safer. We wish we could ay with conviction that the Cherry mine horror had ut an end to the shameful economy which endangers he lives of those who work underground and that we had t hand conclusive evidence that the fire in the Triangle hirtwaist factory had ended once for all the practice of sing fire-traps for factories and of locking the gates nd doors of industrial establishments on the employees uring working hours.

More saddening even than the loss of the heroic men ho went down in that needless wreck is the fact that it kes a spectacular calamity to arouse public opinion to rotest against wanton risk of life. Whatever merited ondemnation may be meted out to those directly responble—however we may deplore the scales of gold blinding e eyes of those who draw dividends from the luxury "floating palaces"—the speed of "ocean greyhounds" —let us not forget that a share of responsibility rests all of us if we have silently consented to the existence known dangers.

It is said, for instance, that vessels on the Great Lakes er every opportunity for wrecks proportionately as astrous as that of the *Titanic* and that many of our ge department stores are well devised to be the scene extensive fires as tragic as that of the Iroquois theater. e embers of many malignant epidemics — typhoid, all-pox, diphtheria — smolder quietly among us, and re are those who scoff at efforts to stamp them out ore they flame up into fierce conflagration.

Would that, taught by repeated calamity, we might at t be wise before the event!

## Current Comment

### PUBLIC OPINION AND LEGISLATION

In another department appears an extract from the *Congressional Record*, giving a discussion in the Senate last week on the Owen bill. Senator Jones of Washington read five telegrams from constituents, urging him to vote against this bill. One appeal stated that the passage of the Owen bill meant "the establishment of one of the worst trusts in the country." Another declared that "medical monopoly is the mainspring of the Owen bill." Another ardent soul, who signed himself "Doctor," asserted that "modern physiologic pathologists, by sheer merit, are rapidly supplanting allopathic pretensions"—whatever that may mean. All asked Senator Jones to vote against the measure. After reading the telegrams, Senator Jones said, "I think on a matter of legislation, what it is wise to do in a legislative way here, I should defer to the expression of opinion of my people, and these are the only expressions I have had in this way." If a senator is to be guided by the wishes of his constituents, he must first know what their wishes are. He naturally assumes that those interested will make their views known, and that those who do not, have no interest in the question at issue. Are any of the citizens of the State of Washington in favor of a national health organization? If so, they have evidently not made known their views to Senator Jones. Are any of the physicians or medical and philanthropic organizations of Washington in favor of the Owen bill? If they are, it would be well for them to stand up and be counted. Do the telegrams quoted above express the sentiments of the people of Washington or are there any persons in Washington who want Senator Jones to vote for a national health bureau? If so, will they please write or wire him, so that he may know how they feel about it?

### BUSINESS AND SANITATION

It can hardly be considered the loftiest view which is advanced by Prof. E. W. Hope, medical health officer of Liverpool, that pounds, shillings and pence have been the mainspring of sanitary progress. Yet much hygienic progress has been made in response to the demands of commerce. Where business considerations are weighty and guided by far-sighted intelligence, there health measures are appreciated and enforced — to the benefit of the whole community. Those diseases which have impeded commerce have been the first to disappear. While the infantile exanthemata, for example, have declined in virulence, they have by no means been brought to or near the vanishing point of typhus, cholera, small-pox, yellow fever and the tropical malarias. The hygienist's authority waxes great in the community which learns that sanitary progress is essential to assured and profitable business development. International quarantines have been established very largely as a help to business. Small-pox is practically extinct in those ports where commerce would be interrupted by the detention of vessels and cargoes. If there were large commercial interests at stake in the elimination of pulmonary tuberculosis from the community, that disease would have to go. It may be that typhoid fever will become extinct as soon as the American people grasp the meaning of its destructiveness. It will be said, and rightly, that this is not an altogether just view of the motives underlying the application of sanitary science to the affairs of civilization. Humane considerations are paramount in sanitary propaganda; it would be a grave error to hold that the work of men like Gorgas, Koch, Manson, Haffkine and Ross has been done merely to advance business interests. Nevertheless, an element of altruism is essential to sound and wholesome business enterprise. There is, of course, a false, parasitic prosperity, not founded on the well-being of the community from which it draws its sustenance; but this does not affect the fact that any community which wants to be prosperous must be healthful. And it has again and again been demonstrated that any community that strives to hide its lack of sanitation will ultimately ruin its business prospects by such duplicity. The history of recent cholera epidemics in certain Italian ports demonstrates this beyond peradventure, were any demonstration needed.

## THE PRESENCE OF THE VIRUS OF EPIDEMIC POLIOMYELITIS IN OROPHARYNGEAL AND INTESTINAL SECRETIONS

While some investigators failed to obtain evidences of the presence of the virus of epidemic poliomyelitis in the secretions of the nasopharynx and of other places in the human body, Kling, Weinstedt and Pettersson[1] succeeded in demonstrating it in the secretions of the mouth, the nose, the trachea and in the intestines after death from this disease. They also have found it in the mouth and pharynx and in the intestinal canal of patients during life. They obtained the secretions of the mouth and pharynx by thorough rinsing with a syringe. The intestinal mucus was obtained after evacuating the intestines by means of an enema, and then thoroughly washing out the sigmoid with salt solution. The fluids thus obtained were filtered and injected into the peritoneal cavity and into the sciatic nerves of monkeys. In all, thirteen patients were examined and the presence of the virus demonstrated in twelve by the production of typical paralysis in the monkeys. From this demonstration it may be concluded that in cases of epidemic poliomyelitis the virus is present on the mucous membranes in question and that this fact must receive due consideration in our notions as to the ways in which the disease is spread.

## CADAVERIC THERAPY

Dr. Park's suggestion, in his article in this issue, of the uses to which the fresh human corpse might be applied after sudden death will probably strike some people unfavorably and to others will seem extravagant. Sentiment rules the large class of people who would weep over a corpse for the production of which their own neglect or hard-heartedness may have been largely responsible. When, however, we consider the living instead of the dead there is considerable to be said for Dr. Park's suggestions. In the large hospitals of great cities receiving accident cases daily there are many opportunities to utilize some of these suggestions. In the therapeutics of the internal ductless glands we are obliged to use extremely heterologous extracts under present conditions, and there is a strong probability, to say the least, that properly prepared and selected homologous extracts as regards the species would be even more effective and perhaps have special advantages otherwise. It will probably be a long time, however, before such utilization will be practicable, at least to any great extent. If it could be it might settle some physiologic questions and perhaps raise some medicolegal ones, as, for example, if fruitful transplantations of the reproductive glands were to indicate strongly the correctness of the view that the germ cells are uninfluenced by somatic changes.

## CLEAN MILK AT A REASONABLE PRICE

The demand for healthy, clean milk and the revolution in its method of production have tended to increase its cost, and as more exacting demands are made on the producers higher prices may be expected. In a recent address before the Chamber of Commerce of Rochester, N. Y., Dr. John R. Williams attempted to show how this cost could be kept within reasonable bounds, or even lower than it is at present. He called attention to a number of practical points in the economical production of milk. In some instances land near cities worth as much as $1,500 an acre is used for dairying purposes, making the overhead charges so great that milk cannot be produced profitably at a moderate price. In other instances, attempts are made to pasture large areas of land, when by more intensive methods feed for the same number of cattle could be produced on a much smaller area. Lack of economical methods in the distribution of milk also has much to do with increased cost. Williams says that half of what the consumers pay for milk goes to pay for the delivery from the railway depot to the home. The overlapping of routes of distribution is also a source of increased cost to the consumer and of lessened profit to the distributor. Williams gives concrete figures as applied to Rochester to show how milk could be delivered to consumers at lessened cost with increased profit to the producer. His solution of the problem regarding distribution would be the leasing of the privilege of distributing milk to a smaller number of distributors. This multiplication of small retailers or distributors of food is recognized as being one of the elements in the high cost of living, but in the case of milk in the large cities the objection of Williams as to distribution may not apply, as the business is sometimes in the hands of several large distributors who have apportioned the territory among themselves. Here, however, enters the question of monopoly, and the practical result is not a lowering of the price but the opposite. The points made by Williams, however, are well taken, and apply with especial force to the smaller cities. A plan for the public regulation of distribution and the elimination of a large number of small distributors would help to solve the problem of the price of milk.

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[1] Kling, Weinstedt and Pettersson: Ztschr. f. Immunitätsforsch., 1912, xii, 316, 657.

# Medical News

## CALIFORNIA

**Physicians Taxed.**—An ordinance was passed by the city council of Monterey recently requiring physicians of the city to pay a business license of $2.50 quarterly.

**Medical Evangelists.**—The delegates of the College of Medical Evangelists, in conference at Loma Linda, March 30, voted $125,000 for improvements during the coming year. About $40.000 of this amount will be used in the construction of a reinforced concrete hospital, two stories in height.

**Ultimatum to Chinese Physicians.**—It is reported that every Chinese doctor in Los Angeles was ordered to cease business, March 25, when notice was served by the State Board of Pharmacy that any Chinese doctor caught in the act of prescribing for a patient would be arrested and prosecuted.

**New Building for County Society.**—A general plan has been ormulated by the board of permanent quarters of the Los Angeles Medical Society for the erection of an office building y the association, to be occupied exclusively by physicians nd dentists and to contain headquarters for the Los Angeles County Medical Association. The report was made that a ot could be purchased for $500.000 and that $500,000 additional could be obtained on a building loan.

**Personal.**—Dr. George H. Kress, Los Angeles, started for urope, April 15.——Dr. Thomas W. Huntington has resigned s member of the San Francisco Health Board.——Dr. Herbert nnn has been elected city physiean of San Francisco.——Dr. . L. Browning. Chico, is reported to be seriously ill with ppendicitis.——Dr. T. P. Tisdale. Alameda, after fifty-five ears of practice, has retired.——Dr. P. C. Remondino, San iego, has returned after a six months' trip abroad.——Dr. . A. Meneray, Santa Rosa, has been appointed physician of onoma County, vice Dr. S. S. Bogle, Santa Rosa, resigned. —Dr. D. B. Van Slyck. Pasadena, was given a dinner by e medical men of that city, March 2, in celebration of his ghty-third birthday and sixtieth anniversary of his entrance to the practice of medicine. Dr. J. H. McBride acted as astmaster.——Dr. Stanley P. Black. health officer of asadena, has consented to remain as medical health officer r the remainder of the year.

## GEORGIA

**Railway Surgeons Meet.**—At the annual meeting of the ntral of Georgia Railway Surgeons' Association held in acon, April 11, Dr. J. G. Dean, Dawson, was elected president d Dr. J. R. Burdette, Tennille, was reelected secretary.

**State Health Officers Meet.**—The Association of State, unty and Municipal Health Boards of Georgia held its second nual meeting in Augusta, April 16, under the presidency of . J. C. Bloomfield, Athens, and elected the following officers: esident, Dr. Eugene E. Murphey, Augusta; secretary-treaser. Mr. A. V. Wood, Brunswick (reelected).

**State Medical Association Meeting.**—The sixty-third annual eeting of the Medical Association of Georgia was held in gusta, April 17-19, under the presidency of Dr. W. L. Fitts, rrollton, and the following officers were elected: president, . W. W. Pilcher, Warrenton; vice-presidents, Drs. J. W. lmer, Ailey, and T. H. Hall, Macon; secretary-treasurer, . W. C. Lyle, Augusta; delegates to the American Medical sociation, Drs. W. H. Doughty, Augusta; T. J. Charlton, vannah; and alternates, Drs. E. G. Ballenger, Atlanta, and. R. Wright, Augusta.

## ILLINOIS

**Personal.**—Dr. N. P. Ward, Saybrook, is reported to be iously ill.——Dr. C. T. Orner, Bloomington, who has been iously ill, is reported to be improving.

**The State Society Meeting.**—Dr. S. Adolphus Knopf, New rk City, will deliver the oration on medicine before the nois State Medical Society at Springfield, May 23, on "Some dern Medico-Sociologic Conceptions of the Alcohol, Venereal ease and Tuberculosis Problems."

**New Officers.**—Clark County Medical Society, at Marshall, il 11: president, Dr. S. C. Bradley; secretary-treasurer, Dr. W. Weir, both of Marshall.——Jersey County Medical iety, at Jerseyville, April 8: president, Dr. A. K. Van ne (reelected); secretary-treasurer, Dr. A. M. Cheney, both Jerseyville.

**Results of Intern Examinations.**—The result of the civil ice examination for internships in the institutions of Cook County shows that of forty successful applicants 20 were graduates of Rush Medical College; 9, of the College of Physicians and Surgeons; 8, of Northwestern University; 2, of Bennett Medical College, and one of the Chicago College of Medicine and Surgery.

**State Board Wins Suit.**—The mandamus suit of the Littlejohn College and Hospital (formerly the American College of Osteopathic Medicine and Surgery) against the State Board of Health for recognition as a medical college, was commenced before Judge Bowles in the Superior Court of Cook County, April 17. During the trial, which lasted four days, Drs. George W. Webster and James A. Egan, of the State Board of Health, Dr. N. P. Colwell, secretary of the Council on Medical Education of tne American Medical Association, and Dr. Fred C. Zapffe, secretary of the Association of American Medical Colleges, testified that the college did not comply with the requirements of the State Board of Health and that it failed to conform to the practice of the majority of medical colleges in the United States. Several members of the faculty of Littlejohn College testified as to their proficiency to teach, this testimony having been demanded by the State Board of Health. The case was given to the jury, April 22, and a verdict was returned April 23 in favor of the State Board of Health on all counts. The jury decided that the faculty of the Littlejohn College had not complied with the requirements of the State Board of Health as a medical faculty, and that the methods of didactic and clinical instruction had not come up to that pursued in the majority of the medical colleges of the United States; furthermore, that therapeutics was not properly taught, but only taught as required for the practice of osteopathy.

### Chicago

**Physicians' Club Meeting.**—At the annual meeting of the Physicians' Club of Chicago held April 23, Drs. Edward H. Ochsner, Rudolph W. Holmes and Frank S. Johnson were elected directors and Dr. Alfred N. Murray was reelected secretary.

**Personal.**—Dr. Arthur R. Edwards, who has been ill for two months on account of severe gallstone attacks and operation, has recovered.——Dr. and Mrs. George S. Isham and Dr. John Dill Robertson have sailed for Europe.——Dr. David H. Fitzgerald was injured in a collision between his automobile and a street car, April 20.——Dr. Willis O. Nance has been appointed chairman of the committee on health of the Chicago city council.

**Avoid Milk Dangers.**—The current issue of the *Bulletin of the Department of Health* announces that the consumer can assist in minimizing the dangers due to milk by observing the following rules:

1. Never take the original bottle of milk into a sick-room; pour out only the amount immediately needed into a glass and let the patient drink from that.
2. Never let the milk stand uncovered in a warm room, or even in the ice-chest; always keep it covered.
3. Never let anyone, well or sick, drink directly from the bottle which is to be returned to the dealer.
4. Never return the bottle to the driver without its being washed clean.

**A Successful and Notable Meeting.**—The program as announced and carried out in the joint meeting of the West Side Branch and the Chicago Medical Society, April 17-19, for the discussion of mental diseases in their various phases, was a notable one. Many eminent authorities on pyschiatry from twelve different states contributed papers and took part in the discussion. So impressed were those in attendance with the importance of the subject, that it was recommended that a similar conference be held next year, and resolutions were passed approving compulsory segregation or sterilization in certain cases of insanity, feeble-mindedness, epilepsy and criminality, as the best means of controlling the increase of these conditions through heredity, and urging a conference of Chicago medical and legal societies to arrange a program for a united effort toward the lessening of the defective classes.

**Joint Conference on Quackery.**—At a meeting of the council of the Chicago Medical Society, April 9, the medical education commission submitted resolutions, which were adopted, setting forth that the numerous medical quacks, irregular pathists, fake healers, abortionists and dealers in patent nostrums and proprietaries, preying on the public, under the title of doctor or otherwise, are negative factors of medical education, and that such practitioners and commercial agencies, actuated by greed rather than the preservation of public health, are a menace to the people and tend to discredit and degrade the healing art, and that the organized medical profession should work to guard the people against individuals who would exploit them for their own ignoble gain; requests that a conference be called of the presidents and secretaries of the Chicago Homeopathic, Chicago Eclectic, Chicago Medical and Chicago Dental societies to appoint a joint committee thoroughly to investigate the number, character and methods of said irregulars, and particularly their advertisements, such joint committee to cooperate with the State Board of Health, the Chicago Health Commissioner and the various forces to improve medical education and practice, and after careful study of the situation, to report to the Council and to the similar executive bodies of the allied societies, with recommendations, on the basis of which united action may be taken by the entire organized profession and its sympathizers.

## KENTUCKY

**College Not Recognized.**—A letter from the office of the State Board of Health of Kentucky states that after the close of the present session the Louisville National Medical College will not be recognized by the board.

**Prohibit Sale of Ice Cream Cones.**—The City Health Department of Louisville has issued an order affecting venders of ice cream on the streets. They will no longer be allowed to dispose of ice cream cones which are filled on the streets, but wll be allowed to sell ice cream only in sealed packages.

**Children's Hospital Report.**—The twentieth annual report of the Children's Free Hospital shows that since January, 1911, 427 children have been admitted, 36 of whom came from the state outside of Louisville. Since the hospital was organized in 1892, 2,031 children have been received. During the year more than 500 operations were performed. The hospital has thirty-two endowed beds and fifteen supported beds. It also maintains a training school for nurses.

**Personal.**—Dr. William H. Wathen, who underwent a surgical operation at St. Anthony's Hospital recently, has recovered and resumed practice.——Dr. and Mrs. Louis H. Mulligan, Lexington, have returned from Europe.——Dr. Dunning S. Wilson has been reelected a director of the Louisville Antituberculosis Association.——Dr. Samuel B. Mills, one of the oldest practitioners of Louisville, is reported to be seriously ill with bronchitis, at the home of his son.——Dr. H. H. Duley, Paducah, is improving after an attack of appendicitis.

## LOUISIANA

**Tulane Research Expedition.**—The first research expedition (for the study of malaria) from the Department of Tropical Medicine and Hygiene of Tulane University, sailed from New Orleans April 20, for Central America. The expedition is headed by Dr. Charles Cassedy Bass of the department. The members of the commission will return to the United States in time to attend the meeting of the American Medical Association at Atlantic City, before which it is intended to announce and exhibit the results of the investigation.

**Health Work Shows Results.**—According to the statements of Dr. W. T. O'Reilly, president of the New Orleans Board of Health, the city is in a much more healthful condition, since a general clean-up campaign was instituted by Dr. Oscar Dowling, president of the State Board of Health. The total number of communicable diseases reported in March, 1912, was 164, as compared with 846 in March, 1911, and the death-rate for the first quarter in the year was at the annual rate of 17.52 per 1,000, as compared with 18.85 per 1,000 for the corresponding period of 1911.

## MARYLAND

**Personal.**—Dr. John J. Abel has been elected a member of the National Academy of Sciences.——Drs. William C. Lyon and Ernest H. Gaither have sailed for Europe.——Dr. Joseph S. Garrison, formerly superintendent of St. Luke's Hospital, was given a dinner, April 18, by the staff and nurses and was presented with an umbrella and a book.——Dr. Frank W. Pearson has returned from Europe.

## MICHIGAN

**Large Budget for Board of Health.**—The Grand Rapids Board of Health has asked an appropriation of $98,390.10 for the coming year. This is the net amount and includes $15,000 revenue, which, it is estimated, the garbage department will yield.

**Fighting Fraud.**—At a meeting of the Wayne County Medical Society at Detroit, April 15, Secretary Haughey read the editorial from The Journal, March 23, 1912, page 863, entitled "What's the Matter with Michigan?" We quote from the *Wayne County Medical Society Weekly* as follows: "The president then introduced Mr. Hugh Shepherd, Prosecuting Attorney for Wayne County. Mr. Shepherd in a vigorous and eloquent address, told of his proposed campaign against 'quack doctors' and 'illegal practitioners' in Wayne County and asked both the active and moral support of this society. He said in part: Since my action against certain quack medicine men last Saturday, I have been pleased with the manifested support and offers of assistance by many of your profession. It seems strange that the prosecuting attorney has to wrestle with these and various other problems of reform. Why has it been necessary for me to do this? Simply because it was not done when I took office. Why not? Because the average public official wants to perpetuate himself in office. This perpetuation in office of incompetent officials is made possible because the law-abiding citizens do not vote, while the rabble does. No public official can conscientiously put his personal interests before the interests of the general public. It makes no difference what becomes of me if the interests of the people are safeguarded. In the various recent raids against cheap dance halls, slot machines, loan sharks and quack doctors, our efforts would have been fruitless without the active support of the police department. We also owe much to the publicity given by the newspapers. He outlined the methods of these quack establishments and compared the principals to highway robbers. One of these concerns had receipts of over $4,000 a month. Mr. Shepherd then asked the support of the society in his campaign against these people and suggested the passage of certain laws by which they could be 'run out of business.' He was emphatic in his assertion that the State Board of Registration should take action to revoke the licenses of the physicians attached t these quack concerns. Following the address, on motion, the board of directors was asked to appoint a committee of thre to assist the prosecuting attorney in his fight against 'illega practitioners.'"

## MISSISSIPPI

**State Health Board Meeting.**—The first full meeting of th Mississippi State Board of Health since its organization i February was held April 8-10 in Jackson. The purpose o the meeting was to carry out the provisions of the act passe by the legislature, and in effect this year, creating the Stat Bureau of Vital Statistics. Dr. W. H. Rowan, Wiggins, wa elected as chief sanitary inspector of municipalities of th state, and a resolution was adopted requesting Dr. W. W Smithson, Jackson, secretary of the board, Dr. W. S. Leather University, director of public health, and the executive com mittee to cooperate in the work of taking definite steps towar organization and also the employment of a statistician.

**State Association Meeting.**—The fortieth annual meetin of the Mississippi State Medical Association was held i Jackson, April 9-11, under the presidency of Dr. D. Williams, Gulfport. The meeting was the largest in th history of the Association. The following officers we elected: president, Dr. S. W. Glass, Dublin; vice-president Drs. J. C. Walker, Houlka; W. W. Parkes, Louisville, and C. Parker, Gulfport; secretary, Dr. E. F. Howard, Vicksbu (reelected); treasurer, Dr. L. B. Sparkman, Cleveland; cou cilors, Seventh District, Dr. S. A. Majure, Dixon; Eight District, Dr. G. W. Wallace, Arbo; and delegates to th American Medical Association, Drs. D. J. Williams, Gulfpor and J. T. Longino, Jonestown. Vicksburg was selected as th next place of meeting. The following resolution was unan mously adopted:

> In view of the fact that the legislature acted in a most favora way on the measures advocated by the State Medical Associatio and because these measures were for the purpose of conserving t greatest of our natural resources, the health of the people; be it
>
> *Resolved*, That the Mississippi Medical Association, in sessi assembled, desires to express in a public way its appreciation a sincere gratitude for the passage of the medical practice act a the vital statistics act, and for the largely increased appropriati for public health work. We know that these laws will redound the upbuilding of the citizenship of the state.

## NEW YORK

**Physicians Lose Property.**—A valuable watch and cha was stolen from Dr. J. W. McGill, Rochester, in St. Mar Hospital, April 11.——Watches and other valuables, wo $190, were stolen from the coats of Drs. Frederick Flahert A. B. Miller and Murray A. Cain, which were hanging in t rooms adjoining the operating room of St. Joseph's Hospit April 13.

**Personal.**—Dr. Harry J. Brayton, for three years a mem of the staff at Raybrook Sanatorium, has been appoint resident physician at Iola Sanatorium, the new institut for tuberculosis of Monroe County.——Dr. Chester Waterm a member of the staff of the St. Lawrence State Hospit Ogdensburg, has been promoted to physician second grade that institution.——Dr. W. P. Bentley has been elected secretary of the Antituberculosis Committee of Cape Vincent.

**Antituberculosis Exhibit.**—An antituberculosis exhibit was held in Cape Vincent, April 8 and 9, at which E. V. Cavanaugh of the State Department of Health gave three lectures. Special emphasis was laid on the necessity of a tuberculosis hospital for Jefferson County and resolutions asking the supervisors to hasten the establishment of the hospital were unanimously adopted.——The antituberculosis societies of Philadelphia, Black River and Sacket Harbor have sent in similar petitions to the board of supervisors of Jefferson County.

**State to Sterilize Habitual Criminals.**—Governor Dix has given his signature to the Bush Bill, a measure introduced into the assembly by Dr. R. P. Bush of Horseheads, which provides for the sterilization of certain classes of male criminals and defectives confined in state institutions. The criminals coming under the provisions of this measure are those who have been convicted of rape or of such a succession of offenses as the board may decide to afford sufficient evidence of confirmed criminal tendencies to make it probable that they would transmit to offspring a tendency to crime, insanity or feeble-mindedness. The law creates a board to be known as the Board of Examiners of Feeble-Minded, Criminals, and Other Defectives and provides that this board is to be made up of one surgeon, one neurologist and one medical practitioner, each with ten years' experience.

**State Society Election.**—At the one hundred and sixth annual meeting of the Medical Society of the State of New York held in Albany, April 16-18, the following officers were elected: president, Dr. John F. W. Whitbeck, Rochester; vice-presidents, Drs. W. S. Gleason, Newburgh; W. F. Campbell, Brooklyn, and R. Paul Higgins, Cortland; secretary, Dr. Wisner R. Townsend, New York City (reelected); treasurer, Dr. Alexander Lambert, New York City; counsel, James T. Lewis, New York City; delegates to the American Medical Association, Drs. Wendell C. Phillips, New York City; Dwight Murray, Syracuse; James P. Warbasse, Brooklyn; L. H. Neuman, Albany, and Julius Ullman, Buffalo, and alternates, Drs. Walter L. Carr, New York City; O. E. Jones, Rochester; Grant C. Madill, Ogdensburg; Rosalie S. Morton, New York City, and William D. Johnson, Batavia. The association adopted resolutions urging the establishment of a national department of health, placing the state quarantine service in charge of the federal government, and thanking the legislature for its failure to pass bills against animal experimentation. A committee was appointed to instruct the public regarding this variety of research work. The next meeting of the society will be held n Rochester.

### New York City

**Personal.**—Dr. and Mrs. George E. Brewer sailed for Europe on April 10.——Dr. John H. Coughlin has been appointed linical professor of medicine in Fordham University School f Medicine.——Dr. Alice Farnam Leader was a passenger n the ill-fated *Titanic*, but fortunately escaped.

**Virginians in New York Organize.**—The University of Virinia Medical Society was organized March 22, the memberhip consisting of graduates in medicine of the University of Virginia resident in New York City. Meetings are to be eld on the third Friday in October, January and March. Dr. William B. Trimble was elected president and Dr. Benjamin P. Riley, secretary-treasurer.

**Hospital Superintendent Honored.**—The members of the ttending and associate staff of the Brooklyn Hospital endered a banquet to Miss Mary Williams Osborn, who has ist retired after having been superintendent of the hospital or ten years. Miss Osborn was given a handsome set of solutions expressing the regrets of the assembled physicians t her departure and their best wishes for her future success.

**Dr. Doty to Open Bureau of Sanitation.**—Dr. Alvah H. oty, former Health Officer of the Port of New York, it is ported, has decided to establish a bureau of general sanitaon, with offices in this city. The work of the bureau will nsist largely in expert advice in all matters relating to the nprovement of sanitary conditions. It will provide headquarrs where railway systems, corporations handling large numrs of employees, or those doing work in drainage, etc., may ek expert advice.

## PENNSYLVANIA

### Philadelphia

**Superstition and the Doctor.**—The sixth of the course of ublic lectures before the College of Physicians of Philadelphia ill be given Aprii 29 by Mr. Owen Wister on "Superstition d the Doctor."

**Mütter Lectureship Open.**—The Mütter Lecture instituted in the College of Physicians by the late Professor Thomas Dent Mütter, M.D., LL.D., on some subject connected with surgical pathology, will be delivered before the college in December, 1912. The compensation is two hundred dollars. The appointment is open to the profession at large. Applications, stating in full the subject of the proposed lecture, should be sent to the Committee on Mütter Museum before June 1.

**Blockley Overcrowded.**—Members of the Special Tuberculosis Committee of the Committee on Municipal Charities visited the Philadelphia General Hospital, April 17, and found the tuberculosis wards for both men and women greatly overcrowded. In the women's wards, rows of beds were placed so close together as to prevent a nurse passing between. Mingled with patients lightly affected were patients in the worst conditions and the glass houses where the patients take outdoor treatment were found to be small and inadequate.

**Resolutions Regarding Dr. Musser.**—At a meeting of the Faculty of Medicine held at the University of Pennsylvania, April 5, resolutions were adopted setting forth the useful and honorable services of the late Dr. John Herr Musser, and recording appreciation of the life thus closed, and respect for his memory; condolence with his friends; recognition of the void his death has made in the ranks of medical teachers; the loss to the community in the removal of a citizen identified with endeavor for the betterment of the people, and sympathy for his wife and family.

## SOUTH CAROLINA

**New Medical Examiners.**—Acting on the recommendation of the South Carolina Medical Association, the governor on April 17 appointed the following members of the State Board of Medical Examiners: Drs. Harry H. Wyman, Aiken; J. T. Taylor, Adams Run; W. W. Fennell, Rock Hill; A. E. Boozer, Columbia; A. M. Brailsford, Mullins; H. L. Shaw, Fountain Inn, and C. B. Earle.

**State Association Meeting.**—The sixty-fourth annual meeting of the South Carolina Medical Association was held in Columbia, April 16-18, and the following officers were elected: president, Dr. Charles M. Rees, Charleston; vice-presidents, Drs. A. B. Knowlton, Columbia; D. M. Michaux, Dillon and C. P. Aimar, Charleston; secretary-treasurer, Dr. Edgar A. Hines, Seneca. President E. A. Alderman of the University of Virginia, delivered the principal address on "The Medical Man and his Service to the State."

## TEXAS

**Quarantine Proclamation.**—The governor on March 30 issued his annual maritime quarantine proclamation, effective April 1. This quarantine applies on all gulf ports and along the Rio Grande border and is directed against all vessels, railway trains or persons coming from places infected with yellow-fever, small-pox, bubonic plague or cholera. All points south of 25 degrees north latitude are considered infected.

**Tuberculosis Conference.**—A southwestern conference on tuberculosis was held in Waco, April 16-17, on call of Governor Colquitt of Texas, at which representatives from Arizona, California, Kansas, Nevada, New Mexico, Oklahoma, Utah and Texas were present. Reports on antituberculosis activities were made by representatives from the various states and suggestions were made for the relief of consumptives from other states, for the discouragement of immigration of poor consumptives from other states and for the prevention of tuberculosis in the southwestern states.

**Personal.**—Dr. Henry Hartman, Temple, has been appointed state bacteriologist, vice Dr. S. N. Key, and will take charge of the laboratory May 1.——Dr. P. F. Robinson, Rock Springs, fractured his ankle and sustained serious injuries to his head in a runaway accident, March 27.——Dr. T. S. Walker, Dallas, was held up and robbed while making a professional call, March 25.——Dr. Don Price, Corsicana, is reported to be seriously ill with meningitis.——Dr. John S. Lankford, San Antonio, has been elected medical director of the San Antonio Life Insurance Company.——Dr. A. E. Spohn, Corpus Christi, who has been seriously ill, is reported to be very much improved.——Drs. C. S. Venable, J. V. Spring and G. W. Sims have been elected directors of the San Antonio Free Clinic.——Major Billie V. Ellis, M.C., N.G., Tex., Houston Heights, has been placed on the retired list on his own application.——Dr. J. S. Buie, Mertens, has been appointed assistant physician at the North Texas Hospital for the Insane, Terrell, vice Dr. R. E. Cloud, Houston Heights, resigned.——Dr. John

O. Kemp, city bacteriologist of San Antonio, has resigned. ——Dr. John H. Wood, Hubbard City, is reported to be seriously ill as the result of a cerebral hemorrhage.

## GENERAL

**"Phossy Jaw" Bill Signed.**—The president signed the bill taxing white phosphorus matches, April 13. It is asserted that the coming into effect of this law will prevent the manufacture of matches made with white phosphorus.

**National Conference on Pellagra.**—The National Association for the study of Pellagra will hold its next triennial meeting at Columbia, S. C., October 3 and 4, the week following the meeting of the International Congress on Hygiene and Demography in Washington. All persons interested in pellagra are invited to participate, and the cooperation of officers of the Government Medical Services, State Boards of Health and State Hospitals for the Insane, is especially solicited. It is expected that several foreign governments and medical organizations will be represented at the conference. Those who wish to present papers should address the special committee, which consists of Drs. J. W. Babcock, J. J. Watson and J. A. Hayne, Columbia.

**International Hygiene Congress.**—Among the nine sections of the coming fifteenth International Congress on Hygiene and Demography, the second section, under the presidency of Dr. Russell H. Chittenden of the Sheffield Scientific School, Yale University, which deals with dietetic hygiene and hygienic physiology, will have papers from most distinguished sources on the following interesting topics: "The Specific Dynamic Action of Foodstuffs." The referees on this subject are Dr. Max Rubner of Berlin, Dr. N. Zuntz of Berlin, Dr. F. G. Benedict of Boston and Dr. Graham Lusk of New York. Dr. Max Rubner, whose fundamental researches on the utilization of foods in the human body are well known, is the principal referee. Professor Zuntz is to take up "The Work of Digestion and Specific Dynamic Action"; Dr. Benedict, "The Influence of the Ingestion of Food on Metabolism," and Dr. Lusk, "The Influence of Foodstuffs and their Cleavage Products on Heat Production." The referees on the second topic, "Nutrition and Growth" are to be Dr. Hans Aron, of Manila and Dr. Lafayette B. Mendel of New Haven. Dr. Aron will speak on "The Influence of Quantity and Quality of Food on the Growing Organism;" Dr. Mendel will discuss "The Rôle of Proteins in Growth." The studies of the past ten years in the nutritive requirements of early infancy have effected a revolution in methods of infant feeding. Dr. Schlossmann of Düsseldorf and Dr. Howland of New York are the referees on this subject. The rôle played by inorganic substances in the nutrition of man has acquired an added importance by reason of recent investigations. Dr. Strauss of Berlin will present a paper on "The Rôle of Common Salt and Water;" Dr. Jacques Loeb, of the Rockefeller Institute for Medical Research, on "The Antagonistic Action of Salts;" Dr. E. Abderhalden of Halle, on "The Relation of the Inorganic Constituents of Food to Those of the Tissue Cells;" Dr. Macallum of Toronto will discuss "The Distribution of Soluble Salts in Living Cells and the Forces Controlling It." The subject of the cost and nutritive value of foodstuffs will be presented by Dr. C. F. Langworthy, the Chief of Nutrition Investigations, Department of Agriculture, Washington, D. C. "Diet in Relation to Disease" will be treated by Dr. A. Magnus-Levy of Berlin, Dr. Carl von Noorden of Vienna, Dr. D. L. Edsall of St. Louis and Dr. Warren Coleman of New York. Dr. Magnus-Levy is to present a paper on "The Scientific Basis of Diet-Therapy;" Dr. von Noorden, "The Choice of Foodstuffs in Relation to Disease;" Dr. Coleman, on "Diet and Metabolism in Fever." A paper will be read by Dr. Rubner on "The Influence of the Preparation of Food on its Nutritive Value." The referees on "Ventilation in Its Hygienic Aspects" are Dr. M. J. Rosenau, professor of Preventive Medicine at Harvard University, and Dr. Yandell Henderson of New Haven. Dr. Rosenau will speak on "Organic Matter in the Expired Air," in which he has recently been making some very interesting investigations; while Dr. Henderson will present some considerations on the unknown factors in the ill effects of bad ventilation. "The Hygienic Physiology of Exercise" will be treated by Dr. Leon Asher of Bern; Dr. R. Tait McKenzie of Philadelphia, Dr. Theodore Hough of Charlottesville and Dr. William P. Lombard of Ann Arbor, as referees. The topics to be discussed are "The Influence of Exercise on the Nervous System;" "The Influence of Exercise on the Heart," "The Influence of Exercise on the Respiratory System," "Some of the Influences which Affect the Muscular Strength." President Taft will address the Congress at its opening session, September 23

## LONDON LETTER

*(From Our Regular Correspondent)*

LONDON, April 13, 1912.

### Lord Lister's Will

Lord Lister has left an estate valued at $320,000, the greater part of which he has devoted to the interests of science and charity. He has bequeathed $50,000 each to the Royal Society, King Edward's Hospital Fund, King's College Hospital (the last hospital to which he was surgeon), and to University College Hospital (where he was educated). With his usual modesty he adds: "I do not wish my name to be in any way associated with these sums in the future." He has also bequeathed $100,000 to the Lister Institute of Preventive Medicine. To the University of Edinburgh, at which he was professor of clinical surgery, he has given the insignia of the Prussian order of knighthood *pour le mérite* and of the English Order of Merit, medals received from the Royal Society and other bodies, diplomas or other announcements of degrees of membership; also honorary gifts and distinctions, including the caskets containing the papers of freedom of London, Edinburgh, Glasgow and the trowel presented to him on opening the nurses' home at Montreal. With regard to the disposition of these articles he states: "I expressly declare that it is my intention that the university authorities, for the time being, shall be at perfect liberty to dispose of all or any part of the gift—for example, by having the medals melted down, or the diplomas or other writing destroyed—at any time and in any manner that may seem to them desirable."

### The Annual Meeting of the British Medical Association

Arrangements for the eightieth annual meeting of the British Medical Association are now completed. The annual meeting of the representatives opens on July 19 at Liverpool. The sectional meetings begin on the 24th and are continued on the 25th and 26th. In the section of medical sociology the insurance act will be especially discussed.

### The Transmission of Sleeping-Sickness

Important experiments on the transmission of human trypanosomes by the *Glossina morsitans* have been carried out in northern Rhodesia by the Luangwa Sleeping-Sickness Commission. The following conclusions have been established: 1. The human trypanosome in the Luangwa Valley is transmitted by *Glossina morsitans*. 2. Approximately 5 per cent. of the flies may become permanently infected and capable of transmitting the virus. 3. The period which elapses between the infecting feed of the flies and the date on which they become infective is approximately fourteen days. 4. An infected fly retains the power of transmitting the disease during its life and is infective at each meal. 5. Mechanical transmission does not occur if a period of twenty-four hours has elapsed since the infecting meal. 6. There is some evidence that in the interval between the infecting feed and the date on which transmission becomes possible the parasites found in the flies are non-infective. 7. Certain species of buck have been found to be infected with the human trypanosome. 8. A native dog has been found infected.

### Detection of Malingering by Administering an Anesthetic

As stated in previous letters to THE JOURNAL, the Workmen's Compensation Act has greatly increased malingering on the part of workmen who have met with accidents. A malingerer was detected recently in the following ingenious manner: He took his employers into court because they had refused compensation for a stiff knee. They alleged that he stiffened it purposely. The medical referee suggested to the judge that the man should be put under an anesthetic. As soon as the man became unconscious the knee moved easily and freely and so he lost his case.

## PARIS LETTER

*(From Our Regular Correspondent)*

PARIS, April 5, 1912.

### Proceedings Against a Well-to-Do Patient Who Received Free Treatment in a Hospital

Early in 1911 a well-to-do patient entered the free ophthalmologic service of a hospital and was operated on for a cataract. He thus not only deprived the medical profession of the fees which one of its members ought by right to have received, but also deprived a needy patient of a bed in the hospital. The Syndicat général des oculistes français protested to the director of the hospital, who, after learning the easy circumstances of the patient, brought suit against him, by authorization of the minister of the interior, for $200 (1,000 francs) damages. To avoid prosecution, the patient paid the 1,000 francs and the minister of the interior authorized the director of the hospital to pay one-half of the sum to the *syndicat* in recognition of the injury to the medical profession. This precedent is one of great importance, for, if it is followed, well-to-do patients will no longer dare to seek treatment in charity hospitals. The *syndicat* urges all opthalmologists to report to the secretary general for prosecution all cases in which persons in comfortable circumstances have received treatment or operation for ophthalmologic diseases in free hospitals.

### Manufacture of Absinthe

The senatorial commission which is considering the manufacture of absinthe has just finished its work, and has decided unanimously that the essence of thujone should not be used in any liquor and that the nomenclature of plants containing thujone should be officially established and traffic in them forbidden. Two years' grace will be allowed the manufacturers of absinthe in order that the supplies may be utilized, and three years' grace to the dealers.

### A Victim of Professional Duty

During October, 1911, Dr. Victor Veau, surgeon of the hospitals of Paris, contracted a serious diphtheria complicated by paralysis of all the limbs during an epidemic of croup at the hôpital des Enfants-Assistés. The president of the republic has recognized the devotion of Dr. Veau, whom he has appointed chevalier of the Legion of Honor. Moreover the Carnegie Foundation has recently awarded Dr. Veau its large gold medal for civil heroism.

### Creation of a Medicolegal Institute

The general government and the Department of the Seine have agreed to cooperate in the erection in Paris of a medicolegal institute comprising the administrative and educational services at present installed in the morgue. The medicolegal institute will undertake the identification of unknown corpses, judicial autopsies, and other medicolegal questions calling for expert knowledge; it will also give instruction in legal medicine with laboratory and practical work. The buildings for the institute will be constructed on ground furnished by the Department of the Seine, which will also be responsible for the direction of the work of the institute. The general government will be responsible for one-half of the expense, which will amount to $200,000 (1,000,000 francs).

### Death of Dr. Paul Brousse

Dr. Paul Brousse, director of the Asile d'aliénés de Ville-Evrard in Paris, former president of the municipal council in Paris and former deputy, has just died, aged 68. Before entering on his administrative work, Dr. Brousse played a considerable rôle in the action of the socialist party of which he was one of the founders and one of the most influential members.

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, April 4, 1912.

### Personal

Professor Pankow of Freiburg has accepted the call as director of the academic gynecologic clinic at Düsseldorf.

Professor M. Hahn has accepted the call as director of the hygienic institute at Freiburg.

### Radium Institute for Biologic and Therapeutic Research at Berlin

April 1 the institute founded by the efforts of Professor His for biologic and therapeutic research on radium in the royal Charité was opened. The aim of the institution is the investigation of the therapeutic effects of radio-active substances such as radium, mesothorium, radiothorium, etc., and their decomposition products. It possesses laboratories for chemical, zoologic and botanical research and a complete equipment for physical measurements. In all there are about fifteen places for research workers. The institute is connected with a policlinic in which internists, surgeons and other interested specialists will have opportunity to treat patients with radiation apparatus of various forms and strength, emanators for inhalation in closed rooms, apparatus for drinking the emanations, and other forms of application. The institute is founded through a fund appropriated by the Kaiser Wilhelm Society for Scientific Research, as well as by grants from various industrial companies. The management is in the hands of privy councilor His, whose representative is Dr. Gudzent. He is supported by a commission to which Professors Kraus, Orth, Lesser, Hildebrand, Bier, Zuntz, Hertwig, Hahn and Marckwald have assured their cooperation. Also a permanent physicochemical collaborator has been secured.

### Libel Suit Following an Alleged Lourdes Miracle

An Austrian clergyman, Pastor van der Bom, published a pamphlet with the title "A Genuine Miracle of Recent Times" describing the healing at Lourdes of a laborer named de Rudder who had suffered for eight years with a broken leg which physicians pronounced incurable and van der Bom publicly offered to pay $250 (1,000 Kronen) to anyone who should explain this miracle on natural principles or who could deny the historical truth of it on valid grounds. Dr. Aigner of Munich presented himself as a candidate for the offered prize. Proposals were made for a court of arbitration, without its being possible to arrive at any agreement. Dr. Aigner published a pamphlet stating that the historical validity of the asserted miracle was untenable. Both parties supported their point of view in a series of newspaper articles. As the choice of a head for the arbitration court could not be satisfactorily settled, Dr. Aigner declared himself willing to leave the verdict in this matter of such importance to the Roman Catholic church to the decision of a bishop or to the Vatican. This proposal was also declined by Pastor van der Bom. A public demand that a German court be declared competent to determine the matter remained likewise unanswered by him. Instead of this, Pastor van der Bom published in a pamphlet tne entire correspondence of the parties and again offered the prize. Dr. Aigner then brought suit against van der Bom on the ground of the libelous form of this pamphlet. The suit came to trial at Linz, Austria, and the jury pronounced Pastor van der Bom guilty of having held up the plaintiff to public scorn, and the court confirmed the verdict with a fine of $37.50 (150 kronen) or three days imprisonment and cost.

### Mortality in the German Empire for 1908

Privy councilor Rahts, a member of the imperial health office, publishes an interesting article based on official statistics on the mortality of Germany for 1908, the principal results of which may be of interest to the readers of The Journal: The statistics for the year 1908 show an increase in the general mortality, the greatest factor being an increase among children of 1 to 15 years of age. On the other hand, the average age reached at death by persons who died after 15 years of age was higher than in the two previous years. The number of deaths from pulmonary tuberculosis and other diseases of the respiratory tract (with the exception of pneumonia) and from the common communicable diseases diminished in number, so that in general the conditions in regard to the mortality during 1908 were quite favorable, especially if they are compared with the average of the previous decade from 1897-1906. The rate of infant mortality has decreased as compared with the preceding decade, although it was somewhat higher in 1908 than in 1907. There was, as compared with the previous decade, an increase in the number of deaths from cancer and other new growths, suicide, accident and syphilis. The attainment of advanced age was more frequent in the thinly populated districts than in those in which there are a number of large cities. The mortality rate in men is found to be higher than that for women.

### Lack of Cadavers in the Anatomic Institute at Leipsic

The anatomic institute at Leipsic and the course in surgery at the university, which depend for a supply of cadavers on the anatomical institute, have suffered for a number of years from a marked deficiency of bodies. As a consequence, instruction in anatomy and surgery has been naturally affected and it has been assumed in Leipsic that this is the reason why many other universities were preferred to that of the University of Leipsic. For this reason the Saxon government has introduced a bill into parliament regulating the supply of bodies for scientific purposes and post-mortem examinations. The bill contains the following principal provisions: Human bodies that are not claimed by the relatives for the purpose of burial at their own expense within forty-eight hours after death or the finding of the body, shall be devoted to scientific purposes unless special reasons prevent. The delivery shall not be made if the demand for the body is opposed for sanitary reasons or if the body is so decomposed that it is no longer suitable for anatomical instruction or if its acceptance for such purposes is declined or if the place to which it should be delivered waives the receipt of it for some other special reason. The delivery, as a rule, is made to the anatomical institute of the University of Leipsic. In certain cases also cadavers may be given to the operation course in surgery for army surgeons in the garrison hospital at Dresden or to the scientific academy of arts at Dresden or to some other scientific institution. The parts of the body not used for scientific purposes by the institution are given fitting burial at the expense of the institution. The bodies of such persons as have died in public hospitals, educational institutions or insane asylums, so far as there are no legal or sanitary objections are, as a rule, sectioned in these institutions and only delivered for scientific purposes after the necropsy. The section may be omitted with the consent of the physician who treated the deceased immediately before death. Naturally the socialist press has already instituted a strenuous newspaper crusade with the claim that the poor wage-earner will now not be secure against ill usage even when dead. It is easy to understand that this material for agitation is eagerly welcomed by the socialists (*Sozialdemokraten*), who take every opportunity to stir up the working classes, while it may be expected from the sound sense of the majority of the population that they will recognize the true significance of the bill and that the parliament will pass it.

### Advancement of Athletics Among the Student Body

At the invitation of the University of Breslau, the representatives of the German universities met in Berlin recently to discuss measures for the advancement of athletics among the students. The meeting was presided over by our hygienist, Professor Rubner. The principal address was made by Professor Partsch of Breslau. At the end of the debate the following statement of principles was adopted: There is a timely demand for the German universities to give attention to athletics. This assembly unanimously declares it to be a duty of the state to provide the necessary means therefor. The fulfilment of this duty is most suitably entrusted to a special committee for athletics. The cooperation of the student body is regarded as especially desirable. For the further advancement of this matter an annual representative assembly of the committee is contemplated. The establishment of gymnasiums and athletic fields is regarded as necessary. Annual local competitive games among the students are to be established, and every three years German university olympic games. In these matters the assembly expressed itself in favor of sympathetic cooperation with the German academic league for athletics. The next German olympic games will occur in Leipsic in 1913 by an agreement of the assembly and the German academic league for athletics with the University of Leipsic. For the next place of meeting the Berlin University was selected.

## VIENNA LETTER

*(From Our Regular Correspondent)*

Vienna, April 3, 1912.

### A Crematorium in Austria

The municipality of Reichenberg, a city in the northern part of Austria, had decided to erect a crematorium. The government refused consent on legal grounds. The municipality, however, governed by modern men, fought this decision until the supreme court of administration (*Verwaltungs-Gerichtshof*) decided that the building of a crematorium was not contrary to the existing laws. There is, in this country, however, no law that permits the operation of a crematorium; the law provides only for the ordinary burials in a cemetery. The supreme court judicially added to its decision the clause that, although at present there is no law concerning the permission of cremation, there is no reason to see why such a law could not be brought into force within a reasonable time by parliament or by an ordinance of the government. The friends of cremation will, therefore, inaugurate a campaign in order to obtain such a law. Medical circles here are, of course, widely in favor of the movement and, no doubt, the occurrence in Reichenberg will do much to strengthen the position of the cremationists.

### A Generous Gift for Medical Purposes

A sum of $600,000 (3 million kronen), has been given to the Jewish Board of Vienna by a well-known philanthropist, Mr. David von Guttmann, under the condition that a children's hospital be erected, and that other funds for similar purposes be united with it in order to insure the upkeep of a large, first-class institution. There is at present in Vienna a real lack of beds for sick children. Altogether not more than about 600 beds are available for that purpose, even if all the homes for convalescents are counted, and two smaller hospitals cannot be opened for lack of funds. The mayor has been forced to appeal to the general public for funds for medical purposes, but the public is a little shy because it fears that the money might be used for political or party interests, even in charitable institutions. Therefore Mr. Von Guttmann has bestowed this money on an association whose impartiality is unmistakable. He required that at least 150 children's beds be added to those in existence. Probably the new hospital will form an annex to the Rothschild Hospital of the Jewish community in Vienna, because this one can dispose of the necessary area without any fresh expenditure. Of course, children of all creeds will be admitted, free of charge, if their parents cannot pay.

## Marriages

Robert Eustis Hoyt, M.D., U. S. Navy, to Miss Lucille Edwards Cook Karmany, at the Marine Barracks, Norfolk, Va., April 3.

William Fletcher McPhedran, M.D., Toronto, Ont., to Miss Lilla Simpson of Frederick County, Md., at Plainfield, N. J., April 9.

Charles Matthias Linehan, M.D., Dubuque, Ia., to Miss Florence Mary Cunningham of Beloit, Wis., April 24.

James William Williamson, M.D., Murdo, S. Dak., to Miss Virginia Edison, at Mitchell, S. Dak., April 8.

Algie Huffman Shock, M.D., Huntington, Ind., to Miss Edna Seward of Bloomington, Ind., April 10.

Horatio E. Abrahams, M.D., to Miss Clara Sophia Apfel, both of Trinidad, Colo., at Denver, April 8.

Harold Ruckman Mixsell, M.D., New York City, to Miss Charlotte Mallory of Easton, Pa., April 12.

John C. Hanna, M.D., to Miss Ethel Roy Aylesworth, both of Big Prairie, O., at Wooster, O., April 6.

C. Charles Hutton, M.D., Picayune, Miss., to Miss Olla Irene Rawling of New Orleans, April 8.

Conda C. Heady, M.D., Bloomfield, Ia., to Mrs. Mollie Riley of Moulton, Ia., at Bloomfield, April 7.

Paul K. Switzer, M.D., Fort Motte, S. C., to Miss Mollie Layton of Spartanburg, S. C., recently.

Maurice D. Kefauver, M.D., to Miss Bertha D. Brenner, both of Smithsburg, Md., April 11.

Adolph Leonard Kyllo, M.D., to Miss Oliva M. Pfeilsticker, both of Grantsburg, Wis., April 6.

Jacob Louis Tuechter, M.D., to Miss Emily Matilda Wagner, both of Cincinnati, April 16.

Alexander E. Horwitz, M.D., to Miss Dora Prinz, both of St. Louis, March 31.

## Deaths

**Paul Casper Freer, M.D.** Rush Medical College, 1884; director of the Bureau of Science of the Philippine Islands and dean of the Philippine Medical College, died in Baguio, Philippine Islands, April 17, from acute nephritis, aged 49. Born in Chicago, he received his early education in Germany and in Chicago and took a course in chemistry in the University of Munich under Professor Von Bayer, graduating with the highest honors in 1887. A year later he was made assistant to Professor Michaels at Tufts College, Boston, and two years later was made professor of chemistry in the University of Michigan, Ann Arbor. In 1901 he was requested to undertake the creation of the Bureau of Science of the Government of the Philippine Islands, in Manila, and after its organization remained there as director, chemist and superintendent of the government laboratories and member of the Philippine Islands Board of Health. He assisted in the founding of the Philippine Medical College and was made its dean and professor of chemistry. He was a member of the Philippine Islands Medical Association and editor of the *Philippine Journal of Science*. Dr. Freer was a scientist of great promise and his early death is to be deplored.

**Mark J. Lehman, M.D.** University of Alabama, Mobile, 1873; of New Orleans; physician for the Howard Association during the yellow fever epidemic of 1878; acting assistant surgeon U. S. Marine-Hospital Service and on duty at the New Orleans Quarantine station at that time, and later on duty in Brownsville, Tex., Pensacola, Fla., and Mexico; for several years physician of Iberville Parish, Louisiana, and for a time coroner of the parish and city physician of Plaquemine; one of the founders of, and a professor in, the Louisiana State College of Dentistry; for fifteen years an editorial writer on the *Jewish Ledger*; died at his home in New Orleans, April 7, aged 57.

**Joseph Newton Lewis, M.D.** College of Physicians and Surgeons, Baltimore, 1892; a member of the American Medical Association; one of the most prominent practitioners of Roanoke, Va., assistant surgeon to the Norfolk and Western Railroad and one of the proprietors of the Lewis-Gale Hospital; was instantly killed in an automobile accident, about five miles from Roanoke, April 6, aged 44. At his funeral physicians of the city acted as honorary pallbearers.

**Louis W. Crampton, M.D.** University of Maryland, Baltimore, 1869; Colonel M. C., U. S. Army; died at San Bernardino, Cal., April 12, from pneumonia, aged 63. Colonel Crampton entered the Medical Corps of the Army in 1875, and had been chief surgeon of the Philippine division. He was to have been retired May 8, on account of age. He was a member of the American Medical Association and the Association of Military Surgeons of the United States.

**Harold Flagg Jewett, M.D.** Long Island College Hospital, Brooklyn, 1893; a member of the Medical Society of the State of New York; instructor of obstetrics in his alma mater; gynecologist to the Bushwick and Swedish hospitals, Brooklyn, and assistant obstetrician to the Long Island College Hospital and Kings County Hospital; died at his home in Brooklyn, April 12, from pneumonia, aged 42.

**William E. Minahan, M.D.** Rush Medical College, 1891; of Fond du Lac, Wis., was one of the heroes who went down to death with the Titanic off the banks of Newfoundland, April 15, aged 44. Dr. Minahan was a member of the American Medical Association and one of the most prominent surgeons of Eastern Wisconsin; a man of unusual skill and ability, as well as force of character.

**Richard Archibald Patterson, M.D.** Medical College of Virginia, Richmond, 1848; surgeon of the Fifty-Sixth Virginia Infantry, C. S. A., during the Civil War; since 1869 a manufacturer of tobacco; president of the Richmond Tobacco Exchange, and president of the Savings Bank of Richmond since 1889; died at his home near Richmond, April 8, from pneumonia, aged 86.

**Samuel Fry, M.D.** George Washington University, Washington, D. C., 1902; for several years a practitioner of Washington, who went to San Antonio, Brazil, S. A., in 1909 to take charge of the Madeira-Mamoric Railway Hospital and afterward settled in New York City; died at his old home in New Orleans, April 9, from the effects of tropical fever, aged 41.

**Charles William Fox, M.D.** University of Louisville (Ky.), 1850; for many years a practitioner of Virginia City, Nev., but for the last forty years a financier of San Francisco; who retired from business in 1905 and afterward resided in San Jose; died in his apartments in the Hotel Vendome in that city, February 17, from pneumonia, aged 85.

**Charles E. Postley, M.D.** Howard University, Washington, 1886; Georgetown University, Washington, 1891; formerly president of the Board of Commissioners of Hyattsville, Md., and accountant of the Indian Bureau of the Interior Department, Washington; died in his apartments in Washington, April 6, from heart disease, aged 64.

**Frank Lee Drummond Rust, M.D.** Harvard Medical School, 1897; a member of the Massachusetts Medical Society and a well-known ophthalmologist of Boston; ophthalmic surgeon to the Carney Hospital and associate professor of ophthalmology in Tufts College Medical School; died at his home in Boston, April 10, from septicemia, aged 38.

**James Dwight Bemis, M.D.** Eclectic Medical Institute, Cincinnati, 1879; local surgeon at Fremont, Ohio, for the New York Central lines and for two terms trustee of the Xenia Orphans' Home; was found dead in his apartments in Fremont, April 13, from heart disease, aged 52.

**James Carter, M.D.** University of the South, Sewanee, Tenn., 1902; was found dead in his office in West Helena, Ark., February 23, aged 38. Death was due to a self-inflicted gunshot wound of the head.

**William A. Hinchman, M.D.** University of Maryland, Baltimore, 1873; a member of the Medical Society of the State of Pennsylvania; a veteran of the Civil War; a member of the Board of Education of McKeesport and visiting physician and president of the McKeesport Hospital; died at his home, April 9, aged 63.

**William Glenn Allen, M.D.** Tulane University, New Orleans, 1873; of Newton, Miss.; a member of the Mississippi State Medical Association; was fatally wounded in a street duel in Newton, March 28, in which he killed his opponent; and died in the Newton Sanitarium, March 29.

**Arthur Jackson Brewe, M.D.** Jefferson Medical College, 1905; a member of the American Medical Association; for several years identified with the medicolegal department of the Philadelphia Rapid Transit Company; lost his life in the sinking of the *Titanic*, April 15, aged 45.

**David F. Earnest, M.D.** Albany (N. Y.) Medical College, 1867; of Port Norfolk, Va.; physician to the Norfolk County Jail; died at his home in Port Norfolk, March 28, from pneumonia, aged 66. Physicians of Norfolk acted as honorary pallbearers at his funeral.

**George P. Cosby, M.D.** Kentucky School of Medicine, Louisville, 1859; for many years a member of the Vanderburg County, Ind., Medical Society; who retired from active practice in Evansville in 1897; died at his home April 17, from heart disease, aged 72.

**Ira Adelbert Hix, M.D.** New York University, New York City, 1883; health officer of Binghamton, N. Y., from 1898 to 1908 a member of the board of managers of the City Hospital; died at his home in Binghamton, April 12, from typhoid fever, aged 53.

**Alfred L. Saylor, M.D.** Rush Medical College, 1886; of Sherwood, Ore.; a member of the American Medical Association; surgeon general of Oregon from 1887 to 1894; died in the Good Samaritan Hospital, Portland, Ore., April 7, from pneumonia, aged 64.

**Robert Arthur Haliburton MacKeen, M.D.** Bellevue Hospital Medical College, 1880; examiner in clinical surgery in the Halifax, N. S., Medical College; died at his home in Glace Bay, January 14, from arteriosclerosis, aged 54.

**William H. Feddeman, M.D.** University of Maryland, Baltimore, 1888; a member of the American Medical Association; was found dead in his rooms in Baltimore, April 12, from the effects of an overdose of chloroform, aged 46.

**Mary Jane Booth, M.D.** Pulte Medical College, Cincinnati, 1885; at one time in charge of the Ohio Hospital for Women and Children, Cincinnati; died at her home in that city, April 9, from typhoid fever, aged 68.

**Martin J. Lunn, M.D.** College of Physicians and Surgeons, Chicago, 1902; a member of the Illinois State Medical Society; died at his home in Chicago, April 19, from septicemia, due to an operation wound, aged 41.

**Francis Watson Bowron, M.D.** New York University, New York City, 1871; a member of the Medical Society of the State of New York; died at his home in Brooklyn, April 11, from heart disease, aged 66.

**Warren Brown Maxwell, M.D.** Dartmouth Medical School, Hanover, N. H., 1876; a member of the Massachusetts Medical Society; died at his home in Grafton, April 11, from pneumonia, aged 72.

**John I. Burford, M.D.**, a retired practitioner of Louisville; died at the home of his son in that city, February 22, from injuries received three weeks before by a fall on the ice, aged 91.

**Langdon Cheves Duncan, M.D.** Medical College of the State of South Carolina, Charleston, 1843; a retired practitioner of New York City; died at his home April 5, from senile debility, aged 90.

**Thomas H. Cornwall, M.D.** Rush Medical College, 1875; for many years a practitioner of Mount Hope, Kan.; died in a hospital in Wichita, April 8, aged 61.

**Philo P. White, M.D.** University of Louisville, Ky., 1874; died at his home in St. Louis, March 12, from chronic nephritis, aged 68.

**J. B. Philley** (license, Texas, Ninth Judicial District Board, 1900); of Granbury; was shot and killed at Hill City, April 5, aged 42.

**A. M. Bruce** (license, Oklahoma, 1908); for many years a practitioner of Bartlesville, died recently and was buried April 7.

# The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

## ECKMAN'S ALTERATIVE

### Another Fraudulent Consumption Cure

Some time ago a consumption cure humbug, Tuberculozyne, was exposed in The Journal. Eckman's Alterative resembles Tuberculozyne in three particulars: (1) it is sold as a "consumption cure;" (2) it is exploited by a horse doctor; (3) it is a cruel fraud. It further resembles Tuberculozyne in that it is advertised by the testimonial method, but then practically all "patent medicines" are sold in the same way. The product is sold by the Eckman Manufacturing Co., Philadelphia, and is said to be the "discovery" of T. T. Eckman, a veterinarian, who first tried it on cows and later experimented on a member of his own family.

Instead of being sold on the mail-order plan, as Tuberculozyne is, Eckman's Alterative is sold through the medium of the druggists. It is heavily advertised in the daily press, the advertisements consisting, generally, of testimonials to which are attached laudatory paragraphs about the preparation with the names of the local druggists inserted. An extensive advertising campaign is being carried on and it is reported that the Eckman concern is going to spend $150,000 during 1912 in advertisements. Here are some of the claims made for this nostrum:

> "A medicine made for the cure of tuberculosis. It has cured this disease again and again."
>
> "Cures have been effected . . . where no intelligent care was taken of the patient, where money was scarce; good food and good cooking unusual."
>
> "Consumptive patients need no longer dread either the fate that formerly overtook all sufferers from lung trouble, or costly and often terribly inconvenient journeys far from home to other climates or to some expensive sanatorium. Hundreds are now staying quietly at home curing themselves at no expense beyond the cost of a few bottles of medicine."
>
> "The Sanitarium treatment has only benefited temporarily, while Eckman's Alterative has cured."

These quotations are sufficient to show that the firm uses the methods classical to "patent-medicine" fakers: that of attempting to discredit the rational scientific treatment of disease and to substitute therefor a worse than worthless nostrum.

Eckman's Alterative was analyzed in the laboratory of the American Medical Association and the chemists' report follows:

#### LABORATORY REPORT

Eckman's Alterative comes in an 8-ounce bottle and is a dark brownish, turbid liquid with a strong odor of cloves. The label declares the presence of 14 per cent. of alcohol. Qualitative tests demonstrated the presence of alcohol, calcium, a chlorid, small amounts of vegetable extractive and traces of vegetable tissue. No other substance of a medicinal nature was detected. Quantitative examination gave the following results:

| | | |
|---|---|---|
| Total solids (residue at 100 C.), including 3.93 gm. of calcium chlorid ($CaCl_2$).... | 6.25 | gm. |
| Alcohol ............................. | 11.22 | gm. |
| Insoluble residue ..................... | 0.073 | gm. |
| Water and undetermined, to make...... | 100.00 | c.c. |

This analysis agrees in general with that made by the New Hampshire authorities who reported the presence of 3.59 per cent. of calcium chlorid and small quantities of powdered cloves.

Here then we have a mixture of alcohol, calcium chlorid and cloves, which every intelligent physician knows is perfectly worthless for the cure of consumption, sold at an exorbitant price—$2 for eight ounces—under the cruelly false claim that it will save the tuberculous. As has been pointed out time and again, the inherent viciousness of fraudulent consumption cures lies in the fact that they lead the sufferer to abandon or ignore those hygienic and dietetic measures which are his only hope. It is not easy, it is not always comfortable, it is frequently disagreeable to follow the treatment which experience has shown to give the only hope of success. It is much easier to continue living the life which, in so many cases, has been responsible for the consumptives' condition; merely taking at stated intervals a medicine which its manufacturers declare to be all that is necessary to bring about recovery.

Hoping against hope that in the "consumption cure" nostrum the secret has at last been wrested from nature by which the White Plague may be vanquished, the ever-optimistic consumptive sacrifices money which should go into good food, sacrifices all too precious time and, finally, life itself, and the consumption cure faker waxes rich in the toll of blood exacted from his credulous victims.

## ANTIDIABETICUM—BAUER

In Germany the makers of nostrums, their methods and their products are systematically exposed by the Society for the Suppression of Quackery (Deutsche Gesellschaft zur Bekämpfung des Kurpfuschertums) through its publication, the *Gesundheitslehrer*, under the aggressive editorship of Dr. Kantor.

Ludwig Bauer,[1] the manufacturer of "Antidiabeticum," inserted advertisements in daily papers asserting that for his "humanitarian efforts" the society "Opera Educativa pacifica" in Rome had granted him a diploma and placed his publications in the celebrated "Bibliotheca Marciazzi." Dr. Kantor, editor of the *Gesundheitslehrer*, declared that, according to information received from the German Consulate in Rome, no such society existed there, and the library referred to probably was the Bibliotheca Marciana in Florence, which, like other public libraries, accepts all donations without critical examination. To offset these exposures, the promoter of Antidiabeticum published advertisements libeling Dr. Kantor and attacking the Society for Suppression of Quackery. This resulted in suits and counter-suits for libel between Dr. Kantor and the directors of the antiquackery society on the one side and the promoter of Antidiabeticum on the other. As a result of the recent combined trial, the court declared that Dr. Kantor's charges had been substantiated and the manufacturer of Antidiabeticum was fined 600 marks or forty days' imprisonment, while apparently on purely technical grounds Dr. Kantor was fined 50 marks or five days' imprisonment. The costs were divided between Bauer and Dr. Kantor in the proportion of 11 to 1. As Bauer in the course of the trial made further libelous charges, Dr. Kantor has lately started new proceedings against Bauer. The incessant persecution of Dr. Kantor was described in an editorial in The Journal, May 20, 1911, p. 1486.

The persecution of Dr. Kantor previously described shows no signs of abatement nor has Dr. Kantor given evidence of loss of courage. Some of the German medical societies have subscribed for the *Gesundheitslehrer* for each of their members. It is written in popular style for the masses and is a sharp and effective weapon for the campaign against quackery.

## PHENACETIN, SULPHONAL AND TRIONAL

### Report of the Council on Pharmacy and Chemistry, Holding These Names to be Non-Proprietary

The following report of the Committee on Patents and Trademarks was adopted by the Council and the descriptions in New and Nonofficial Remedies, 1912, have been modified as directed in the report. W. A. Puckner, Secretary.

#### REPORT OF THE COMMITTEE ON PATENTS AND TRADE-MARKS

Recently the Council voted to list lanolin in "New and Nonofficial Remedies" as a synonym for adeps lanæ hydrosus, its pharmacopeial name. This action was in accord with the generally recognized principle that the name used by a patentee to designate a patented article becomes the common name of such article after the patent has expired. This principle, and also the principle that a generic title—or common name—cannot be legally continued as a trade-mark, have been generally recognized and are thoroughly well established by decisions of the courts.[1]

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[1] According to a report in the *Allgemeine medizinische Central-Zeitung*, Jan. 6, 1912, p. 14

So far as medicines are concerned, the same principles have been directly established by a decision of the Supreme Court of the state of New York in the lanolin case.[2]

Your committee believes it important that the medical profession know the facts regarding this subject of names of patented articles, namely, that when the patent expires, the name of the article becomes public property, provided the name has been generally used for the article. Besides adeps lanæ hydrosus or lanolin, there are three preparations in the U. S. Pharmacopeia that come in this category, all of which have been widely used under the proprietary names given by the patentees. These are acetphenetidin, sulphonmethane and sulphonethylmethane, sold, respectively, under the names phenacetin, sulphonal and trional. The patents on these products having expired, anyone can make and sell them. They are now official in many foreign pharmacopeias, with direct or indirect recognition of their trade names in practically all.

It is evident that the names "phenacetin," "sulphonal" and "trional" have become generic designations for the several products to which they have been applied.

Therefore, it is recommended that the present descriptions for these articles in New and Nonofficial Remedies be modified to indicate more clearly that the names "phenacetin," "sulphonal" and "trional" are synonyms for the official titles acetphenetidin, sulphonmethane and sulphonethylmethane, respectively, and that the tests of identity and purity prescribed in the U. S. Pharmacopeia should apply to the products dispensed under these titles.

## Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### BLACKENING OF THE SKIN BY GOLD CHAIN

*To the Editor:*—Why should a10-carat gold chain blacken a person's neck? One of my patients complains of this and came to me for advice. I have made inquiries of jewelers and find that this is a rather common occurrence among certain people. A jeweler says the fineness of the chain has little effect, a 10- and 14-carat having the same effect. In the case of my own patient I have been careful to exclude the various powders used by women, which often contain zinc, bismuth and other metals, also the taking of iron or sulphur. Could an early case of pulmonary tuberculosis have any effect? I believe this case is of that character. A peculiar thing about the case is that other members of my patient's family are said to wear the chain without causing the slightest mark; also, the patient wears rings and bracelets without the discoloration.

SUBSCRIBER.

ANSWER.—On a casual examination of books and literature, we fail to find any record of a scientific investigation of this question, but such a discoloration could easily be caused by the formation of a sulphid of copper. Ten-carat gold may contain about 60 per cent. of copper while more or less sulphur is commonly present in the air in the form of hydrogen sulphid. It comes from coal-gas and from the decomposition of animal and vegetable matter.

Another suggestion: It is a common observation that hard-rubber objects will blacken silver and gold because of the sulphur which was used in the vulcanizing of the rubber and which escapes gradually in the form of hydrogen sulphid. It may be found that this patient has some toilet article—a hairbrush or a nail-file, for example, with a composition rubber handle—which is near the chain over night, and the resultant discoloration rubs off on the neck.

As to the alleged difference between this patient and other members of the family, this may not be true, or there may be something peculiar in the secretion of the skin in this person, which favors the action of the sulphur, or some other conditions might be found as the cause if it were worth while for a thorough observer to study into the matter. These remarks are largely in the nature of speculation, because there are so many undetermined factors in the problem presented, but some of the suggestions may be helpful to our correspondent.

If any of our readers know of any authoritative statement on this subject, we shall be glad to forward the information.

### PITUITARY EXTRACTS IN PHYSICAL AND MENTAL BACKWARDNESS

*To the Editor:*—Please give me a list of articles dealing with the use of the extract of the anterior lobe of the pituitary body in physical and mental backwardness.

A. L. P.

ANSWER:

Cushing, H.: Functions of the Pituitary Body, *Am. Jour. Med. Sc.*, April, 1910; abstr. in THE JOURNAL, April 30, 1910, p. 1477.

Franchini, G.: Functions of the Hypophysis and Action of Experimental Injection of Its Extract, *Berl. klin. Wchnschr.*, April 18, 1910.

Cross, E. S.: Hypopituitarism, *New York Med. Jour.*, Oct. 15, 1910.

Dunan, T.: Rôle of Hypophysis Cerebri in Nutrition, *Presse méd.*, April 19, 1911; abstr. in THE JOURNAL, May 27, 1911, p. 1621.

Cushing, H.: The Hypophysis Cerebri, THE JOURNAL, July 24, 1909, p. 249.

Hypophysis Cerebri, Editorial, THE JOURNAL, July 24, 1909, p. 302.

### ANTIFORMIN

*To the Editor:*—In THE JOURNAL (April 6, 1912, p. 1005) appears an article entitled "The Value of the Loeffler Method of Sputum Examination," in which reference is made to the use of antiformin. Please inform me where this substance can be obtained.

F. B. NATHER, Spokane, Wash.

ANSWER.—See New and Nonofficial Remedies, Ed. 1912, p. 30. Antiformin is made by the American Antiformin Co., and can be obtained through the drug trade.

### TRIPLETS LIVING AT 68

*To the Editor:*—In reply to an inquiry made by J. F. Leys, U. S. Navy, Newport, R. I. (THE JOURNAL, April 13, 1912, p. 1136), as to whether there are any triplets now living at 70 years of age, I will say that there are triplets, born June 9, 1844, a sister and two brothers, named Windecker, now living in Fond du Lac, Wis. About twelve years ago I operated on Sidney Windecker for cataract. The triplets are not quite 70, being 68, but the difference is so slight as to justify this reply.

DR. G. N. BRAZERN, Racine, Wis.

### LOW HEMOGLOBIN CONTENT AND RECOVERY

*To the Editor:*—Dr. Barron asks (THE JOURNAL, March 23, p. 880) if recovery can take place after the hemoglobin falls to 10 per cent. or less. It may be of interest to him and others that I found, two years ago, in looking over the records of the extra-uterine pregnancy cases at the Massachusetts General Hospital, a case in which the hemoglobin was only 9 per cent. The pulse was 130 and the temperature 100; white count, 25,000. The record stated that many quarts of blood were free in the abdomen. This patient made a perfect recovery, with no postoperative complications.

W. PEARCE COUES, M.D., Boston.

## The Public Service

JOURNAL Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

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[1] For example, the frequently quoted Singer Sewing Machine case may be mentioned. This case was decided by the U. S. Supreme Court (per Justice White, May 8, 1896), on appeal from decree of Circuit Court of U. S. for Northern District of Illinois. The following is an extract of the decision (163 W. S. 169): It is the universal American, English and French doctrine "that where, during the life of a monopoly created by a patent, a name, whether it be arbitrary or be that of the inventor, has become, by his consent, either express or tacit, the identifying and generic name of the thing patented, this name passes to the public with the cessation of the monopoly which the patent created." . . . The decision emphasizes, of course, that the defendant must not carry on unfair or deceptive competition in business. The principles laid down above are further emphasized by the opinions recorded in Green Tweed & Co. v. Mfgs. Belt Hook Co. (158 F. R. 640).

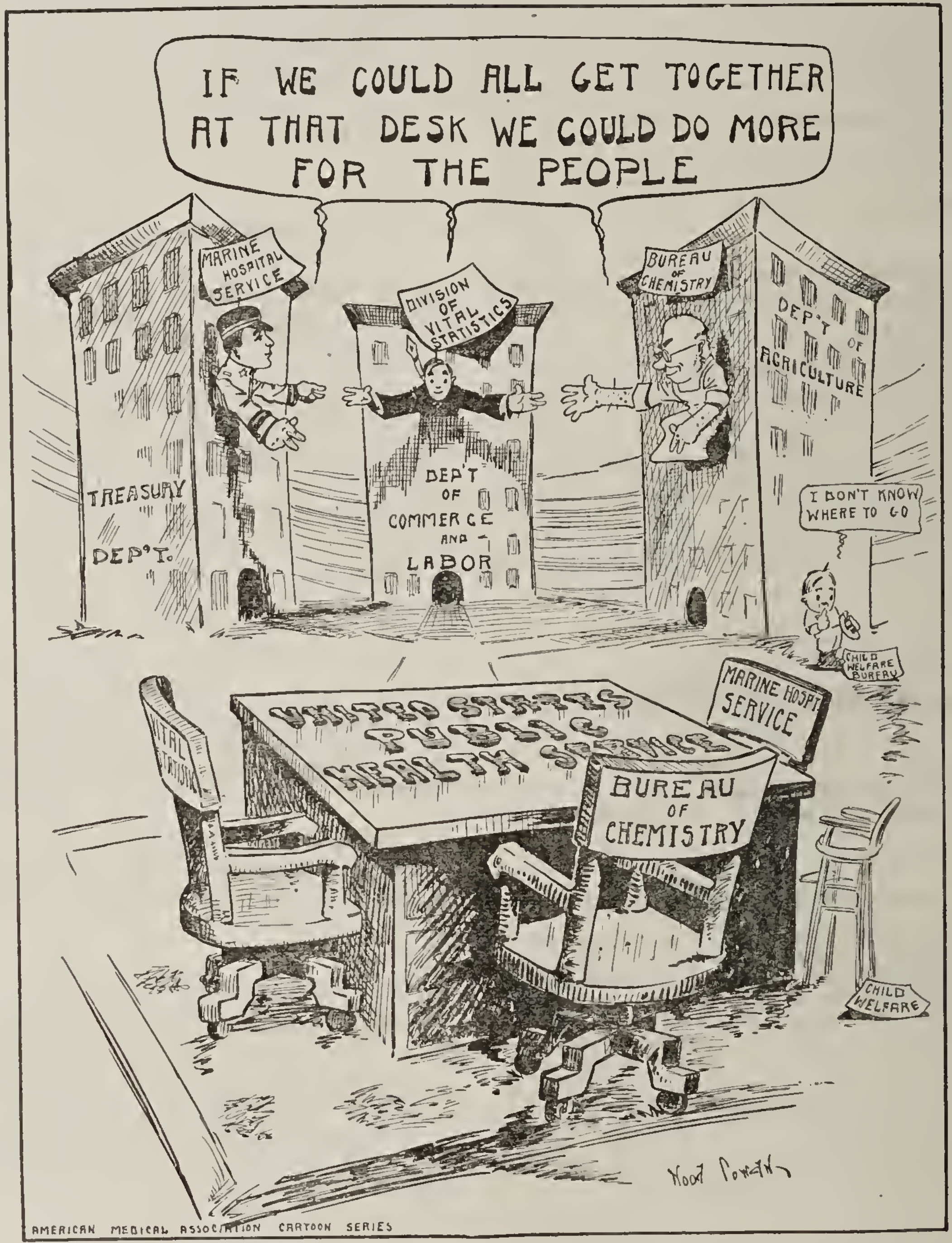
[2] Jaffe et. al. v. Evans & Sons, limited, N. Y. State Rep., Vol. 109, Suppl. 75, p. 257, THE JOURNAL A. M. A., Sept. 9, 1911, lvii, p. 906

# Medical Economics

This Department Embodies the Subjects of Post-graduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

## DEBATE IN THE SENATE ON THE OWEN BILL

The Owen bill came in for a brief but illuminating discussion in the Senate, Tuesday, April 16. Senator Jones, of Washington, arose and read a selection of telegrams, which he evidently assumed were representative of public sentiment in his state. Senator Owen, Senator Works and Senator Smoot also took a hand in the discussion. The extract from the *Congressional Record,* given below, is commended to the careful attention of all our readers and particularly to the physicians of the state of Washington. Are they willing to admit that the five telegrams read express the sentiment of a majority of the people of the state? If not, then it would be well to have Senator Jones informed as to what is the real sentiment of his constituents.


IF WE COULD ALL GET TOGETHER AT THAT DESK WE COULD DO MORE FOR THE PEOPLE
MARINE HOSPITAL SERVICE
TREASURY DEP'T.
DIVISION OF VITAL STATISTICS
DEP'T OF COMMERCE AND LABOR
BUREAU OF CHEMISTRY
DEP'T OF AGRICULTURE
I DON'T KNOW WHERE TO GO
CHILD WELFARE BUREAU
UNITED STATES PUBLIC HEALTH SERVICE
VITAL STATISTICS
MARINE HOSP'T SERVICE
BUREAU OF CHEMISTRY
CHILD WELFARE
AMERICAN MEDICAL ASSOCIATION CARTOON SERIES

### DEPARTMENT OF PUBLIC HEALTH

*Mr. Jones:* Mr. President, I have some telegrams in the nature of petitions which I desire to present. I want to say, in connection with the matter that has already been referred to, that I have received a great many telegrams indorsing the compensation act proposed from my state. My people, however, are much interested in another proposition that appears, to them at least, to be very serious, it bearing the honored name of the senator from Oklahoma (Mr. Owen). While I know he is a "progressive," and I am satisfied he would not take away the liberties of any of our people, a great many of my people are rather fearful. I want to read one telegram I have received, which reads as follows:

> Vote in favor of the Owen bill means the establishment of one of the worst trusts in our country; its defeat means that we can still choose our own physician and our own medical school. We don't want any interference with our present vested rights of freedom.
>
> W. Elwanger.

This feeling seems to have spread considerably among my people. I have another telegram from Seattle, which reads as follows:

> Please use every available effort to defeat the Owen bill. It is fraught with great danger to the liberty of every American citizen. Medical freedom will be gone if any one particular school has a monopoly. Medical monopoly is the mainspring of the Owen bill.
>
> R. Cooper Willis.

Then, also from Seattle—I take it that possibly to-morrow I will get a great many similar telegrams from some other locality in the state—I have the following telegram:

> The world is sound and moving on. Modern physiologic pathologists by sheer merit are rapidly supplanting allopathic pretensions. In desperation allopaths are seeking to recover prestige through gag legislation and state medicine crushing with ignorant force an enlightened and aspiring people. For sake of truth and humanity, kill Owen bill.
>
> Doctor P. Rudolph.

I also have a telegram from Spokane, as follows:

> The passage of the Owen bill as amended will deprive many of your best people of freedom.
>
> Geo. T. Crane.

The ladies of my state are also getting fearful of this reactionary measure of my friend from Oklahoma. They say:

> We look to you for the protection of our individual and national rights, hence the defeat of the Owen bill.
>
> Mrs. Michael Earles.

*Mr. Owen:* Mr. President——

*Mr. Jones:* I want to ask the senator, before he interrupts, whether it is his intention seriously to press this trust-breeding, monopolistic, liberty-destroying, tyrannical, reactionary measure against the wishes of the people of my state. I have a great deal of confidence in his liberty-loving proclivities, but I do feel that in the matter of legislation, at least, I should pay some regard to the views of my people.

I have a great many more telegrams from people in my state with reference to this matter which I desire to submit, and I should like to know whether the senator from Oklahoma seriously intends to press this measure which is fraught with so much danger to the people of my state.

*Mr. Owen:* The bill itself abundantly answers the telegrams which have been read, and for the information of the senator from Washington I will call his attention to this provision of the bill:

> That the health service established by this act shall have no power to regulate the practice of medicine or the practice of healing, or to interfere with the right of a citizen to employ the practitioner of his choice, and all appointments made within the health service, including the head of the service, shall be made without discrimination in favor of or against any school of medicine or of healing.

The bill provides further that no domicile or residence of a person shall be entered without the consent of the occupant; that no function belonging exclusively to the state shall be exercised by the department.

The opposition to this measure is inspired in large measure, in my opinion, by the same forces that have opposed the carrying out of the pure food and drug act in this country and by those who are engaged in disseminating patent medicines and who have a good deal of money invested in that business.

They have stirred up innocent people, such as the Christian Scientists and some few members of the eclectics or the chiropractics or other citizens who imagine that their right to practice medicine or the healing art may be interfered with.

Those artificial telegrams which are sent here—artificial in the sense that they are instigated by a private interest—serve no useful purpose except, perhaps, to confuse the minds of those who do not understand what it really means.

I will say to the senator from Washington that, so far as I am concerned, I do intend to press Senate bill No. 1 and to do whatever I can to establish a Department of Health in this country that shall make available, as far as possible, all the information acquired by the scientific world in regard to the preservation of human life.

I remind the senator from Washington that it was the investigation of Carroll, of Lazear, and of Agramonte and the other patriots of peace, a number of whom lost their lives in solving the problem of yellow fever at Havana, where the death-rate was over 649 to the hundred thousand prior to the American occupancy, and rapidly fell to zero, which made possible the building of the Panama Canal, which the French nation had been unable to build because of yellow fever and because of the Chagres fever.

I should like to know if in reality the senator from Washington is opposed to the principle of this bill or whether he is merely diverting himself by reading these telegrams.

*Mr. Jones:* I wish the senator from Oklahoma to know what my people think about this measure. I have not myself examined it very thoroughly, and am not now proposing to express any judgment with reference to it. I am glad to have the senator's suggestion with reference to how these telegrams happened to come here. These people are certainly somewhat interested in the matter, because they paid at least a dollar apiece to get the telegrams here. So it is something serious to them. I do think on a matter of legislation—what it is wise to do in a legislative way here I should defer to the expression of opinion of my people, and these are the only expressions I have had in this way.

All these telegrams came in this morning. During the last session of Congress I got a great many telegrams of the same character. So that however they were inspired, and whoever brought about these telegrams, they must represent the sentiments of these people and their fears; and I am glad to have the assurance of the senator from Oklahoma that he does not intend to deprive these people of their liberty and their freedom and that this is a good and meritorious measure. I assure him I shall look into it very carefully indeed, and if the results, after having done so, convince me that it is all that the senator says it is, I shall possibly vote for it.

*Mr. Owen:* I ask the senator from Washington if he is in favor of an independent health service in the United States or not?

*Mr. Jones:* That is a matter I want to look into very carefully, having due regard for the views of my people.

*Mr. Owen:* In other words, I understand the senator from Washington to say that after this matter has been before the public three years actively, he has not made up his mind on it?

*Mr. Jones:* No; the senator does not understand me to say anything of the kind.

I have views on the general subject, but I have not been able to examine the particular features of the bill, and I do not desire, therefore, at this time to commit myself to any particular measure.

*Mr. Owen:* I will ask the senator from Washington if he recalls the language of the republican national platform on this question.

*Mr. Jones:* Oh, yes; and I am a little bit surprised that, progressive as he is, the senator finds something in the republican platform which meets his approval. That to me is a little suspicious.

*Mr. Owen:* I am unable to determine from anything the senator says whether he is in favor of an independent health service or not, and I am willing to leave it in the *Record* that way if he is.

*Mr. Works:* Mr. President, I suppose I am one of the innocent individuals who have been misled into the belief that this is undesirable legislation. I think I know pretty well the contents and the meaning of this bill and the forces that are behind it. I happen to be a member of the Committee on Public Health and National Quarantine, and I have given the bill a good deal of study.

A good many of the objectionable parts of the bill have been eliminated, and every effort has been made to make it just as innocent as possible. Nevertheless, it is a part of a system of legislation that is going on all over this country which is intended to establish a state medicine, and to place all the medical activities of the government in the hands of one school of medicine; and this effort is properly characterized in the telegrams which have been read here in the Senate.

This particular bill is not so harmful in itself, but it is a part of the entire system of legislation about which we are complaining. I am not now going to discuss the merits of the bill. I expect to do so at the proper time when the bill comes before the Senate for consideration.

I desire to say in this connection, however, that it has been stated all over this country, just as it has been now stated on the floor of the Senate, that the opposition to this bill has been instigated and carried on by the patent-medicine men, and that other innocent people have been brought to believe it is harmful. That is an entire mistake, and in some quarters it is maliciously stated. The opposition to the bill is not carried on by the patent-medicine men. I do not know whether they are opposing it or not, but I know that the League for Medical Freedom, which comprises most of the opposition to the bill, has nothing to do with patent-medicine men. They have absolutely refused to accept any money from them. They are acting independently. Of course it is natural that the Christian Scientists, against whom most of this legislation is directed and who, in some of the states, under legislation now in force, are being prosecuted and imprisoned for carrying on their mode of healing, should stand opposed to legislation of this kind, and they are doing it consistently and in good faith.

The physicians of other schools of medicine are making the same opposition to it on precisely the same grounds—that their liberty to practice their mode of healing, and the right of the people to resort to them for healing, will be affected by this legislation, if it is carried out as it is intended, not as appears on the face of the bill, but as it will be carried out and enforced throughout this whole country by legislation of this kind.

I am only saying this in order to attract the attention of the Senate to the fact that whatever objection is made to the bill, and which will be made on the floor of the Senate, will be made in good faith, without any selfish interest on the part of the patent-medicine men or anybody else.

*Mr. Smoot:* Mr. President, in this connection I want to say that on March 22, 1912, I introduced a bill to establish a public-health service, and for other purposes, and when Senate bill No. 1 is up for consideration before the Senate, I intend to offer my bill as an amendment to the one reported to the Senate.

I will say that the bill provides that the Public Health and Marine-Hospital Service and all the other health agencies of the government shall be put into the public-health service, and it will be under the Secretary of the Treasury, as the Public Health and Marine-Hospital Service is to-day. There will be provided an assistant to the Secretary of the Treasury, whose duty it shall be to preside over this service.

I desire to say that it will reach the same result, in my opinion, as the bill introduced by the senator from Oklahoma will reach. It will not entail another organization or another department, an independent department, and so far as the expense is concerned, there are only two additional employees from those in the public service to-day.

I sincerely trust that the Senate will compare the two bills and the organizations provided, and what is to be accomplished by the two, and I shall, as I said, offer this as a substitute for Senate bill No. 1 when it is up for consideration.

*The Vice-President:* The telegrams will lie on the table.

## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

### Ninth Month—Second Weekly Meeting

### ACUTE YELLOW ATROPHY OF LIVER[1]

ETIOLOGY: Age, sex, pregnancy. Syphilis, toxic agents, chloroform.[2]

PATHOLOGY:[3] Gross changes, size, color. Microscopic changes in lobules, cells, ducts. Changes in other organs.

SYMPTOMS: Onset, clinical history, nervous symptoms, hemorrhages, physical examination, urine. Prognosis.

### CARCINOMA OF BILE PASSAGES

GALL BLADDER: Type, extension, secondary deposits. Casual relation of gall-stones.

BILE DUCTS: Types, primary and secondary effects.

### INFECTIONS OF THE BILIARY TRACT[4]

BACTERIOLOGY: Organisms usually found. Various changes occurring as result of *Bacillus typhosus* infection; of *Bacillus coli* infection.

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[1] White: Boston Med. and Surg. Journal, 1908, clviii, 729. Tileston: Boston Med. and Surg. Jour., 1908, clviii, p. 510.

[2] Wells: Archives of Internal Medicine, 1908, i, 589.

[3] McCallum: Johns Hopkins Hospital Reports, 1903, x, 375.

[4] Kelly: Am. Jour. Med. Sciences, 1906, cxxxii, pp. 416 and 744.

PATHWAYS OF INFECTION: (a) From duodenum by diverticulum of Vater and common duct; (b) portal circulation; (c) systematic circulation; (d) lymphatic circulation; (e) directly through wall of gall-bladder from peritoneum.

### ACUTE CATARRHAL CHOLANGEITIS (CATARRHAL JAUNDICE)

ETIOLOGY: Age, sex, gastro-intestinal disorders, infectious disorders, bacteria present.

SYMPTOMS.

### SUPPURATIVE CHOLANGEITIS

ETIOLOGY: Previous diseases, microörganisms usually found.

SYMPTOMS: Indefinite previous history. Insidious onset. Jaundice, constitutional symptoms. Local symptoms.

PROGNOSIS.

### ACUTE CHOLECYSTITIS

Differentiate clinically the following varieties: Catarrhal, suppurative, phlegmonous, gangrenous, membranous.

### CHRONIC CHOLECYSTITIS

Pathologic changes in wall. Incidence of gall-stones. Symptoms.

## Medical Education and State Boards of Registration

### COMING EXAMINATIONS

ARKANSAS: Regular, Little Rock, May 14. Sec., Dr. F. T. Murphy, Brinkley.

FLORIDA: Regular, Jacksonville, May 7-8. Sec., Dr. J. D. Fernandez; Eclectic, Jacksonville, May 6-8. Sec., Dr. Hiram J. Hampton, Tampa.

GEORGIA: Regular, Atlanta, May 1-4. Sec., Dr. C. T. Nolan, Marietta; Homeopathic, Atlanta, May 8. Sec., Dr. R. E. Hinman, 106½ Whitehall Street, Atlanta.

ILLINOIS: Coliseum Annex, Chicago, April 30. Sec., Dr. James A. Egan, Springfield.

LOUISIANA: Regular, Tulane University, New Orleans, May 30 to June 1. Sec., Dr. A. B. Brown, 108 Baronne Street; Homeopathic, New Orleans, May 6. Sec., Dr. Edward Harper, 702 Macheca Bldg.

MASSACHUSETTS: State House, Boston, May 14-16. Sec., Dr. Edwin B. Harvey, State House.

MISSISSIPPI: State Capitol, Jackson, May 14. Sec., Dr. W. W. Smithson.

NEBRASKA: Senate Chamber, State House, Lincoln, May 22-23. Sec., Dr. C. P. Fall, Beatrice.

NEVADA: Carson City, May 6. Sec., Dr. S. L. Lee.

NEW YORK: May 14-17. Chief of Examinations Division, Mr. Harlan H. Horner, Department of Education, Albany.

TENNESSEE: Memphis, Nashville and Knoxville, May 1-2. Sec., C. A. Abernathy, Pulaski.

WISCONSIN: Milwaukee, May 28-30. Sec., Dr. J. M. Beffel, 3200 Clybourn Street.

### Connecticut Homeopathic and Eclectic March Reports

Dr. Edwin C. M. Hall, secretary of the Connecticut Homeopathic Examining Board, reports the written examination held at New Haven, March 12, 1912. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 2 both of whom passed. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Hahnemann Med. College and Hospital, Chicago | (1910) | 77 |
| New York Homeo. Med. College and Hospital | (1892) | 84 |

Dr. T. S. Hodge, secretary of the Connecticut Eclectic Examining Board, reports the written examination held at New Haven, March 12, 1912. The total number of subjects examined in was 11; total number of questions asked, 110; percentage required to pass, 75. Only one candidate was examined, a graduate of the Eclectic Medical College of the City of New York, 1910, and he passed with a grade of 90.

### Utah April Report

Dr. G. F. Harding, secretary of the Utah State Board of Medical Examiners, reports the written examination held at Salt Lake City, April 1, 1912. The number of subjects examined in was 19; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 5, including one osteopath, all of whom passed. Five candidates were licensed through reciprocity. The following colleges were represented:

PASSED

| College | Year Grad. |
|---|---|
| Rush Medical College | (1912) |
| Northwestern University Medical School | (1911) |
| St. Louis University | (1909) |
| University of Pennsylvania | (1911) |

LICENSED THROUGH RECIPROCITY

| College | Year Grad. | Reciprocity with |
|---|---|---|
| Denver College of Medicine | (1893) | Colorado |
| Rush Medical College | (1887) Wisconsin; (1901) | Idaho |
| Michigan College of Medicine and Surgery | (1894) | Idaho |
| Lincoln Medical College | (1902) | Nebraska |

## Book Notices

THE PRINCIPLES OF SANITARY TACTICS. A Handbook on the Use of Medical Department Detachments and Organizations in Campaign. By Edward Lyman Munson, A.M., M.D., Major, Medical Corps, United States Army. Cloth. Price, $2. Pp. 306. U. S. Cavalry Association, Fort Leavenworth, Kan.

A STUDY IN TROOP LEADING AND MANAGEMENT OF THE SANITARY SERVICE IN WAR. By Major John F. Morrison, General Staff, U. S. Army, and Major Edward L. Munson, Medical Corps, U. S. Army. Cloth. Price, $1.25. Pp. 245. U. S. Cavalry Association, Fort Leavenworth, Kan., 1910.

The amateur military surgeon, however great his patriotism or sincere his desire to become proficient in the military practice of his profession, is at a great disadvantage as compared with his professional brother of the regular establishment who has made a life study of the subject. There has been a great dearth, also, of information for the volunteer or militia surgeon, save in army regulations and the knowledge contained in general orders or in text-books by officers of the regular establishment, and in severely technical monographs by officers of the Medical Corps in the periodical literature.

The excellent work of Colonel Straub was the first to give information in understandable form to the volunteer military surgeon. The valuable books of Munson and Morrison, now at hand, have been adopted by the government as text-books and are in general use by officers of the Medical Corps and line of the army and organized militia. Their purpose is not so much to discuss the treatment of casualties received in battle, as to show the best methods under the military system by which military experience, medical supplies and hospitals may be brought in contact with the injured with the least difficulty and delay, and in the interest of both humanity and military efficiency. The difficulty of having surgical relief available at the right time and place has, in every war, resulted in a vast amount of needless suffering and mortality.

Morrison and Munson's "Study in Troop Leading" has been developed from one of the problems prepared for study at the army school of the line. It illustrates, under assumed conditions of battle, the leading of troops and the management of a sanitary service coordinate therewith. The general situation is first discussed and then the special tactical situation, as it develops throughout the maneuver, detailing the sanitary arrangements, sanitary administration, methods of the sanitary service on the battle field, disposal of the dead, the sanitary line of communication, etc. It describes briefly, and yet with great clearness, the inter-dependent operations of the tactical and sanitary mechanism of a large military unit in modern war.

In this "Principles of Sanitary Tactics" Major Munson seeks to clear up the hazy conception which exists in the minds of many officers in the line and medical department as to the important scope and methods of the sanitary service with troops in campaign. Much suffering has heretofore been caused by ignorance and indifference regarding these matters. The information previously obtainable on this subject was not standardized and was in great measure difficult of apprehension by the untrained volunteer surgeon; the need for such a work has therefore been urgent. This work standardizes instruction regarding sanitary tactics, both for the individual and group, in garrison, armory, maneuver camp and war. The preliminary chapters deal with the general subjects of the organization of the sanitary service, the tactical education of medical officers, the solution and preparation and problems of sanitary tactics, and the participation by medical officers in war-games, terrain exercises, tactical walks and rides, and field maneuvers. This is followed by thirty-five problems, which are worked out and are grouped under the heads of visibility problems, sanitary tactics with the detached battalion and squadron; the detached regiment; the reenforced brigade and the infantry division, those leading the student from the battalion unit by gradual steps to the division.

These books cannot be too highly commended for use and study by both medical and line officers, not only of the organized militia, but of the regular establishment.

A Handbook of Health. By Woods Hutchinson, A.M., M.D. Cloth. Price, $1.25. Pp. 330. Boston: Houghton Mifflin Company, 1911.

The author has endeavored to set forth in non-technical language something of the anatomy and physiology of the human organism and the best method of keeping it in a healthful condition. He discusses the various subjects connected therewith in his usual graphic style, so familiar to the reading public through his magazine articles and books. The book, for the most part, treats the subjects in an elementary and figurative manner and can be easily understood by the ordinary layman. Hutchinson calls the body the human automobile and then discusses the various varieties of fuel in the form of food, which help to keep the engine going. He likens the heart to a pump and the vessels to a pipe-line system and discusses their care. The lungs constitute a bellows and need pure air to keep them free from colds, consumption and pneumonia. He tells how to keep the wonderful coat—of the skin—healthy, by clothing, baths, bathing, etc. He discusses the plumbing and sewering of the body, the muscles, the stiffening rods of the body machine (bones) and tells how to get and keep a good figure. The nervous system constitutes a telephone exchange and its cables. The lookout department consists of the nose, tongue, eye and ear. Among the other subjects discussed in an understandable way are exercise and growth, the speech organs, the teeth, infections and how to avoid them. accidents, emergencies, etc. This book should be of interest to the layman of any age, and if widely read would undoubtedly bring about better hygienic and saniary living. It can be commended as valuable in the health education of the public.

Practical Gynecology. A Comprehensive Text-Book for Students and Physicians. By E. E. Montgomery, M.D., LL.D., Proessor of Gynecology, Jefferson Medical College. Fourth Edition. rice, $6. Pp. 857, with illustrations. Philadelphia: P. Blakston's Son & Co., 1912.

The arrangement of this book has been changed somewhat o meet the demands of modern medical pedagogy. It opens ith special anatomy, followed in order by physiology, tiology, diagnosis, therapeutics, functional disorders, malormations, traumatisms, inflammations, displacements, ectopic estation and genital tumors. Special emphasis is laid on the nfluence of constitutional conditions and the importance of reatment from the medical side. The latter cannot fail to be eneficial because of the too prevalent desire to operate for any conditions which do not require operation. The text as been revised, many new illustrations have been added, and he number of pages increased. The excellency of the text is s great as in the previous editions. The author's views on ynecologic questions are so well known that it is not necesry to detail them here. The book enjoys a deserved opularity.

Conduct and Its Disorders Biologically Considered. By arles Arthur Mercier, M.D., F.R.C.P., F.R.C.S., Physician for ental Diseases to Charing Cross Hospital. Cloth. Price, $3.25 1. Pp. 377. New York: Macmillan Co., 1911.

According to the author—and we have no grounds for puting his statement—this book is the first to work this ld. Although of the making of books there is no end, and though conduct is what every man from Adam down has en engaged in from birth to death, still Mercier says, "there is not in existence, curiously enough, any comprehensive study of conduct as a whole." Although many departments of conduct are described in various books, none covers the general field of human activity. Mercier's treatment of the subject is comprehensive; from the analysis of the spider's actions—part instinctive and predetermined and part circumstantial and variable—up to the most complex web of emotions controlling man's most involved activities, the reader follows Mercier up a flight of steps, from various points of which he may calmly survey and dissect all the events of human history. Along this path he finds new lights thrown on play, work, incentive, motive, deceit, conceit, morality, modesty, emulation, duty. The teacher and the psychologist will be especially interested in the author's shrewd phraseology and helpful viewpoint. The style is clear, the presentation systematic, and the analysis incisive—indeed the work comes near being arbitrary and academic in its definitions.

The British publishers who printed the book used a lightweight paper so that the volume is not heavy—a feature to be commended to many American publishers—but they failed to trim the pages! Having a full equipment of printer's machinery, we sent the volume down stairs and had the edge trimmed—but what shall the average reader do? A plodding bibliophile may like to cut pages as he reads—but the poor, busy practitioner, who has to pick the book up at odd moments—for him we shed a tear.

Diseases of the Stomach. A Text-Book for Practitioners and Students. By Max Einhorn, M.D., Professor of Clinical Medicine at the New York Post-Graduate Medical School and Hospital. Fifth Edition. Cloth. Price, $3.50 net. Pp. 531, with 112 illustrations. New York: William Wood & Co., 1911.

The fourth edition of this book was reviewed in The Journal, March 23, 1907. In addition to having undergone a thorough revision of the matter previously contained in it, the book has in the present edition a much more extended presentation of the methods of $x$-ray and radium diagnosis of stomach conditions, which are illustrated by numerous plates. The use of mechanical means of diagnosis, such as the gastro- and duodenal diaphane, the duodenal bucket and the esophagogastroscope, is also more fully set forth. The book continues to be an admirable presentation of stomach diseases by one who has given years of study to this important subject.

Clinical Immunity and Serodiagnosis. By A. Wolff-Eisner, M.D. Translated by Ray W. Matson, M.D., Professor of Histology, North Pacific College of Dentistry and Pharmacy, Portland, Ore. Cloth. Price, $2.50. Pp. 184. New York: William Wood & Co., 1911.

This book presents clearly and concisely the various theories and underlying principles of immunity and is sufficiently comprehensive in scope to enable the general worker, for whom it is intended, to become familiar with the subject. It is, of course, technical in character, but this cannot be avoided. It is to be commended to those who wish to gain a general knowledge of the advances in this great field of medicine. The translation is clear and accurate.

Zahnärztliche Chirurgie. Von Prof. Dr. Med. Fritz Williger, Direktor der Chirurgischen Abteilung des Königlichen Zahnärztlichen Universitäts-Instituts zu Berlin. Second Edition. Paper. Price, 4.50 marks. Pp. 142, with illustrations. Leipsic: Werner Klinkhardt, 1911.

This work is made up of clinical material, including the experiences of the author, in the care of each patient. It contains a wealth of information in regard to tumors, abscess, necrosis and osteomyelitis of the face and jaws. There are 112 illustrations showing the etiology, pathology and treatment of each patient.

A Manual of Pathology. By Guthrie McConnell, M.D., Professor of Pathology and Bacteriology, Temple University, Medical Department, Philadelphia. Second Edition. Flexible Leather. Price, $2.50 net. Pp. 531, with illustrations. Philadelphia: W. B. Saunders Co., 1911.

The excellence of the first edition has been maintained in the revision. The record of knowledge is brought up to date, facts are clearly and correctly stated and presented in an orderly manner. The essentials of pathology are presented in a commendable manner. The book fulfills its pretensions of being a manual only.

# Medicolegal

## Board of Health Powers in Cases of Infectious and Contagious Diseases—County Must Pay for Disinfecting Buildings Not Quarantined

*(Sawyer vs. Wapello County (Ia.), 133 N. W. R. 104)*

The Supreme Court of Iowa reverses a judgment rendered in favor of the plaintiff, who was the duly appointed health officer of the local board of health of the city of Eldon, a part of whose charge was for disinfecting buildings in which there had been a contagious disease (measles), and where no quarantine had been maintained. The principal question presented was whether the county was liable for such service. It was conceded that the rules of both the state and local boards of health required disinfection in all cases where the plaintiff disinfected.

The county contended that it was not liable for disinfecting buidings after diseases where quarantine was not maintained, while the plaintiff contended that it was liable for disinfecting buildings where contagious diseases had existed, whether a quarantine was or was not maintained. The court takes the plaintiff's view on this point. It says that the first clause of section 2570a of the Supplement to the Iowa Code of 1907 clearly empowers the local board of health, in all cases of infectious or contagious diseases dangerous to the public health, to take charge of the person or persons so afflicted, and to take possession of the infected house or lodgings where they may be. It is further provided in the same clause that the local board shall make such provisions as are best calculated to protect the public from such diseases, and shall provide needful medical attendance, nurses, assistance and supplies. The medical attendance and other things enumerated shall be furnished at the residence of the diseased person, if, in the judgment of the board, it should be done; and it cannot be doubted that it is the duty of the board to make as complete provisions for the protection of the public where there is no removal to a pesthouse, as where there is such removal. The law does not absolutely require a quarantine. That is left to the discretion of the board of health, and it may take charge of the case and of the premises without in fact establishing a quarantine.

The section then provides further: "All bills for expenses incurred in carrying out the provisions of this section, and in establishing, maintaining or raising a quarantine, including disinfection, and the building and furnishing of any pesthouse," shall be paid by the county. To say that the charge for disinfection is to be allowed only in case of a quarantine is too narrow a construction of the statute.

The entire purpose of the statute is to protect the public from the evil effects of infectious or contagious diseases, and it is made the duty of the board of health to make such provisions as shall, in its judgment, best afford such protection, and to this end the board is given absolute control over the diseased persons, and over the premises they occupy at the time. The board may quarantine, or it may remove the person, if it sees fit to do so; but, whether it does so or not, it may control the person and premises, and, in the court's judgment, in any and all events, it is just as incumbent on the board to protect the public by the exercise of authority over the building as it is by the exercise of authority over the person.

It will not be claimed, the court apprehends, that the expense of medical attendance and the like is not chargeable to the county under section 2570a, where the board has assumed the control of such person; and if the board considers it necessary for the public welfare that the premises be disinfected, although no quarantine has been maintained, the court thinks the statute intended that the expense thereof should also be paid by the county. The statute leaves it with the board of health to determine what infectious or contagious diseases are a menace to the public health, and provides that the board shall also determine what steps shall be taken to best protect the inhabitants therefrom; and if, in the judgment of the board, it is wise to disinfect premises where no quarantine has been maintained it is clearly within its power to do so, and when it has done so the court thinks the expense of such service is chargeable to the county.

The evidence in this case clearly showed that there was a ratification by the local board after the plaintiff's service had been rendered; hence it was immaterial whether there was a prior contract. There was no evidence before the jury tending to show that disinfecting after measles was an unreasonable requirement on the part of the board of health, and the reasonableness or unreasonableness of the rule was not a matter for the consideration of the jury.

But there was a considerable conflict in the evidence as to the value of the services rendered by the plaintiff in disinfecting the buildings in question, for which he charged and was allowed $5 each, and the court thinks that the question should have been submitted to the jury, instead of a verdict being directed for the full amount of the plaintiff's claim. The testimony of men who had disinfected buildings at other times, under the direction of officers of the town, which showed that the service rendered by the plaintiff in that respect was not of the value claimed, was competent. It was true that these men were not physicians, nor experts in disinfecting, but their testimony showed what they had done, and the material they had used in the work, and the time taken, and the value of the material. If it was work that could be as well done by a non-professional, or non-expert, as by the plaintiff, the county was not bound to pay more than its reasonable value, no matter by whom it was done. The approval of the bill by the local board of health was prima facie evidence only of the value of the service, and it was for the jury to say what such value was, under the entire record.

## Things Non-Experts May Testify to Concerning a Paranoiac—Moral Insanity and Insanity Defenses to Crime

*(Banks vs. Commonwealth (Ky.), 141 S. W. R. 380)*

The Court of Appeals of Kentucky affirms a conviction and sentencing to life imprisonment of the defendant Banks for homicide. His only defense was that at the time of the homicide he was afflicted with that species of insanity known as "paranoia," and therefore was not responsible for his act.

The court does not consider that it was error to permit non-expert witnesses, after giving evidence of their knowledge of the habits, conduct, and conversation of the defendant formed from an acquaintance and association with him, to be asked not only "if, in their opinion, he was a person of sound or unsound mind," but, also, "if, in their opinion, he had mind sufficient to know right from wrong." Without dealing in the refined or confusing distinctions of which the subject is capable, but treating it as a practical question in the administration of the criminal law, the court is unable to make any distinction between the legal effect that should be attached to the competency of a question involving the soundness of mind of the accused and a question involving his capacity to know right from wrong. If a person is of sound mind, as soundness of mind is commonly understood by non-expert witnesses, then he is capable of distinguishing between right and wrong, and should be held accountable for his acts. On the other hand, if he is of unsound mind, he should not be held legally responsible for what he does. Therefore, when a non-expert witness is allowed to express an opinion that the accused is of sound mind, there seems no reason why he should not also be permitted to express an opinion that he knows right from wrong. One opinion does not require more knowledge than the other, nor is one more than the other a usurpation of the functions of the jury.

Neither does the court think the opinion of the witnesses should be confined to the act under investigation or limited to the victim. Soundness of mind and capacity to distinguish between right and wrong was in this case, as it is in all others in which there is not a sudden or abrupt destruction or disturbance of the mental faculties, the result of a gradua growth. Nor must non-experts be excluded from testifying because paranoia is so peculiar a disease that no one but a medical expert who has made it a study can understand o portray it.

Certain instructions given the jury were complained of in that they did not submit for consideration the form or species of insanity on which the defense was predicated. Both legal and medical authorities recognize that there are varieties of insanity—the disease manifesting itself in different forms. But the prevailing legal rule, and the one adopted in Kentucky, is that insanity, whatever form it may assume, to be an excuse for crime must be the result of mental unsoundness. What is known as "moral insanity," defined to be "a morbid state of the affections and passions, or unsetting of the moral system, the mental faculties remaining normal and sound, an irresistible impulse to commit a criminal act coexisting with mental sanity," never obtained a foothold in this state, nor has it in any other.

While the law does not desire or demand that incapables shall be punished for violating its mandates, the frequency with which this often mysterious and always alarming mental state known as insanity is put forward as an excuse for crime makes it necessary for the protection of life that this defense should be as carefully guarded from abuse as its nature will permit. And, although medical writers are generally agreed that there is a well-defined disease called moral insanity, as distinguished from mental insanity as the latter is usually understood, the doctrine of moral insanity as a protection against punishment has been repudiated by all courts as dangerous to the safety of society.

Under the Kentucky practice, in every case in which the defense of insanity is made, the accused is allowed the widest latitude in bringing before the jury the peculiarities of the particular affection he is suffering with, whatever its technical name may be: but, when this is done, he must submit to the inexorable test that it is only unsoundness of mind as a result of mental disease that will save him from the consequences of his act.

### Licensing Power of Boards of Health Limited

*(M. L. Shoemaker & Co. vs. Board of Health of Gloucester City (N. J.), 81 Atl. R. 349)*

The Supreme Court of New Jersey holds that boards of health have no power to require that wagons used for gathering and removing slaughter-house refuse and the like be licensed by them, and, further, that a license fee of $50 for each wagon engaged in gathering and removing slaughter-house refuse and the like is for revenue, and an exercise of the taxing power unwarranted by the statutory powers of boards of health. The court says that the nearest approach to such power conferred by the statutes of New Jersey is in the authorization of the board to regulate, control and prohibit the keeping or slaughtering of all kinds of animals, and the accumulation of offal and all decaying or vegetable substances: but these powers do not authorize the icensing of wagons to remove offal and the like. 'The method provided by the act of enforcing the ordinances of the board of health is by prescribing a penalty for their violation. When he legislature meant to authorize the board to license an employment, it said so in express language, as in the supplement of May 9, 1889, which authorizes it to license persons ngaged in the business of cleaning cesspools and privies, and o require all vehicles used in the business to be approved by he board.

### Gonorrhea of Eye Attributed to Accident

*(Sullivan vs. Modern Brotherhood of America (Mich.), 133 N. W. R. 486)*

The Supreme Court of Michigan affirms a judgment for the laintiff for $260.40 accident insurance for the loss of an eye y gonorrhea. The court says that the plaintiff claimed that, hile doing her family washing, with a washtub and washoard, and while washing some flannels, some water from the ub was accidentally splashed into her right eye; that she ubbed her eye at the time; that it became and continued ainful, and that it became much inflamed; that she called a hysician, who found the eye badly inflamed, and advised her o consult a specialist; that one took charge of the case, and ry soon sent her to a hospital, where she remained between two and three weeks, and finally suffered the total loss of the eye. The physician diagnosed the case as inflammation of the mucous membrane of the eye caused by gonorrheal infection. The court cannot say as a matter of law that the plaintiff's testimony was so improbable, or that the presence of the germ in the water was so improbable or conjectural, that the case should not have been submitted to the jury. The evidence of the physician was to the effect that the sight of the eye was destroyed by inflammation due to gonorrhea; that gonorrhea of the eye could not be contracted unless there were gonorrheal germs brought into contact with it, and the splashing of the water as testified to by the plaintiff was the only explanation given. The court cannot say that the testimony was inconsistent with the theory that the injury was accidental. Nor can it hold that the court should have determined that the germ came into the eye in some way other than as claimed by the plaintiff. The case was one for the jury.

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# Society Proceedings

## COMING MEETINGS

American Medical Association, Atlantic City, N. J., June 4-7.

American Academy of Medicine, Atlantic City, May 30-June 2.
Amer. Assn. of Genito-Urinary Surgeons, Philadelphia, June 7-8.
American Climatological Association, Hartford, Conn., June 10-12.
American Dermatological Association, St. Louis, May 23-25.
American Gastro-Enterological Association, Atlantic City, June 3-4.
American Gynecological Society, Baltimore, May 28-30.
American Laryngological Association, Atlantic City, May 9-11.
American Laryngological, Rhinological and Otological Society, Philadelphia, May 13-15.
American Medico-Psychological Association, Atlantic City, May 28-31.
American Neurological Association, Boston, May 30-June 1.
American Ophthalmological Society, Atlantic City, June 12-13.
American Orthopedic Association, Atlantic City, May 30-June 1.
American Otological Society, Atlantic City, June, 10-11.
American Pediatric Society, Hot Springs, Va., May 29-31.
American Society of Tropical Medicine, Atlantic City, June 3.
American Surgical Association, Montreal, May 29-31.
American Therapeutic Society, Montreal, May 31-June 1.
Arizona Medical Association, Bisbee, May 7.
Arkansas Medical Society, Hot Springs, May 13-16.
Association of American Physicians, Atlantic City, May 14-15.
Connecticut State Medical Society, New Haven, May 22.
Florida Medical Association, Tampa, May 8-10.
Illinois State Medical Society, Springfield, May 21-23.
Iowa State Medical Society, Burlington, May 8-10.
Kansas Medical Society, Hutchinson, May 1-2.
Maine Medical Association, Portland, June 12-13.
Massachusetts Medical Society, Boston, June 11-12.
Missouri State Medical Association, Sedalia, May 21-23.
Montana State Medical Association, Helena, May 8.
Nat. Assn. for Study and Prev. Tuberculosis, Washington, May 30-31.
National Association for Study of Epilepsy, Vineland, N. J., June 3.
Nebraska State Medical Association, Lincoln, May 7-9.
New Hampshire Medical Society, Concord, May 8-9.
New Jersey Medical Society, Spring Lake, June 11-13.
North Dakota State Medical Association, Valley City, May 8-9.
Ohio State Medical Association, Dayton, May 7-9.
Oklahoma State Medical Association, Shawnee, May 7-9.
Rhode Island Medical Society, Providence, June 12-13.
South Dakota State Medical Association, Mitchell, May 22-24.
Texas State Medical Association, Waco, May 7-9.
Wisconsin State Medical Society, Wausau, May 22-24.

## AMERICAN UROLOGICAL ASSOCIATION

*Eleventh Annual Meeting, held in New York, April 24, 1912*

The President, Dr. Louis E. Schmidt, Chicago, in the Chair

### Officers Elected

The following officers were elected for the ensuing year: President, Dr. Granville MacGowan, Los Angeles; vice-president, Dr. J. Bentley Squier, New York; secretary, Dr. H. A. Fowler, Washington; treasurer, Dr. Homer G. Fuller, Washington.

### The Phenolsulphonephthalein Test in Surgery of the Genito-Urinary Tract

Dr. Louis E. Schmidt and Dr. Herman L. Kretschmer, Chicago: It is our belief that the phenolsulphonephthalein test is the test of choice in preference to all other tests of this character. At the present time our decision in our operative procedures is not reached from the result of this test, but by our physical examination and detailed clinical findings of all kinds, and in part by our experience. The drug has in all cases been introduced intravenously.

DISCUSSION

Dr. John T. Geraghty, Baltimore: The function of the kidney as determined by any of the present-day methods is nothing more than the function of that kidney at the time the test is made. It is impossible to predict what combination of circumstances may arise which would change entirely the function of that kidney. You cannot separate the renal function from that of other organs. Absorption necessarily plays a rôle. The intramuscular administration of the drug gives less variation than the subcutaneous. In all normal cases, following intravenous injection of the drug, the excretion is directly in proportion to the concentration of the drug in the blood. In diseased conditions, the kidneys are slow to take up this new work; consequently short observations may lead to error. For total functional estimations we use the intramuscular method. In unilateral estimations, however, we use the intravenous, and collect for two fifteen-minute intervals. From certain facts already known and from some experiments which we have carried out on frogs, we have been able to determine that this drug is excreted by the urinary tubules alone and not by the glomeruli.

Dr. Hugh Cabot, Boston: We have continued to use this test since I last reported on it, and to me it has lost none of its advantages. We do not believe that supreme and complete dependence can be put on this or any other test. We have used the intravenous method in the catheter cases.

Dr. Henry L. Sanford, Cleveland: We have used the intravenous method in the ureter catheter cases, and our experience has been that the amount of drug excreted in one-half hour with the intravenous method corresponds very closely to the amount excreted in one hour with the intramuscular method. There have been some cases in which the results have been difficult to interpret, but probably the results after operation were due to some influence outside the kidney. I think it is very important to consider other organs besides the kidney.

Dr. Bransford Lewis, St. Louis: This test is very serviceable in showing improvement in renal elimination if employed successively in individual cases. I place much more reliance on it when used in that way than I do on the first reading in a given case.

Dr. Louis Heitzman, New York: Why is it that at the present time not more time is devoted to the microscopic examination of the urine taken separately from the two kidneys? If we do that carefully we can learn infinitely more as to the condition of our patients than we can from purely functional tests.

Dr. L. E. Schmidt, Chicago: The fact that some of us are interested in this line of work does not mean that we are particular admirers of any particular functional test, but I think it is our desire to develop a test that will be better than any of its predecessors. We all know perfectly well their shortcomings. I do not believe, neither does anyone else, that any one single test can prove the functional activity of the kidneys, but with the information we gain from a clinical study of the case, I believe we will be able to come to conclusions in the future far more accurately than without the use of this test.

## Albumin Determination as an Aid in Diagnosis of Kidney Lesions

Dr. George W. Warren, New York: The albumin content in its relation to the amount of pus in the urine is the greatest gross aid in diagnosticating kidney infections. The albumin content in the most marked cases of cystitis does not exceed 0.15 per cent. Therefore, in pyuria of doubtful origin, where the urine is free from blood with an albumin content of more than 0.15 per cent., the kidney is involved in the great majority of cases. With a small amount of pus and an albumin content of 0.15 per cent. it can safely be assumed that the kidney is infected.

DISCUSSION

Dr. E. E. Smith, New York: I have employed this method in locating suppurative lesions. I have found that the greatest possibility of error has come between a prostatic abscess and a pyelitis; in other words, we are apt to find with the pus from the prostate more albumin than we will get with a cystitis.

Dr. Guy L. Hunner, Baltimore: On the whole, I quite agree with Dr. Warren's conclusions, and still I feel that we have to use the same judgment here as in the phthalein test if we are depending on the relationship of the amount of albumin to the amount of pus in helping us to settle the question as to whether we are dealing with a bladder or a kidney lesion.

## The Effects of Ureteral Ligation: Experimental and Clinical

Dr. J. Dellinger Barney, Boston: Sudden and complete occlusion of one ureter may produce no symptoms whatever, and uninterrupted recovery may ensue in 21 per cent. of cases, but in the event of an injury to both ureters there is complete anuria in all, as is to be expected, whereas in the unilateral injuries suppression of urine occurred in only 1.6 per cent. Ureteral fistulas are developed in 24 per cent., their site depending on the nature of the operation. Where only one ureter is ligated, pain and tenderness in the kidney, usually subsiding spontaneously, is to be expected in 26 per cent. It has not been found in cases of bilateral injury. Infection of the kidney produced by the injury to the ureter, or aggravated by it, and necessitating subsequent nephrectomy, occurred in 15 per cent. Both ureters may be clamped for as long as seventy-two hours with complete recovery after removal of the obstruction, whereas one ureter may be completely blocked for ten days without destroying the integrity of the kidney. Of fifteen patients in whom the subsequent condition of the kidney was investigated, hydronephrosis was observed in 80 per cent., but in no case was this of more than moderate size. In the remainder there was said to be no change in the condition of the kidney. The mortality of bilateral occlusion of the ureter is found to be 33.3 per cent., whereas in unilateral occlusion it is 17.8 per cent., but in both instances we must consider the influence of other factors, such as the previous condition of the patient, and the severity of the operation. Our investigation of this series of cases shows that there is strong probability that often a ureter is ligated without the fact being known, and that in the presence of postoperative anuria, and in the absence of localizing symptoms examination of each ureter by the cystoscope may be the only means of determining whether one or both ureters have been occluded.

## The Time for Prostatectomy

Dr. Benjamin Tenney, Boston: The symptoms of prostatic obstruction may be grouped so as to mark off four stages of the disease. In the first stage there is difficulty or slowness of starting urine, and loss of speed and force in the stream. We do not know enough about the growth of hypertrophies in the prostate to advise radical treatment in this stage. In the second stage the daily calls to urinate grow more frequent, and the patient is wakened once or oftener at night. Examination at this time will show 50 c.c. or more of residual urine. This is the stage when it is most desirable to operate, for the following reasons: There is no hope of spontaneous improvement and every probability that things will grow worse. The kidneys have suffered little or not at all from back pressure. The bladder is still ahead of the bacterial invasion. The amount of material to be removed is less than it will be later and the risk of bleeding is possibly less. If the hypertrophy be benign it guarantees the patient against the pain and risk of catheter life and sepsis. If the hypertrophy be malignant it is the early operation which gives the patient the best chance for complete removal. The patient is younger than he will ever be again and there is steady increase in the mortality rate with each decade from forty on. The third stage usually begins when the patient acquires the catheter habit, though the fourth or septic stage may precede it.

### The Removal of Ureteral Stone by Cystoscopic Methods

**DR. BRANSFORD LEWIS, St. Louis:** It is probable that the estimate of Leonard is correct that 50 per cent. of ureteral calculi are capable of being relieved by the expectant plan, but what of the other 50 per cent.? Certainly it should not be immediate operation. There are recorded a sufficient number of successes attained by cystoscopic measures to warrant their use in favorable cases. Of course, it cannot be claimed that cystoscopic endeavor will always meet with a happy outcome. The injections or ureteral dilatations may have to be repeated several times with the stone descending in successive steps. But even that is better than abdominal section.

DISCUSSION

**DR. W. F. BRAASCH, Rochester, Minn.:** Undoubtedly the systoscopic method of removal of stones from the lower end of the ureter is the method of the future. This method is not as easy as it looks, however, and there are many stones that cannot be removed in this way. When the stone is above the bladder junction it would be impossible to remove unless very small and quite loose. I think the method of the future will be to incise the opening through the cystoscope. We have carried out some experiments on dogs which show that slitting the lower end of the ureter will not cause subsequent contraction.

**DR. J. H. CUNNINGHAM, JR., Boston:** That stones are very lightly held in the ureter I think is well evidenced by the fact that so many start from the kidney and pass into the bladder. The mere passage of a catheter by the stone will sometimes dilate the ureter so that the stone will pass. I think these cystoscopic methods should be tried before we undertake such an extensive operation as is required to remove a stone when we do any kind of an operation.

**DR. WINFIELD AYERS, New York:** Manipulation through the vagina and rectum may aid in getting these stones out of the lower end of the ureter. All one needs to do in a large number of cases is to change the position of the stone to have it pass.

**DR. HUGH H. YOUNG, Baltimore:** I agree that we ought to use the intravesical cystoscopic methods in the removal of calculi from the lower end of the ureter. By means of an intravesical rongeur I have been able to catch and remove two ureteral stones.

### Liquor Aluminum Acetate in Colon Bacillus Infection of the Urinary Tract

**DR. IRVIN S. KOLL, Chicago:** Of my eight cases, five were urethritis, all following an acute gonorrhea, the colon bacillus, however, being obtained in pure culture; two were cystitis, and one was pyelitis, all pure colon bacillus infections. An average of thirty-one days for all cases was necessary to obtain a sterile urine. In no instance was there any local irritation worth noting.

### Case of Malaria Simulating Renal Calculus

**DR. E. O. SMITH, Cincinnati:** A man, aged 29, July 8, 1911, was taken suddenly with a severe pain in left side of abdomen. The character and severity of the pains were such as to uggest renal calculus. The next day there was macroscopic lood in the urine, continuing for a day or so. He had nother severe attack two weeks later. The patient had had t times some elevation of temperature but no chill. Radiographs showed no evidence of stone. The patient continued o suffer great pain. He gave no history of malaria. Thinking that possibly malaria might be the cause of the trouble, arge doses of quinin sulphate were suggested, to be followed y Fowler's solution. The patient returned December 28, and aid that his pain began to subside after the first dose of uinin. The *Plasmodium malariæ* was found in his blood. He ad another severe attack Jan. 21, 1912. Since that time e has had no severe attacks, but still feels an occasional isturbance.

### Case of Gonorrheal Pyelitis

**DR. LOUIS C. LEHR, Washington:** A man, aged 27, was een Nov. 6, 1911, complaining of a urethral discharge and ainful urination. He had had two previous attacks of gonorrhea, from which he recovered promptly. The present attack began Oct. 5, 1911. Examination showed a scanty purulent discharge containing gonococci. There was a marked terminal hematuria. The prostate and seminal vessels were apparently normal. The hematuria and pain subsided in about two weeks under rest and internal medication. Local treatment was then instituted, but in spite of all efforts the urine remained cloudy and continued to show gonococci until January 20, when cystoscopic examination revealed purulent urine coming from the left ureter. This ureter was catheterized and some of the urine inoculated on serum agar. The report from the laboratory showed a pure culture of gonococci. Stock and autogenous vaccines were tried but without beneficial result. On February 15 pelvic lavage with silver nitrate was started. After four of these treatments with solution of silver nitrate varying in strength from 1-5,000 to 1-2,500 the urine became clear and remained so, and cultures on serum agar proved negative.

### The Gonorrheal Complement Fixation Reaction

**DR. LOUIS E. SCHMIDT, Chicago:** This series comprises 103 cases, all taken from my private practice. Thirty-four cases were individuals who denied gonorrheal infection and were clinically free from any sign or symptom of gonorrhea. The test was negative in every instance. There were three cases of individuals suffering from their first attack of gonorrhea. The test was made in the second week of the attack and was negative in each case. There were twenty-four cases of chronic gonorrhea, of which seventeen were positive and seven negative. Nearly all these cases had posterior adnexal trouble, and a few had epididymitis. In all these cases the gonococcus had been found within thirty days previous to making the test. In forty-two cases examined mostly for conditions other than gonorrhea, with a history of gonorrhea anywhere from one to thirty years previously, the test was positive in five and negative in thirty-seven. This group shows a large percentage of negative reactions in cases that are clinically cured. In my opinion this result indicates that a negative test in such a patient is good evidence that the disease is cured. This percentage also tends to show that the number of those who remain over a long period of time in a condition to infect with gonorrhea is far smaller than was formerly supposed.

### Diagnostic Value of the Specific Complement Deviation Reaction in Gonorrhea

**DR. JAMES A. GARDNER and DR. G. H. A. CLOWES, Buffalo:** In our series of 106 gonorrheal cases, twenty-three showed a three-plus reaction, fifteen a two-plus, twenty-three a one-plus, thirty-seven were negative. Of the twenty-three cases showing a three-plus reaction twenty were examined, in eighteen of which we found intracellular diplococci microscopically. Of the fifteen cases giving a two-plus reaction thirteen were examined, in nine of which we demonstrated intracellular diplococci. Of the twenty-three cases showing a one-plus reaction, seventeen were examined, in eleven of which we demonstrated intracellular diplococci. We believe that the three-plus and the two-plus reactions are fairly diagnostic of the presence of a gonorrheal infection, while a one-plus reaction, without being confirmed by clinical data, should not be taken more seriously than should a one-plus Wassermann reaction.

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## TENNESSEE STATE MEDICAL SOCIETY

*Seventy-Ninth Annual Meeting, held at Chattanooga, April 9-11, 1912*

*(Concluded from page 1224)*

### Surgery of the Tonsil as Related to Chronic Diseases

**DR. C. B. WILEY, Chattanooga:** Most important of the chronic diseases for which the tonsillar tissues are in many cases the primary foci of infection is tuberculosis. Local manifestations, however, of tuberculosis of the tonsils or their adjacent tissues, are comparatively infrequent. It is undeniable that most tonsils whether showing external evidence of inflammation or not, if taken between the thumb and finger and squeezed, will expel more or less cheesy, foul-smelling material. This same material, by a series of experiments, when injected into guinea-pigs, has developed tuberculosis in fourteen out of twenty-one injections, and the remaining seven showed severe septic infection. The treatment of latent tuberculosis of the tonsil consists in their removal by the most complete method possible, to prevent further infection.

The treatment of hyperplasia of the tonsils necessarily becomes surgical in most cases. Local measures in such conditions are usually without results other than annoyance to the patient.

### The Tonsils

Dr. C. B. Jones, Knoxville: Tonsillectomy is superior to cauterization and tonsillotomy. The faucial tonsils should be removed when diseased or hypertrophied, because they interfere with proper breathing. The patient is more subject to catching cold, and the general health is more or less impaired. Tonsillotomy does not remove the source of infection. Tonsillectomy does. The latter can be performed under either a local or general anesthetic.

#### DISCUSSION

Dr. E. C. Ellett, Memphis: There is no doubt that recurrent tonsillitis and recurrent peritonsillar abscess cannot be treated by local measures, and I think most operators now remove the tonsil entirely. The operation advised by Sluder, of St. Louis, is the most satisfactory I have tried. I do not think we ought to attach any importance to the size of the tonsils. Enlarged tonsils generally make no more difference to the person in the majority of cases than does the size of the appendix. If the tonsil is diseased, whether it be small or large, it should be removed.

Dr. George H. Price, Nashville: It is not that the tonsil primarily is at fault, but the invading agency is greater than the tonsil can handle. The removal of a tonsil should not be done unless absolutely necessary.

Dr. O. Dulaney, Dyersburg: Some of the most unfavorable results I have seen have been in neurotic patients who underwent tonsillectomy. They were hyperesthetic to begin with, and any foreign substance which would cause irritation and contraction of the muscles caused the patient to complain of shortness of breath. Where they are not diseased and are not causing any local or constitutional trouble, it is well to let them alone.

### Perforation of the Gall-Bladder With Report of Seven Cases

Dr. Battle Malone, Memphis: In only two of the seven cases was anything approaching an accurate diagnosis made, and one of these two was not confirmed either by operation or autopsy. Experience with any number of these cases quickly impresses one with the analogy between perforation of the gall-bladder and perforation of the appendix. In each we meet with acute free perforation with septic peritonitis, and with chronic perforations with limiting adhesions and localized abscesses. In the present series of cases, four have been of the pre-perforative type and three of the chronic. In free perforation of the gall-bladder, if an accurate history of preceding gall-stone colic is at hand, a correct diagnosis should be made; while on the other hand, the symptoms of acute infection of the gall-bladder with pericholecystitis are practically identical with chronic perforation and abscess, and it is practically always only by laparotomy that this complication is recognized. It is not difficult to recognize promptly a free perforation of the appendix, but this might readily be confused with gall-bladder perforation, especially if the appendix were situated high up. Aside from careful attention to preceding history there would be no way short of laparotomy to clear up the diagnosis. We should not mistake a perforation for a very severe colic, and if we obtain a clear history of preceding gall-stone disease, this is a more likely, as well as a more dangerous mistake, than the confusion with perforated gastric or duodenal ulcer.

#### DISCUSSION

Dr. W. A. Bryan, Nashville: I recall three cases in which there was perforation of the gall-bladder, and every one had been diagnosed as gall-stones, but only one had been diagnosed as perforation of the gall-bladder. In this case one of the bile-ducts had ruptured, with an accumulation of fluid localized in the lesser peritoneal cavity. The patient was extremely septic and died. A second case was one in which the gall-bladder was greatly distended and cystic, and there was a large stone in the cystic duct. There were other stones present, and ulceration had occurred toward the liver through the gall-bladder and the stones escaped into the liver-substance. There was a large accumulation of fluid in the gall-bladder, the patient having just had an inflammatory attack. In this case the gall-bladder was removed, and the patient recovered. In the third case the cystic duct was completely blocked by cicatricial tissue, yet the stones had perforated into the liver; the gall-bladder was contracted and contained stones, which were removed and the patient recovered.

### The Traumatic Neuroses, Due to Alleged or Actual Injury, From a Medicolegal Standpoint

Dr. Raymond Wallace, Chattanooga: The wide-spread impression that the spine and spinal cord are liable, before all other parts, to meet with injury in cases of accident, accounts in large measure for the multiplicity of these cases in the courts today. The lawyers believe it, the laity believe it, and unfortunately many doctors believe it. Such cases are met with in the courts, but how rarely are they seen in private practice. The etiology of a traumatic neurosis does not depend so much on the extent of injury or physical violence as on its subjunctive reflection on the mind of the person injured. Its development is almost entirely psychogenous.

The natural mental inferiority of the injured one may, by designing lawyers, be attributed to injury. It is most essential to investigate in detail the physical, nervous and mental conditions of a claimant previous to an alleged accident. The moment the question of damages arises, the dominant or nearest relative usually exerts a most extraordinary and dangerous influence. Subsequent examinations by physicians in conversation with lawyers inflame the patient's mind. He now exaggerates his symptoms. The detection of the various forms of accident psychoses as differentiated from organ injury is not always of easy moment, and in many cases learned physicians will differ and appear as experts on opposing sides. Another phase of intense interest is that of pure simulation. This term should be employed only when the individual purposely and consciously attempts to deceive. He may willfully exaggerate such symptoms as do exist, or represent diseased conditions to exist which either preexisted the accident, or which do not exist at all. In short, he may present symptoms or physical signs due to an accident which never occurred.

#### DISCUSSION

Dr. Jere L. Crook, Jackson: I cannot recall a single case of traumatic neurosis in my experience in which the lure of lucre has not played a most important part in it. There has been no definite disease in any of the cases. There has been in every case the expectation of profit from the time the suit was in process of formation or had been instituted. This is the largest factor in the etiology of traumatic neurosis in my judgment. In every case of this kind we should subject the patient to every possible means of determining whether or not there be a definite pathology.

Dr. Battle Malone, Memphis: My observation has been that railroad employees do not have these neuroses, whereas they are very common among passengers. The railroad employee, when he is hurt, is anxious to get well. He wants to go back to work as quick as possible, and he is inclined, as a rule, to minimize his troubles. In the case of the passenger, who has no particular employment, the neurosis does not interfere with his business. I have been compelled to believe that a great many of the so-called neuroses are not neuroses at all, but are cases of simulation.

Dr. E. T. Newell, Chattanooga: We should examine these patients with traumatic neurosis and give them the benefit of the doubt. I recall the case of a man who was thought to have a traumatic neurosis; but it was found later that he had sustained a real injury to the hip, and had a metastatic infection from which he died.

**Dr. S. J. Dye**, Chattanooga: I have had a good deal to do with these medicolegal cases, and do not recall a single patient who was not cured shortly after the litigation.

### Placenta Prævia, With Report of a Case

**Dr. M. A. Blanton**, Baileyton: The interesting features in this case were: (1) no history of hemorrhage during the last third of pregnancy; (2) a placenta prævia centralis, and (3) twelve hours' hard labor without rupture of the membranes or hemorrhage.

#### DISCUSSION

**Dr. H. H. McCampbell**, Knoxville: The reason cesarean section is advocated in cases of placenta prævia is that there are more surgeons than there are obstetricians. Almost any practitioner can perform a cesarean section if he is efficient in the art of surgery, while to manage a case of placenta prævia correctly requires considerable skill. There are very few cases of placenta prævia in which the child survives. If delivered alive, it usually succumbs for the reason that in the vast majority of cases of placenta prævia the mother has suffered more or less from hemorrhage for two or three months, leaving her in an anemic condition, and consequently the child is anemic and poorly nourished.

**Dr. H. W. Cheney**, Chattanooga: When a practitioner has not the facilities to send a patient to the hospital, the thing to do is to go through the placenta and do a bipolar version.

**Dr. E. A. Long**, Johnson City: If the diagnosis of placenta prævia can be made early, it is a safer plan for the mother—and her health should be considered—to produce a therapeutic abortion.

**Dr. H. Boyd**, Scottsboro, Ala.: Whenever you can get the patient to a hospital, with a good surgeon, empty the uterus as quickly as possible by cesarean section.

**Dr. H. G. Smith**, Cedarville, New Jersey: We cannot advocate too highly cesarean section when a patient has been under the intelligent supervision of other physicians and has not been examined by a midwife or by an incompetent practitioner.

### Brain Surgery

**Dr. L. L. Sheddan**, Knoxville: Intracranial pressure is always indicative of some abnormality and is produced by a variety of conditions, such as intracranial tumors, epidural, subdural, and cerebral hemorrhages, effusions into the ventricles, hydrocephalus, and trauma. When pressure within the cranial cavity is sufficient to produce structural changes, if not relieved in a short time, surgical interference is indicated. In other cases in which tension is not sufficient to destroy, but great enough to produce radical disturbance of function, it is good practice to do some decompressive operation.

### Treatment of Peritoneal Infections

**Dr. W. M. McCabe**, Nashville: Irrigation of the peritoneal cavity is not to be recommended, except where one has had he misfortune to rupture a large suppurating cyst or fibroid umor. The peritoneal cavity in this instance is filled with us, and no harm can be done. There are certain gutters in he abdominal cavity which, aided by the mesentery, guide luids to the pelvis and localize infection. Irrigation cannot lo anything but overflow these channels, macerate feces and tomach contents, and thereby convert a local into a general nfection. The peritoneum can wall off and take care of a solid nass of feces in a localized area much better than it can nyriads of small particles spread throughout the cavity. I ave always been content to wipe out foreign material with auze sponges and not to irrigate. I have not lost a patient ith visceral perforation from peritoneal infection. I believe rainage to be indicated, first, in all cases of suppurative eritonitis, whether local or general; second, where necrotic issue or foreign material is left in the cavity; third, where we re not certain that stitches in hollow viscera will not hold; urth, where it is impossible to control hemorrhage. The nly valid objection that can be advanced against drainage its ability to produce adhesions, which, in my opinion, re sometimes very helpful. The time to commence treating peritoneal infection is while it is in its incipiency and localized. Operate immediately, if the patient's condition will permit, in all cases of visceral perforation, whether from ulcer or vulnerable bodies. It goes without saying that the time to remove the appendix is when the condition is localized in this organ.

This would be an ideal method of treating infected fallopian tubes, but unfortunately infection has reached the peritoneum before one sees the patient.

### Treatment of Earache

**Dr. Walter Dotson**, Gallatin: The treatment of any form of earache can be summed up in the word drainage. Drainage of the middle ear can be accomplished in three ways: First, drainage through the eustachian tube; second, drainage through the drum membrane, as exosmosis, and third, drainage through the drum membrane by an incision with the knife.

Simple or pressure earache should be treated by draining the middle ear of its contents through the eustachian tube. This can be done by catheterization of the tube and forcing its canal open by compressed air. Drainage should also be secured by exosmosis through the drum membrane. This is best secured by the application to the external surface of the membrane, of a snug-fitting, cone-shaped tampon. The tampon should be made fresh from absorbent cotton and the large end of the cone fluffy. This cone should be soaked in an antiseptic anesthetic dissolved in glycerin. Warm this tampon over the lamp and apply the large fluffy end of the cone snugly against the drum membrane. This tampon is left in place for twenty-four hours or more. By it we get mechanical support to the bulged-out drum membrane. Antiseptic application to the inflamed surface, anesthetic application for the relief of pain, and the glycerinated tampon produce an exosmosis of the serum in the middle ear. This anesthetic antiseptic solution is made from 10 per cent. phenol (carbolic acid), and 4 per cent. cocain dissolved in glycerin. Earache produced by suppuration of the middle ear should be treated by thorough drainage through an incision of the drum membrane.

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# Current Medical Literature

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### California State Journal of Medicine, San Francisco

*April, X, No. 4, pp. 131-176*

1 Life of Radium and Its Therapeutic Use in Internal Medicine. E. O. Jellinek, San Francisco.
2 Economic Value of Deciduous Teeth. M. E. Jordon, Los Angeles.
3 Mastoid Cases, with Special Reference to Diagnosis. J. M. Stephens, San Francisco.
4 Rational Surgery of Retrobulbar Neoplasms and Case of Cylindroma of Orbit: Extirpation of Same and Preservation of Eye. P. De Obarrio, San Francisco.
5 Diagnosis and Treatment of Syphilis. G. D. Culver, San Francisco.
6 *Experimental Study of Nephritis with Empyema of Cranial Sinuses and Milky Serum. C. Quinan, San Francisco.
7 Case of Sinus Thrombus Due to Welch Gas Bacillus. E. D. Shortlidge, San Francisco.
8 Results Obtained with Modified Vaccine. L. D. Green, San Francisco.
9 Important Points in Early Recognition and Differentiation of Some Diseases of Nervous System. H. C. McClanahan, San Francisco.
10 *Strangulated Femoral Hernia Containing Undeveloped Kidney. J. W. Seawell, Healdsburg.

6. **Nephritis with Empyema of Cranial Sinuses and Milky Serum.**—In the course of a series of experiments on the blood and urine proteins of a nephritic man, a peculiar lipemia was brought to light by Quinan. The fresh blood of this individual was not in any way remarkable. It appeared, in fact, to be entirely normal. On standing, however, in a very short time white, milky serum began to separate and, generally speaking, in the course of an hour it had accumulated in such abundance that nothing whatever could be seen of the clot, and the vessel appeared to contain pure milk. The fresh serum was

slightly alkaline in reaction. It showed no tendency to separate into layers on standing, and after several weeks *in vitro* remained homogeneous in appearance and uniformly white. It was not affected in the least by ordinary filtration. And it passed without change through a Berkefeld filter. When diluted in the proportion of 1 to 100 with distilled water, it formed a strongly opalescent solution. This mixture was remarkably stable. Weak mineral acids and alkalies had no demonstrable effect on it, and various neutral salts brought about no change that could be detected. All attempts to clarify it by means of organic fat solvents, failed utterly. When, on the contrary, the serum, diluted with fifteen parts of water was gently mixed with chloroform, so far from rendering the solution clear this solvent invariably had the reverse effect and augmented the cloudiness. By treating the milky serum as Boggs and Norris suggested, with an excess of ammonium oxalate crystals, and allowing it to stand twelve hours, ether, previously tried without success, rendered the serum quite clear, but it was invariably noted, also, that after a few hours the serum emitted an intense ammoniacal odor, exactly as would have occurred in an ordinary double decomposition in the presence of a stronger inorganic base. The diluted serum could always be clarified by filtering out the carbon dioxid globulin group.

10. **Strangulated Femoral Hernia.**—Seawell's patient was 83 years old. Had always enjoyed good health, with the exception that ever since he could remember he had been troubled with a lump that would appear from time to time in his left groin; the lump would remain for a few hours, then disappear, but was always accompanied by pain in the epigastrium. Recently during a vomiting spell or while lifting, the lump returned, accompanied by severe pain and vomiting. A diagnosis of strangulated hernia was made; an attempt to reduce under chloroform was unsuccessful. On being called in on the fifth day, Seawell found the patient in a fairly good condition, pulse 80, temperature 99.6 F., somewhat emaciated, arteries somewhat sclerotic, lungs in good condition, abdomen apparently presented nothing except some distention over the epigastrium, also some resistance to pressure in that region; no particular tenderness in any one spot. In the left groin was a mass about the size of a hen's egg, firm to the touch, somewhat tender, immovable, not tympanitic; had exactly the same feeling that you would expect to find in a strangulated gut. Immediate operation was advised and consented to. The contents of the hernia were exposed; there was not any sac covering a blue-black mass that at first appeared to be gut; no fluid surrounded it. On close examination the mass proved to be solid and attached by a pedicle, but further examination proved the mass to be a small undeveloped kidney attached by its ureter. The organ was amputated, the ureter cauterized and the wound closed. The patient stood the operation well. But the relieving of the strangulated kidney did not relieve him either of his vomiting or pain, as both seemed to get progressively worse. The patient died on the fourth day.

### Wisconsin Medical Journal, Milwaukee

*March, X, No. 10, pp. 555-618*

11 Anomalous Renal Vessels Causing Renal Colic or Symptoms Referable to Appendix or Gall-Bladder. A. H. Levings, Milwaukee.
12 Vaginal Ptosis: Surgical Treatment. R. Elmergreen, Milwaukee.
13 Ocular Manifestations of Hysteria. D. F. Harbridge, Philadelphia.
14 Business Side of Practice of Medicine. W. F. Zierath, Sheboygan.
15 Diabetes Insipidus. F. Johnson, North Freedom.

### West Virginia Medical Journal, Wheeling

*April, VI, No. 10, pp. 327-362*

16 Meaning of Conservation in Medicine and Surgery. C. R. Ogden, Clarksburg.
17 *Protection of Public by State Authority. E. Davis, Charleston.
18 Bleeding from Lungs in Tuberculosis. C. A. Wingerter, Wheeling.
19 *Position of Women at Time of Labor. T. R. Evans, Huntington.
20 Acted as Her Own Midwife. L. Buckle, New York.
21 Amebiasis: Report of Case. J. B. Whittington, Hansford.

17. **Protection of Public by State Authority.**—The plan outlined by Davis consists essentially of the following: First, a central bureau composed of a sufficient number of competent physicians, who should give their whole time to the work, being paid an adequate salary and be given full authority for the obtaining of information under compulsion of law, to disseminate popular information on hygiene and sanitation, oversee in a general way all local measures for the prevention of disease, and have at their disposal sufficient funds for these various purposes; second, local funds and officers provided for by the authority of the state through its legislature, and not dependent on the local government should such local government fail to enforce the laws; these local authorities having funds and power under state commissioner of health to take all needful measures for the prevention of disease and the protection of the health of the people.

19. **Position of Women at Time of Labor.**—In the course of his remarks on the position of women at the time of labor, Evans says that the squatting position on the floor, or on a hard level surface gives all of the advantages of the lithotomy position, and more to the woman in labor. In the first place, there is the great advantage of gravitation. In addition, she can powerfully assist with the compression by her thighs, and they can compress the uterus not only laterally, but in front and downward. Indeed, it is evident to Evans that the main reason for the creation of the soft yet powerful thigh of a woman is to materially aid in her delivery. They are genital. She does not need such bulky levers purely for locomotion. The softness of the tissues of the thighs in woman prevents damage to the uterus when used for its compression. In this attitude the thighs, when brought to press on the uterus, tend to correct its usual early obliquity, and the inclined planes act as skids. Also, the sufferer perhaps instinctively accommodates the container to the thing contained, or by the sensation of pain and pressure changes the angles and axes of her pelvis by contortions, which she can do with greater advantage than on a bed. In Evans' experience at coal mines, where a barren woman is a curiosity; the perineum is very seldom ruptured, and he does not support it in the cases of multiparæ to prevent its rupture, but to assist the delivery. The damage of a ruptured perineum when the woman is in the squatting attitude is more apparent than real; the danger is less. As labor is much expedited by the squatting or kneeling attitude, uterine inertia is less likely. Should there be too much hemorrhage it would sooner be discovered if the woman's hips are not sunken in a bed in a darkish corner, and she can be better attended on a mat on the floor. That fortunately rare condition, concealed hemorrhage, more quickly exposes itself when the woman is squatting or kneeling. She the more quickly shows evidence of faintness.

### Monthly Cyclopedia and Medical Bulletin, Philadelphia

*March, XV, No. 3, pp. 129-192*

22 Dental Disease as It Affects Mind. H. S. Upson, Cleveland.
23 *Chronic Acetanilid Poisoning a Perfectly Definite Symptom-Complex. H. C. Gordinier, Troy, N. Y.
24 Causation of Psychopathic Maladies. B. Sidis, Portsmouth, N. H
25 Imperfections in Diagnosis and Treatment of Pathologic Conditions of Teeth and Jaws. R. H. Ivy, Philadelphia.
26 Symptoms and Treatment of Pneumococcus Infection in Pulmonary Tuberculosis. F. N. Robinson, Monrovia, Cal.

23. Abstracted in The Journal, June 3, 1911, p. 1677.

### Interstate Medical Journal, St. Louis

*April, XIX, No. 4, pp. 305-398*

27 *Diaphragmatic Hernia Diagnosed Before Operation. N. B. Carson and L. Huelsmann, St. Louis.
28 *Raynaud's Disease. E. C. Beck, New York.
29 Economics of Food. A. L. Benedict, Buffalo, N. Y.
30 Surgical Treatment of Ascites. J. F. Binnie, Kansas City, Mo.
31 Examination of Cerebrospinal Fluid. A. D. Dunn and G. A. Stevens, Omaha, Neb.
32 Etiology and Clinical Aspect of Ascites. C. H. Neilson, St. Louis.

27. **Diaphragmatic Hernia.**—In order to reach the hernia, Carson and Huelsmann made an incision in the eighth intercostal space on the left side, down to the pleura, which was opened throughout the entire extent of the skin incision. Before making the pleural opening, pressure in the lung was raised to 25 mm. of mercury. The rib stretcher was then introduced; but on account of rigidity of the ribs, enough space

could not be secured and it had to be removed, and the eighth, ninth and later the seventh ribs were resected. On opening the pleura, the chest was seen to be full of small intestines, except at the upper border, where a small edge of the lower lobe of the lung and a small fringe of omentum were visible. When the small intestines were pushed down, a large opening in the diaphragm was found, and was seen to extend backward, from about an inch from the costal cartilage in front, to the posterior limit of the diaphragm behind, and about a half or three-quarters of an inch outside the pericardium and the esophagus. Through this opening came into the pleural cavity all of the stomach, transverse colon, the omentum, parts of the ascending and descending colon and about 15 feet of the small intestine. After closing the hernial opening, that in the chest wall was closed in layers, but before closing the pressure was raised and the lung fully expanded. The hernia was evidently congenital.

28. **Raynaud's Disease.**—While amputating the large toe for gangrene, Beck noticed that bleeding was very scanty, and remarked about the probability of sclerosis in this case. Forty-eight hours later the gangrene had extended, following approximately the branches of the dorsalis pedis artery. The patient complained of spasmodic pains radiating throughout his calf, but showed no symptoms of sepsis. Beck advised amputation at the knee and operated forthwith. The patient made an uneventful recovery. The pathologist's report was obliterating endarteritis. The question arises, says Beck, Is Raynaud's disease an affection of the vasomotor nerves causing disease of the arteries, or is it primarily a disease of the inner coats of the arteries with the nervous symptoms secondary to it?

## Bulletin of Lying-In Hospital of City of New York

*March, VIII, No. 2, pp. 45-88*

33 Obstetric Forceps and Their Relation to Mother and Child. J. W. Markoe, New York.
34 Care of Normal Obstetric Patient During Third Stage of Labor and Puerperium. R. McPherson, New York.
35 Case of True Intraligamentous Unruptured Tubal Pregnancy of Eight Months. C. F. Jellinghaus, New York.
36 Congenital Anomalies of Appendix. R. McPherson, New York.
37 Three Cases of Cysts of Omentum. J. W. Markoe and R. McPherson, New York.
38 General Hemangiomatosis of Placenta. J. R. Losee, New York.

## Cleveland Medical Journal

*March, XI, No. 3, pp. 161-240*

39 *Systematization of Certain Morbid Processes as Regards Their Relation to Nervous System on Anatomic Basis of Its Functional Activity. D. H. Dolley, Columbia, Mo.
40 *Treatment of Septic Abortion. E. O. Houck, Cleveland.
41 Adrenals. R. G. Hoskins, Columbus.
42 Buphthalmia: Case Report. S. H. Monson, Cleveland.
43 *Gastro-Intestinal Absorption of Drugs. T. Sollmann and P. J. Hanzlik, Cleveland.
44 Causes and Control of Insanity. A. G. Hyde, Cleveland.
45 Prehistoric Surgeon: Trephining by Primitive Man. F. D. Snyder, Ashtabula.

39. **Neurocytologic Changes.**—It is shown by Dolley that in numerous abnormal conditions there is a common anatomic basis of those identical nerve-cell changes which are peculiar to normal functional activity. The common exciting cause affecting the nervous system which is thus predicated is to be found in the physiologic factor of stimulation. From this, work, and finally overwork, result. The types which are thus classified under their form of stimulation, for undoubtedly still other conditions remain to be thus grouped, are: from trophic stimulation, anemia; from thermal stimulation, heat exhaustion; from mechanical stimulation, traumatic shock and at least some traumatic neurosis; from chemical stimulation of the bacterial toxins, a group of infectious diseases, again broadly typified; from an undetermined stimulation, either trophic, chemical or psychic, exophthalmic goiter; and from an excessive spontaneous stimulation of every-day life, which in its normal display leads finally and inevitably to natural senescence, neurasthenia and allied disorders.

40. **Treatment of Septic Abortion.**—The employment of vaginal or uterine packs in the treatment of abortions, Houck says, should be greatly restricted because they favor infection. In the presence of a virulent infection the expectant plan of treatment offers the best result. Where such expectant plan is followed the virulent organisms disappear in from one to three weeks, when the uterus may be safely evacuated. In following out the expectant plan of treatment the patient should receive twice daily a hot saline or bichlorid douche. The douche serves the double purpose of cleansing the vagina and promoting contraction of the uterus. Ice bags should be applied to the hypogastrium and the bowels should be emptied. Houck employs elixir of iron, quinin and strychnin as a general measure. He also allows a rather liberal diet. The patient is placed in the Fowler position to promote drainage from the vagina. He has had no experience with vaccines or serums, for they do not seem to be recommended in acute septic conditions. When the temperature has returned to normal or thereabouts and remains so for two or three days, the uterus may be safely evacuated. He has not found that this expectant plan, even when followed by a curettage, appreciably lengthens the stay in bed. When the curetting was undertaken he was surprised at how little the uterus contained. The average stay in hospital in his cases was twenty-one days; one private patient he kept in bed for two months, not because of her infection, but because of an acutely dilated heart following an endocarditis as a result of criminal abortion.

43. **Gastro-Intestinal Absorption of Drugs.**—The authors have been engaged for some years in studying the absorption of drugs from the alimentary canal by the use of quantitative methods. So far they have completed the investigation of phenol and of sodium iodid. The chemical, physical and pharmacologic characters of these two substances are very different. Accordingly, they have been able to show that there are fundamental differences in the phenomena of their absorption. On the other hand, notwithstanding this dissimilarity, they also present some interesting features in common. The general plan of the experimentation consisted in placing known quantities of the substances into the ligated stomach or intestinal segments of anesthetized dogs or cats, under varying conditions. The portions remaining unabsorbed in the contents and tissues of the viscus were then determined quantitatively. The amount of the substance which had disappeared, which had been absorbed, was thus accurately known. One of the most striking phenomena, with both drugs, was that the absorption is not a steady process. In both cases it proceeds very rapidly for the first few minutes, and is then markedly checked or even practically inhibited. For instance, some 35 per cent. of the phenol, or 50 to 75 per cent. of the iodid is absorbed within ten minutes after their administration. The exact figures vary in different experiments. The amount absorbed at the end of two hours is but very little greater; some 25 to 65 per cent. of the drug remains unabsorbed during the duration of the experiment. The phenol and the iodid both present this phenomenon of inhibiting their own absorption. The mechanism of the inhibition, however, is quite different in the two cases. The absorption of phenol (and incidentally also of the iodid) is scarcely affected by changes in the general blood-pressure, unless this falls to the shock level. On the other hand, the absorption of phenol is greatly influenced by changes in the intestinal circulation. The mechanism of the iodid inhibition is quite different: This is strictly local; for it cannot be produced by placing the iodid into another loop or by injecting it intravenously. It is only produced by direct contact, and is confined to the epithelial surface to which the iodid has been applied. Intestinal absorption is not confined to the living animal, but may occur quite extensively after death. The post-mortem absorption may amount to 47 per cent. of phenol, 35 per cent. of sodium iodid and 15 per cent. of alcohol.

## Lancet-Clinic, Cincinnati

*April 6, CVII, No. 14, pp. 371-396*

46 *Preventive Vaccination Against Typhoid. W. S. Harpole, Chicago.
47 Importance of Early Diagnosis of Chronic Kidney Inflammations. D. M. Hall, Memphis, Tenn.
48 Supraorbital Pain: Its Significance. L. D. Brose, Evansville, Ind.
49 Histopathologic Studies on So-Called Osteoma Cutis. A. Ravogli and G. Goosman, Cincinnati.
50 Cases of Protracted Intervals Between Births of Twins. W. W. Vinnedge, Lafayette, Ind.

46. Abstracted in The Journal, Oct. 28, 1911, p. 1479.

### Annals of Surgery, Philadelphia

*April, LV, No. 4, pp. 473-640*

51 *Cephalic Tetanus. A. J. Brown, New York.
52 Treatment of Heart Wounds. E. H. Pool, New York.
53 Pneumectomy: Its Possibilities. S. Robinson, Boston.
54 Tumors of Male Breast. J. Speese, Philadelphia.
55 Clinical Features and Treatment of Acute Perforating Gastric and Duodenal Ulcer. E. Eliot, Jr., New York.
56 *Repair of Hernia from Peritoneal Side of Abdominal Wall. E. H. Beckman, Rochester, Minn.
57 Congenital Malformations of Ureters. D. N. Eisendrath, Chicago.
58 *Operation for Aneurismal Varix of Popliteal Vessels. J. C. Da Costa, Philadelphia.

51. **Cephalic Tetanus.**—The patient whose case is the seventh reported in the United States was struck over the right temporofrontal region by the tine of a mechanical manure spreader, which caused a lacerated wound of the forehead. The blow was severe enough to knock him down, and he thinks he was unconscious for a few minutes, was dazed for an hour or two, and suffered from a severe headache for the remainder of the day. The wound was cleansed and dressed. It was found to extend down to and at one point through the periosteum, but there was no evidence of fracture of the skull. The following day the patient felt practically well, and went about his work as usual on that day and on the day following. Three days after the accident the patient noticed that he could not perfectly control the right side of his mouth while eating, and particularly when trying to take fluids. This was followed on the next day by twitching of the muscles of the left side of his face, which increased in severity, and soon tonic spasms of the muscles of mastication of both sides supervened, giving rise to a marked trismus. There were no constitutional symptoms and the patient did not feel sick in any way. The muscular spasms became so severe that six days after the accident he was unable to take any nourishment by mouth, and his jaws were so tightly clenched that the teeth of his lower jaw were cutting into the gum of the upper and it was necessary to extract six of them. Subsequent to this he was able to take liquid nourishment by the mouth for a day, but on the following day it was necessary to resort to rectal feeding. There was some slight twitching of the extremities. From the sixth until the fourteenth day of his disease, inclusive, the patient received 65.500 units of tetanus antitoxin, injected subcutaneously in ten doses, ranging from 1.500 to 11.500 units at a dose. The patient was discharged on the twenty-eighth day after his injury, with a very slight prosopoplegia remaining, and with the wound healed by granulation after a mild suppurative course.

56. **Repair of Hernia.**—The following is a description of the technic in a case of femoral hernia used at the Mayo Clinic. After the primary operation has been completed, the abdominal wall is retracted on the side of the hernia so that the femoral ring is exposed. A pair of artery forceps are then introduced through the hernial ring from within the abdomen to the bottom of the sac. The sac is grasped with these forceps and pulled back into the abdomen. Two or three mattress sutures of heavy linen or silk are then passed completely through the neck of the sac and tied. The remaining portion of the sac can then be either excised or stitched to the abdominal wall. The most essential factor in the cure of a hernia is to obliterate the sac, and following this operation, the sac is completely obliterated, and it is impossible for it to reinvert through the femoral ring. In the cure of inguinal hernia by this method, only those cases in which the sac is of small size are suitable; that is, the entire sac must necessarily be pulled back into the abdomen and the pillars of the internal ring sutured with mattress sutures of linen or silk, similar to the femoral hernia just described.

58. **Operation for Aneurismal Varix of Popliteal Vessels.**—In the case cited, Da Costa made a longitudinal incision of the popliteal vein and sutured the opening into the artery from within the vein. Transverse division of the vein on each side of the opening with utilization of an isolated portion of the vein wall for a superimposed flap which was laid over the line of sutures in the artery. End-to-end union of the divided vein.

### Journal of Medical Society of New Jersey, Orange

*April, VIII, No. 11, pp. 557-610*

59 Hemotherapeutics or Use of Blood as Therapeutic Agent; Technic of Direct Transfusion. A. L. Soresi, New York.
60 Treatment of Syphilis in General Practice. C. L. DeMeritt, Hoboken.
61 Pregnancy and Neuropathology. S. Husserl, Newark.
62 Edema of Children. E. G. Hummel, Camden.
63 Optimism in Medicine. W. L. Pyle, Jersey City.
64 Eye-Strain. T. R. Chambers, Jersey City.
65 Clinical Observations on Kidney Functional Diagnosis. E. A. Ill, Newark.

### Boston Medical and Surgical Journal

*April 11, CLXVI, No. 15, pp. 547-582*

66 *Chronic Ulcer or Chronic Indigestion: Successful Treatment by Surgical Measures: Report of Twenty-Five Cases. C. L. Scudder, Boston.
67 Chorionepithelioma. S. Rushmore, Boston.
68 *Relation of Gonorrhea to Pelvic Disease. G. W. Kaan, Boston.
69 Palliative and Operative Treatment of Anal Fissure. T. C. Hill, Boston.
70 *Delicate Method for Obtaining Hemin Crystals from Minute Blood-Stains. W. F. Whitney, Boston.
71 Rupture of Bowel from Compressed Air; Operation; Recovery. F. J. Cotton, Boston.

66. **Chronic Ulcer or Chronic Indigestion.**—The twenty-five cases of chronic ulcer recorded by Scudder represent cases which had failed to be cured by medical treatment. At best they had had only temporary relief from acute symptoms under medical treatment. They have all, with two exceptions, been followed in their life history since operation. With one exception these have remained practically well for from one and nearly two to seven years following the surgical treatment. This time of freedom from symptoms is longer than the longest interval between attacks in any of these cases under medical treatment. In other words, the surgical treatment of these cases (each instance being a case of demonstrated gastric or duodenal ulcer or its sequelæ) has proved of greater value than the medical treatment.

Scudder believes that this group of cases of chronic indigestion demonstrates that modern surgical methods do assist in the healing of certain chronic ulcers.

There were twenty-five patients and twenty-seven operations. Two patients were operated on after the ulcer had perforated and had been sutured; hence the two additional operations.

Fifteen were cases of obstruction at the pylorus or hourglass deformity at the middle of the stomach. Five presented no obstruction at the pylorus; four were perforated gastric ulcers; one was a perforated duodenal ulcer.

There were two deaths in this group of cases; one from perforation of a gastric ulcer near the pylorus and one following partial gastrectomy among the early cases due to a mechanical difficulty. There have been no deaths following the simple posterior gastro-enterostomy. There have been no cases with the vicious circle or vomiting due to obstruction distal to the new stoma. There have been no cases of gastrojejunal ulcer near the anastomotic opening.

68. **Gonorrhea and Pelvic Disease.**—Kaan believes that statements which claim that the gonococcus infection in the woman is responsible for 60 per cent. or more of the operations for pelvic inflammation are decided exaggerations and should be modified in the interest of truth and proper teaching. The statement that 45 per cent. of the cases of sterility are due to gonorrhea is also discredited by him.

70. **Method of Obtaining Hemin Crystals from Minute Blood Stains.**—Whitney has worked out the following method: A minute fragment of the suspected substance, a scraping from a stain or a bit of stained fiber is placed on a slide and a very small drop of formic acid, sp. gr. 1.20, is brought over this with a glass rod. Over the drop is inverted a small watch glass, which should not touch it, nor project beyond the edge of the slide. A gentle heat is applied directly beneath the drop, and the moment condensation is seen on the inside of the watch glass over the drop, the heat is discontinued, the watch glass lifted off and the remainder of the fluid allowed

to evaporate in the air. When dried, it can be examined microscopically and mounted permanently in a drop of Canada balsam. The crystals are very small, usually requiring a high dry or oil immersion lens to see them well, but they are so numerous that they cannot be overlooked. A second application of acid does not seem to make them any larger. But the fact that the crystals are very small shows that only a minute quantity of blood coloring matter is necessary for their formation, and speaks for the delicacy of the method. In practice it has been found that the addition of a very little hydrobromic acid, 34 per cent., 1 drop; acid formic sp. gr. 1.20, 4 c.c., gives darker and more numerous crystals than with formic acid alone.

### Kentucky Medical Journal, Bowling Green

*April 1, X, No. 7, pp. 277-334*

72 Cerebrospinal Meningitis. W. L. Mosby, Bardwell.
73 Climacteric Neurosis in Women. J. O. Jenkins, Newport.
74 Acute Otitis Media; Cause, Complication and Treatment. W. J. Thomason, Newport.
75 General Practitioner's Laboratory. L. A. Tate, Louisville.
76 Cesarean Section. A. H. Barkley, Lexington.
77 Physician as Expert Witness. H. L. Waggener, Bardwell.
78 Salvarsan in Treatment of Syphilis. J. Schultz, Logmont.
79 Case of Premature Children. W. Z. Jackson, Arlington.
80 Present Status of Cancer of Uterus. G. N. Cowden, Nashville, Tenn.
81 .Old Transylvania University of Old Kentucky. J. Clahn, Owensboro.

### Medical Record, New York

*April 13, LXXXI, No. 15, pp. 698-742*

82 Some Salient Points in History of Causal Agent of Syphilis. J. B. Stein, New York.
83 Papilloma of Vocal Cords Cured by Radium. R. Abbe, New York.
84 Pediatric Memoranda. Corgenital Myxedema, Cystic Goiter with Feeble Mentality. H. B. Sheffield, New York.
85 Examination of Duodenal Contents for Diagnostic Purposes to Clear Up Certain Affections of Upper Abdominal Region. M. Gross, New York.
86 *Cheyne-Stokes Respiration, with Report of Two Remarkable Cases. D. Felberbaum and S. Ehrenreich, New York.
87 Extension and Recurrence of Breast Cancer Through Deep Fascia. L. F. Watson, Oklahoma, Okla.
88 Malignant Tumors. L. M. Stroud, Terrell, Texas.
89 Effect on Ears of Rapid Transit Through Hudson and East River Tunnels. E. P. Fowler, New York.

86. **Cheyne-Stokes Respiration.**—The two cases cited by the authors are unique in that (1) the typical manifestations of Cheyne-Stokes respiration continued for a long period of time, and (2) they were associated with definite symptoms of pontomedullary disease and chronic nephritis, so that clinically the origin of this symptom was evidently very obscure. In the second case the periods of dyspnea and apnea each lasted for 35 seconds.

### Journal-Lancet, Minneapolis

*April 1, XXXII, No. 7, pp. 169-196*

90 Polycystic Disease of Kidney. D. C. Balfour, Rochester, Minn.
91 Rounders. F. W. MacManus, Buford, N. Dak.
92 Albumin Milk: Technic and Indications for Its Use. F. W. Schlutz, Minneapolis, Minn.

### New Orleans Medical and Surgical Journal

*April, LXIV, No. 10, pp. 725-810*

93 Nerves and Their Sensations, Especially Pain. C. W. Allen, New Orleans.
94 Etiologic and Epidemiologic Irregularities of Cerebrospinal Meningitis. H. D. King, New Orleans.

### American Journal of Medical Sciences, Philadelphia

*April, CXLIII, No. 4, pp. 469-624*

95 *Jejunostomy. W. J. Mayo, Rochester, Minn.
96 Pancreatic Lymphangitis. J. B. Deaver and D. B. Pfeiffer, Philadelphia.
97 *Chronic Cholecystitis. J. R. Verbrycke, Jr., Washington, D. C.
98 Value of Frozen Sections in Teaching of Physical Diagnosis. H. R. M. Landis and G. Fetterolf, Philadelphia.
99 *Treatment of Pulmonary Tuberculosis by Compression of Lung. M. E. Lapham, Highlands, N. C.
100 *Leukemic Tumors of Breast Mistaken for Lymphosarcoma. C. A. McWilliams and F. M. Hanes, New York.
101 Osteitis Deformans, Paget's Disease: Reports of Two Cases and Autopsy in One. B. F. Stahl, Philadelphia.
102 *Value of Nitric Acid in Cauterizing Wounds Made by Rabid Animals. P. Bartholow, New York.
103 Medical Aspect of Chronic Typhoid Infection (Typhoid Bacillus Carriers). W. J. Stone, Toledo, Ohio.
104 Epidemic Poliomyelitis: Clinical Study of Acute Stage. R. Stein, New York.
105 *Clinical Contribution to Our Knowledge of Poliomyelitis with Cortical Involvement. L. P. Clark, New York.
106 Value of Nauheim Baths in Nephritis with High Blood-Pressure. E. A. Newton, Bad Nauheim, Germany.

95. **Jejunostomy.**—Jejunostomy is an active competitor of gastrostomy in cases of esophageal and cardiac obstruction, and in extensive ulcers which cannot be excised and gastrojejunostomy is not feasible. In malignant diseases of the stomach of the ulcerous type it offers a means of palliation. The technic of jejunostomy is described by Mayo as follows: The abdomen is opened by an epigastric incision either in the midline or to the left in the rectus muscle. The jejunum is picked up and, selecting a point from 12 to 16 inches from its origin, a loop is drawn out of the abdomen, nicked on the convex surface and a No. 9 rubber catheter pushed through the opening down stream until it extends about 3 inches inside the lumen of the jejunum. This point is fixed in position by a single chromic catgut suture, the catheter is then infolded by the jejunal wall for an inch or an inch and a half by mattress sutures of linen after the plan of Witzel. The intestine is anchored to the peritoneum by two or three linen sutures in the lower angle of the incision which is closed down to the tube in the usual manner or the end of the catheter can be brought out of a small stab wound at one side of the incision, the intestine being fixed to the peritoneum on the inside by several linen sutures.

Liquid feeding may be commenced at any time and carried out for an indefinite period without danger of leakage and with a certainty that the nutritive material will pass into the assimilative tract. Leakage does not follow the removal of the tube and if it should slip out accidentally it must be replaced within twelve hours or the tract may become obliterated. All kinds of fluid nourishment are borne well in these cases, preparations of milk, eggs, meat ground fine and mixed with fluid, carbohydrates in fluid form, etc. In none of his cases has Mayo observed subsequent ill effects from the jejunum becoming adherent to the peritoneum after the removal of the feeding tube.

97. **Chronic Cholecystitis.**—The following points are emphasized by Verbrycke. There are numbers of dyspeptics whose symptoms are due to gall-bladder disease. Diagnosis should be made early and treatment instituted before the occurrence of gall-stones if possible. Surgery is the only treatment for a certain class of cases. In all early cases, exclusive of those dangerously acute, medical treatment, according to the principles outlined above, should be tried before recourse to surgery. In a number an apparent cure will be effected, particularly if no stones have formed, and it is usually impossible to state whether or not stones are present. The medical treatment can do no harm in those patients who have not yet had symptoms of obstruction. If two attacks occur after treatment has been started there is still time for surgery, and an operation should then be performed. It is not advisable to give medical treatment further trials. In those cases which do finally come to operation the previous treatment will usually have put the patient in a better condition. The foregoing diet and medication should also be given in the postoperative treatment of those who require surgical intervention.

99. **Compression of Lung in Tuberculosis.**—In the cases in which Lapham has thus far employed the nitrogen compression method of treatment the indications for the operation were: Inability to arrest the process in fifteen cases; inability to hold a previous recovery in three cases; impatience to return to work and unwillingness to risk the uncertainty of symptomatic treatment in two cases; while in another patient the operation was done on purely theoretical grounds; and one case was referred expressly for the treatment.

There were three deaths and one failure in the fifteen cases, all of which were advanced and otherwise hopeless. One death was due to hemorrhage before the effects of the method could be obtained. This case was characterized by severe and persistent hemorrhages which constituted the indication for attempting the treatment. The second death was due to a violent exacerbation of an intestinal tuberculosis, together with an exaggerated course of tuberculin given after the patient left. The third patient left far too soon and was afterward not properly cared for. The patient who did not improve still has a chance of recovery. She is gaining slowly and is in every way much better than before the attempt was made. The pleural cavity is filled with adhesions and there is an enormous, almost malignant development of the pleural collateral circulation. All of the others are doing well, and in all of them recovery could not have been made unaided.

Of the three patients unable to hold a recovery when made, one has been earning his living for over a year without the loss of a day's work, and the other two are in equally favorable condition. There were two cases of business men impatient to resume work, and unwilling to risk the slow and uncertain results of symptomatic treatment. It is too soon to prophesy, says Lapham, but the lungs of both are being successfully compressed, and she believes that within a year these men will return to work and be as free from the dread of a relapse as an anatomic recovery can make them.

100. **Leukemic Tumors of Breast.**—Very unusual features were presented by McWilliams and Hanes' patient. She complained, first, of a tumor of the breast, and probably referred any slight evidences of impaired health to this tumor, whereas the subsequent course of the disease and the autopsy show that the breast tumor was merely an incident in the leukemic process. The superficial lymph-nodes were never enlarged. The spleen was not palpable until late in the course of the disease. A study of the various blood-forming tissues reveals a transformation from the normal to a tissue in which one type of mononuclear cell greatly predominates. The patient developed toward the close a severe enteritis, and it is interesting that the type of cell which took part in the inflammatory exudate was the mononuclear cell seen elsewhere so abundantly, and not the polymorphonuclear leukocyte, a finding easily explained by the condition of the bone marrow, in which very few myelocytes were found.

102. **Value of Nitric Acid in Cauterizing.**—The principal object proposed in Bartholow's paper is to reaffirm in all its rigor and in a pointed manner, the rule that the application of *fuming* nitric acid is the most effectual means of destroying the "virus" of rabies in wounds, and that in all cases in which we fear its coexistence with a bite, it should be got rid of as far and as quickly as may be possible. To destroy the "virus" before it has germinated in the wound is the means sometimes of wholly avoiding the disease which it provokes. The technic is simple and direct, and entirely adapted to a particularly prompt mode of application. But, it has the high merit of paving the way for the subsequent success of the Pasteur treatment. Wounds made by rabid animals should not be sewed up; they should be allowed to bleed. Hence, the use of stitches, instead of caustics, washing and dressing, is a gross and gratuitous blunder; stitches being the means of fructifying the "virus" and very little to the purpose in wounds of this character. It is the destruction of the poison that counts, not the mere healing of a "solution of continuity."

105. **Poliomyelitis With Cortical Involvement.**—Clark summarizes the cerebral involvement in poliomyelitis on its anatomic-pathologic side as follows: There may be a disseminated encephalitis affecting not only the white substance of the pons and crura cerebri, but also the gray matter of the cortex and regions of the central ganglia. The process, in some instances, would seem to originate in the pia, thus furnishing an important document for the fact that in the epidemic disease the palsy or injury may be a cerebral instead of a spinal one. The random and often unilateral character of the lesion in the cortex is a parallel picture to the pure spinal types. Clark cites a case of poliomyelitis and epilepsy associated in the same patient. Attacks of grand mal epilepsy occurred regularly two or three times every three or four months since the attack of poliomyelitis. The evidence in the case pointed to the fact that this patient suffered a diffuse cortical injury at the onset of the poliomyelitis, leaving organic changes in the cortex producing his epilepsy. The epilepsy has responded illy to the usual hygienic plan of treatment so beneficial in pure idiopathies

### Journal of Michigan State Medical Society, Battle Creek

*April, XI, No. 4, pp. 211-266*

107 Treatment of Fractures. C. H. Sample, Saginaw.
108 Disturbance of Function of Ear, Nose and Throat in Nervous Diseases. C. D. Camp, Ann Arbor.
109 Vaccine Therapy. W. T. Dodge, Big Rapids.
110 Unnecessary Colpotomy. J. J. Reycraft, Petoskey.
111 Case of Pellagra. L. W. Keyes, Whitehall.
112 Treatment of Trifacial Neuralgia by Deep Alcohol Injections. F. B. Tibbals, Detroit.

### Proctologist, St. Louis

*March, VI, No. 1, pp. 1-56*

113 Diagnosis and Treatment of More Serious Forms of Colitis. P. L. Mummery, London.
114 Primary Mucous Colitis. P. Daniel, London.
115 Sacculitis of Large Intestine. H. Drummond, Newcastle-Upon-Tyne, England.
116 Treatment in Certain Common Rectal Diseases. Sir F. Wallis, London.

### Journal of Cutaneous Diseases, New York

*March, XXX, No. 3, pp. 119-178*

117 Toxic Dermatoses. M. B. Hartzell, Philadelphia.
118 Influence of Anaphylaxis in Toxic Dermatoses. J. A. Fordyce, New York.
119 Some Toxic Effects in Skin of Disorders of Digestion and Metabolism. J. C. Johnston, New York.
120 Toxic Origin of Erythema Multiforme. H. G. Anthony, Chicago.

*April, XXX, No. 4, pp. 179-234*

121 Case of Acanthosis Nigricans. C. J. White, Boston.
122 Veronal Poisoning. S. Pollitzer, New York.
123 *Instance Indicating Connection Between Acne and Enlargement of Thyroid Gland. D. W. Montgomery and G. D. Culver, San Francisco.
124 Arsenical Cancer: Report of Case. U. J. Wile, New York.
125 Blood After Intravenous Injections of Salvarsan. G. M. MacKee, New York.

123. **Acne and Thyroid Gland.**—This case locally was not different from many other instances of severe acne of the papulo-pustular type with many comedones. During the two years that the authors had this patient under observation, periods of improvement and of exacerbation were so definitely associated with her manner of living and particularly with the water she drank, that they are convinced that her general condition was primarily at fault and that the acne was an external evidence of intricate internal disturbances. It may be, they suggest, that the water in question caused some disturbance of some of the internal organs such as the pancreas or suprarenals and that a compensatory activity of the thyroid gave rise to goiter and hyperthyroidism, which, in turn contributed to cutaneous erethism. Of the practical relationship between the taking of the suspected water in this case and the accentuation of the acne there is no doubt. When the patient took the water the acne grew worse; when she ceased the acne improved.

### American Journal of Surgery, New York

*April, XXVI, No. 4, pp. 129-160*

126 *Vaginal Ptosis: Surgical Treatment. R. Elmergreen, Milwaukee, Wis.
127 Present Status of Conservative Work on Uterus, Fallopian Tubes and Ovaries. C. R. Hyde, Brooklyn.
128 Certain Gynecologic Aspects of Neurasthenia and Hysteria. E. Novak, Baltimore.
129 Surgical Essentials. F. E. Neef, New York.
130 Rôle of Male in Infertilitas Matrimonii. Q. W. Hunter, Louisville, Ky.
131 Surgical Removal of Tonsils. Finger Enucleation. F. A. Foster, New York.

126. Also published in the *Wisconsin Medical Journal*, March, 1912.

### Mississippi Medical Monthly, Vicksburg

*April, XVI, No. 12, pp. 231-250*

132 Illusions and Idiosyncrasies in Treatment of Malaria. H. L. Sutherland, Benoit.
133 Indicanuria and Its Importance to General Practitioner. J. C. Herrington, Asylum.
134 Pellagra. E. G. Martin, Benoit.

### New York Medical Journal

*April 13, XCV, No. 15, pp. 729-780*

135 Analysis of Results of Rhizotomy in Treatment of Spastic State of Cerebral Diplegia. L. P. Clark and A. S. Taylor, New York.
136 Physician and Masseur. J. M. Taylor, Philadelphia.
137 Treatment of Phymatiasis by Means of Continuous Bath. A. Rose, New York.
138 Physician as Business Man. S. Epstein, New York.
139 Diagnosis of Tumors of Female Breast. G. Barie, New York.

140 *Symptoms and Diagnosis of Cancer of Body and Tail of Pancreas Suggestive Sign, with Report of Case. M. Packard, New York.
141 Leukoplakia Buccalis. R. H. Ivy, Philadelphia.
142 Homo: Pavilion of Man in Dresden. J. F. C. Luhan, New York.
143 Contribution to Study of Physiology and Pathology of Skeleton of Oral Extremity of Thorax (Stethographic Method). C. M. Desvernine, Havana, Cuba.

140. **Cancer of Pancreas.**—Carcinomatous growths of the pancreas, on account of the disturbance of pancreatic function, Packard claims give rise to a symptom complex that is peculiarly characteristic. The symptoms of cancer of the body and tail will depend on compression of the bile duct, but are due to alterations of the pancreatic tissue, and to involvement of the solar plexus. Packard emphasizes that one must never lose sight of pain, with its characteristic distress and prostration. The celiac neuralgia, together with the zone of tenderness to his mind, is certainly suggestive.

### Louisville Monthly Journal of Medicine and Surgery, Ky.

*April, XVIII, No. 2, pp. 321-352*

144 Infantile Paralysis (Acute Anterior Poliomyelitis). C. Thompson, Louisville.
145 Treatment of Leukemia with Bacterial Toxins. L. K. Baldauf, Louisville.
146 Where Dental Surgeon and Rhinologist Meet. A. O. Pfingst, Louisville.

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## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### Australian Medical Journal, Melbourne

*February 10, I, No. 30, pp. 321-332*

1 Retroperitoneal Hydatid Cysts. F. D. Bird.
2 *Ankylostomiasis in Ceylon. T. Fiaschi.

*February 17, I, No. 31, pp. 333-344*

3 Chronic Salpingitis. A. N. McArthur.
4 After-Effects of Salpingitis. F. Meyer.

*February 24, I, No. 32, pp. 345-356*

5 Acute Salpingitis. G. R. Adam.
6 Pathology of Salpingitis. H. B. Allen.
7 *Early Rising During Puerperium. R. T. Sutherland.
8 Hydatid Cyst Following Direct Implantation of Ovum of Taenia Echinococcus. T. S. Hutchings.

*March 2, I, No. 33, pp. 357-368*

9 Treatment of Inoperable and Operable Sarcomatous Growths by Coley's Fluid. R. B. Duncan.
10 Glaucoma. J. W. B. Barrett and W. F. Orr.
11 Symptoms of Vagal Involvement Following Diphtheria. M. Williams.
12 Dystocia Due to Hydatid Cyst in Pouch of Douglas. R. T. Sutherland.

2. **Ankylostomiasis in Ceylon.**—Of internal diseases a fairly common one in Ceylon is ankylostomiasis. This disease, even in the tropics, is frequently mistaken for simple anemia, general dropsy, malarial cachexia, or for beri-beri; hence the importance of examining early the feces for the ova. If these are found, Fiaschi says, the patient should be at once treated with thymol, using the well-known precautions necessary with such a powerful drug; but if too weak to stand this, Castellani gives the following combination:

| ℞ | Gm. or c.c. | |
|---|---|---|
| Olei Eucalypti | 2 | ♏xxx. |
| Chloroformis | 3 | ♏xlv |
| Olei Ricini | 38 | ʒx |

One-half of this is given in the morning and the other half an hour later.

7. **Early Rising During Puerperium.**—For statistical purposes Sutherland took 200 consecutive cases of early rising, the date of rising ranging from the fourth to the eighth day. Of these 118 sat out on the fourth, thirty-eight on the fifth, seventeen on the sixth, ten on the seventh, and seventeen on the eighth day. Two were discharged on the ninth, 116 on the tenth, thirty-seven on the eleventh, nineteen on the twelfth, fourteen on the thirteenth, three on the fourteenth, eight on the fifteenth and one on the seventeenth day. One patient returned after ten days with uterine hemorrhage. A very small piece of placenta was found at the fundus and removed by the curette. She was quite well after. One patient fainted on sitting up in bed on the seventh day. One patient was giddy on sitting out on fourth day. One patient complained of backache on sitting up in bed on the second day. One patient died suddenly of pulmonary embolism on the thirteenth day while being discharged in the waiting room. She sat up on the seventh day, but had a temperature on the evening of ninth and tenth days of 103 F., and was then kept in bed. One patient complained of headache on the eighth day (sat out third day). One patient had shreds on tenth day (sat out sixth and discharged thirteenth day). One patient had placental tissue removed on the ninth day. One patient had triplets. Three had twins. Eight had forceps (4 per cent.). Five had post-partum hemorrhage. Four had inflamed breasts (2 per cent.). Twenty-eight required a uterine douche (14 per cent.). Sixty-one patients (30.5 per cent.) had a temperature of 99 F. or over at some period or other during the puerperium. If the patients are excluded in which the temperature was under 100 F. there remain thirty patients (15 per cent.) with temperatures of 100 F. or over at some period.

### Lancet, London

*March 30, I, No. 4622, pp. 849-910*

13 *Paratyphoid Fever and Meat Poisoning. F. A. Bainbridge.
14 Different Forms of Human Electrocardiogram and Their Significance. W. Einthoven.
15 Case of Ruptured Kidney. A. Adams.
16 Salvarsan in Syphilis. D. Kennard and W. H. Gordon.
17 *Classification in Gynecology. W. E. Fothergill.
18 Sex of Larvæ of Mosquitoes. H. A. Adie.
19 *Abscess of Lung and Liver: Simple Cure of Chronic Case by Upside-Down Position. W. E. McKechnie.
20 Pulmonary Embolism as Sequel of Diphtheria. D. Stewart.

13. **Paratyphoid Fever and Meat Poisoning.**—The evidence which Bainbridge presents is offered as proof positive that meat poisoning and paratyphoid fever are distinct diseases. In the first place he says they are caused by different bacilli, which (though closely allied) can be distinguished by appropriate methods. Second, the distribution of the organisms which cause paratyphoid fever is quite unlike that of the organisms which cause meat poisoning. Third, paratyphoid fever is spread by human bacillary carriers, whereas meat poisoning results from the consumption of food which is derived from infected animals or is contaminated by animal agency. Finally, the clinical pictures of the two diseases are usually quite dissimilar. It is true that, on the one hand *B. paratyphosus* (A) and (B) have, although very rarely, been met with in cases of acute gastro-enteritis, and that, on the other hand, the illness following the consumption of meat infected with Gaertner's bacillus or *B. suipestifer* may take the form of pyrexia lasting two or three weeks. But Bainbridge does not attach much importance to these exceptional cases, partly because they are exceptional, but still more because abdominal infections seem unusually liable to variability in their clinical manifestations, a case in point being enteric fever. It may, however, he continues, be admitted that the boundary-line between meat poisoning and paratyphoid fever is less well defined in regard to their clinical character than in regard to their epidemiology, and possibly they may eventually prove to be more nearly akin in some respects than now seems to be the case.

17. **Classification in Gynecology.**—For some years Fothergill has been using six main divisions in clinical teaching and in his own work. They were suggested to him by the arrangement of specimens introduced by Lorrain Smith into the pathologic museum of the University of Manchester, and thus have the sanction of professional pathologists. They are: (1) Developmental Errors; (2) Vascular Changes; (3) Mechanical Conditions; (4) Results of Infection; (5) Progressive Conditions; and (6) Retrogressive Conditions. 1. "Developmental Errors" contain two sub-groups: (a) congenital errors, and (b) errors in development at puberty. 2. "Vascular Changes" includes active and passive hyperemia as recognized at first by symptoms and later by hypertrophy and fibrosis, respectively. This group also includes varicosity of the veins in the pelvis and hemorrhage into the pelvic organs, the pelvic cellular tissue, and the peritoneal cavity. 3. "Mechanical Lesions" is a large and obvious group containing injuries, displacements and hernias. 4. "Results of Infection" is a main division which is to be subdivided

according to the organisms present in each case. In this group the few cases of primary pelvic parasitic disease may be included without gross impropriety. 5. "Progressive Conditions" includes overgrowths, cysts and new growths. Perhaps this group should be divided. But it is hard to draw the line between hypertrophy and adenoma of the endometrium or between innocent and malignant new growths. 6. "Retrogressive Conditions" occur mainly in connection with the menopause, but the reproductive organs share in the general changes of senility.

19. **Abscess of Lung and Liver.**—From the character of the pus in this case, the practically aseptic condition and the physical signs, McKechnie diagnosed liver abscess with perforation of diaphragm and pleura and secondary abscess in the base of the lung, with adhesion of lung, liver and pleura to the diaphragm in the neighborhood of the perforation; with intermittent partial evacuation of the cavities in the liver and lung *via* the bronchi and trachea. It appeared that the cavities were only partially emptied by fits of coughing when, after filling up, the pus began to rise in the bronchi, causing irritation by its hydrostatic pressure on the lung and liver and its presence in the healthy parts of the bronchi. That this surmise was probably correct was shown by the fact that when McKechnie began treatment by inverting the patient, at once a very large quantity of pus was evacuated; a full breakfast cupful, a quantity greater by far than he had been in the habit of evacuating by any one spasm of coughing. He made the boy hang suspended over the edge of a table, head downward, the whole body hanging vertically upside down, the legs and thighs lying on the table at right angles to the body and thus supporting him. In this position he was made to cough and squeeze his chest till no more pus came out. By this means the abscess cavity was completely emptied, and he was made to repeat the process five or six times a day. In about six weeks he ceased to have pus and was cured.

### Australasian Medical Gazette, Sydney.

*February 17, XXXI, No. 7, pp. 149-176*

21 *Neurasthenia. C. Allbutt.
22 Treatment of Mental Disease in Early Stage. J. M. Mosher.
23 Ocular Hygiene of Schools. G. H. Hogg.

*February 24, XXXI, No. 8, pp. 177-208*

24 Disease of Man Spread by Insects. A. G. Butler.
25 *Stramonium Poisoning. H. H. Parkinson.

*March 2, XXXI, No. 9, pp. 209-236*

26 Experimental Leprosy. J. A. Thompson.
27 Criminal Abortion. F. H. Kenny.
28 Case of Ruptured Kidney. R. N. Rockett.

*March 9, XXXI, No. 10, pp. 237-260*

29 Government Ophthalmic Hospital, Madras. T. Smith.
30 Tumors Met with in General Practice. W. S. Sweet.
31 Absence of Zygomatic Arch. H. G. Holmes.

21. **Neurasthenia.**—Drugs, says Allbutt, play a subsidiary part in the cure of neurasthenia; though, of course, on the other hand, for occasional uses they are indispensable. Constipation often yields, with but little drug assistance, to skilful abdominal massage. The so-called "tonics" are useful incidentally. In convalescence the advance from occupation to occupation, from exercise to exercise, needs the greatest discretion, for, in contrast with hysteria, a chance excess of work may undo the advantage of many weeks' improvement. A very large part of convalescent occupation should be manual rather than mental work. It is well, as soon as may be, to arrange for the convalescent exercises with cheerful companions; and a quick eye will learn to perceive when rest is degenerating into dawdling and coddling, and when a cautious return to activity is required. For in many of these patients moral education is as important as the physical; in children and young adults the moral education is of the utmost importance; in older persons, habits good and bad are too often fixed and permanent; thus it is very important not to let the child hear what has been called the "formula of his defects," lest he act up to the character, and so fix his more fluid dispositions on perverted lines.

25. **Stramonium Poisoning.**—Parkinson could find out nothing about the toxic effects of stramonium. He simply treated the symptoms. Hydrochloric acid was given, as stramonium is incompatible with mineral acids. Opium was used as a sedative, and to prevent tenesmus should diarrhea come on as he anticipated. Aconite was given to slow the heart's action.

### British Medical Journal, London

*March 30, I, No. 2674, pp. 709-764*

32 *Skin Rashes in Children. J. L. Bunch.
33 Late Syphilitic Glossitis Treated by Salvarsan (Ehrlich-Hata). Sir M. Morris.
34 Sixteen Months' Experience of Salvarsan. G. G. S. Stopford-Taylor and R. W. Mackenna.
35 Cases of Chronic Purpura With and Without Cutaneous Lesions. F. H. Edgeworth.
36 Leishmania Donovani and Leishmania Tropica. R. Row.
37 Epithelioma of Hand and Glands; Removal of Two Fingers and Glands. R. Parker.
38 Acute Poliomyelitis (Heine-Medin's Disease). R. M. Hewitt.
39 Acute Anterior Poliomyelitis in Southwest Norfolk. G. F. Cross.
40 Serum and Vaccine Therapy in Connection with Diseases of Eye. C. W. G. Bryan.

32. **Skin Rashes in Children.**—As regards treatment of pityriasis rosea Bunch advises a soap and water bath every day, or, if there is any itching, a starch or alkaline bath should precede the application of any lotion or ointment. The following lotion may be ordered:

| ℞ | Gm. or c.c. | | |
|---|---|---|---|
| Glycerini acidi carbolici .......... | 66 | | ♏x |
| Sodii bicarbonatis.................. | 66 | or | gr.x |
| Boracis ......................... | 33 | | gr.v |
| Aq. Dest. ......................ad | 30 | | ℥j |

or

| ℞ | Gm. or c.c. | |
|---|---|---|
| Liq. Sodii chlorinatæ............ | 2 | ♏xxx |
| Spiritus lavandulæ ............ | 8 | ʒij |
| Aq. Dest. ......................ad | 30 | ℥j |

If an ointment, one containing 15 grains of either or both to the ounce of vaseline, may be ordered; or an ointment containing yellow mercuric oxid and resorcin may be made up with lanolin and lard. Under such treatment Bunch says the disease tends to disappear in about a month.

### Bristol Medico-Chirurgical Journal

*March, XXX, No. 115, pp. 1-96*

41 Appreciation of Lord Lister. R. Roxburgh.
42 Direct Laryngoscopy, Bronchoscopy and Esophagoscopy. P. Watson-Williams.
43 Chronic Interstitial Pancreatitis of Uncertain Origin. J. M. Clarke.
44 Operations on Uterus and Appendages During Pregnancy. W. C. Swayne.
45 Cases Illustrating Difficulty and Importance of Early Diagnosis in Acute Intestinal Obstruction. E. W. H. Groves.
46 Tuberculosis of Nose and Pharynx. A. J. Wright.
47 *Gall-Bladder Cases Presenting Features of Interest. E. H. E. Stack.
48 *End-Results of Forty-One Operations for Internal Derangements of Knee-Joint. A. R. Short.

47. **Gall-Bladder Cases.**—The points of interest referred to by Stack are 1. An advanced condition of cholecystitis, with dense adhesions or even pus in the gall-bladder, may be present in patients who have never had to leave off their ordinary duties. 2. Histories typical of gall-stone colic may be present in patients when there is nothing amiss with their biliary apparatus, as in the pancreatic and hydatid cyst cases. 3. A very large calculus can be present in the common duct without there ever having been jaundice. 4. In acute pancreatic disease, if the patient lives some time, the digestive action of the discharge in retarding healing is very marked. 5. Six weeks may elapse after an operation before bile begins again to enter the intestine. 6. Gall-stones can simulate cancer in all its symptoms, except, of course, those due to metastasis.

48. **Operations for Internal Derangements of Knee-Joint.**—During the ten and a half years from January, 1901, to July, 1911, there have been treated by operation at the Bristol Royal Infirmary fifty-six patients with internal derangement of the knee-joint out of a total of 22,782 surgical in-patients. Of these it has been possible to obtain an after-history in forty-one instances. In twenty cases there was an obvious tearing or loosening of one or other semilunar cartilage; in two it was the external and in eighteen the internal that was

at fault. The abnormalities were very various. In seven cases the internal cartilage was split. In three cases the internal cartilage was not torn, but very loose. There were one or two instances of each of the following: Anterior end torn free (2), posterior end torn free (2), external cartilage left attached only at ends (2), internal cartilage torn across middle (1), left attached only at ends (1) or only in front (1), anterior part torn away from capsule except at the extreme end in front (1). The loose bodies were usually composed of bone and cartilage (5 cases) or cartilage only (4 cases). In one instance the body was derived from the internal semi-lunar cartilage; in several cases it was noted that there was a depression on the femur from which a piece of bone and cartilage had separated. In several cases there was a loose fibrous attachment. In one knee the loose body was organizing blood-clot. Once there were two bodies present, and such difficulty was experienced in getting hold of the second that it had to be left. No after-history is available.

The relation to injury was very definite in nearly all cases. It is precisely stated that in nine patients the cause was a football accident, and in another the game of hockey. Probably there were others besides these. Of the whole series of forty cases, excluding one in which the clinical picture was quite unlike that characteristic of internal derangement: In twenty-five the result is described as excellent. In seven the result is described as good. In four the result is described as fair. In four the result is described as bad. No patient died as a result of the operation. Where a damaged cartilage was found and removed the operation was extraordinarily successful, and there was not a single failure. On the other hand, when a loose body was removed, there were three unsatisfactory results, and only two quite recent cases could be classed as excellent. Six patients mention that they are now able to play football again, several are miners, and one is a sailor. One miner is able to do his work without inconvenience after removal of a cartilage from both knees.

### Annales de Gynécologie et d'Obstétrique, Paris

*March, XXXIX, No. 3, pp. 129-192*

49 Evolution of the Practice of Obstetrics. (De l'évolution de l'obstétricie et de ses rapports mutuels avec l'évolution sociale.) A. Pinard.
50 *Delivery in the Tabetic. (Tabes et puerpéralité.) A. Fruhinsholz and A. Rémy.
51 *Infection of the Cervix During Labor. (L'infection du col pendant le travail et la rigidité secondaire des bords de l'orifice utérin.) Potocki and Sauvage.
52 *Serotherapy in Uncontrollable Vomiting of Pregnancy. (Vomissements graves de la grossesse et sérum de femme enceinte des premiers mois.) G. Fieux and A. Dantin.

50. **Delivery in the Tabetic.**—Observation of the influence of a pregnancy on the progress of the tabes has shown that in some cases it has aggravated, in others favorably modified, the course of the tabes, and in others no influence was apparent. Few realize the importance of examining for signs of tabes in cases of uncontrollable vomiting in pregnant women; but not until tabes has been excluded should the diagnosis of a purely pregnancy process be accepted. In a case reported in detail a iv-para of 36 was spontaneously and painlessly delivered of a healthy boy, free to date—over two years—from any signs of inherited taint. The contractions of the uterus proceeded normally in all the cases of the kind on record, although the patients were unaware of them, and delivery was physiologic.

51. **Masked Infection of the Cervix During Labor.**—Potocki and Sauvage warn that when the edges of the os become rigid from infiltration during labor, this is a sign that the cervix is infected and thus is a danger signal. It is generally assumed that this infiltration is of mechanical origin but their research has disproved this, and they emphasize that the discovery of secondary rigidity of the lips of the os should impose hysterectomy as the only means to ward off serious trouble from the underlying infectious process already set up.

52. **Serotherapy in Vomiting of Pregnancy.**—Fieux and Dantin report the case of a iii-para of 26 who developed uncontrollable vomiting early in her latest pregnancy and her condition became alarming by the fourth month. A subcutaneous injection was then made of 3 or 4 c.c. of serum from a healthy woman approaching the third month of pregnancy. Improvement was apparent at once, and after a second similar injection—using 12 c.c. this time—there was no further tendency to vomit. No other measures were applied after the serum was injected, and the patient was given the usual diet. Le Lorier reported last July a similar case, but the immediate improvement in these cases may have been a mere coincidence. (Mayer's report of improvement of toxic pregnancy skin affections under this form of serotherapy was published in The Journal Oct. 21, 1911, p. 1415.)

### Annales de l'Institut Pasteur, Paris

*February, XXVI, No. 2, pp. 82-159*

53 Factors of Bacterial Toxlcity. II. (Etude des bacilles de Preisz-Nocard.) M. Nicolle, G. Loiseau and P. Forgeot.
54 Serodiagnosis of Infection with Preisz-Nocard Bacilli. (Nouveau procédé de diagnostic des Infections à bacilles de Preisz-Nocard.) P. Forgeot and E. Cesari.
55 Chickens Brought Up Free from Microbes. (Expériences sur la vie sans microbes.) M. Cohendy.
56 The Destruction of Red Corpuscles in Spleen and Liver. (La destruction intrasplénlque et intrahépatique de corpuscules rouges du sang dans les conditions normales et pathologiques.) I. I. Lintvarev

### Archives des Maladies du Cœur, etc., Paris

*March, V, No. 3, pp. 163-224*

57 Heart and Venous Pulse Tracings While Reclining on Left Side. (Les avantages de l'inscription simultanée systématique du cardiogramme en décubitus latéral gauche et du pouls veineux.) E. Pezzi and H. Sabri.
58 Extrasystoles Witbout Compensating Repose. H. Busquet.
59 Experimental Syphilitic Arteritis. (Recherches expérimentales sur les artérites et les anévrysmes syphilitiques.) F. Vanzetti.

### Archives Mensuelles d'Obstetrique et de Gynécologie, Paris

*March, XVII, No. 3, pp. 225-304*

60 *Cultures of Lactic-Acid Bacilli in Local Treatment of Puerperal Infection. (Les cultures de bacilles lactiques dans le traitement de l'infection puerpérale.) A. Brindeau.
61 Rupture of the Dura in the Newly Born. (Les ruptures de la dure-mère cranienne chez les nouveau-nés.) L. Meyer and E. Haugh.
62 Placenta Antibodies. (Les anticorps placentaires dans le sang de la femme gravide.) P. Bar.
63 *Ultimate Outcome of Cesarean Section. (Le pronostic éloigné de l'opération césarienne classique.) M. Marioton.

60. **Lactic-Acid Bacilli in Local Treatment of Puerperal Infection.**—Brindeau declares that cultures of lactic-acid bacilli are valuable for sterilizing any tissue, not merely the intestines alone to which their use hitherto has been restricted. It is logical, for lactic acid is a powerful and non-toxic antiseptic. The cultures prevent the development of pathogenic species and promote leukocytosis, while the lactic-acid bacilli never become pathogenic. The cultures can be used to sterilize any septic or putrid wound, but their main field is for infected vulvoperineal tears after delivery. He mixes the contents of a culture vial with sterilized milk sugar and injects the soft mass into the vagina and applies wicks of gauze directly to the wound, renewing the dressing three times a day for two days. The action is quicker the more concentrated the culture, so he centrifuges it to collect the bacteria for an urgent case. He gives the details of fourteen cases of puerperal endometritis, fifteen of vulvovaginal tears, seven of mammary abscess, four of postoperative fistula, three of vaginal hysterectomy, two of puerperal peritonitis, one of the Porro operation and four of other operations, all confirming the efficacy of lactic-acid bacilli in cleansing, sterilizing and promoting healing of infected wounds.

63. **Repeated Cesarean Section.**—Marioton states that Bar has delivered twenty-four patients who had previously undergone cesarean section, and in all but one case it was necessary to deliver the child by repeating the cesarean section. The uterus did not rupture in any instance, but Marioton has found records from three other clinics showing spontaneous rupture in from about 2 to over 18 per cent. in thirty-nine, twenty, and eleven cases, while four other clinics report no ruptures. In the total 157 cases of pregnancy following cesarean section in the total eight clinics, rupture occurred thus in 2.54 per cent. Experience teaches the necessity for making the second cesarean section early, before labor has

commenced. The greatest prudence is necessary also in selecting the cases suitable for cesarean section. It should be done only in those free from risk of infection.

### Bulletin de l'Académie de Médecine, Paris

*March 12, LXXVI, No. 11, pp. 193-212*

64 *Treatment of Undescended Testicle. (Procédé d'orchidopexie.) C. Walther and C. Monod.

64. **Treatment of Undescended Testicle.**—The special feature of Walther's technic is that the spermatic cord is mobilized as far up as possible and the testicle is drawn down and slipped into the other half of the scrotum through a small slit made for it in the septum. The slit is then sutured on each side of the spermatic cord, so that the testicle is held firmly in its new bed by the elastic force of the septum. He leaves the cord entirely free; the traction from the testicle below gradually stretches it. The testicle itself is also left free in its new bed. He has applied the method in over thirty cases and thirteen of the patients have been recently reexamined after an interval of a few months to over nine years, all confirming the excellence and permanency of the results.

### Presse Médicale, Paris

*March 20, XX, No. 23, pp. 229-236*

65 Technic for Sphygmomanometry. E. Enriquez and J. Cottet.

### Archiv für klinische Chirurgie, Berlin

*XCVII, No. 3, pp. 515-830. Last indexed April 6, p. 1044*

66 Leontiasis and Fibrous Ostitis. (Ueber Leontiasis ossea und Ostitis fibrosa.) Boit.
67 Anastomosis Between Bile Ducts and Intestines. (Ueber Gallenweg-Darmverbindungen.) W. Kausch. Commenced in No. 2.
68 *Operative Treatment of Suppurative Meningitis. (Die Operation der eiterigen Meningitis.) S. Kostlivy.
69 Causes of Spontaneous Gangrene. (Zur Pathogenese der sogenannten spontanen Gangrän.) T. Todyo.
70 Fascia Flap to Close Defect in Trachea. (Deckung von Trachealdefecten durch eine freie Plastik aus der Fascia lata femoris.) H. Levit.
71 *Fracture of the Skull. (Die Schädelfracturen und ihre Behandlung mit besonderer Berücksichtigung der primären Schädelplastik—Reimplantation.) W. Schaack.
72 Iodid as Factor in Exophthalmic Goiter. (Erzeugt Jodeinspritzung Morbus Basedow?) O. Bardenhewer, H. Klose and R. E. Liesegang.
73 *Experimental Surgery of the Heart. (Versuche zur Herzchirurgie.) E. Schepelmann.
74 *Roentgenotherapy of Skin Cancers. (Die Röntgenbehandlung der Hautcarcinome, speciell des Basalzellenkrebses; sein histologisches Verhalten vor und nach der Bestrahlung.) H. Körbl.
75 Technic for Gall-Stone Operations. (Ueber den Bauchdeckenschnitt, die Bauchnaht und die Tamponade bei Gallensteinoperationen.) O. Sprengel.
76 The Laparotomy Incision. (Zur Frage des Bauchdeckenschnittes.) W. Körte.

68. **Operative Treatment of Suppurative Meningitis.**—Kostlivy reports a case of suppurative meningitis following fracture of the occipital bone in a man of 52 and one following otitis media in a boy of 13, in both of which the accumulation of pus under the dura was evacuated, with the recovery of the boy and marked improvement in the other case. The progress of the meningitis in the latter case, however, was only temporarily arrested; the patient succumbed three weeks later with symptoms of progressive dementia and necropsy showed general atrophy of the brain, the meninges clean and smooth except where fresh granulations had formed around the trephined portion. It is probable that the trauma in this case had been due to the preexisting atrophy of the brain. In both cases the operative treatment may be regarded as having been successful and proved its usefulness. The site for the trephining must be determined by the trauma or the ear affection, or possibly repeated puncturing by the Neisser-Pollack technic may be necessary to locate the best point for the operation. In both the above cases the cerebrospinal fluid obtained by lumbar puncture was very turbid, and the changes found in the meninges at the operation were of the severest nature. In another case a man of 40 with a chronic otitis media was hit on the head with a potato during a brawl and the discharge from the ear increased, with much headache, and a radical mastoid operation was done. Recovery was apparently smooth for nearly three weeks when fulminating suppurative meningitis developed suddenly and proved fatal in a few hours. The meningitis was metastatic in this case, a small focus on the other side of the head, while the original focus was clean and smooth. Kostlivy's experience has been that there is less tendency to prolapse of the brain when a considerable area is exposed than with a small trephine opening. In one case he made two small openings and thinks that this facilitated drainage. In both his cases there was oozing for a long time; even if merely the local exudation is drained away, this removes septic matters and prevents their spreading to adjacent regions.

71. **Fractures of the Skull.**—Schaack reviews the experiences with 530 cases of fracture of the skull at the Obuchow hospital in St. Petersburg. In eighteen cases the broken off pieces of the skull were reimplanted and the results confirm the superior advantages of this measure. Fourteen of the patients made a smooth recovery. In the 166 cases of fracture of the base of the skull the mortality was 61 per cent.; treatment here can be only conservative and symptomatic. The prognosis is much better with fracture of the convexity of the skull; the mortality was only 25 per cent. in the 206 cases of this kind in which an operation was attempted among the total 364. In fourteen of the cases local anesthesia sufficed. The mortality in the fatal cases was almost exclusively the result of the injury to the dura from the accident. When the brain is injured too, the prognosis is still graver; the mortality was 56 per cent. in his fifty-six cases of this kind, nearly all the patients succumbing to suppurative meningitis.

73. **Experimental Surgery of the Heart.**—Schepelmann gives an illustrated description of some experimental work in this line, the chordæ tendineæ or some valve being cut with a special chordotome he has devised, or the superior venæ cavæ being ligated in the rabbit and dog. His experience with eighteen rabbits and eighteen dogs has shown that the heart is too weak in older animals, accustomed to life in captivity, to stand such an operation, but that young vigorous animals bear it with comparative ease. The tissues of the heart were so friable in the older animals in captivity that the sutures would not hold.

74. **Roentgenotherapy for Cancer of the Skin.**—Körbl reports the results of exposures to the Roentgen rays in 140 cases of superficial cancer during the last six years at von Eiselsberg's clinic at Vienna. Seventy-three of the patients have been reexamined recently, and he summarizes the details of each in this group. Twenty-eight of the patients have had no signs of recurrence since; but in thirty-seven cases the cancer has returned. In eight cases the cancer seemed to be rebellious to the rays, no effect from the exposures having been apparent at any time. The interval since the exposures in the twenty-eight cases of apparent cure has been six years in two; five years in two; four years in six; three years in five; two years in four, and one year in nine. The principle for treatment is to urge radical surgical measures in every case. But if the patient absolutely refuses or is of very advanced age or other conditions forbid a radical operation, then roentgenotherapy is applied. In every case an exploratory excision of the growth is made and if the findings indicate an epithelioma then the radical operation is insisted on most strenuously. In four cases the recurrence of a basal cell carcinoma was different histologically from the original cancer, being more like an ordinary epithelioma. This transformation of a basal cell carcinoma into a growth of the ordinary epithelioma type has been observed so far only when the original growth has been exposed to the Roentgen rays, but it suggests that these cancers are of equally malignant nature with the other epitheliomas, and consequently require radical excision just as much as the others.

### Beiträge zur klinischen Chirurgie, Tübingen

*March, LXXVIII, No. 1, pp. 1-154*

77 *External and Internal Secretions Studied by Injecting Stain Into Living Animals. (Die äussere und innere Sekretion des gesunden und kranken Organismus im Lichte der vitalen Färbung.) E. E. Goldmann.
78 Mouse Carcinosis. (Verhalten der Lymphgefässe bei experimentell erzeugter Peritonealcarcinose der Maus.) H. M. Evans.

79 Etiology of Talipes Cavus. (Zur Aetiologie des Klauenhohlfusses.) F. Gelges.
80 Pulsion Diverticulum of the Esophagus. (3 weitere Fälle von zweizeitig operierten Pulsionsdivertikeln des Oesophagus.) F. Geiges.

77. **Study of the Vital Processes by Diffuse Incorporation of a Stain.**—It is now two years since Goldmann called attention to the remarkably instructive findings in regard to secretions, both external and internal, when a living animal is injected with a stain. It soon becomes incorporated and participates in the vital processes. (See THE JOURNAL, Oct. 2, 1909, p. 1140). He here reports further research in this line, his monograph filling 108 pages, blazing the way and building the roadway for further investigators to go on beyond the point he has reached. His work was done with rats and mice; the stain used was isamin blue, and he gives thirty colored plates of the findings showing the biochemistry learned by this means in regard to the ovum, placenta, embryonal tissue, the histochemistry of the peritoneum, the fate of injected substances, of induced infections and degenerative processes, intoxications, the healing of wounds, tumors, etc., and vital processes in general. Among the new conceptions gleaned from this research is the close analogy between the fetus and a cancer, especially in the avidity and force with which each takes up substances from the maternal organism. Only one organ displays any power in this line even approximating that of the placenta; this organ is the liver. The findings with vital staining of the liver suggest, Goldmann says, that substances which have a toxic influence on the liver might have an influence on malignant growths.

### Berliner klinische Wochenschrift

*March 18, XLIX, No. 12, pp. 533-580*

81 Cultivation of Living Tissues Outside of the Organism. A. Carrel.
82 Plastic Surgery. (Demonstration zur plastischen Chirurgie.) R. Mühsam.
83 *Cramp of the Iris. (Beschreibung von periodischem Auftreten einer wandernden Pupille.) A. Erlenmeyer.
84 Fever from Excessive Thyroid Functioning. (Temperaturerhöhung bei Hyperthyreoidismus.) H. Stern.
85 *Dissolved Albumin in Stomach Content with Cancer. (Beitrag für die diagnostische Verwendbarkeit des Gehaltes an gelöstem Eiweiss bei Achylia gastrica.) K. Thiele.
86 *Potassium in Treatment of Gout. (Bedeutung des Natriums und Kaliums für die Entstehung und Heilung der Gicht, mit Berücksichtigung des Radiums. Nach Tierversuchen.) S. Cohn.
87 *Composite Roentgenogram of Moving Object. (Polygramme, eine neue Art Röntgenbilder zur Darstellung von Bewegungsvorgangen.) M. Levy-Dorn and M. Silberberg.
88 Five Cases in Which an Artificial Common Bile Duct Was Made from Simple Rubber Drain. (Bildung eines künstlichen Choledochus durch ein einfaches Drainrohr.) M. Wilms.

83. **Recurring Ameboid Movements of the Pupil.**—In Erlenneyer's case a woman of 48 had attacks at times of what he alls "wandering pupil." During about twenty seconds the upil spread and twisted, becoming oval and then stretching ut long, with the longest axis slanting or transverse. He comares the movements to those of the ameba and explains them s a hysteric clonic spasm of the iris.

85. **Albumin in Stomach Contents with Cancer.**—Thiele eports experiences which confirm the diagnostic value of the iscovery of dissolved albumin in the stomach content one hour fter the Ewald test-breakfast. The response was constantly egative in his fifteen cases of benign achylia and as contantly positive in his twelve cases of gastric cancer. The ries include three border cases with intermediate figures. The mple test is made by diluting the stomach content with dislled water, 1 to 10; 0.5 to 10; 0.25 to 10; 0.05 to 10, and 025 to 10. Then 1 c.c. of the reagent is placed carefully on p of the mixture in each of the six beakers in turn. The rst beaker in which no turbid zone forms on addition of the eagent is accepted as the index for the findings, designated r the dilution 10, 20, 40, 100, 200 and 400. In Thiele's three order cases the index was 100; in the cancer cases constantly 00 or 400, while in the benign achylia cases the index was om 10 to 40 in the majority, reaching 60 in a single case. he technic was described in THE JOURNAL July 8, 1911, p. 3. The reagent is a solution of 0.3 parts phosphotungstic id; 1 part hydrochloric acid, 20 parts 96 per cent. alcohol, nd 200 parts water.

86. **Sodium in Origin of Gout.**—Cohn presents arguments and relates experimental and clinical experiences which he thinks justify the conclusion that gout is the result of derangement of the metabolism of sodium and potassium and suggest that abstention from sodium is an important therapeutic measure. Potassium, on the other hand, counteracts the injurious influence of the sodium and should be given systematically. He has taken the potassium salts himself and given them to patients for weeks and months at a time and never witnessed any injurious by-effects, while they displayed a marked influence in attenuating the gouty process.

87. **Polygrams of Moving Organs.**—The principle of the moving picture is applied by Levy-Dorn and M. Silberberg, only they make the two or three exposures all on the same plate without changing it. The resulting composite picture shows the varying outline of the organ at the different periods, and gives instructive oversight of the motor conditions as they show by a number of examples.

### Correspondenz-Blatt für Schweizer Aerzte, Basel

*March 20, XLII, No. 9, pp. 321-368*

89 *Poisoning from Food. (Einige Fälle von Nahrungsmittelvergiftungen.) H. Reinhold.

89. **Poisoning from Food.**—Reinhold reports three paratyphoid epidemics following the eating of meat or fish. The disturbances suggested cholera, the diarrhea, colics, vomiting, prostration and apathy. A number died of those affected, but necropsy revealed merely hyperemia and extravasation of blood in the intestinal mucosa. Differentiation was possible only by the agglutination test, as the presence of a few paratyphoid bacilli in the stools is no sign of paratyphoid infection. He urges physicians to inquire into the history of the case, the food eaten and its origin, examine the excreta, and test for agglutination in all suspicious cases. He would like to have his country adopt the German law requiring declaration of all such cases.

### Deutsche medizinische Wochenschrift, Berlin

*March 21, XXXVIII, No. 12, pp. 537-584*

90 Traumatic Neuroses. (Begutachtung der nervösen Unfallerkrankungen sowie der nervösen Beamten.) A. Cramer.
91 *Problems in Chemotherapy. F. Blumenthal.
92 Salvarsan in Anthrax. (Neuere Gesichtspunkte in der Milzbrandtherapie.) G. Becker.
93 Salvarsan in Malaria. (Behandlung der Malaria mit Salvarsan.) M. Tuschinsky.
94 Mushroom Poisoning. (Kasuistischer Beitrag zur Kenntnis der Pilzvergiftungen.) J. Schurer.
95 *Roentgenoscopy and the Tryptophan Reaction in Diagnosis of Gastric Cancer. (Leistungen des Röntgenverfahrens und der Glyzyl-Tryptophanreaktion für die Diagnose des Magenkarzinoms.) C. Kayser.
96 Case of Recovery from Tuberculous Meningitis. (Heilbarkeit der tuberkulösen Hirnhautenzündung.) Hochstetter.
97 Effect of Heated Term on Infants and Older Children. (Einwirkung der Sommerhitze auf Säuglinge und ältere Kinder.) E. Schlesinger.
98 Periodically Recurring Parotitis; Two Cases. (Periodische Speicheldrüsenschwellungen.) C. Luders.

91. **Chemotherapeutic Problems.**—Blumenthal reports years of research on the affinity of different drugs, especially arsenic and mercury, for the various tissues and whether certain preparations of the drugs possess more of an affinity to certain tissues and whether this affinity can be influenced from without. His findings supply a basis for certain empirically learned facts and explain others. Among the points thus learned is that the combination of an iodid with an arsenic preparation serves to promote the transportation of the arsenic to the tissues—the iodid thus proving an efficient conveyor for arsenic. It acts entirely different with mercury, hastening its evacuation, the iodid in this case conveying the mercury out of the system.

95. **Diagnosis of Gastric Cancer.**—Kayser states that the experiences at the Strasburg policlinic in charge of E. Meyer have confirmed the importance of the aid in diagnosis of cancer from roentgenoscopy and the glycyl-tryptophan reaction. They permitted in some cases detection of gastric cancers which had eluded all other means of investigation. Positive findings with the tryptophan test render cancer highly probable, but negative findings do not exclude it unless the test has been applied several times. With much retention, the response is less pro-

nounced, and consequently it is important to rinse out the fasting stomach before the Ewald test-breakfast, watching, however, to see that bile pigments, blood and tryptophan itself do not get into the stomach when this is done. He tabulates the findings of the tryptophan test, applied in fifty cases strictly according to Neubauer and Fischer's technic, including seventeen patients with known cancer. In three cases everything pointed to cancer except the negative tryptophan test, and an exploratory laparotomy confirmed its findings. With certain cancer, the reaction was positive in fourteen and negative in three cases, while it was constantly negative in all the other thirty-three cases of a gastric affection which proved to be non-malignant. (A recent article on this test was published in THE JOURNAL April 6, 1912, p. 1008.)

### Medizinische Klinik, Berlin

*March 24, VIII, No. 12, pp. 471-512*

99 *Syphilitic Disease of the Aorta. (Die syphilitische Erkrankung der Aorta.) A. Goldscheider.
100 Importance, Diagnosis and Treatment of Disease of the Nasal Sinuses. (Nasennebenhöhleneiterungen.) E. Wertheim. Commenced in No. 11.
101 *Primary Ethyl Chlorid Anesthesia. (Der Chloräthylrausch und seine Bedeutung für die Praxis.) A. Stieda and P. Zander.
102 Advantages of Carbon Dioxid Snow in Dermatology. (Ueber die Darstellung des Kohlensäureschnees und die Anwendung desselben in der Dermatologie.) L. E. Merian.
103 *Differential Diagnosis of Gastric Achylia and Cancer. (Zur Differentialdiagnose zwischen Carcinoma ventriculi und Apepsia simplex.) G. Einstein.
104 Salvarsan and Latent Microbism. J. Ruhemann.
105 Tincture of Iodin for Sterilization of the Skin. (Die Hautdesinfektion mit Jodtinktur.) Pickenbach.
106 *Whooping-Cough. (Zur Frage der Versorgung stickhustenkranker Kinder.) A. Galisch.

99. **Syphilitic Disease of the Aorta.**—Goldscheider states that the prevalence of involvement of the aorta is still underestimated. During the last two years he has encountered ninety-seven cases in his private practice and forty-nine in the policlinic. His experience confirms anew the favorable influence of specific treatment on the syphilitic affection of the walls of the aorta. Small aneurysms may retrogress entirely and medium-sized ones to a certain extent, but little effect can be anticipated in the cases of very large aneurysms; here benefit is exceptional. Iodid treatment alone never displayed any appreciable influence on syphilitic aneurysm of the aorta in his experience. General hygiene is especially important; in two of his cases carelessness in this line on the part of the patients interrupted the progressing improvement and put the patients back in their old condition. He is confident that by repeating the course of specific treatment from time to time the patient's life can be materially lengthened if he takes the proper precautions.

101. **Primary Ethyl Chlorid Anesthesia.**—Stieda and Zander have done over a thousand minor operations during the last year under anesthesia induced by the first whiffs of ethyl chlorid. They commend it as a convenient and effectual mode of anesthetizing for a brief operation. The operator must resist the tendency to give more of the ethyl chlorid than is necessary; the fact that the patient retains his consciousness is misleading in this respect. From 20 to 40 drops suffice for women and children; men may require up to twice this.

103. **Differential Diagnosis of Cancer and Simple Achylia.**—Einstein has been studying the amounts of dissolved albumin in the stomach content which Wolff and Junghaus assert are characteristic for cancer. (Their statements were summarized in THE JOURNAL July 8, 1911, p. 172). They found in malignant disease a large proportion of dissolved albumin in the stomach content one hour after the test meal with a very small proportion of pepsin and hydrochloric acid. Einstein's research confirms the importance of this test, the findings serving to differentiate simple achylia from the apepsia with malignant disease.

106. **Whooping-Cough.**—Galisch has noticed that the course of whooping-cough is more severe when several children have it together than when the child is kept apart from other children with it. The sight of others affected certainly aggravates the nervous element in the disease, and the possibility of a new infection from it cannot be positively excluded. He thinks that repeated infection is a possible factor in keeping up coryza as well as whooping-cough. In both affections he is confident that much would be gained by measures to prevent accumulation of disease products, having the child go into a second room and well ventilating the first, after each coughing spasm, using a fresh handkerchief each time in coryza.

### Jahrbuch für Kinderheilkunde, Berlin

*March, LXXV, No. 3, pp. 265-402*

107 Differential Pneumograph and Its Application to Children. (Der differentielle Pneumograph und seine Anwendung bei Kindern.) D. Ssokolow.
108 Great Advantages of Albumin Milk in Infant Feeding. (Zur Ernährung Neugeborener mit Eiweissmilch.) A. Benfey. (Ueber Ernährung magendarmkranker Säuglinge mit Eiweissmilch.) C. Beck.
109 Gangrene of Both Calves in Scarlet Fever. Recovery. (Fall von symmetrischer Hautgangrän bei Scharlach.) L. Silberstein.
110 Familial Fatal Jaundice in Two New-Born Infants. (Zur Kasuistik des habituellen familiären Ikterus der Neugeborenen.) H. Rehn.

### Mitteilungen aus den Grenzgebieten der Med. und Chir, Jena

*XXIV, No. 3, pp. 383-606. Last indexed March 23, p. 902*

111 *The Relations Between Phimosis and Kidney Disease. (Beziehungen zwischen Phimose und Nierenerkrankungen.) P. Heinrichsdorff.
112 Viscosity of the Blood. (Klinische und experimentelle Untersuchungen über die Viskosität des Blutes.) J. Mayesima.
113 Diagnosis and Treatment of Duodenal Stenosis. (Zur röntgenologischen Diagnostik und chirurgischen Therapie der Duodenalstenose ) H. Assmann and J. Becker.
114 *Prophylactic Nucleic Acid Injections Before Laparotomies. (Zur Vorbehandlung von Laparotomien mit subkutaner Injektion von Nukleinsäure.) E. v. Graff.
115 *Goiter in Northwestern Bavaria. (Die Verbreitung des Kropfes in Unterfranken.) W. Lobenhoffer.
116 Consequences of Removal of Long Stretch of Longitudinal Muscle in Intestinal Wall. (Folgeerscheinungen nach operativer Entfernung der Längsmuskulatur des Darmes.) A. Müller and K. Kondo.
117 *Four Cases of Lymphogranulomatosis. (Paltauf-Sternberg.) F. Blumberg.
118 *Importance of Occult Blood in Stomach Content or Stools as Sign of Cancer. (Der Nachweis von okkultem Blut in Stuhl und Mageninhalt und seine Beziehungen zur Diagnose chirurgischer Magenkrankheiten, insbes. zur Frühdiagnose des Magencarcinoms.) H. Zoeppritz.
119 *Pathogenesis of Cholelithiasis. L. Hofbauer.
120 Nature of Goiter. (Zur Frage nach dem Wesen des Kropfes.) B. Breitner.

111. **Connection of Phimosis with Kidney Disease.**—Heinrichsdorff remarks that any one who has occasion to do much necropsy work soon becomes impressed by the number and variety of conditions which may entail hydronephrosis directly or indirectly. He has recently encountered four cases in which the hydronephrosis was the direct consequence of phimosis. The text-books do not insist enough on the serious consequences liable to be entailed by phimosis, he declares; in the literature he has found only one instance recorded analogous to his four cases. No matter what the degree of phimosis or even of mere adherent prepuce, whether there is much or little obstruction to the outflow of urine, the effect is a want of cleanliness and consequent infection and balanitis, urethritis, cicatricial formations and changes in the bladder from the excessive straining even if there is no actual cystitis. The straining increases the inflammation and infiltration, the urine backs up even in the ureters, dilating them and reducing their elasticity, and hydronephrosis and uremia follow sooner or later. In the four cases described the attending physician did not connect the moderate phimosis with the kidney symptoms. The boys had complained for years of difficulty in urinating but, as they seemed well, little attention was paid to their complaints until after symptoms of uremia became apparent. Even these did not lead to detection and removal of the cause until after the uremia had been long installed, two years in one and five years in another case. A history of scarlet fever or appendicitis may aid in misleading the physician as in two of the cases reported. In two of the cases, as also in the one cited, the operation for the phimosis led to a fatal exacerbation; the patients had been suffering so long from uremic poisoning that the anesthetic used for the operation was the last straw for the urinary apparatus. The operation itself is harmless in this respect; the danger is from the ether or chloroform. This teaches the importance of operating for the phimosis without delay but exclusively under local anesthesia. The experiences related confirm further the importance of bearing phimosis in mind as a possible factor in all cases of hyper-

trophy of the bladder with bilateral hydronephrosis. Even when the prepuce seems normal, inquiry should be made whether the patient has ever had phimosis at any time; secondary changes may be left long or permanently after the phimosis has been corrected.

114. **Pre-Operative Nucleic Acid Has No Prophylactic Value.**—Preliminary injection of nucleic acid as a prophylaxis of peritonitis was given a thorough trial in von Eiselberg's service at Vienna but the conclusions are unfavorable. In 1,056 laparotomies done under the prophylactic injections the mortality from this cause was 4.6 per cent., but in a later series of 775 laparotomies, in which it was not used, the mortality averaged only 2.7 per cent.

115. **Goiter in Bavaria.**—Lobenhoffer gives a map of the Unterfranken district showing the local prevalence of goiter and the geologic formations. In some of the towns 21 to 26 per cent. of the inhabitants have goiter. The endemics correspond always to certain geologic formations from which the drinking water is derived. Water from shell limestone is the main goiter-producer, but in a milder degree red sandstone, keuper and zechstone are also involved. He urges the authorities to bring water from a distance if need be and to train the young to recognize that unboiled drinking water is a poison in certain regions. Boiling the water seems to do away with its goiter-producing properties, and it is possible that iltering through certain substances or treating with ultraviolet rays may have the same effect. Switzerland has accomplished much in the prophylaxis of goiter; a special committee gives advice after careful study of local conditions before any new watering system is installed, and an expert geologist should be consulted for all public improvements in goiter regions. The latest research in regard to the causal agent of goiter seems to demonstrate that it is a purely chem-cal substratum substance which enters the water as a toxin but which is certainly destroyed by heating the water to 70 C.

117. **Pseudoleukemia.**—Blumberg reports four cases of the Paltauf-Sternberg type of lymphogranulomatosis, with ecropsy in three cases and microscopic examination of the xcised main tumor in the other. Not the slightest sign of rdinary tuberculosis was found in any instance, but in two ases Much's granula was found, and Blumberg thinks that his must have some causal connection with the affection and ossibly may be the bridge connecting it with tuberculosis, if, s some believe, the granula is an attenuated form of the ubercle bacillus.

118. **Occult Blood as Sign of Cancer.**—Zoeppritz emphasizes hat a positive reaction to the guaiac test applied to the stomach content or stools is not decisive but that a single negative esponse testifies against the presence of malignant disease. n a total of forty-two cases of chronic gastritis, occult blood as never found in the stools; six times large amounts of lood were found in the stomach content—it is the constant nd regular discovery of invisible blood that is so characteris-c of gastric cancer. He gives summaries of eight cases in hich everything except the negative occult blood findings emed to testify to malignant disease, but the course of the ses confirmed the findings of the test. In eleven cases of nign stenosis of the pylorus, occult blood was found in the ools in two, but only on one or two occasions. This occurred o in 53.9 per cent. of fifty-two cases of old gastric ulcer. In 5 cases of cancer, positive findings in both stomach content nd stool were obtained in 94.55 per cent. of the 110 cases in hich the diagnosis was confirmed by an operation. If the lorus happens to be gaping, with cancer, the stomach con-nt flows out so soon that the test may be negative in the omach content while positive in the stool—this is occasion-y observed. In five of the cancer cases the stool findings re negative with advanced cancer; some substance must be esent in the gastro-intestinal tract in these rare cases ich inhibits chemically the reaction. Occult blood may be garded as an early symptom of gastric cancer, and it is the st symptom to sound the alarm with recurrence after moval of the cancer. With regularly positive findings in the lerly, the general health much impaired, he advises an exploratory laparotomy, at least, without waiting for other symptoms. He tabulates under twenty-three headings the details of his 110 cancer cases.

119. **Origin of Gall-Stones.**—Hofbauer argues to prove that the erect position of man is responsible for the conditions which favor cholelithiasis, the flow of bile not being so free as in four-footed animals. Human beings must make an effort to improve conditions in this respect, and he says this can be accomplished by training the diaphragm to wider excursions. He advocates deep abdominal breathing as a kind of automassage of the liver and bile ducts. The abdomen should be drawn in during expiration, not during inspiration. The abdominal musculature should be made to aid in expelling the breath. This forces the contents of the abdomen up toward and against the relaxed diaphragm and vice versa.

## Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

*March, XXXV, No. 3, pp. 265-408*

121 Roentgenotherapy in Gynecology. H. Eymer and C. Menge.
122 *Cesarean Section. (Zur Kasuistik des klassichen Kaiserschnitts.) A. Richter.
123 *Present Status of Decapsulation of Kidneys for Eclampsia. (Die bisherigen Erfahrungen mit Nierendekapsulation bei Eklampsie.) E. Balser.
124 Salvarsan in Operative Gynecology. O. Schaeffer.
125 Histology of Ovaries with Metritic Hemorrhages. S. Adachi.
126 Mortality from Puerperal Fever. (Sterblichkeit an "Kindbettfieber" in Bayern in den Jahren 1881-1910.) F. Loeb.

122. **Cesarean Section.**—Richter says that his late chief, Professor Leopold, hoped to round out a hundred cesarean sections without a death, but his eighty-third patient died, and he died himself just three operations short of the hundredth. Richter has continued the series, and reviews the lessons learned by this material of 107 cesarean sections with only one death, and for this the operation should not be held responsible as he explains. The fetal mortality was 0.9 per cent. In thirty-five cases the tubes were resected to prevent further conception. In fifteen cases cesarean section was done twice. The technic was the classic method. When possible the women for whom cesarean section was contemplated were taken into the clinic two weeks before term; an internal examination was made once or twice and the operation was done before rupture of the membranes, when the os was dilated. The bag of waters was punctured before the first incision, the woman already on the operating table. To ward off hemorrhage as the uterus was incised, two syringefuls of ergot or hypophysis extract were given before the operation and rubber tubing was wound around the waist. When the placenta is attached on the anterior wall of the uterus the lengthwise incision should avoid the site of the placenta as much as possible. This location of the placenta was generally detected beforehand by the course of the tubes and ligaments. The duration of labor then is of subordinate importance if everything that can harm the woman is kept away. Cesarean section is contra-indicated, he says, if the temperature is above normal and the amniotic fluid is putrid, and also if the woman has had version or forceps applied outside. The use of the colpeurynter under the conditions of a good clinic is permissible, but even this should be reduced to the minimum. The various experiences on which the above conclusions are based are related in detail.

123. **Decapsulation of the Kidneys in Eclampsia.**—Balser applied this measure as a last resort in three cases of severe eclampsia, all in young primiparæ, but without avail. He has found records of decapsulation being done for eclampsia in three cases before delivery with two recoveries; on one kidney alone, after delivery, in four cases with one recovery, and on both kidneys after delivery, in ninety-one cases with fifty-seven recoveries. The mortality in the fifty-seven cases in which the convulsions came on before or during labor was 45.6 per cent.; in the thirty-four puerperium cases it was 32 per cent. Balser adds that probably a number of other unfavorable cases have never been published. Analyzing the data cited, he draws the conclusion that the theoretical bases on which the operation is based are unstable, the indications for it are but vaguely known, and we know too little of the ultimate outcome of such a serious operation as this, especially as it is done on kidneys known to be already pathologic,

besides the dangers from infection of the wound—one patient succumbed to this and one to iodoform poisoning. On the other hand, Balser calls attention to the excellent results obtained in eclampsia with Stroganoff's prophylactic method of treatment. He has had only 6.6 per cent. mortality in his 360 cases and Balser's experience is brilliantly confirming the superiority of this method, he declares. He describes the technic in detail as applied in a recent case and states that it is absolutely harmless and entails no later injury. It is adopted, he says, in some other German clinics. (The method was described in The Journal July 3, 1909, p. 86, and July 9, 1910, p. 177.)

### Münchener medizinische Wochenschrift

*March 19, LIX, No. 12, pp. 625-680*

127 The Appendicitis Question. (Wie können wir zur Einigung in der Appendizitisfrage gelangen?) A. Krogius.
128 *Retrograde Transportation in Narrow Organs. (Zur Frage der "rückläufigen" Bewegung in röhrenformigen Gangsystemen.) E. Goldmann.
129 The Three Stages of Tuberculosis. (Spätformen der Tuberkulose.) F. Hamburger.
130 The Mononuclears in Hemolysis and Lipolysis. (Hämolyse, Lipolyse und die Rolle der einkernigen ungranulierten basophilen Zellen.) S. Bergel.
131 Dislocation of the Fibula. (Zur Behandlung der Luxatio peroneorum.) R. Eden.
132 *Duodenal Ulcer. (Statistische und ätiologische Bemerkungen zum Ulcus pepticum duodeni.) H. A. Dietrich.
133 *Injurious Effects from Camphor. (Schädliche Wirkungen des Kampfers.) C. Happich.
134 Importance of Training in Anatomy. (Wert morphologischer Ausbildung für den Mediziner.) W. Lubosch.
135 The Children of Liquor Drinkers. (Die Trinkerkinder unter den schwachbegabten Schulkindern.) E. Schlesinger.

128. **Ascending Currents in Mucous Canals and Ducts.**—Goldmann introduced into the rectum a capsule containing charcoal or indigo in a number of patients with a fistula in the bowel, and in from one to three days particles of the foreign substance appeared in the fistula, proving the existence of antiperistaltic movements or retrograde transportation of the particles. He obtained positive findings also in experimental work and in cases of fistulas into the bile apparatus when the foreign substances were given by the mouth. Everything tends to show that retrograde transportation of bacteria and minute foreign bodies may be responsible for infection or may supply the nucleus for a concrement. The same factors may aid in the production of concrements in the urinary passages, salivary glands and appendix. Stagnation in canals and ducts favors this retrograde ascending current and subsequent infection, and hence should be combated early.

132. **Duodenal Ulcer.**—Dietrich states that evidences of gastric ulcer and of hemorrhagic erosions were found each in 1.1 per cent, and of duodenal ulcer in 0.4 per cent. of 8,538 necropsies at the Hamburg hospital, 1908-1911. In twenty-four cases the duodenal ulcer was single and in ten multiple; in four there was an associated gastric ulcer and in two hemorrhagic erosions in the stomach. In none of the cases was there a history of an extensive burn, but in no less than eight of twenty-six cases the duodenal ulcer followed an operation in which the omentum or mesentery had been ligated. A thrombus had evidently formed and worked its way backward against the current, and injured the duodenal lining where it finally lodged. He summarizes these eight cases, emphasizing the rapid progress of the ulceration in these conditions and the usual early arrosion of an artery that follows.

133. **Dangers from Camphor.**—Happich injected camphor into rabbits and guinea-pigs and the results confirmed those reported in the literature in regard to the great difference in the effects of camphor when it is inhaled or injected into an artery or vein. He ascribes the difference to the neutralizing of the injurious influence of the camphor by glycuronic acid which is generated fresh in the pulmonary circulation by the combination of oxygen and sugar. When the camphor is to be injected into a vein or artery, the individual conditions in regard to the presence of adequate amounts of oxygen and of sugar must be estimated. When either of these is known to be abnormally diminished, then the use of camphor should be restricted. This applies especially, he says, to patients in inanition, the insane, cancer patients, typhoid convalescents, diabetics, in heart disease with failing compensation, in double pneumonia and, above all, in poisoning from illuminating gas. A healthy person can bear from 2 to 4 gm. camphor, but he doubts whether the tuberculous are in fit condition to receive the injections of camphorated oil which Höhne has been recently advocating.

### St. Petersburg medizinische Zeitschrift

*March 14, XXXVII, No. 5, pp. 63-78*

136 *Tuberculin Treatment in Progressive Paralysis. A. Pilez.
137 Reaction to Salvarsan Injection. (Zur Kasuistik der Reaktionserscheinungen nach Salvarsaninfusionen.) J. Grunberg.

136. **Tuberculin Treatment of General Paralysis.**—Pilez states that in eighty-six cases of general paralysis, 26.68 per cent. of the patients were clinically cured and resumed their active life, 10 per cent. were improved so that they resumed their social life again but were not capable of sustained business effort; in 39.44 the affection progressed, while in 23.2 per cent. it was apparently arrested. These results were obtained with a systematic course of tuberculin treatment in a sanatorium, the dosage higher than in tuberculin treatment of tuberculosis. This treatment was introduced by von Wagner; it is based on the frequent observation of arrest and apparent recovery from progressive paralysis following some intercurrent acute febrile infection. Wagner aims to induce a febrile transformation in the body and has found tuberculin the most convenient means for the purpose. At two-day intervals he injects subcutaneously 0.01 c.c. tuberculin in a 10 per cent. solution, up to a maximal dose of 1 c.c. Fifteen febrile reactions comprise the course. Pilez urges physicians in general to take up this treatment of general paralysis as still better results can be obtained in private practice. He has never witnessed any tendency to untoward by-effects from the treatment. On suspicion of tuberculosis this method is not applicable and possibly injections of nuclein or of killed staphylococcus culture might be tried—the main point is to apply treatment during the incipient phase of the general paralysis, and here the general practitioner has better chances of success than in institutions where only the advanced stages are seen.

### Virchows Archiv, Berlin

*March, CCVII, No. 3, pp. 221-476*

138 Consequences of Ligating Outlets of Glands. (Zusatz über die Folgen der Unterbindung des Ausführungsganges der Bauchspeicheldrüse und anderer Drüsen.) G. Ricker.
139 Primary Endothelioma of Lymph-Nodes. (Fall von primärem Endotheliom der Lymphdrüsen.) A. Da Gradi and M. De Amicis.
140 Multiple Benign Epitheliomas in the Skin with Mixed Tumor in the Parotid. T. M. van Leeuwen.
141 Adrenal Cysts. (Zur Kenntnis der Nebennierenzysten.) W. Nowicki.
142 Congenital Atresia of Duodenum. (Ueber angeborenen Verschluss des Duodenums.) F. Kermauner.
143 The Infundibulocolic Ligament. (Eine Bauchfellduplikatur zwischen dem Mesosigmoideum und dem weiblichen Geschlechtsapparat.) W. Liepmann.
144 Sclerosis of Portal Vein. (Ueber Pfortadersklerose.) M. Simmonds.
145 Autolytic Production of Lactic Acid in the Liver. (Autolytische Michsäurebildung in pathologischer Leber.) H. Youssouf.
146 Leukocytes and Leukemia. (Hämotologische Studien. III.) E. Neumann.
147 Origin of Amyloid Concrements in the Lungs. (Entstehung der Corpora amylacea in der Lunge.) H. Brutt.
148 Local Action of Salvarsan on Intragluteal Injection. (Oertliche Wirkung des Salvarsans bei intraglutäaler Injektion.) H. Löhe.
149 Behavior of Liver in Respect to Fat in Food. (Verhalten der Leber gegenüber den verschiedenen Arten von Speisefett.) S. S. Chalatow.
150 Fatty Degeneration of Stellate Cells. (Die Cholesterinesterverfettung—Cholesterinsteatose—der Kupfferschen Sternzellen.) R. Kawamura.

### Wiener klinische Wochenschrift, Vienna

*March 21, XXV, No. 12, pp. 439-474*

151 Thorium Treatment of Leukemia. (Behandlung der Leukämie mit Thorium X.) W. Falta, Kriser and L. Zehner.
152 Action of Radium Emanation. (Wirkungen der Radiumemanation.) E. v. Knaffl-Lenz.
153 Pathogenesis of Appendicitis. E. Miloslavich.
154 Topical Diagnosis from Tests of Kidney Functioning. (Topische Nierendiagnostik auf Grund der Funktionsprüfung.) V. Blum.
155 Bronchoscopy for Foreign Bodies. (Bronchoskopie bei Fremdkörper.) H. v. Schrötter.
156 Treatment of Incarcerated Hernia in the Duodenojejunal Fossa. (Ein operativ geheilter Fall von inkarzerierter Treitzscher Hernie.) J. Gobiet

### Zeitschrift für klinische Medizin, Berlin

*LXXIV, Nos. 5-6, pp. 355-478. Last indexed March 23, p. 905*

157 Movability of Heart and Accentuation of Apex Beat During Reclining on Left Side. (Verschieblichkeit des Herzens und Verstärkung des Herzspitzenstosses in linker Seitenlage.) M. Georgopulos.
158 Two Cases of Fatal Hematemesis with Cirrhosis of the Liver. (Tödlicher Hämatemesis bei atrophischer Leberzirrhose.) W. Zelensky.
159 Icteric Blood Corpuscles in Jaundice of the Newly Born. (Ikterische Zellen im Blute bei Icterus gravis neonatorum.) P. Neukirch.
160 Ameba Dysentery and Eosinophilia. (Zur Kenntnis der Amöbendysenterie und der enterogenen Eosinophilie.) A. Albu and A. Werzberg.
161 *Means to Induce Hyperemia in the Lungs. (Versuche zur Erzeugung von Lungenhyperämie.) O. David.
162 Friction of the Blood and Poiseuille's Law. (Reibungswiderstand des Blutes und Poiseuillesches Gesetz.) W. R. Hess.
163 The Liver Diastase with Experimental Nephritis. (Beitrag zum Zusammenhang der Drüsen mit innerer Sekretion.) F. Orkin.
164 Nature of Gout. (Ueber die Wirkung des Atophans, mit einem Beitrag zur Theorie der Gicht.) M. Dohrn.
165 Action of Phosphorus on Myocardium. (Wirkung des Phosphors auf die Herzmuskulatur.) I. Rodow.

161. **To Induce Hyperemia in the Lungs.**—David describes the various means that have been devised to promote the local circulation in the lungs, and expatiates on the benefit therefrom in pulmonary affections. His extensive experimental research has demonstrated, he says, that nothing is so effectual for this purpose as to breathe air with less oxygen than ordinary air. His experiments have established, he continues, that a reduction of the oxygen partial pressure by 10 per cent. induces pronounced hyperemia in the lungs while reduction to this point is free from any injurious influence on the lung tissue. He is inclined to explain the local hyperemia as the result of the exaggerated work of the alveolar cells. David has devised a special apparatus to furnish air to breathe with reduced oxygen content.

### Zeitschrift für Urologie, Berlin

*March, VI, No. 3, pp. 177-256*

66 *Aims and Methods of Modern Urology. (Wege und Ziele der modernen Urologie.) C. Posner.
67 *Calculus Impacted in Ureter Mouth Nucleus of Bladder Tumor. (Ureterstein als ätiologisches Moment für Blasentumoren.) Lotsy.
68 *Differentiation of Hydronephrosis. (Zur Diagnose der Hydronephrose vortäuschenden Erkrankungen.) N. P. Trinkler.
69 Two Cases of Chyluria. (Zur klinischen Bedeutung des Fettharnes.) T. Cohn.
70 *Syphilis of Bladder and Ureters. (Syphilis der Harnblase und der oberen Harnwege.) N. A. Michailoff.

166. **Present Status of Urology.**—Posner's article was read t the inaugural session of the newly organized Berlin Urologic ociety. He emphasizes the borderland character of this ecialty and how it encroaches on numerous other specialties ll around, besides its relations to general medicine. He warns iat the triumphs of urologic surgery must not delude into the elief that progress is to be sought only along this line, and iat urology has reached the limit of its usefulness when the ringe and the catheter fail. He declares that those who iow what terrible consequences may be entailed by a gonoreal inflammation of the urethra, will slight it as little as a iberculous affection of the kidneys; those who know the ecisive importance of the first catheterization of a patient ith enlargement of the prostate will not treat it lightly any ore than if it were the removal of the enlarged gland itself, id those who do not call to their aid for diagnosis all the idings of palpation, digital and instrumental, all the results analysis of the urine, all the disturbances in innervation, short, the entire clinical picture, will not be able to profit iderstandingly even from the most striking cystoscopic findgs. There are no such things as trifles in urology; in the e estimation or neglect of the minor points lies only too ten the key to success or failure in the individual case. He ds that very few organs are so functionally important as e urinary apparatus. Never at any moment is any trouble the urinary apparatus of purely local importance. Every p we take or refrain from may be fraught with the most portant and far-reaching general consequences. In view of s enormous responsibility, he adds, we must strain every ve to broaden our diagnostic powers and perfect the science indications and the means of treatment. The local urologi- society has been founded to enable each to share the fruits of his research with others working in the same lines, and have others pass judgment on their value and spur each to greater achievements.

167. **Bladder Papilloma with Ureter Calculus for Nucleus.**—After removal of part of the papilloma at three sittings, the patient passed an oxalate stone and all the pains which had tormented her for three years ceased at once. The unsuspected stone had been impacted in the ureter mouth and the irritation from it had induced the papillomatous growth over it.

168. **Differentiation of Hydronephrosis.**—Trinkler reports a case of assumed hydronephrosis. Cystoscopy showed that the right ureter gave less urine than the left which seemed to be working normally. The tumor was spherical; it had developed in less than two days and its location in the rear of the hypochondrium and front of the lumbar region, and the transmission of fluctuation up into the right kidney region on percussion from the front—all signs pointed to right hydronephrosis; gynecologists consulted said that the genital apparatus was not involved. The tumor proved to be an ovarian cyst with a very long pedicle which had become twisted. Adhesions between the cyst and the liver kept the cyst unusually high. When the liver is enlarged and congested, it is liable to push the kidney down and fill its place. In another case recently the liver and gall-bladder had sagged into the lumbar region while the kidney had been pushed over toward the bifurcation of the aorta, almost into the small pelvis. In the two cases previously mentioned the cystoscopic findings were misleading; the reduced output from the right kidney was not due to functional but to mechanical causes.

170. **Syphilis of the Bladder.**—Michailoff's patient was a woman of 39, the wife of a physician; she complained of a dragging pain in the hips and recurring hematuria during the last five years. The hip region pains had recurred at intervals during fifteen years. The cystoscope revealed numerous papules resembling the cutaneous lesions of syphilis. The Wassermann reaction was negative, but repeated a week later it gave a positive response, and under mercury and iodid internally and boric acid irrigation of the bladder, the bladder affection took a remarkable turn for the better.

### Zentralblatt für Chirurgie, Leipsic

*March 23, XXXIX, No. 12, pp. 385-416*

171 *Case of Gasserectomy Under Local Anesthesia. (Exstirpation des Ganglion Gasseri in Lokalanästhesie.) F. Krause.
172 *Advantages of Tincture of Iodin for Sterilization After Abdomen is Opened. (Zur Verwendung der Jodtinkturdesinfektion am eröffneten Magen-und Darmtrakt.) E. Payr.
173 *Care After Prostatectomy. (Zur Nachbehandlung der suprapubischen Prostatektomie.) E. E. Goldmann.

171. **Gasserectomy Under Local Anesthesia.**—Krause reports a case in which he removed the gasserian ganglion under local anesthesia, the patient stupefied first with a strong sedative by the usual technic. When she roused from the influence of the sedative she stated that she had not noticed that any operation was being done on her. She was a woman of 72 with a severe valvular defect. All the peripheral branches of the trifacial nerve had previously been resected and deep injections of alcohol made—all to no effect. She was accustomed to pain, which may have cooperated in making her less sensitive to the gasserectomy.

172. **Iodin Sterilization of the Open Abdomen.**—Payr has been in the habit during the last three years of painting with iodin the mucosa of stomach and intestines when it was exposed in the course of a laparotomy, and he has been much impressed with the advantages of the method and lack of by-effects. It is a most valuable aid, he says, in resection of the stomach or intestine. He first wipes the mucosa dry and then paints it once or several times with the tincture of iodin. The irritation therefrom seems to be a powerful stimulus for the local healing process. Examination of the field of operation later has shown always faultless healing. The course of the cases in which the iodin had been applied always seemed shorter and more favorable than in those without.

173. **Treatment After Prostatectomy.**—Goldmann drains after suprapubic prostatectomy, using a drain big enough to fill the entire incision, which he keeps small on purpose. He

aims to enucleate only the central hypertrophied masses of the prostate. If urine tends to collect and stagnate in the cavity left by their removal, he arranges for its continuous irrigation with a weak boric acid solution through a retention catheter, kept at an even temperature and instilled drop by drop. In threatening cases this is supplemented every hour by flushing out the wound with hydrogen dioxid; this removes any coating accumulating on the tissues. By this technic he was able to cure the patient in a recent case threatening severe sepsis; the continuous irrigation did not interfere with healing or continence while it prevented all danger of formation of concrements in the cavity left by the prostatectomy and also of secondary septic hemorrhages, both of which contingencies occurred and nearly proved fatal in two each of his former series of cases.

### Zentralblatt für Gynäkologie, Leipsic

*March 23, XXXVI, No. 12, pp. 353-384*

174 The Epithelium in the Uterine Cervix. (Zur Frage des Epithels im Isthmus uteri.) O. Büttner.
175 Bacteriologic Findings in Six Cases of Puerperal Fever. P. Hüssy.
176 Vaginal Fixation of Uterus Through a Laparotomy. (Vesico-Vaginofixatio uteri abdominalis.) K. Czerwenka.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*March 19, XXXIII, No. 34, pp. 353-360*

177 Efficacy of Subconjunctival Injection of Mercuric Chlorid. (Sul valore terapeutico delle iniezioni sottocongiuntivali di sublimato corrosivo.) L. Marchetti.

*March 21, No. 35, pp. 361-368*

178 Treatment of Large Umbilical Hernia. (Ernie ombellicali di grosso volume.) P. Leonardo.

### Policlinico, Rome

*March, XIX, Medical Section No. 3, pp. 97-140*

179 Leukemia and Pseudoleukemia. (Il substrato organico individuale nella eziologia e nella determinazione clinica delle forme pseudoleucemiche e leucemiche.) P. D. Siccardi.
180 *Severe Parasitic Anemia. (Anemia grave con reperto di flagellati nell'intestino, loro morfologia e caratteri culturali.) G. Franchini.
181 First Case of Three-Day Fever in Catania. (Primo caso di febbre da pappataci in Catania e nella Sicilia Orientale.) M. C. Francaviglia.

*March, Surgical Section No. 3, pp. 97-144*

182 Experimental Research on Transvesical Prostatectomy and Its Effects. (Ricerche sperimentali sugli esiti della prostatectomia transvesicale e sulla funzione della prostata.) N. Leotta. Commenced in No. 2.
183 Experimental Resection of the Testicle. (Sulla resezione del testicolo.) V. Baranbo.
184 Experimental Research on Influence of Nephrectomy on Opsonic Index. (L'influenza della nefrectomia unilaterale sull'indice opsonico, rispetto ai germi piogeni.) A. Poggiolini.

180. **Anemia from Cercomonas in the Intestines.**—In Franchini's case the patient had recurring attacks of severe anemia, weakness, abdominal pain and diarrhea during twelve years, with intervals of years of comparative health. Finally a severe attack was traced to the presence of the *Cercomonas* in the intestines; the reds numbered only 500,000 and the hemoglobin was only 17 per cent. when treatment was instituted. The patient rapidly recuperated as the parasites were expelled. In another case a woman had had symptoms of gastric ulcer for years; it finally perforated and in the pus aspirated from the circumscribed peritonitis the *Cercomonas* was found in great numbers. These protozoa had not been responsible probably for the lesion in this case, but their presence had evidently aided in keeping up the chronic irritation. Guastalla has reported a similar case, the gastro-intestinal symptoms having been observed at intervals for twenty years before the parasite was finally discovered in the stools. In the above cases no benefit was obtained from any measures until after the parasites had been expelled. Franchini gives a colored plate of the parasites grown on agar, showing up well the flagella and spine in certain phases of their growth.

### Riforma Medica, Naples

*March 9, XXVIII, No. 10, pp. 253-280*

185 *Industrial Inhalation of Flour Dust. (Il lavoro del mugnaio: l'inalazione di polvere di farina.) L. Ferrannini.
186 Cancer of the Parotid. (Caso di periendotelioma della parotide.) A. Alhaique.
187 Diagnosis of Duodenal Ulcer. (La diagnosi precoce dell'ulcera duodenale non complicata.) S. Rizzardo

185. **Industrial Inhalation of Flour Dust.**—Ferrannini found that the dust inhaled was apparently digested and absorbed and thus did no harm as a rule. But when the dust was in excessive amounts or the air passages were diseased, the dust accumulated unmodified in the bronchi and alveoles. His research was carried on in the rooms where the flour was put up in bags, and the vital capacity of some of the workers there was found much reduced from this obstruction of parts of the lower air passages, when the natural conditions of digestion of the inhaled flour dust are suspended.

### Semana Medica, Buenos Aires

*February 29, XIX, No. 9, pp. 397-448*

188 *Symmetrical Gangrene of the Extremities. (Consideraciones sobre la etiologia y tratamiento del sindrome de Raynaud.) G. B. Udaondo.
189 *Artificial Cell Production: (Apuntes de quimica.) V. Delfino.

188. **Symmetric Gangrene.**—Udaondo says that Raynaud's disease is comparatively frequent in Argentina, the humidity of the climate being possibly a contributing factor. The history of the affection is reviewed and the importance emphasized of Petges and Bonnin's two recent cases in which Addison's and Raynaud's diseases were associated in adults, and of a case reported in 1908 in which Raynaud's disease became accompanied later by exophthalmic goiter. Voivenet and Fontaine have also reported six cases of Raynaud's disease accompanied by perverted thyroid function. In two cases in Udaondo's own practice, the symmetrical disturbances in circulation developed in previously healthy individuals. He regards Raynaud's disease as shown to be a series of symptoms resulting from some toxic action on the nerve centers or the peripheral branches. Even in the so-called idiopathic form —which is encountered in about a third of all cases—there must be some latent infectious process or disturbance in some organ with an internal secretion as the primary source for the toxic action.

189. **Artificial Cell Production.**—Delfino's illustrated article explains the chemical production of crystals and colloids and shows how it is possible, with inorganic salts and colloids, to produce imitations of natural cells. The artificial cells have a nucleus and undergo mitosis and can be stained, fixed and preserved by the ordinary methods of histologic technic.

### Hospitalstidende, Copenhagen

*March 20, LV, No. 12, pp. 325-356*

190 *Inherited Tendency to Diabetes. (Om den arvelige Disposition til Sukkersyge.) K. A. Heiberg.
191 Lupus of the Tongue. (3 Tilfælde af Lupus vulgaris linguæ.) O. Strandberg.

190. **Inherited Predisposition to Diabetes.**—Heiberg quotes Frerichs' 10 per cent. of 400 cases of diabetes in which an inherited predisposition might have been incriminated; Külz' 25 per cent. of 592 cases; Naunyn's 17 per cent. of 398; von Noorden and Williamson reporting about the same percentage, while Schmitz found a history of diabetes in other members of the family in 47 per cent. of 2,115 cases. Heiberg tabulates the data he has learned from investigating the family history among 100 diabetic and 100 other hospital patients of the same class, not including any pay-patients. Only seven relatives with diabetes were found among the 100 non-diabetics while the corresponding number among the 100 diabetics was eighteen. The diabetes had commenced before the age of 10 in seven of the 100 cases and in eighteen between 10 and 20. In 90 per cent. no cause for the diabetes was known; in the others there was cirrhosis of the liver or lithiasis. Even making due allowance for the fact that a history of diabetes in the family is more likely to be learned by a diabetic than by the non-diabetic, still the preponderance of evidence is in favor of heredity as a predisposing factor.

## Books Received

Journal Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

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# TREATMENT OF FRACTURES

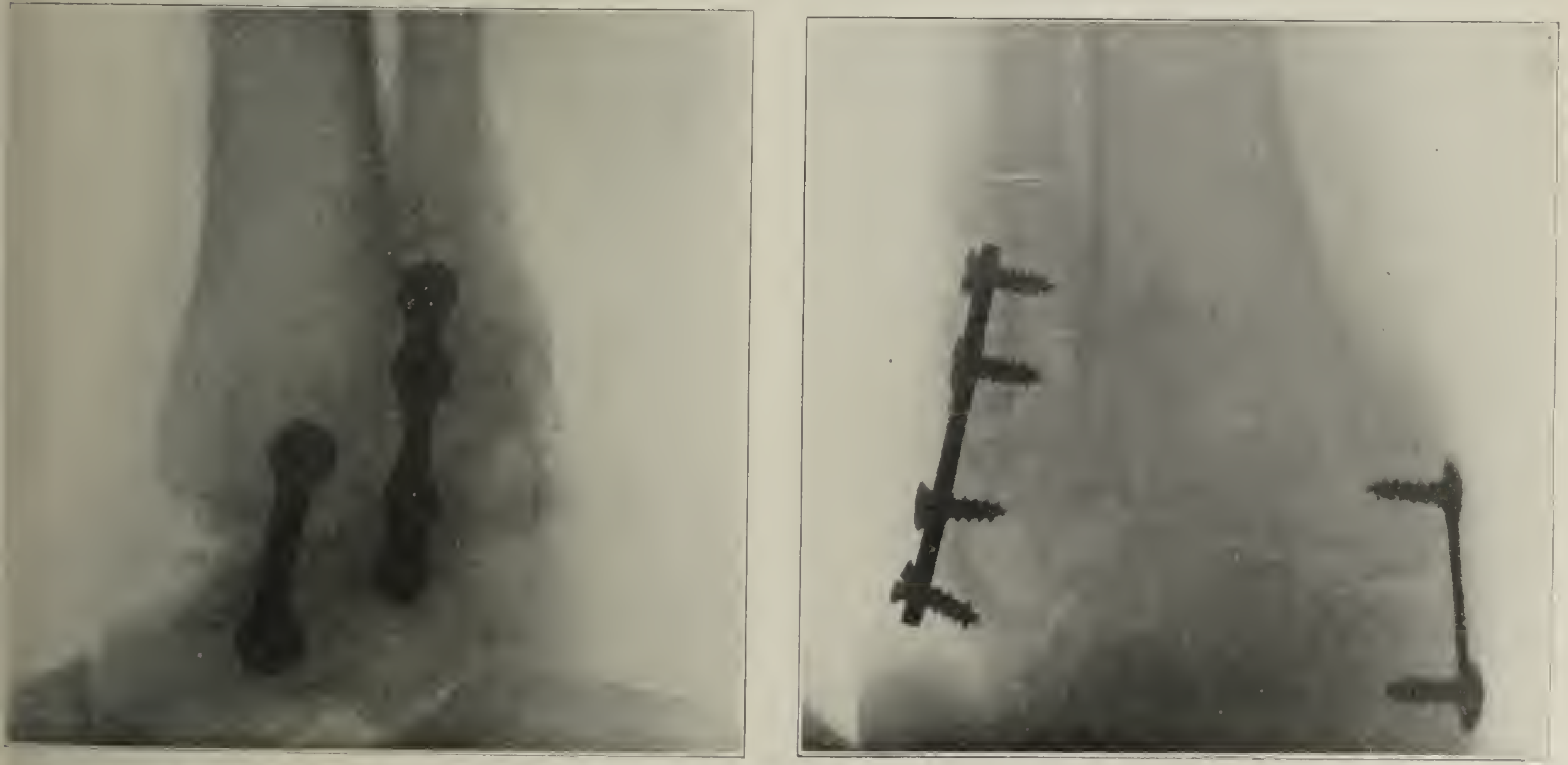
M. L. HARRIS, M.D.
CHICAGO

It is unnecessary to call attention to the great frequency of fractures. As all are aware, they form in nearly all communities a large and important part of the work of everyone doing general practice. There is no class of cases, the management of which is so fraught with danger to both the reputation and the purse of the physician as is that of fractures. The subject, therefore, is one worthy of our most careful consideration, not only for the good of the patient, but for our own welfare as well. Another reason that the subject will bear reviewing at this time is because the people are becoming familiar with the appearances of fractures as shown by the *x*-ray, and are demanding better anatomic results in their treatment. People with fractures are no longer satisfied with a result which simply permits them to get out and around with from 1 to 3 inches of shortening due to overlapping of the fragments. They want to see an *x*-ray picture so that they can know that the ends of the bone are in apposition and if, after discharge, patients find the ends not in apposition, they must know why.

Physicians themselves are largely responsible for this because they do not more fully explain to the patients about their fractures. When a bone has been severely fractured it is not always possible for it to recover fully, yet this fact is not explained sufficiently to the patient and he is too frequently led to believe that a perfect restoration to the normal can take place. This is a mistake. On the other hand, we all know that the results obtained in the treatment of fractures in many cases might be improved.

## DIAGNOSIS

Medicine has improved in other lines; why should it not improve in the treatment of fractures? The one thing which, more than any other, has led us to improved technic in the treatment of fractures undoubtedly has been the use of the *x*-ray. This has not only shown us the existence of marked deformity which could not be recognized by other methods of examination, but it has also shown us the existence of fractures which, without its use, would have remained undiscovered. Many injuries in the neighborhood of joints, and even to the long bones, which were thought to be simply sprains or bruises are found, on examination by means of the *x*-ray, to be linear fractures either extending along the shaft of the bone or frequently into the neighboring joint. The importance of recognizing and treating such a case as one of fracture rather than as one of sprain is apparent to all, for, while a sprain might best be treated by movements and massage, a fracture would require prolonged immobilization.



Figs. 1 and 2.—Lateral and front views of results of plating a Pott's fracture in a tabetic. Received April, 1911, three months after ccident. No union whatever. Fracture plated April, 1911. Pictures taken Oct. 2, 1911. Good union. Patient walking without inconvenience.

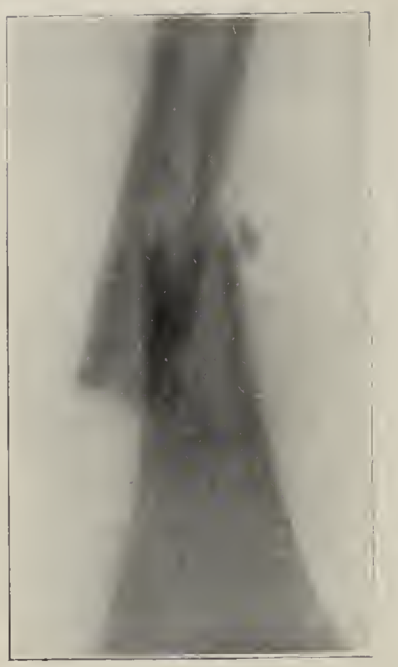


Fig. 3.—Fracture of femur; junction of middle and lower third, Oct. 30, 1911.

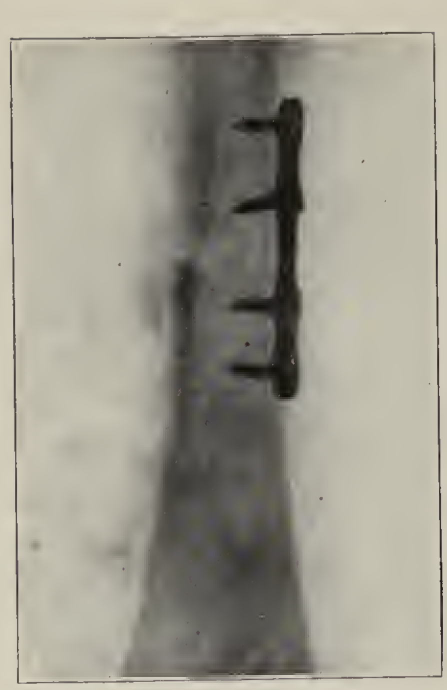


Fig. 4.—Same as Figure 3, taken Nov. 22, 1911, three weeks after plating.

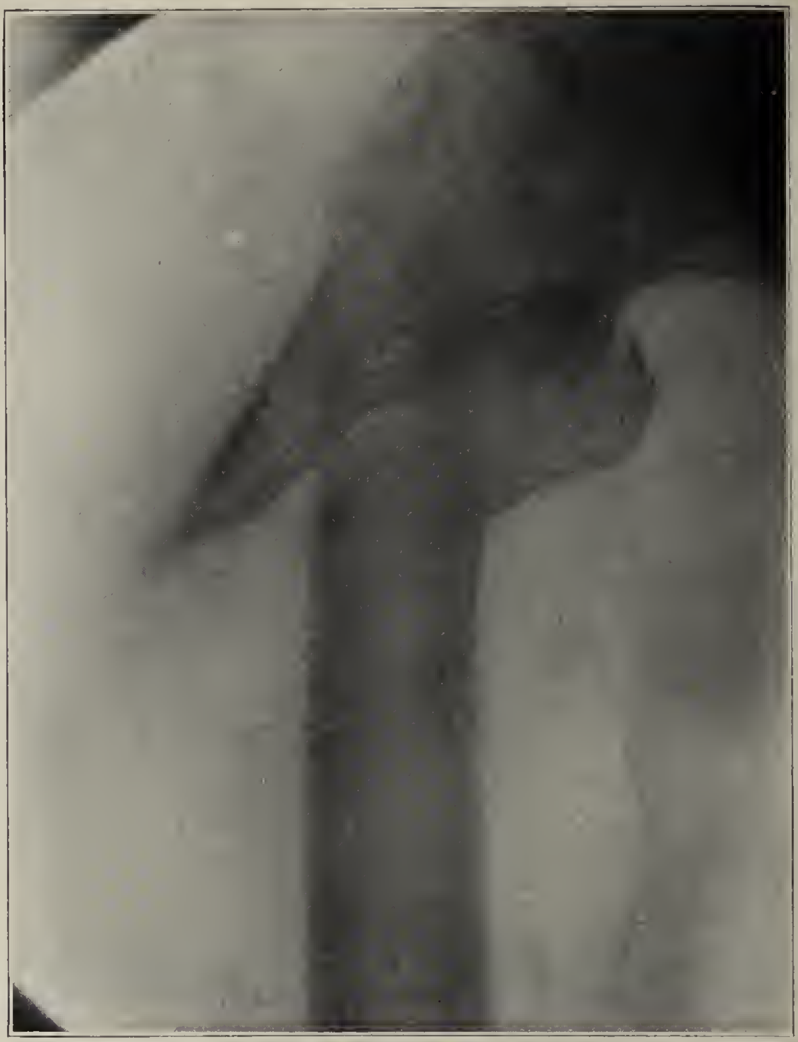


Fig. 6.—Same as Figure 5. Dec. 4, 1911, at the end of three months' treatment with extension casts, etc. No union. Patient now consented to operation.

I am well aware that the use of the *x*-ray in routine practice outside of a well-equipped hospital is perhaps inpracticable or even impossible, but that does not mean that one should not profit by what others have learned by the use of the *x*-ray.

*X*-ray plates and pictures are now accessible to all and there is no excuse for one not familiarizing himself with what these pictures have taught us. While I believe that the *x*-ray should be used in practically every case of fracture or probable fracture, yet I do not believe that one should be so tied to the *x*-ray as to neglect all other means of diagnosis.

A careful study of injuries by means of the *x*-ray shows us what may occur and what to expect in certain classes of injuries, or rather what particular injury to expect from the application of force in a definite manner.

Having become familiar with the results of the application of force and with the physical evidences of these results in particular cases, one is able to predict the

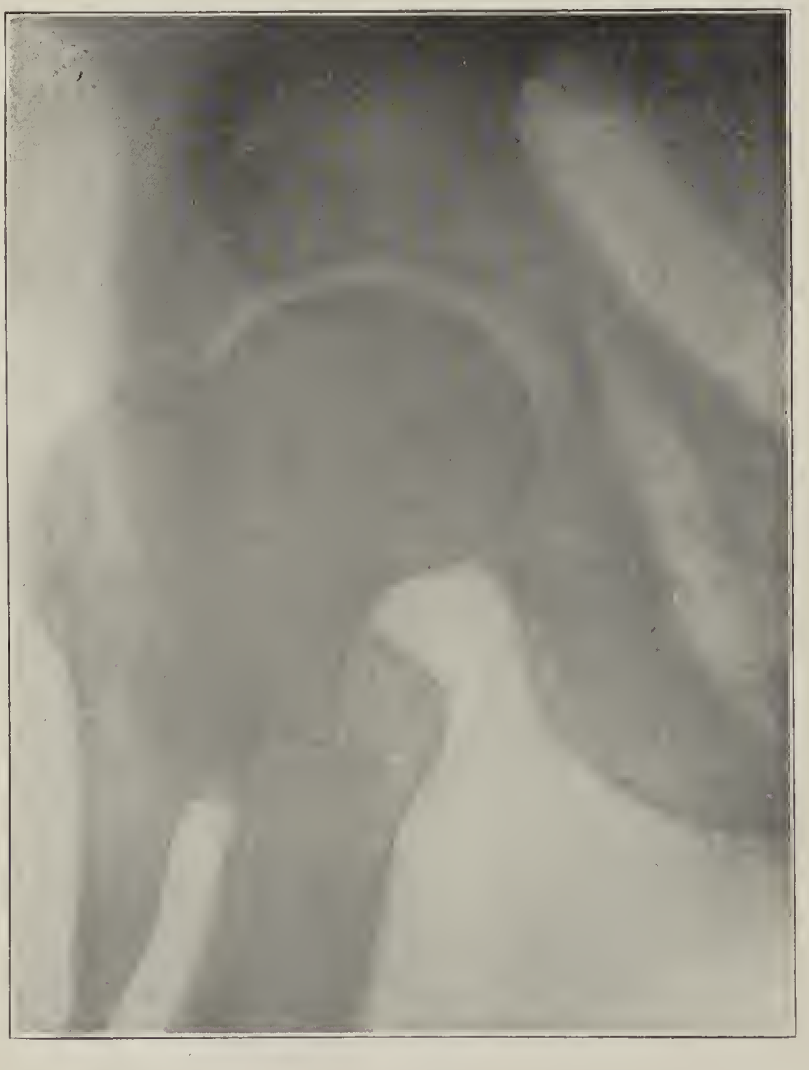


Fig. 5.—Intertrochanteric fracture of femur, showing position of fragments after best adjustment possible. Traction with Lemon-Mueller apparatus. Patient declined operation.

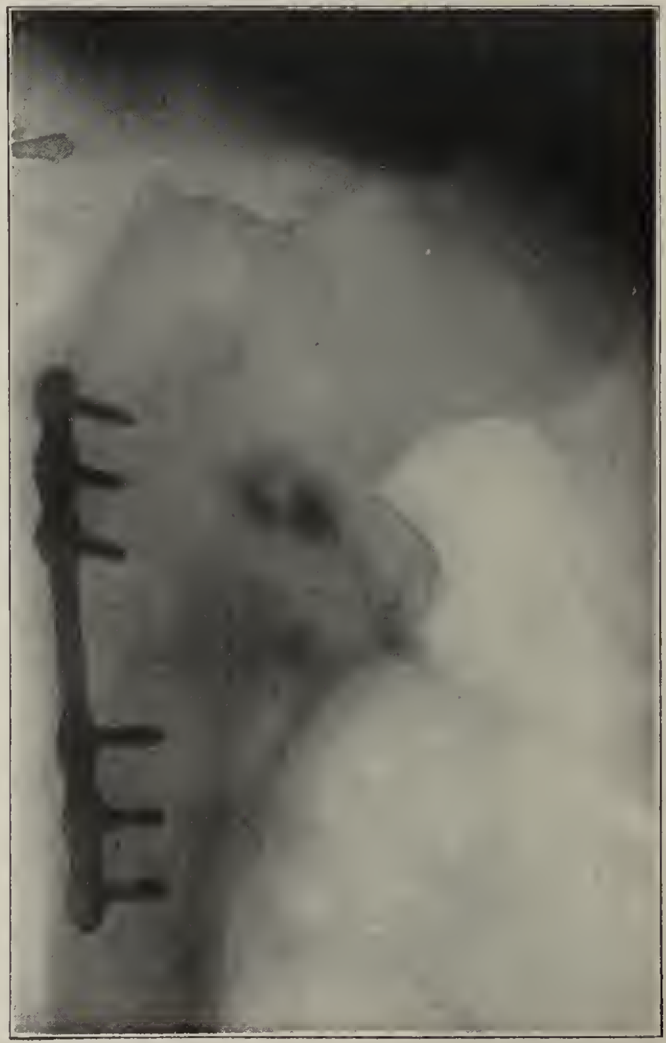


Fig. 7.—Same as Figures 5 and 6, after plating.

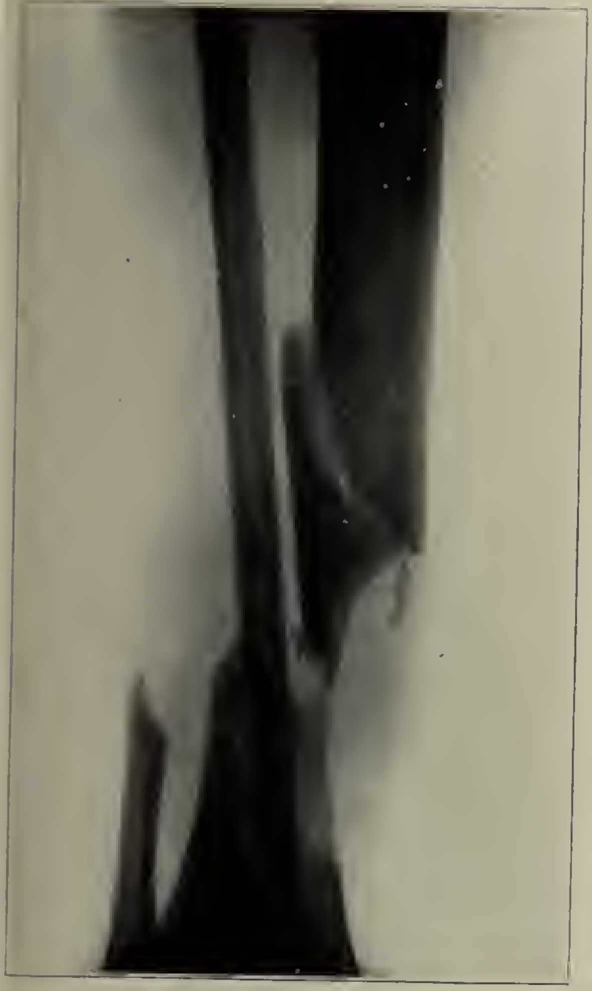


Fig. 8.—Bad compound comminuted fracture of leg, 3 inches above ankle. Great loss of soft parts and loss of 3 inches of tibia. Picture taken July 19, 1911, soon after accident.

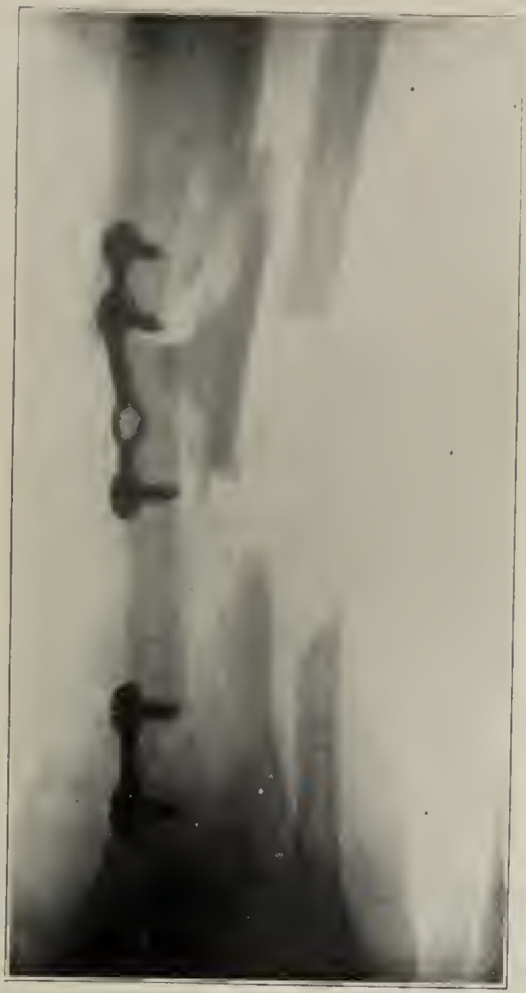


Fig. 9.—Same as Figure 8. Taken July 25, 1911. Three inches of fibula transplanted to tibia and plated in position. Plates were left exposed on account of lack of soft parts to cover them.

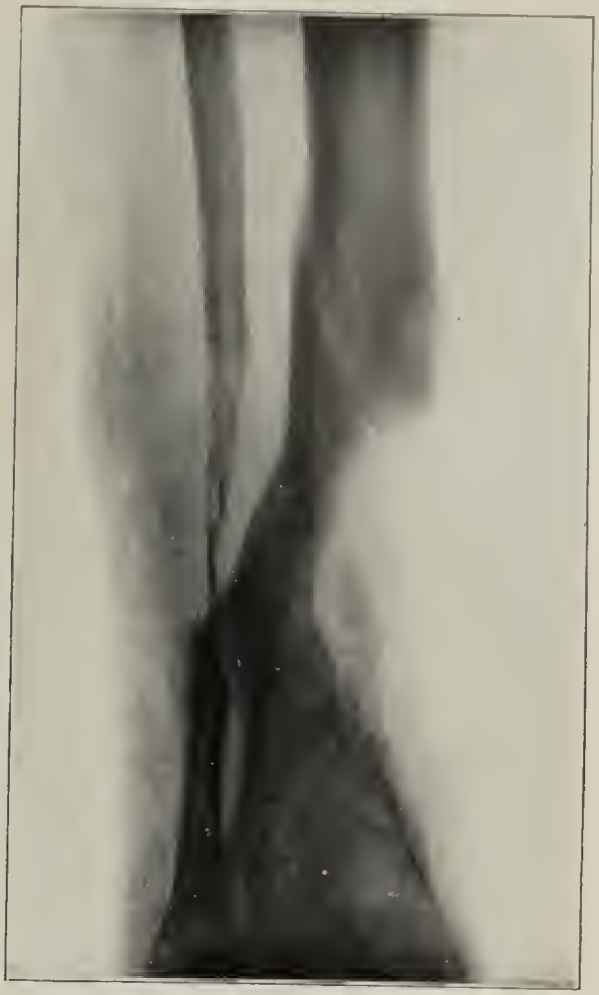


Fig. 10.—Same as Figures 8 and 9. Taken March 1, 1912. Plates removed. Solid union of tibia by means of transplanted fibula. Reformation of fibula. Wound entirely healed.

character of the injury from his knowledge of these facts with a considerable degree of certainty even without the use of the *x*-ray. An accurate history of the manner in which an injury was received is of great importance, therefore, in the diagnosis and should be inquired into ery carefully; and if the atient is able to give the nanner in which the force was pplied the damage done can ften be predicted with consid-rable precision. Thus, knowng exactly what to look for naterially facilitates the mak-ng of a diagnosis. One should ot be too hasty in making a iagnosis from a single *x*-ray icture alone. It requires con-iderable practice to interpret -ray pictures correctly. It hould be remembered that -rays are only shadows and ndicate space of but two dim-nsions; consequently no per-pective is shown in the ordi-ary picture. In order to show pace of three dimensions it is ecessary to take at least two ictures of the part in different lanes, and, unless this be one, many errors will be nade in the interpretation of -ray pictures.

### TREATMENT

If displacement of the fragents is present the best thing to be done, of course, is to bring about a perfect reduction or adjustment of the ends of the bone. Formerly it was frequently impossible to determine whether a perfect readjustment of the ends of the bone had been accomplished or not; but now, by the use of the *x*-ray,

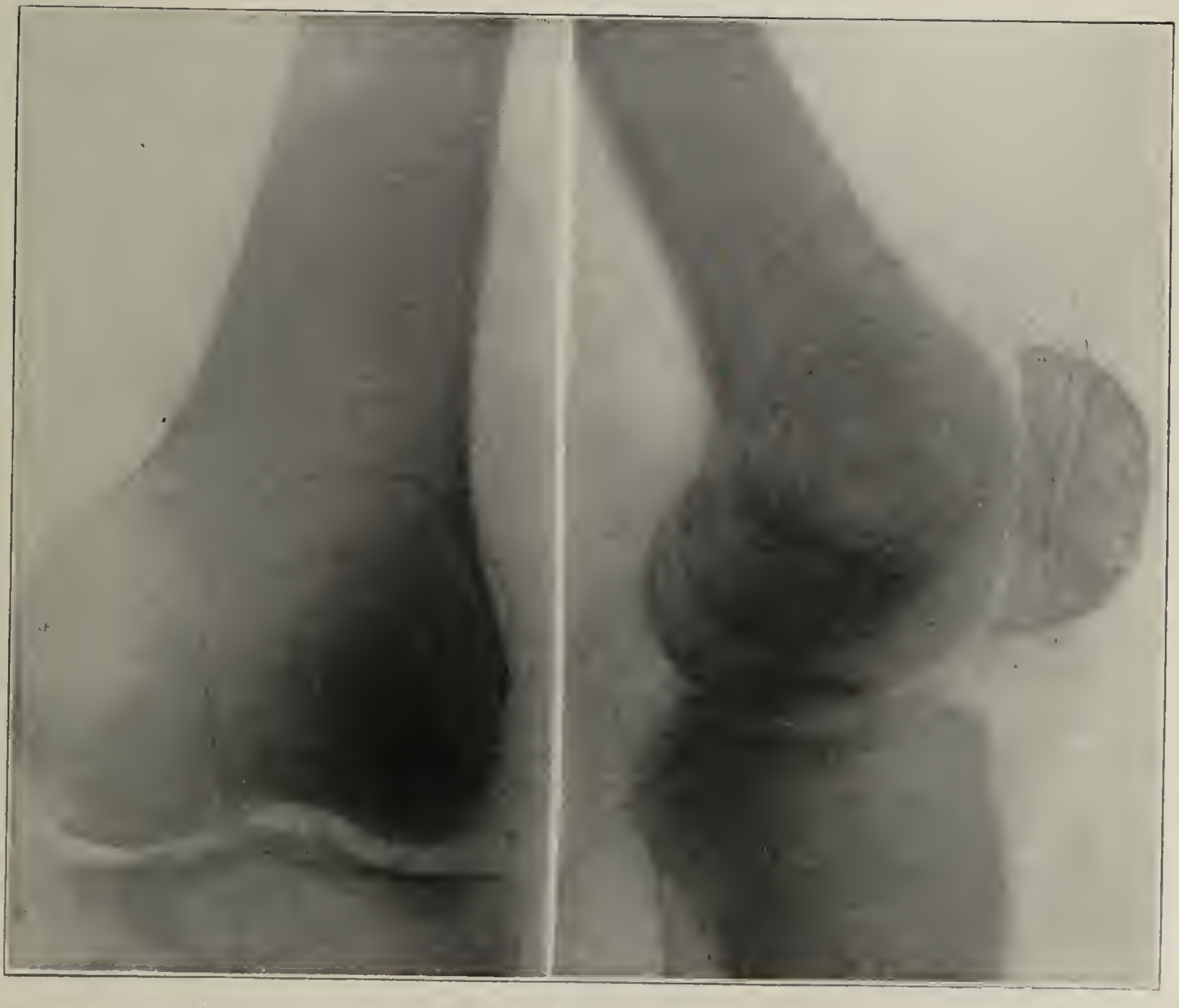


Fig. 11.—Circumferential wiring of transverse fracture of patella.

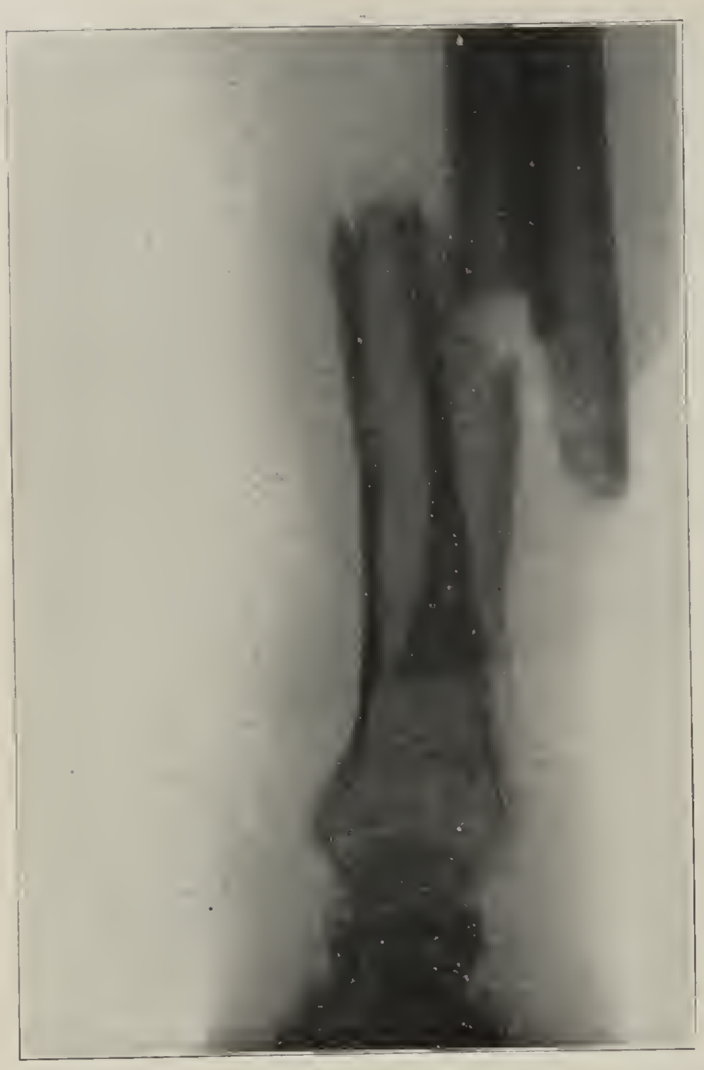


Fig. 12.—Compound fracture of both bones of forearm with loss of soft parts; wound treated with tincture of iodin. Picture taken July 10, 1911, soon after fracture.

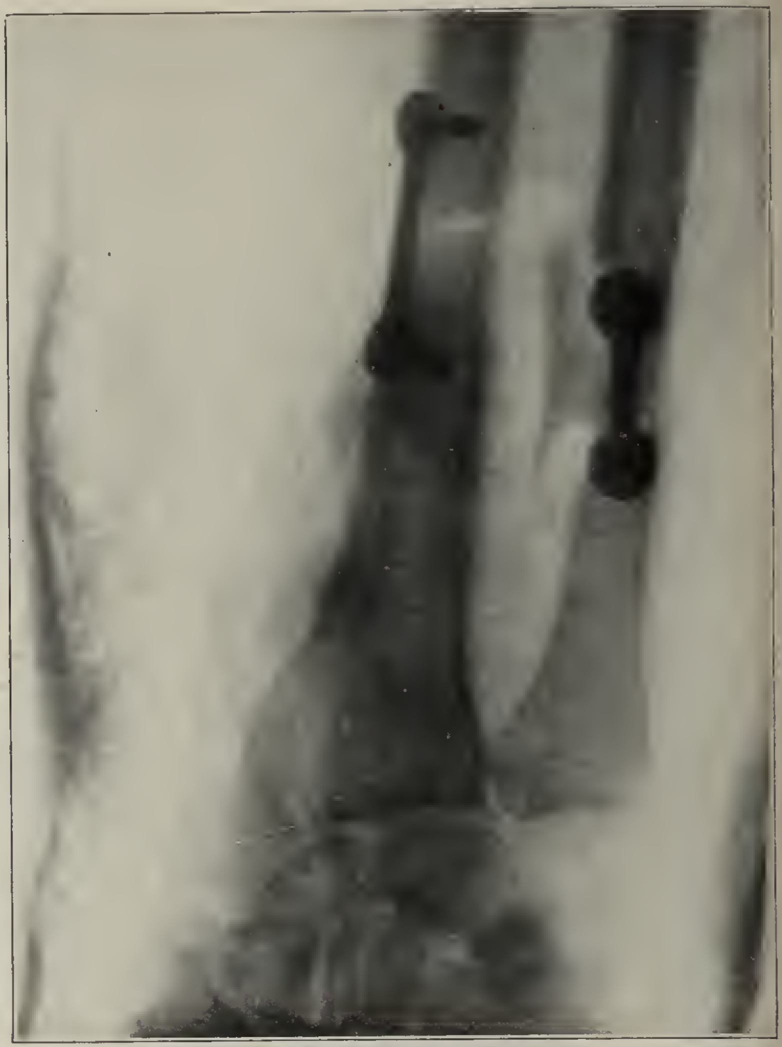


Fig. 13.—Same as Figure 12, taken July 18, 1911, after plating. Primary union. Perfect result. Plates remain in.

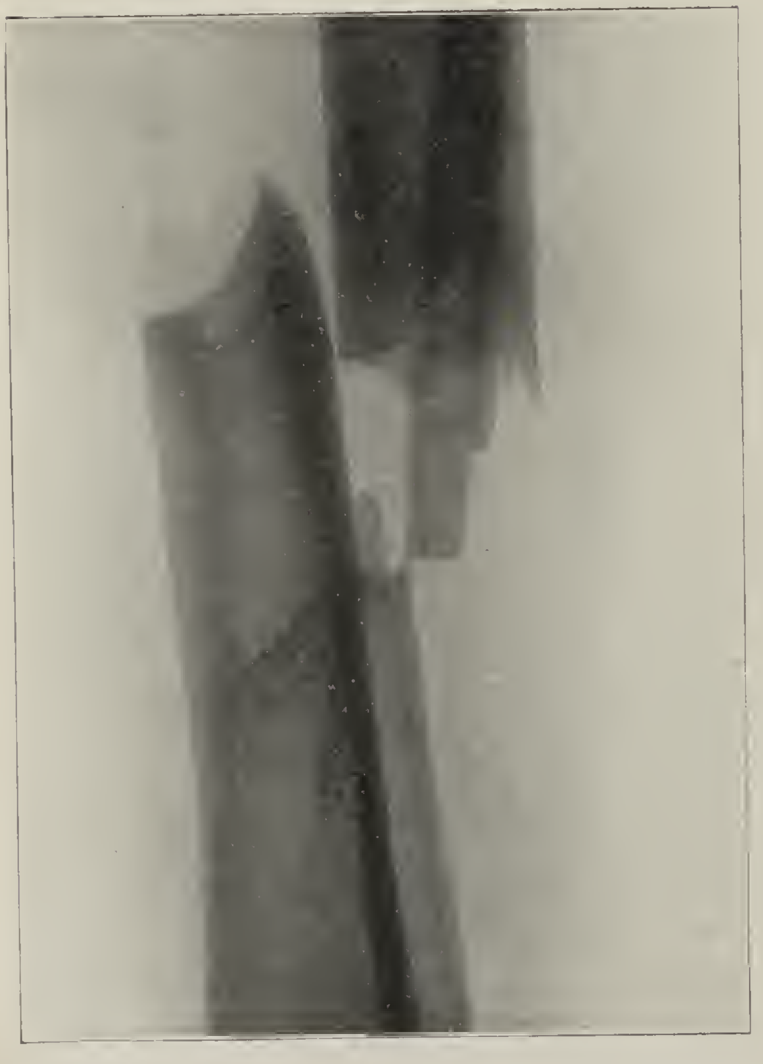


Fig. 14.—Fracture of both bones of leg about the middle. Picture taken Oct. 3, 1911, three months after injury. No union.

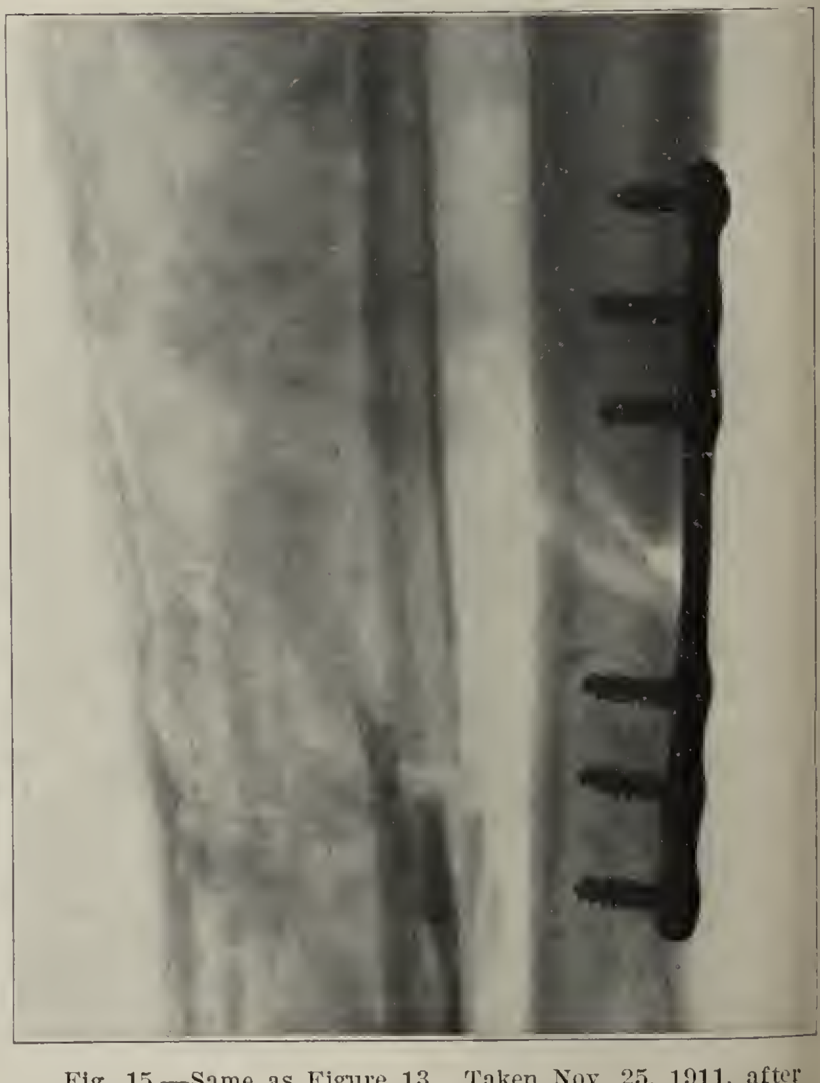


Fig. 15.—Same as Figure 13. Taken Nov. 25, 1911, after plating.

we are able to know that this has or has not been accomplished. When possible, an $x$-ray examination should be made in every case after the parts have been adjusted in order to see if the adjustment has been perfect. This is the only way in which one can be certain. When perfect reduction has been secured and the parts placed in a suitable fixation dressing, as, for instance, a plaster-of-Paris cast, it should not be forgotten that the ends of the bone may not remain in apposition, but may again become displaced and, unless the case be constantly watched, unfortunate results may occur. Thus a cast which is perfectly snug and tight when it is put on may become loose and too large by reason of the shrinkage which may take place in the parts as the swelling subsides. Constant vigilance is the price of good results in the treatment of fractures. In many cases it is found to be impossible to secure a perfect reduction of the fragments. The question, then, immediately presents itself as to the cause of the inability to bring about the reduction. In fractures of the long bone the most frequent cause of the inability to bring the ends of the bone in apposition is the interposition of some of the soft tissues between the ends of the bone. There may be a distinct layer of fascia or muscle lying between the ends of the bones which cannot be dislodged, or some of the sharp spiculæ may catch n the soft parts and thus prevent the fractured end from being moved into place. Again, the interposition of loose or detached pieces of bone between the fractured ends may interfere with reduction.

In certain fractures of some of the spongy bones, or of the epiphyses of some of the long bones, reduction may be impossible owing to the impaction which exists. When reduction is impossible, from any cause, the quesion of an open operation arises.

Formerly the opening up of a fracture was looked on s a very serious procedure and one fraught with much anger. To-day, however, the operation is looked on in n entirely different light owing to our improved methods f technic. In fact, the open operation in the treatment f irreducible fractures is now considered to be the only roper treatment in all cases in which there is no contrandication to operation. As perfect reduction and retenion of fractures of the long bones is found to be the xception rather than the rule, and as perfect functional esults are to be expected only when normal anatomic elations have been restored, many surgeons consider the pen or operative treatment of all fractures of this class s the method of choice. In other words, they maintain hat practically all fractures of this class should be perated on at once and the ends of the bones placed n accurate apposition and maintained by means of some mechanical device. Formerly silver wire was used to maintain the fragments in apposition, but this was ound to be very unsatisfactory.

Without mentioning all the various mechanical devices hat have been used for this purpose we will come at nce to the means most commonly used to-day, namely, he so-called Lane plate.

Lane's plates are pieces of metal of various sizes and hapes, usually steel, and perforated so that they may e applied to the fractured ends of the bones and rewed firmly thereto, so as to hold the ends solidly in ccurate apposition. There is no question but what the ne plate, nicely applied, forms a very perfect mechanal union of the fractured ends and, when uninterrupted ealing takes place, the end-results are very much better an those usually obtained by the ordinary methods of treatment. If there were no dangers and no bad results connected with this method of treatment it would certainly seem to be ideal, but it is found that infection may take place, and infection in compound fractures—for an openly treated fracture is nothing more than a compound fracture—is always a serious condition, and has frequently led to loss of a limb or even of a life. Again, it has frequently been necessary to remove a plate even after the fracture has united, on account of the presence of a persistent suppurating sinus. If these objections could be removed, or reduced to a minimum, there is no doubt but what the method would and should find very wide application. We know that the dangers of primary wound infection in other operations has been practically eliminated by proper operative technic, and if that can be done in other parts of the body there is no reason why it cannot be done in operations on bones.

Experience has fully confirmed this conclusion. The technic of this class of bone work has been most carefully worked out by Lane, of London, and anyone who will conscientiously follow his exceedingly careful, painstaking technic will be rewarded by the same good results which he obtains. It has been found by experience that the open method of treating fractures requires the highest degree of technical skill, for a freshly fractured bone when opened up is very much more likely to become infected than almost any other tissue in the body.

The technic of opening the peritoneum is a simple matter compared to opening up a fresh fracture. Not only must the surgical technic reach the highest state of perfection, but one must have suitable instruments with which to work. There is no class of operations in which the results depend so much on having suitable instruments with which to work as in the open treatment of fractures. If not fully prepared it were much better not to undertake the work. Notwithstanding these real difficulties in the way of success, the open method of treating fractures has become well established. The results obtained in suitable cases are so much better than those had under the old methods that they cannot be ignored, and if one hopes to secure for his patients such good results he must prepare himself to do this kind of work.

It is absolutely essential to success that nothing but sterile instruments shall be permitted to come in contact with the wound, not even the gloved finger or anything which has been touched by the gloved hand. Until one has reached this degree of perfection in one's technic one cannot hope to attain success in this line of work. These facts cannot be too strongly emphasized. Of all the devices that have been proposed for this kind of work there is none which fulfils the indication so well as the metal plate and screws. The plate finds a useful field, not only in simple fractures, but also in compound fractures and in the latter class of cases, even when infection or suppuration is already present. As is well known, compound fractures which are suppurating are very hard to hold in place on account of the constant change of dressing which is necessary.

By adjusting the fragments and putting on a solid metal plate which will hold the ends firmly together, the care of the case is very much facilitated and the recovery hastened. Of course the plate will have to be removed in this class of cases when union of the bone has taken place, but this is a matter of no importance compared to the great good which the plate accomplishes.

In compound fractures which are not already infected, the plates may be used as though the fracture were a simple one from the start, and this brings up the question of the best method of treating compound fractures when they are first seen and before they are infected. It was formerly thought to be necessary to shave the parts and then to scrub thoroughly with soap and water and alcohol, and bichlorid, etc.; but now we know that this is about the best way of infecting the wound that could be employed. The washing and scrubbing simply washes dirt into the wound and injures the vitality of the cells already exposed, thus diminishing their resistance and does not get rid of the germs which are present. It has been found to be much better, in this class of cases, not to attempt to do any washing and, above all, not to apply any water or soap to the parts. If gross dirt can be seen in the wound it should be picked or wiped out and the whole area thoroughly painted with tincture of iodin. If the ends of the bones have been exposed they should be wiped off and painted with the iodin before being returned. After thoroughly painting with the iodin, and allowing it to dry, the parts should be carefully adjusted as well as possible and a dressing and splints applied. If, after a few days, it is found that the wound has not become infected a plate may be applied, if necessary, through the compound opening, with every probability that the wound will heal by first intention, just as though the fracture had been a simple one from the beginning.

Too much praise cannot be given the iodin method when it is properly used, as it is without doubt the simplest and the most valuable method of preparing the skin with which we are acquainted.

At the Alexian Brothers Hospital, where we have a large emergency service and hence a great many compound fractures of all kinds, we have found the use of the tincture of iodin, in the manner mentioned, of the greatest value and it is the regulation method of treating this class of cases.

While we think that the metal plate, as a rule, is the best mechanical device to use in the open treatment of fractures, there are some exceptions to the rule. Thus, in fractures of the patella, which should always be operated on if there is much separation of the fragments, we believe that the patella is best held in place by putting a wire circumferentially around the fragments and twisting it up tightly. The patella is so superficial, and it is so necessary to have a good smooth surface on which to kneel, that the use of a plate in this location does not seem desirable. Likewise, in fracture of the olecranon the passage of a wire around the fragment through the triceps tendon and then through the ulna—twisting it up tightly—is better, as a rule, than the use of a screw in the detached fragment which is so small and in the child not completely ossified.

Pott's fractures, as a rule, are easily reduced and maintained without open treatment, but occasionally some mechanical device is necessary, and then a plate is the best thing to use, notwithstanding the fact that the bone is very superficial. It is better to use a plate and remove it later if it give rise to any trouble, as its removal is such a simple matter. The use of a suitable plate in this location, however, contrary to expectations perhaps seldom causes any annoyance. In those fractures accompanied by considerable overlapping, such as fractures of the shaft of the femur or spiral fractures of the tibia, especially in stout, heavy men, it is very desirable to have some mechanical means of producing steady, strong traction and in old ununited fractures of these bones some such traction device is essential to good work. The best traction device for this purpose with which I am acquainted is the Lemon-Mueller apparatus. It is a heavy metal frame in which the patient can be placed and anesthetized. The legs of the patient can be placed in any position of abduction, rotation, etc., and any degree of extension can be made and maintained for any length of time. By the use of this apparatus the open treatment of all fractures of the femur is very much facilitated. The patient is fixed in the apparatus and anesthetized. A free incision is made exposing the fracture, traction made until the ends of the bones are opposite, when, by adjustment, they are easily brought into perfect apposition. The plate is then applied, the wound closed and the leg and pelvis inclosed in a plaster-of-Paris cast before the patient is removed from the apparatus. The patient is so supported in the apparatus that a cast can be applied to almost any part of the body. One of the greatest advantages of the apparatus is the ease with which these fractures can be operated on with the least possible manipulation of the parts. Fractures of the neck of the femur have always been looked on as one of the most discouraging and unsatisfactory fractures that we are called on to treat. Non-union is the rule and, in fact, the possibility of bony union for a long time was absolutely denied. While the possibility of bony union has been established, it must be acknowledged that it is a great exception under the ordinary methods of treatment as at present carried out. Of course allowance must be made for the fact that many of these cases occur in patients who are so old and so enfeebled that no active treatment is possible, and they often succumb from shock or simply as a result of the confinement. Fractures of the neck, however, do occur in persons with sufficient vitality to permit of some plan of active treatment being carried out, and in these cases, under present methods of treatments, we ought to get bony union as a rule.

The Whitman method of traction and fixation in marked abduction is undoubtedly the most important improvement which has been made in the non-operative treatment of these cases, and next in importance is the Maxwell method of longitudinal and transverse traction. Even these improved methods have not been as successful as might be desired. Hence the open method has been extended to these cases with the hope of bringing about a more certain and speedy bony union.

It is not a new idea, for it was proposed some years ago, to nail the detached portion of the neck, and the operation was carried out a number of times. Operative technic of bone surgery, however, had not reached its present state of development at that time. Hence the operation was not widely employed. Our present technic has placed the operation on a sound basis and it is more frequently made use of. Formerly the attempt was made to pass the nails through the trochanter and neck and into the head without exposing the parts. This was found to be very unsatisfactory, as it was impossible to tell whether the head was in proper place or whether it had been reached by the nail or not. At present the nails are inserted by the open method. The joint is opened freely by an anterior or lateral incision. Traction is made until the head and neck are in perfect apposition, when the nails are driven in firmly, fixing the head in place. It is better to use two nails so as to prevent rotation of the head. The wound is then closed and a suitable cast applied. Of course a drill is used to make a hole through the trochanter and neck before driving in the nails, so as not to split the bone.

The extension apparatus, already mentioned, will be found of inestimable value in this operation. It is impossible to take up in detail all the special fractures, but sufficient has been said, I think, to show that an era of better treatment of fractures is at hand and that it behooves all of us who expect to treat these cases, not only to familiarize ourselves with the methods, but also to perfect ourselves in the technic if we would hope to secure the results for our patients which they are certain to demand.

32 North State Street.

# RESULTS OF ANTITYPHOID VACCINATION IN THE ARMY IN 1911, AND ITS SUITABILITY FOR USE IN CIVIL COMMUNITIES *

FREDERICK F. RUSSELL, M.D.
Major, Medical Corps, U. S. Army
WASHINGTON, D. C.

The Medical Corps of the Army has been endeavoring to protect large numbers of individuals against typhoid fever by means of prophylactic vaccination with killed bacterial cultures. In the Army, during times of peace, our posts are like small communities, with their own water-supplies, sewerage systems and organized administration of community affairs. So long as the troops are in garrison they have no more disease than exists in the adjoining communities. We are, however, not content with this condition of safety, but must descend from our fastnesses, and in the absence of real war, engage in mimic battles and campaigns. From the purely military point of view these movements are maneuvers, not war, but from the standpoint of health and disease there exists the same real danger as in actual war.

As the Medical Corps is charged with the preservation of the health of the Army, we have endeavored to protect it against typhoid, not merely in garrison, but also in the field, in campaign and on the march. The principles of prophylaxis applicable to cities fail us utterly, and our main reliance has come to be the protection of each and every individual composing the Army. The mere question of numbers is of little moment since whole nations have been immunized against smallpox, and we think little of the number of persons involved.

Another question is of more importance, whether vaccination against typhoid fever actually protects against the disease, and whether it can be accomplished without danger. It is this question that we believe has at last been settled in such a way and on such a scale as to leave no doubt in the mind of any reasoning person.

Our knowledge of vaccination against typhoid fever begins with the work of Pfeiffer and Kolle,[3] who, in 1896, immunized two men and made complete and comprehensive studies of the blood-changes following inoculation with killed cultures, showing, as far as laboratory methods permit, the identity of the immunity following an attack of the disease, and the artificial immunity produced by inoculation. At about the same time, Wright,[4] of London, inoculated two men with killed typhoid bacilli, but his main work was published in the following year, 1897, when he reported the successful immunization of seventeen persons. In 1898, he continued the work in India, where 4,000 British soldiers were vaccinated. On the outbreak of the Boer War in 1900, he, together with Leishman of the Royal Army Medical Corps, undertook the preparation of the vaccine and supervision of the inoculation of the British troops, of whom some 100,000 were treated. In India, where it was first used on an extensive scale, the results obtained were quite encouraging, but for various reasons the same procedure in South Africa was not as satisfactory as had been anticipated. Indeed, considerable opposition was aroused and there were not a few who contended that, when carried out in an endemic area, vaccination did more harm than good by virtue of a mysterious negative phase which for a time rendered the vaccinated more susceptible to infection than the untreated. It is very doubtful if a negative phase of such importance ever existed. Indeed, all our recent experience has failed to show a negative phase of clinical importance.

A few years later, in 1904, the Germans in the Herero campaign in southern West Africa, resorted to the use of prophylactic vaccination on the advice of Prof. Robert Koch. Vaccination was voluntary and only about one-half of the command, 7,287 men, availed themselves of it. The results, while good, fell short of expectations. There was, roughly speaking, only one-half as much disease among the protected as among the unprotected, while the number of deaths was reduced to one-quarter of the number among the non-immunized.

The second period in the history of antityphoid vaccination begins with the work of Sir William B. Leishman, in 1904. He took up the subject when Wright left the Army, and has remained in charge up to the present time. In his Harben lecture[5] of 1910 he explains, in a measure, the lack of success in earlier years, by showing that a vaccine may be made less efficient by the use of too great heat in killing the bacilli, and by stating his belief that much of the vaccine used in South Africa was damaged in its preparation by overheating. Since the year 1904, an improved vaccine has been used among the British troops in India in ever-increasing quantities with uniformly satisfactory results. They have vaccinated more than 100,000 men without any untoward results. The most recent figures from India, reported by Col. R. H. Firth,[6] cover the first six months of the year 1911.

> "In that period there were, in all India, 112 cases of typhoid with six deaths, among the protected men, and forty-five cases with four deaths among the non-protected. The protected population was 63,624 persons, and the non-protected, 8,481. From these data we find the case incidence per thousand among the protected to be 1.7 and among the non-protected to be 5.3. If we take the mortality and express it as per million, then the ratio for the protected is 94, and for the non-protected, 471. That is to say, the incidence for typhoid for the first half year was roughly five times as great among the non-protected as among the protected."

Our own experience with antityphoid vaccination began in 1908, and early in 1909 we vaccinated all who volunteered. In 1909 we immunized 1,887 persons, in 1910, 16,073. For 1911, the figures are not yet com-

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* Read before the Buffalo, N. Y., Medical Union, Jan. 24, 1912. Published with the permission of the Surgeon-General, U. S. Army. The introductory portion of this address is omitted from THE JOURNAL, but appears in full in the author's reprints. In it Major Russell discusses the general subject of the prophylaxis of typhoid fever.

[3] Pfeiffer and Kolle: Deutsch. med. Wchnschr., 1896, xxii, 735.

[4] Wright: Lancet, London, Sept. 19, 1896, p. 807; Brit. Med. Jour., Jan. 30, 1897, p. 16.

[5] Leishman, W. B.: Jour. Roy. Inst. Pub. Health, London, 1910, xviii, 394.

[6] Firth, R. H.: Jour. Roy. Army Med. Corps, London, 1911, xvii, 495.

plete, but are estimated at over 80,000, making the total number of persons immunized approximately 100,000. Over 80 per cent. of these have received the full course of three doses. The vaccine has been prepared in the laboratory of the Army Medical School, and the immunization has been carried out without accidents. In 1910, we shipped to various posts in the service and to other institutions, 75,843 c.c., and in 1911, 312,101 c.c.

The preparation of the vaccine is comparatively simple. An avirulent culture of the typhoid bacillus is grown for twenty-four hours on agar, washed off in normal salt solution, standardized by counting the bacilli, killed by heating to 55 C. for one hour and then 0.25 per cent. of tricresol is added as a matter of safety. Our object has been to immunize with a bacillus which has been changed as little as possible by heat or chemicals in the preparation of the vaccine, and for this reason very little work has been done with extracts, non-toxic portions, or the many modifications which have been suggested.

Up to the present time, a single strain of the bacillus has been used, not with the idea that that was the best method, but in order to simplify our problem as much as possible, and in this we have followed the example of the English. In preliminary experiments it was found that inoculations with this culture gave rise to the production of immune bodies in large quantities and produced, according to laboratory standards, a high degree of immunity, without, at the same time, causing severe general or local reactions.

| | Number of Doses | Reaction, Absent | Reaction, Mild | Reaction, Moderate | Reaction, Severe |
|---|---|---|---|---|---|
| First dose .... | 45,680 | 68.2% | 28.9% | 2.4% | 0.3% |
| Second dose .. | 44,321 | 71.3% | 25.7% | 2.6% | 0.2% |
| Third dose ... | 38,902 | 78.0% | 20.3% | 1.5% | 0.1% |

Had our results with the vaccine been poor or only fair the next step would naturally have been the search for a better one. As the problem has developed, however, we realized that the results were extraordinarily good, almost incredible in fact, and in view of this we have hesitated to alter the vaccine in any way. There are, no doubt, some improvements possible, but we have no real reason for dissatisfaction with the vaccine used at present.

In preparing a vaccine undue complexity must be avoided, as it is essential to have an adequate supply promptly when needed. It does not keep indefinitely and cannot, therefore, be made up in large quantities and stored for use in emergencies. To be of value it must admit of preparation on short notice, and this is particularly necessary in the military service where every mobilization, as the Texas maneuvers, comes as a surprise.

The vaccine is injected into the subcutaneous connective tissue (not into the muscles or into the skin) of the arm, at the level of the deltoid insertion, the necessary skin sterilization having been accomplished by tincture of iodin. Intramuscular injections should be avoided since the rapid absorption of the bacteria may lead to unpleasant anaphylactic general reactions and to unnecessary pain on movement.

Three doses are given at ten-day intervals: the first contains 500 million bacteria, the second and third 1 billion each. As a rule, there is a local reaction consisting of a red and tender area about the size of the palm of the hand, which usually subsides within forty-eight hours. The general reaction, when present, shows itself by malaise, headache, fever, occasional chills, quite rarely by nausea, vomiting or diarrhea, and in exceptional instances, by transient albuminuria. The general reactions in 128,903 doses have been tabulated and show that the severe type of reaction occurs in only one to three persons per thousand.

As the occasional severe reactions are followed by no serious trouble their occurrence does not constitute a valid objection to the use of the prophylactic. In children or young people they rarely appear. We have always insisted, however, that no one, not in good health at the time, should be vaccinated, in order to avoid the vaccination of persons in the incubation stage of typhoid and other diseases.

The recent mobilization of troops in Texas has afforded an exceptional opportunity to test the method of individual protection by means of prophylactic vaccination. Large numbers of troops have been vaccinated by the English in South Africa and in India, and in the United States during the past two years, but this is the first time in the history of the subject that vaccination against typhoid has been compulsory.

The vaccination of volunteers had been in progress for over two years and a small number of men had already been protected before orders for mobilization were issued. On arrival at the maneuver camp all others were vaccinated as rapidly as vaccine could be prepared and shipped to Texas. In about one month from the beginning of the movement, the immunization of the entire command was completed. The whole program was carried out under the direction of the chief surgeon, Colonel Birmingham, promptly and systematically and without protest, either in or out of the service, as the idea was not new to either officers or men, since some one had received the treatment voluntarily at every post in the Army during our preliminary campaign of education.

An unusual feature of the Texas maneuvers was the large number of recruits forwarded to the front from New York, St. Louis and Denver, as rapidly as they could be enlisted and equipped; on arrival they were segregated in quarantine camps, to prevent the introduction of contagious diseases into the command, and advantage was taken of this period of detention to administer the typhoid prophylactic. Many cases of measles and mumps developed among the newly enlisted men, but no typhoid fever occurred. At San Antonio the three diseases causing the highest non-effective rate were venereal diseases (4.1 per thousand), and measles and mumps (3.1 per thousand). Typhoid fever was a negligible factor in the health of the division. One case occurred in the person of a hospital corps man who developed symptoms of fever before the third dose of vaccine was administered; the disease was mild, and was considered influenza until a blood-culture revealed the true diagnosis. One other case occurred in camp, the patient being a civilian, employed as a teamster by the quartermaster; this man, together with other civil employees of the Army, had been given an opportunity to be vaccinated, but had refused, and after this experience the quartermaster declined to employ men who refused protection by vaccination.

In addition to the main divisional camp at San Antonio, smaller camps occupied by separate brigades were established at Galveston, Tex., and at San Diego, Cal. At Galveston there were about 4,500 persons, and at San Diego about 3,000. No cases of typhoid were reported from Galveston and only one from San Diego.

Other detachments, smaller in size, were scattered along the border and among them there was no typhoid.

Colonel Kean,[7] in an article on the sanitary record of the Maneuver Division, makes the following statement:

> The immense advance in camp sanitation and particularly the value of this protective measure can be estimated by comparing the typhoid incidence of this camp with that of the Second Division, Seventh Army Corps, which was organized at Jacksonville, Fla., about June 1, 1898, and remained there in camp until October; some of the regiments leaving in September. This division was not conspicuously unfortunate in its typhoid record for that time, and is selected because of the close similarity of its conditions of service to those of the Maneuver Division. The two divisions were encamped in nearly the same latitude and for about the same length of time, each had a good camp site and an artesian water-supply of unimpeachable purity. While the period in camp of the Second Division, Seventh Army Corps was later in the year, the number of men involved is larger for the Maneuver Division. The accompanying table referring to the former is taken from the celebrated "Report on Typhoid Fever in U. S. Military Camps in the Spanish War," by Reed, Vaughan and Shakespeare, Vol. 1, page 609.

1898

TABLE SHOWING FOR THE REGIMENTS OF THE SECOND DIVISION OF THE SEVENTH ARMY CORPS, ASSEMBLED AT JACKSONVILLE, FLA., THE MORTALITY AND MORBIDITY FROM TYPHOID FEVER

| Regiments | Mean Strength | Cases of Typhoid Fever | | Deaths from Typhoid Fever | Deaths from All Diseases |
|---|---|---|---|---|---|
| | | Certain | Certain and Probable | | |
| Second Illinois | 1.095 | 253 | 341 | 18 | 22 |
| First North Carolina | 1,164 | 147 | 227 | 16 | 20 |
| Second New Jersey | 1,153 | 185 | 318 | 29 | 32 |
| First Wisconsin | 1,232 | 209 | 311 | 46 | 48 |
| Fiftieth Iowa | 1.097 | 164 | 253 | 33 | 33 |
| Ninth Illinois | 1,288 | 153 | 248 | 18 | 28 |
| Second Virginia | 1,220 | 105 | 152 | 17 | 20 |
| Fourth Virginia | 1,274 | 135 | 231 | 21 | 28 |
| Forty-Ninth Iowa | 1,236 | 378 | 612 | 50 | 50 |
| Total | 10,759 | 1,729 | 2,693 | 248 | 281 |

1911

TABLE SHOWING FOR THE ORGANIZATIONS COMPOSING THE MANEUVER DIVISION AT SAN ANTONIO, TEXAS, THE MORBIDITY AND MORTALITY FROM TYPHOID FEVER, MARCH 10 TO JULY 10, 1911

| Organization | Mean Strength June | Cases of Typhoid. Certain and Probable | Deaths from Typhoid Fever | Deaths from All Diseases |
|---|---|---|---|---|
| Eleventh infantry | 924 | .. | .. | .. |
| Fifteenth infantry | 969 | .. | .. | 2 |
| Eighteenth infantry | 1.022 | .. | .. | .. |
| Thirteenth infantry | 929 | .. | .. | .. |
| Twenty-second infantry | 1,033 | .. | .. | .. |
| Tenth infantry | 1,016 | .. | .. | 1 |
| Seventeenth infantry | 954 | .. | .. | .. |
| Twenty-eighth infantry | 951 | .. | .. | .. |
| Third field artillery | 847 | .. | .. | 2 |
| Fourth field artillery | 741 | .. | .. | 1 |
| Engineer battalion | 536 | .. | .. | 1 |
| Signal corps | 197 | .. | .. | .. |
| Ninth cavalry | 744 | .. | .. | .. |
| Eleventh cavalry | 1,143 | .. | .. | 3 |
| Sanitary troops | 795 | 1 | .. | 1 |
| Total | 12,801 | 1 | 0 | 11 |

The troops remained in their several camps from March 10, 1911, to the middle of July, a period of approximately four months, and during that time there were two cases of typhoid with no deaths.

As the divisional camp at San Antonio was the largest and best known of the maneuver camps the interest of the public has centered on it. Any one who visited it or who has kept in touch with the improvements in field sanitation knows that all the elements which tend to affect the health of men under canvas were controlled better than they ever have been before. The sanitary difficulties of camp life arise mainly from the lack of sewer- and water-systems and the necessity of developing a scavenger system. Another source of great trouble arises from the necessity of living on the same ground and in close contact with innumerable animals; at San Antonio there were 6,000 horses and mules in temporary corrals, and on picket lines scattered here and there among the troops. The arrangement of a cavalry or horse artillery camp brings a line of horses in close proximity to each row of tents; the necessary horses of each infantry regiment or ambulance company are picketed close to the troops to insure their proper care.

It is a simple matter to pipe a water-supply into camp, but troublesome to dispose of the wastes; and many expedients have been devised to overcome such difficulties. The camp at San Antonio is noteworthy as exemplifying the best system so far devised for the disposal of camp wastes. One of the lessons taught by the Spanish War was the importance of the house-fly in the spread of intestinal diseases. The fly is dangerous merely as a carrier of infectious material from the latrines to the food-supplies and it remains a harmless nuisance, no matter how numerous, if it has access to neither of these things. Nevertheless, the simplest way of circumventing the fly is to exterminate it by destroying its breeding-places and this was done most thoroughly at San Antonio. As its principal breeding-place is in stable-wastes, arrangements were made in advance for carting all manure to a dumping ground about one mile from camp, where it was burned under the supervision of enlisted men of the medical department. Flies, however, will breed not only in manure, but also in soil soaked with excreta and other organic matter, and the destruction of ova and larvæ was accomplished by frequently burning over the picket lines with crude oil and refuse forage. As a result, the number of flies, at first rather large, tended constantly to diminish.

No single measure, however good, is sufficient in dealing with this ubiquitous pest; kitchens and mess tents were screened, and kitchen wastes, both liquid and solid, were disposed of in what has come to be known as the kitchen crematory. This is merely a pit 1 foot deep, 2½ feet wide and 4½ feet long, walled up for 1 foot and lined with a layer of cobble-stones. In this simple contrivance all the liquid and solid wastes, except the bath and wash water, can be consumed.

The disposal of excreta in camps[8] in recent years, more especially since the Spanish War, has passed through three stages, the latrine pit, the Reed trough, with excavator attachment, and the so-called incinerator. In the old latrine pit no attempt was made to treat the excreta, except perhaps by the desultory application of a little earth or lime, and this system has been justly condemned and cast aside. The Reed trough, with its leaky excavator, long haul, attendant stream of soil pollution and enforced abandonment in freezing weather, has also failed to meet the requirements. The incinerator, aside from the matter of expense and disagreeable odor is, on account of its weight and the delays attending its installation, impossible as a part of the equipment of a mobile army. In the camp at San Antonio the excreta were successfully disposed of by using a narrow latrine pit, 18 to 24 inches in width, covered by a tightly fitting wooden box with self-closing seat covers. The contents of the pit were sterilized daily by fire, using a gallon of crude oil sprinkled over a thin layer of hay for each burning and this was sufficient even after three months' constant use to rid the latrines of odor and flies.

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[7] Kean: The Journal A. M. A., Aug. 26, 1911, p. 713.

[8] Ann. Report of the Surgeon-General, U. S. Army, 1911.

No camp has ever been so free from nuisances and flies as this, and the sick-rate from all causes was low; consequently, there were those who questioned the true value of vaccination in preventing typhoid. The point is important and with the data at hand the answer should not be difficult.

There is no doubt but that the hygiene and health of the men received almost ideal care; the difficulty was, however, that the men were not confined to camp, but had liberty and opportunity to visit the neighboring cities of San Antonio and Galveston. Thousands spent more or less time in these cities, where they dined and lunched and drank and slept—in fact, became, for the time being, a part of the community. In Galveston, especially, where a ten minutes' ride carried one from the camp to the heart of the city, the number of men visiting town was large. The soldier always has a good appetite, and he drank and ate everywhere, in good restaurants and bad, in the numerous lunch-wagons and at street-corner stands. Fruits and pies and sweets in enormous quantities were purchased of hucksters lined up along the camp boundaries; they even invaded the company streets carrying their various sorts of indigestible and infectious products from tent to tent. The best kind of camp sanitation could not keep down typhoid in the presence of all these possible chances of infection, if typhoid existed to any extent among the local population.

During this period of four months there were reported to the health office forty-nine cases of typhoid with nineteen deaths among the civil population of the city of San Antonio, and in Galveston, 192 cases were recorded during the same period. These two cities can therefore serve as controls and indicate what might have happened to our troops in the absence of vaccination.

Aside from the sources of infection in the adjoining cities, we must believe that the men were also exposed to the influence of an unknown number of chronic bacillus-carriers among our own men. There is every reason to believe that among 18,000 men there were one or more carriers in each regiment, yet they spread no disease, and one of the most important conclusions to be drawn from our recent experience is that in vaccination we have the only effective protection against the elusive carrier.

Another experience which may help us in forming an opinion has been related by Major Lyster:[9] The Eleventh United States Cavalry participated in a military tournament in Nashville, Tenn., lasting ten days, and, on the return to Fort Oglethorpe, Ga., typhoid appeared and spread until ten cases had occurred. At this time only 165 of the command had been immunized. The post commander therefore took measures which resulted in the immunization of 736 persons in the regiment and of seventy civilians at the post. The epidemic promptly ceased on completion of the immunization and soon afterward the regiment, with the exception of one troop, left the post on a twenty-one-day march, going to Knoxville, Tenn., and return, some 300 miles. Major Lyster says:

> There was no attempt to boil or sterilize the drinking-water used on this march, the supply being from whatever was used locally. On the return of the command, after spending twenty-one days in a country where typhoid is prevalent practically throughout the year and living under war conditions, the sick report was stated by the commanding officer to have been *nil*. No subsequent cases of typhoid developed. While from the nature of the experiment the result is only presumptive evidence in favor of inoculation it cannot well be made conclusive for obvious reasons.

Viewed in the light of our recent experience in Texas and on the Mexican border, it is perfectly apparent that the regiment owed its freedom from typhoid to the prophylactic treatment it had received before the march began.

The duration of the immunity following vaccination still remains a subject for speculation. Colonel Firth[10] concluded from statistics recently collected in India that the degree of immunity begins to diminish between the second and third years after vaccination, and in order to maintain the troops in a maximum state of resistance he recommends reinoculation after two and one-half years. His tables also show that even after the fourth and fifth years considerable immunity remains, as the rate per thousand is roughly only one-fourth of that of unprotected troops. In our own service, the measure is of too recent introduction for any conclusions to be drawn. Up to the end of September, we had vaccinated 81,340 men, and among these only twelve cases of typhoid, with no deaths, had been reported. Since three doses are used in our service (in the English only two) of a somewhat different vaccine, we expect the protection to exceed that obtained in India.

The effect on the morbidity from this disease for the entire Army is now becoming apparent; the admission and death-rate for 1910 were the best as yet recorded, and in the year 1911 the number of admissions had fallen to one-quarter (from 2.4 per thousand to 0.6) of that of last year; there is also some improvement in the death-rate. There were only forty-five cases in the Army in the United States during 1911, and seven of these were contracted before enlistment or while on furlough. As this has been a year of unusual exposure this reduction in the amount of fever is a source of considerable satisfaction. The significance of this low rate appears when a comparison with preceding years is made; in 1909 there were 173 cases and sixteen deaths; in 1910, 143 cases and ten deaths, and in 1911, forty-five cases and eight deaths.

We are, therefore, justified in believing that under the conditions encountered in the Army, vaccination is harmless and efficient.

In civil life, the conditions are somewhat different, being, in many ways, simple compared to those in the Army. In cities, all the general principles of sanitation can be put in force and there may not be the same urgent reasons for universal vaccination as exist in the Army, yet there is no doubt but that vaccination would diminish greatly the amount of typhoid. There is no conflict, moreover, between vaccination and general sanitary reforms; each has its sphere and, perhaps, in the far distant future, when sanitation is perfect, there may be little necessity for vaccination; in the meantime, in this and the succeeding four or five generations most of the typhoid now occurring in our cities and country districts can be prevented by vaccination. All whose duty or profession brings them into contact with the sick should certainly be vaccinated. Those especially exposed, as travelers, campers, engineers, plumbers and workers in industrial villages, should also be treated. We have found that children bear the immunization rather better than adults, as it seldom interferes with their play. They should be immuized if living in a district where the typhoid-rate is high, or before leaving a healthy city for a summer vacation. Contacts in houses or familiies in which a case of typhoid has developed should be vaccinated if they are well and free from fever at the time; not that a dose of vaccine would do any real harm even were the patient in the incubation stage of the disease, but should typhoid fever follow immediately after vaccination it would tend to discredit the procedure in the eyes of the public. On the appearance of an epidemic outbreak those in the infected area who have not already had the disease should be protected. This has been done many times and there is no convincing reason for fearing a negative phase or condition of increased susceptibility. Cullinan,[11] in 1901, vaccinated 500 persons at the Richmond Asylum, during an epidemic lasting five months, and among these only 1.36 per cent. contracted the disease, and almost all of these were in the incubation stage at the time, while 14.9 per cent. of 114 uninoculated nurses were attacked.

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[9] Lyster: Mil. Surgeon, 1911, xxviii, 528.

[10] Firth: Jour. Roy. Army Med. Corps, 1911, xvi, 589.

Leishman has related the following experience bearing on this point:[12]

> To my mind, however, the most important evidence bearing on this question of the negative phase is to be sought, not in the laboratory but in actual practice; in other words, in a study of the evidence for and against any increased period of susceptibility to enteric fever in the case of men recently inoculated. I may say that, from a very early period, I felt that its dangers, if existent, must be trivial, for the following reason. At the time of the Maidstone epidemic, in 1897, a considerable number of inoculations were carried out by Sir A. E. Wright, Colonel Semple and myself on the attendants at the Barming Asylum, which at the time was heavily infected. Subsequent to our inoculations, which totalled about one hundred, other cases occurred, so that it was evident that our inoculations were done at a time when these attendants were still exposed to infection. The results of the inoculations in this instance were excellent, no case being recorded among the inoculated. Now here, if ever, we should have seen evidence of increased susceptibility if a negative phase was present in these attendants, inoculated as they were during the height of the epidemic; and, further, inoculated with doses of the vaccine considerably larger than are ever employed nowadays. Still no single case occurred, and I cannot help thinking that this points clearly in the direction of the safety of inoculating in the presence of the disease and is strong evidence that the dangers of a negative phase are more theoretical than real.

In this country, Richardson and Spooner[13] vaccinated 100 nurses in the Massachusetts General Hospital while there were typhoid cases in the wards, with the result that for the first year in the history of the institution there were no cases among the nurses or attendants. D. J. Davis, in Chicago, has had much the same experience, as has Lambert in the New York hospitals (personal communication). The same procedure has been carried out in many other hospitals and always with the same good results, and it is now proper to recognize that vaccination may be carried out in the presence of an epidemic. This has recently been done in Torrington, Conn., Guantanamo, Cuba, and several other places.

> "Torrington has a population of about 17,000 people. Early in September typhoid fever broke out, the cause of which has been traced to an infected water-supply. Two hundred and twenty-seven cases of typhoid were reported in September, fifty-four in October, and five in November, a total of 286 cases with twenty deaths, not including patients infected there and taken sick elsewhere. Of the fifty-nine patients taken sick in October and November nearly if not all of them were secondary cases. At the onset of the epidemic some of the physicians advocated typhoid vaccination and between three and four hundred inoculations were made. The cases were all carefully selected and no inoculations were given to persons with fever or any indication of ill health. The physicians report that the usual history was a slight chill and rise of temperature, 99 to 100 F., with indefinite aches in the back and limbs for about twelve hours, and local swelling and soreness at site of inoculation. Some had no reaction whatever, and only in a few cases were the individuals indisposed for two or three days. The usual technic was followed, the inoculations being given ten days apart. No cases of typhoid occurred among the vaccinated except one man who developed the fever after his second inoculation and ran a mild and very short case of typhoid. Forty-five of the eighty nurses were vaccinated, the others refused it. Two cases developed among the unvaccinated nurses. One physician writes that at the outbreak of the epidemic he inoculated himself, wife and two children, and added, 'None of us experienced any ill effect and all had a feeling of safety in the depression and panic that pervaded the community.'"[14]

Since this report I have learned of one additional case among the unvaccinated nurses, making three out of the thirty-five refusing prophylactic immunization.

Antityphoid vaccine is also, I feel convinced, destined to play an important part in the treatment of typhoid fever. As an agent powerful enough to give the immunity it does against infection it can certainly be counted on to hasten the development of the immunity which brings with it cure and convalescence in typhoid.

## CONCLUSIONS

1. Antityphoid vaccination in healthy persons is a harmless procedure.
2. It confers almost absolute immunity against infection.
3. It is the principal cause of the immunity of our troops against typhoid in the recent Texas maneuvers.
4. The duration of the immunity is not yet determined, but is assuredly two and one-half years, and probably longer.
5. Only in exceptional instances does its administration cause an appreciable degree of personal discomfort.
6. It apparently protects against the chronic bacillus-carrier, and is, at present, the only known means by which a person can be protected against typhoid under all conditions.
7. All persons whose professions or duty involves contact with the sick should be immunized.
8. The general vaccination of an entire community is feasible and could be done without interfering with general sanitary improvements, and should be urged wherever the typhoid-rate is high.

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[11] Quoted by Wright: Brit. Med. Jour., Oct. 26, 1901, p. 1226.

[12] Leishman: Harben Lecture, Jour. Roy. Inst. Pub. Health, London, 1910, xviii, 515.

[13] Richardson and Spooner: Boston Med. and Surg. Jour., 1911, clxiv, 8.

[14] Monthly Bulletin Connecticut State Board of Health, November, 1911.

# A TYPHOID CARRIER ON SHIPBOARD

WILBUR A. SAWYER, M.D.

Director of the Bureau of the Hygienic Laboratory of the California State Board of Health

BERKELEY, CAL.

An investigation just completed by the California State Board of Health has traced twenty-seven cases of typhoid among sailors to a carrier in the crew of a lumber steamer. Four of the patients succumbed to the disease. This typhoid carrier is unique among those already reported inasmuch as he was a member of a ship's crew and infected a large number of his companions without having anything to do with the handling of their food. The danger from typhoid on this ship was so well known among sailors that the vessel was called the "fever ship" and it was difficult to secure desirable men for the crew.

For three and a half years it has been noticed at the United States Marine Hospital in San Francisco that a large part of all the typhoid cases has come from the steamship *Acme*, a vessel carrying lumber from Humboldt Bay, usually from Arcata, to San Francisco Bay and sometimes to San Pedro, the port of Los Angeles. This observation was reported to the State Board of Health and the Health Department of San Francisco. An investigation, carried on by the latter, brought to light evidence pointing to a member of the crew as a carrier. This man, H. O., was investigated during two weeks in the City and County Hospital in San Francisco, but was discharged on Dec. 15, 1911, after the city bacteriologist had reported that the blood gave negative Widal tests and that typhoid bacilli could not at that time be demonstrated in the stools.

The investigation by the city showed that the solution of this problem involved work in other cities. The State Board of Health was notified of this fact and immediately assigned the investigation to the Division of Epidemiology of the Bureau of the Hygienic Laboratory. The director of the bureau began work on the problem on Dec. 28, 1911.

The *Acme* takes fuel oil in San Francisco but discharges cargo in Oakland. No passengers are carried, and there are usually only twenty-one men employed on board. These are the captain, first mate, second mate, chief engineer, assistant engineer, two firemen, one cook, one waiter, and twelve seamen.

Sanitary surveys showed that the ship was on the whole no less sanitary than most vessels of her kind. There was evidence of recent alterations made by the owners in their attempt to check the series of typhoid cases by making the vessel more hygienic. The mess-room for the officers was clean and attractive. The crew took the food which was set out for them and ate it sitting on the cargo. The galley was not so clean as is desirable. Dishes were washed in hot water in a small tank heated by steam coils.

The forecastle housed twelve men in very close quarters. There were three tiers of bunks and very little unoccupied space. The air conditions had recently been rendered less objectionable by the placing of a ventilator through the deck overhead. At the first inspection the sailors' water-closet was in a filthy state and suggested opportunity for the spread of infection by flies. Before the investigation had terminated conditions had been greatly improved by the replacing of the bowl, the installation of a system of constant flushing with sea-water, and the cementing of the floor. The danger of conveyance of infection by flies was very slight while the ship was at sea and practically free from them, but considerable when the vessel was tied at fly-infested wharves.

The introduction of typhoid bacilli to the ship in the food-supply could be almost entirely ruled out. No fresh milk was taken aboard, condensed milk being used. Fresh vegetables, such as lettuce, radishes, celery, and onions, were eaten raw by the crew, but all the food except meat was purchased exclusively in San Francisco. Other ships buying in the same market were free from typhoid.

The drinking-water supply for the galley was taken through a pipe and faucet from a large closed iron tank. Near the forecastle was a new covered barrel from which the crew obtained water through a faucet for drinking and washing. Near the deck-house was an old cask which had escaped destruction at the time the alterations were made, when the other water-containers were replaced. It lay on its side, and water was obtained from it by dipping through a small square hole with a common drinking-cup. It is apparent that members of the crew reaching into the dark barrel would wet their hands and contaminate the water. This cask was called the officers' cask. It supplied water for the officers' table and for any members of the crew who found it convenient to drink from it. The officers' cask has recently been thrown overboard and has been succeeded by a small barrel with a faucet.

Samples were taken from each water-supply and were examined for colon bacilli. All the examinations were negative except one of two tests made of samples taken from the officers' cask. A portion of this one sample of water showing colon bacilli was incubated in lactose bile and later plated on Endo medium, but typhoid bacilli could not be demonstrated. Possibly the results would have been different if the officers' cask had not been freshly filled shortly before each examination.

In order to eliminate as far as possible infection from unknown water-supplies the owners had specified for some time past that all the drinking-water should be taken aboard in San Francisco. This meant that the officers' cask might receive contamination for nearly a week between fillings. Limiting the water-supply to a single safe source did not prevent further cases from developing.

It was evident that there were several methods by which typhoid bacilli might be readily distributed by one member of the crew to the others. The infection could be spread by contamination of the food during preparation, by pollution of the officers' cask, by soiling of the hands of the crew in the crowded forecastle or the insanitary toilet, or by transference of infectious material by flies from the toilet to the food-supply. The contamination of the officers' cask seemed to explain most satisfactorily the possible distribution of typhoid bacilli from a carrier to the majority of the cases.

Inquiry showed that the men did not frequent any particular boarding-house or saloon in Arcata or San Francisco. They ate on board ship during their term of service and most of them had never gone ashore in Arcata. In San Francisco they scattered about town as did the sailors from the other ships and they had no special rendezvous. Other ships than the *Acme* coming into San Francisco are comparatively free from typhoid.

In order to find out whether any other ships sailing to and from Humboldt Bay and taking water there were troubled with typhoid, a number of ships accessible in San Francisco Bay were visited and the owners of other vessels were interviewed. In no instance had there been recent cases of typhoid fever on board the ships. On six ships sailing to Humboldt Bay we asked whether the men knew of any vessels on which there had been typhoid, and on four of the six the reply was made that the *Acme* had had trouble with the disease. No other ships were mentioned as having typhoid. Dr. S. B. Foster, the officer representing the United States Public Health and Marine-Hospital Service at Eureka, reported that no cases of typhoid had come under his care since January, 1908.

The evidence already presented gave ground for a strong suspicion that the series of typhoid cases among the crew of the *Acme* arose from a focus on board the ship. Every effort was then made to detect the source by examination of individuals who might be carriers. It was impossible to lay the blame on any one cook or waiter as these men had been changed at short intervals during the series of cases. A similar situation existed with regard to the seamen and firemen. With the exception of the captain (G. O.), the first mate (J. H.), the chief engineer (L. P.), and the winch-driver (H. O.). no members of the ship's company at the time of beginning the investigation had been aboard for any considerable period. When the first visit to the *Acme* was made, she was in dry-dock and all the men had been discharged except the four mentioned above. Of these only the captain (G. O.) and the winch-driver (H. O.) had been aboard during the entire series of cases. The captain had never had typhoid. The winch-driver had had the disease four years before, but he had been examined in December. 1911, by the city bacteriologist of San Francisco and his stools had been found free from typhoid bacilli. The first mate had not had typhoid. He had been aboard for a year, and two years previously he had been in service on the same ship. The chief engineer had been on the *Acme* since April 6, 1910, and had been infected with typhoid on the ship in February, 1911.

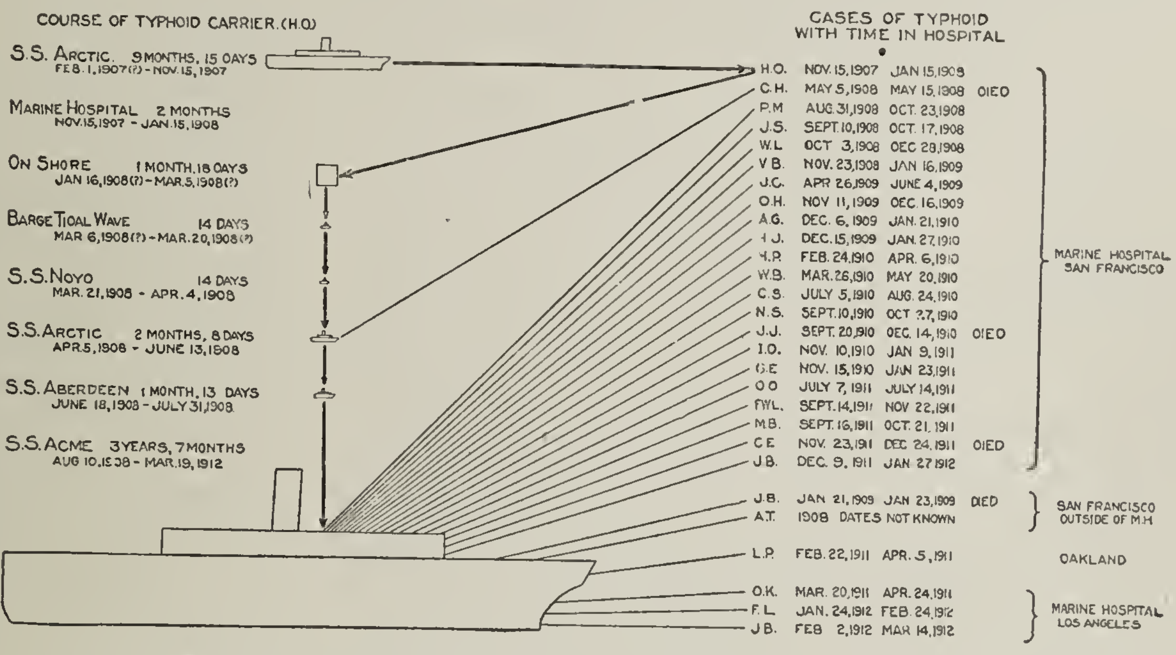
COURSE OF TYPHOID CARRIER.(H.O.)
S.S. ARCTIC. 9 MONTHS, 15 DAYS FEB. 1, 1907(?) - NOV. 15, 1907
MARINE HOSPITAL 2 MONTHS NOV. 15, 1907 - JAN. 15, 1908
ON SHORE 1 MONTH, 18 DAYS JAN 16, 1908(?) - MAR. 5, 1908(?)
BARGE TIDAL WAVE 14 DAYS MAR 6, 1908(?) - MAR. 20, 1908(?)
S.S. NOYO 14 DAYS MAR. 21, 1908 - APR. 4, 1908
S.S. ARCTIC 2 MONTHS, 8 DAYS APR. 5, 1908 - JUNE 13, 1908
S.S. ABERDEEN 1 MONTH, 13 DAYS JUNE 18, 1908 - JULY 31, 1908
S.S. ACME 3 YEARS, 7 MONTHS AUG 10, 1908 - MAR. 19, 1912
CASES OF TYPHOID WITH TIME IN HOSPITAL
H.O. NOV. 15, 1907 JAN 15, 1908
C.H. MAY 5, 1908 MAY 15, 1908 DIED
P.M AUG. 31, 1908 OCT. 23, 1908
J.S. SEPT. 10, 1908 OCT. 17, 1908
W.L. OCT 3, 1908 DEC 28, 1908
V.B. NOV. 23, 1908 JAN 16, 1909
J.C. APR 26, 1909 JUNE 4, 1909
O.H. NOV 11, 1909 DEC. 16, 1909
A.G. DEC. 6, 1909 JAN. 21, 1910
H.J. DEC. 15, 1909 JAN. 27, 1910
H.P. FEB. 24, 1910 APR. 6, 1910
W.B. MAR. 26, 1910 MAY 20, 1910
C.S. JULY 5, 1910 AUG. 24, 1910
N.S. SEPT. 10, 1910 OCT 27, 1910
J.J. SEPT. 20, 1910 DEC. 14, 1910 DIED
I.O. NOV. 10, 1910 JAN 9, 1911
G.E. NOV. 15, 1910 JAN 23, 1911
O.O. JULY 7, 1911 JULY 14, 1911
F.W.L. SEPT. 14, 1911 NOV 22, 1911
M.B. SEPT. 16, 1911 OCT. 21, 1911
C.E. NOV. 23, 1911 DEC 24, 1911 DIED
J.B. DEC. 9, 1911 JAN 27, 1912
MARINE HOSPITAL SAN FRANCISCO
J.B. JAN 21, 1909 JAN 23, 1909 DIED
A.T. 1908 DATES NOT KNOWN
SAN FRANCISCO OUTSIDE OF M.H.
L.P. FEB. 22, 1911 APR. 5, 1911
OAKLAND
O.K. MAR. 20, 1911 APR. 24, 1911
F.L. JAN. 24, 1912 FEB. 24, 1912
J.B. FEB 2, 1912 MAR 14, 1912
MARINE HOSPITAL LOS ANGELES

Chart showing periods of service of a typhoid carrier on six ships and resulting cases among the crews; prepared by Dr. W. A. Sawyer, director of the California State Hygienic Laboratory. Copyright, 1912, by California State Board of Health. Lengths of ships are proportional to length of stay of carrier on board ships.

The first laboratory investigation consisted of examinations of blood, feces and urine from the captain (G. O.), the first mate (J. H.), and the chief engineer (L. P.). Specimens were taken at the ship on December 30, and January 3, and additional samples from L. P. on January 16. Examination of the blood showed a positive Widal reaction for the engineer (L. P.). The other blood examinations were negative. Examinations of the urine and feces of each of the three men failed to reveal typhoid bacilli.

Shortly after the specimens from the captain, first mate, and chief engineer had been found to be free from typhoid bacilli, it was learned that two seamen of the *Acme* had just come down with typhoid and were under the care of the United States Marine Hospital in Los Angeles. It was decided to begin the investigation anew by making a thorough investigation of hospital records and of the names and dates on back pay-rolls of ship-owners, and also by interviewing as many of the early patients of the typhoid series from the *Acme* as could be reached. The records of the United States Marine Hospitals in San Francisco and Los Angeles were of great value, and we are greatly indebted to Surgeons James M. Gassaway and S. D. Brooks for placing hospital records at our disposal. We were fortunate in being able to find and interview four of the early patients, V. B., I. O., L. P., and O. K. The results of the searching of records and interviewing of former patients enabled us to secure the information shown on the chart illustrating this article. All the evidence tended to indicate that the winch-driver (H. O.) was responsible for the series of cases on the *Acme* and also for the single case received by the Marine Hospital since January, 1908, from the steamer *Arctic*. For the sake of brevity and clearness the chart has been made to show the history of H. O., the winch-driver, from the time of his taking service on the steamer *Arctic* to the time when our investigation was completed. The chart shows also the length of his stay aboard each ship on which he served, and indicates by initials all typhoid patients known to have come from these ships into hospitals and gives the dates of their stay under treatment. A study of the dates shows that all the cases received their infection while on board ship with H. O. The diagram shows also that patients from the *Acme* were cared for in three cities, San Francisco, Oakland and Los Angeles. That there were other undiscovered cases can be little doubted. In fact, one victim, J. F., who was reported by one of the crew, was omitted from the statistics because the diagnosis could not be confirmed by other evidence. The cases were not limited to the seamen. L. P. was chief engineer, and J. B., who died in the German Hospital in San Francisco, was first mate.

It will be noticed that during the stay of H. O. on the *Acme*, covering a period of forty-three months, there were twenty-six cases. During his period of service next in length (two and one-fourth months on the *Arctic*) one case occurred. In all there were twenty-seven cases of typhoid fever, four of which were fatal. Of the patients twenty-one were in the United States Marine Hospital in San Francisco, and three of them died, making the mortality 14.3 per cent. During the period beginning with H. O.'s return to work after his illness and ending Feb. 22, 1912, sixty-three typhoid patients were admitted into the Marine Hospital in San Francisco from all other ships entering San Francisco Bay, including the river boats, foreign ships and government boats. Of these sixty-three patients six died, showing a mortality of 9.5 per cent. The cases traceable to the carrier, H. O., were one-fourth of all the typhoid cases admitted and were responsible for one-third of the resulting deaths. Under the care of the Marine Hospital in Los Angeles during the same period there were three cases from the *Acme* and fourteen cases from other ships. All of the seventeen patients recovered. All the cases which could be collected and confirmed showed that there had been twenty-seven cases traceable to H. O. and that four of the patients had died. This gives a mortality of 14.8 per cent., which suggests that the infection being distributed by H. O. was more virulent than the average strain of typhoid.

The evidence collected strengthened all previous suspicions that the infections came from a carrier on board the *Acme,* and special suspicion fell on H. O. It was decided to make thorough laboratory examination of material from all persons under slightest suspicion and to begin with the chief engineer (L. P.), the captain (G. O.), and the winch-driver (H. O.). The plan included keeping each man under investigation in a hospital for at least twenty-four hours. This would insure that the specimens were *bona fide* and properly taken. The A. W. Beadle Co., owners of the *Acme,* generously met the expense of keeping the men in the Roosevelt Hospital in Berkeley. On March 2, the *Acme* came into port at Oakland and the captain (G. O.) and winch-driver (H. O.) came to the hospital. Specimens of blood, urine, and feces were obtained from the two men during their stay of thirty hours. On March 10 the chief engineer (L. P.) reported for observation. Similar specimens were obtained from him during the following twenty-four hours. All three of the men were given fluidextract of cascara on admission to the hospital and Epsom salts the next morning.

TABLE 1.—AGGLUTINATION TESTS ON THREE SUSPECTS AND TWO CONTROLS

| Dilution of Serum Tested | Serum of | | | | Serum of Control | |
|---|---|---|---|---|---|---|
| | G. O. | H. O. | L. P. vs. Hopkins | L. P. vs. H. O. 7th Gen. | A | B |
| 1-4 | + | + | + | ± | ± | + |
| 1-8 | ± | + | + | ± | ± | + |
| 1-10 | ± | + | + | ± | ± | + |
| 1-20 | — | + | ± | + | ± | + |
| 1-40 | — | + | — | + | — | — |
| 1-80 | — | + | — | + | — | — |
| 1-100 | — | ± | — | + | — | — |
| 1-160 | — | + | — | + | — | — |
| 1-200 | — | — | — | + | — | — |
| 1-300 | — | — | — | ± | — | — |
| 1-400 | — | — | — | — | — | — |
| 1-800 | — | — | — | — | — | — |

TABLE 2.—RESULTS OF CULTURE EXAMINATION

| Name | Spec. | No. of Endo Plates | Colonies Suspicious in 48 Hours | Colonies on Russell's Med. | Reaction on Russell's Med. After 2 to 14 Days | |
|---|---|---|---|---|---|---|
| | | | | | Positive | Negative |
| G. O. | Urine | 6 | None | 0 | 0 | 0 |
| G. O. | Feces | 12 | Few | 14 | 0 | 14 |
| G. O. | Feces | 11 | Few | 25 | 0 | 25 |
| H. O. | Urine | 6 | Few | 5 | 0 | 5 |
| H. O. | Urine | 6 | Few | 5 | 0 | 5 |
| H. O. | Feces | 12 | Very many | 107 | 55 | 52 |
| L. P. | Urine | 6 | Very few | 20 | 0 | 20 |
| L. P. | Feces | 18 | Very few | 10 | 0 | 10 |
| L. P. | Feces | 6 | Very few | 5 | 0 | 5 |
| L. P. | Feces | 6 | Very few | 5 | 0 | 5 |

The results of agglutination tests performed on the blood samples from G. O., H. O., L. P., and two normal individuals who had never had typhoid fever (A. and B.) are given in the first table. The test was made macroscopically and the serum was allowed to act for twenty-four hours in the specified dilutions on bouillon cultures of the Hopkins strain of typhoid except in one of the tests of the serum of L. P. In that case the sixth generation of a typhoid culture isolated from the stool of H. O. was used. It will be noticed that the serum of L. P. who had been infected on board the *Acme* had much greater agglutinating power for the bacilli from H. O. than for the standard laboratory culture. In Table 1 positive results are indicated by the sign +, negative by the sign — and partial (showing clumps and cloudy fluid) by the sign ±.

The specimens of feces and urine were plated on Endo medium. Suspicious colonies were transferred to Russell's double sugar agar. Those showing reactions characteristic of typhoid bacilli were submitted in bouillon culture to macroscopic agglutination tests with antityphoid serum. The results of the first part of these examinations are shown in Table 2.

In the second table it will be seen that fifty-five of the cultures isolated from the feces of H. O. gave the reaction characteristic of typhoid bacilli on Russell's medium. Twenty-six of these were planted on broth, and this third generation of the organisms on artificial mediums was tested with antityphoid serum. The macroscopic agglutination test was positive in twenty-four hours in all cases in dilutions of one to twenty but only partial in dilutions of one to fifty. In glucose broth these cultures all produced acid but no gas. Seven of these cultures from H. O., together with controls of known typhoid and colon bacilli, were tested for motility, for indol production, for acid and gas formation in various sugar media (dextrose, lactose, mannit), for production of color-change in neutral red agar, for coagulation of milk, and for liquefaction of gelatin. The cultural characteristics of the seven organisms from H. O. were identical with those of the typhoid bacillus. The failure to be completely agglutinated by antityphoid serum in dilution of one to fifty was accredited to the power which newly isolated cultures have of resisting agglutinins. This explanation was confirmed after some of the cultures had been transplanted through the eleventh generation in the course of two weeks. The strains from H. O. then equaled the Hopkins strain in agglutinability. Both strains gave complete agglutination at one to 4,000 and partial results up to one to 500,000. One of the H. O. cultures even showed evidence of clumping at one to 1,000,000.

The proof that H. O. was a carrier was now considered complete and the findings were reported to the secretary of the State Board of Health for executive action. What to do with H. O., now that he was known to be a constant source of danger, became a serious problem. He was an able-bodied man of 36. He had not been sick since recovering from typhoid in January, 1908, and he complained of no symptoms. He ran the winch on the forward end of the *Acme* and cared for the lamps and gears when the ship was at sea.

At a conference between health officials and a representative of the owners of the *Acme,* it was decided, on March 19, 1912, that this carrier should be taken off the *Acme* and an attempt should be made to rid him of his infection through appropriate treatment. Surgeon James M. Gassaway made this possible by offering to take him into the United States Marine Hospital in San Francisco for study and treatment. Accordingly the Secretary of the State Board of Health visited the *Acme* and notified H. O. that he would be transferred to the Marine Hospital and would be placed under quarantine there. When H. O. was informed of the danger of his presence to others, he showed deep concern and voluntarily gave up his work and entered the hospital.

A consideration of the facts revealed by the investigation of the source of typhoid fever on the *Acme* leads to the following observations:

1. A carrier may be of great danger to others, even when not occupied in the preparation or handling of food. Conditions on shipboard may be specially favorable to the transference of infection, as witnessed by the occurrence of twenty-six cases within three and a half years on a ship carrying twenty-one men.

2. In examinations of cultures freshly isolated from materials suspected of containing typhoid bacilli, negative agglutination tests with the usual dilutions of serum should not be accepted without cultural confirmation. The well-known power of freshly isolated cultures to resist agglutinins was strikingly illustrated.

3. Emphasis is given by this investigation to the point which others have made that typhoid patients should not be unconditionally dismissed by physicians unless their feces and urine have been examined and found to be free from typhoid bacilli. If the staff of the Marine Hospital in San Francisco had discovered typhoid bacilli in the stools of their patient, H. O., in January, 1908, and had in some way prevented his spreading typhoid among sailors, this one hospital would have saved for itself the expense of treating twenty-one typhoid patients, and four deaths would have been prevented.

## THE VALUE OF THE WIDAL REACTION IN THE DETECTION OF TYPHOID CARRIERS

EDWARD B. BIGELOW, M.D.
Assistant Bacteriologist, Board of Health
WORCESTER, MASS.

In a previous communication[1] I have said that most carriers of typhoid bacilli have a persistent positive Widal agglutination reaction and suggested that this fact should be taken advantage of to trace the source, and if possible anticipate a typhoid epidemic. By this means in Worcester, in 1910, one carrier was discovered who initiated an epidemic of 213 cases of typhoid, and in 1909, the probable source of two other smaller epidemics was brought to light. To show the efficiency of this procedure the cases of two more typhoid carriers are now briefly reported from our 1911 experience.

1. Between August 1 and September 27, five cases of typhoid were reported to the board of health on one milk route. The dairyman, the producer of about 60 quarts of milk daily, was also his own distributor. Specimens of blood were obtained from all persons on the dairy farm. One only, that of the dairyman himself, gave a positive Widal agglutination. He was 51 years of age and said that he had had typhoid twice, once when about 10 years of age and again about eight years ago, since which time his general health had been good. His urine and feces were examined. The feces contained typhoid bacilli. On the evidence of the positive Widal he had been prohibited from distributing milk. Nine more cases of typhoid were reported developing among his former customers in the next two weeks and none later.

2. On the report to the board of health of the death of one person and the illness of two other relatives in the neighboring house from typhoid, an investigation was instituted. In the family of the dead victim five months previously there had been one other death apparently from pneumonia. In this same family was a man who had had an attack of typhoid when in another state, eighteen months previously, followed by necrosis and abscess formation about the sternum. In spite of an operation a year ago he still had two small pus-discharging sinuses over the sternum leading down to the bone bare of periosteum. His blood gave a positive Widal reaction. On three different examinations his urine and feces were found negative for typhoid bacilli, but the pus from the sinuses over the sternum was positive on each of these occasions. The intermediary agent from the carrier to the three synchronous cases of typhoid fever seemed in this instance to have been fruit, which the carrier gathered some days before the onset of their attacks.

61 Pearl Street.

## EXPERIMENTS WITH BISMUTH PASTES

F. McKELVEY BELL, M.D.
OTTAWA, CANADA

During the past two years I have used Beck's bismuth paste in a variety of conditions and with more or less favorable results.

It may be said *a priori* that bismuth paste is useful not solely in chronic conditions. Many recent sinuses and sloughing wounds, etc., are quite amenable to this form of treatment.

The first series of cases were those of tubercular adenitis, twelve cases in all, ten cervical and two inguinal. In this condition, in which some of the glands are caseating or suppurating, it is almost impossible to keep a perfectly aseptic field during operation and, even when the glands have not broken down, the size of the cavity after their removal, often filled with blood as it is, encourages pus formation. It appeared that if this cavity were filled with bismuth paste before the last closing suture was inserted, suppuration would be prevented. This proved to be the case. There was no pain after operation and the cavity filled with a perfectly clear, aseptic mixture of serum and liquefied petrolatum, the bismuth being precipitated. Unfortunately for the success of the experiment, in these cases the paste seems to do more than its duty, not only preventing pus formation, but, in addition, preventing the formation of healthy granulations. The wound required to be opened and drained in the usual manner, but took much longer than usual to heal. In some of these wounds, which had filled with serous or seropurulent fluid, a stitch was removed and bismuth paste injected. The wounds healed painlessly, but rather more slowly than those in which the other forms of drainage were employed. In one case in which healing had taken place quite promptly there was an opening through a small vesicle about every second week, and a small quantity of seropus was discharged; then healing would readily take place again without further discharge. After this had happened three times it occurred to me that there might be some foreign body in the wound, and with a probe this could be felt at about 1 inch depth. I removed it with a curet. It was a concretion of bismuth about the size of a dried pea and quite brittle; there were five more of these bismuth stones which were removed at the same time. The wound then healed permanently without further drainage.

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[1] Bigelow: THE JOURNAL A. M. A., Oct. 28, 1911, p. 1418.

The second series of cases, four pericecal abscesses, gave much more favorable results. The patients' ages were 45, 56, 62 and 73 years, respectively. They had all suffered attacks of appendicitis from ten to seventeen years previously. I will omit symptoms and details of the operations; suffice it to say that each wound was opened and drained with a rubber tube, of 1-inch caliber, for four days. On the fifth day, instead of substituting a smaller tube or gauze drainage — a procedure which is attended with considerable pain and which in certain cases might entail a slight amount of risk through the breaking down of adhesions—a glass syringe of 1½ ounce capacity was filled with bismuth paste and a small rubber tube, 6 inches in length, attached to the nozzle and passed down to the bottom of the sinus. The paste was then injected slowly until it filled the cavity to the level of the skin. The wounds needed no further drainage and no further care beyond a daily change of dressings. The cavities filled very rapidly, the evening temperature (which under ordinary drainage averages about 100 degrees F.) dropped in a few hours to normal and remained there. A little fresh paste was injected in from five to seven days and in three of the four cases this procedure did not need to be repeated, the sinuses being closed by the end of the second week.

The absolute freedom from pain or tenderness after this form of intra-abdominal drainage and the prompt fall in temperature, together with rapid healing, were all very gratifying to the patients as well as to the surgeon. It became apparent, too, from later observations that there is less liability to the formation of pockets of pus and dense postoperative adhesions than where other forms of drainage are used.

In seven subsequent cases of general peritonitis this form of drainage was used as above, in each case on the fifth day, each having been previously drained with large rubber tube and by means of Murphy's enteroclysis.

In ten of these eleven cases mentioned complete healing took place in from fourteen to twenty-one days, the eleventh, that of a man, aged 73, taking five weeks; this slowness was no doubt due to lack of vitality in the tissues. One especial advantage bismuth showed over other forms of drainage was that the muscular and skin sutures were far less inclined to suppurate and give way, so that one secured a much firmer scar and consequently less liability to postoperative hernia.

The next two cases are rather unusual. The first of these, a perirenal abscess, when opened contained about a quart of putrid greenish pus, the cavity extending downward and postperitoneally to about the middle of the internal surface of the ilium, while an apparently healthy kidney (which secreted normal urine) nestled in the upper zone of the cavity. I was at a loss to understand the *raison d'être* of the abscess and had to content myself for the present with irrigation and drainage. Two days later I removed the gauze and injected 4 ounces of bismuth paste and on the following day the cause of the abscess was evident. The bismuth was returned from the wound, black in color, showing that there must be some intestinal secretion acting on it. Evidently we had to deal with a fecal fistula of minute caliber. Some ulceration must have taken place in the posterior wall of the descending colon. The cause of ulceration was as yet unknown. The cavity commenced filling in rapidly, in three days the paste returned white; in three weeks more the cavity was a mere sinus about as large as a lead-pencil—both dimensions—and right at this time healing ceased. The patient showed slight signs of bismuth poisoning, blackening of gums and nausea. This was easily remedied in a few days by removal of the paste, etc., but the patient grew slowly worse and died two months later. Post-mortem examination showed sarcomatous nodules in kidney and liver. I think that had the pathologist looked for it he would have found lymphosarcoma of the mesocolon as well. This case is of interest in that it illustrates the use of bismuth paste as a diagnostic agent in detecting minute fecal fistulas in abscess cavities, and the power it has of rapidly healing these fistulas. It shows us, too, a simple way of proving their closure. It also points out once more the danger of using too large quantities of the paste, 4 ounces in this instance; but the following case illustrates this point more emphatically.

A large (formerly psoas) lumbar abscess with outer opening, 3 square inches of jagged hideousness from which the lower pole of the right kidney protruded, had been forming for twelve years. There was a suppurative spondylitis of the lumbar vertebræ and the crest of the ilium was eroded. The skin was undermined from the twelfth rib to the iliac crest and backward to the spinous processes. The patient, a woman aged 40, was greatly emaciated but still in fair condition. Her evening temperature was 102 to 103 F. and the amount of daily discharge from the wound was tremendous. She did not respond to Moro's tuberculin ointment. The urine was negative. The sinus was curetted and washed clean with hydrogen peroxid, the edges of the wound were trimmed and completely closed, then 6 ounces of bismuth paste were forced in. The temperature was normal that night for the first time in years; there was no pain; no morphin was needed. On the fourth day there was still no fever and no pain, and the wound was looking splendid. On the fifth day, however violent symptoms of bismuth poisoning appeared: incessant vomiting, diarrhea amounting at times to bloody stools, extreme weakness, cyanosis and clammy sweats, ulceration of mouth, blackening of gums followed by rapid emaciation. Thus in a few days we lost all we had gained and more. The paste was removed at once and treatment instituted to counteract the bismuth poisoning but it was two weeks before the patient recovered from it; and the wound, now minus some skin lost during operation, gaped wider than ever. The patient died six weeks later, death being in all probability accelerated by bismuth.

Note: One should always leave a free exit for bismuth paste where large quantities are used.

Bismuth paste makes a splendid dressing for burns or for sloughing surfaces, is soothing, healing and prevents the adherence of dressings.

In varicose ulcers and other chronic ulcers it is not so useful until after the healthy granulations have started, because it is not sufficiently stimulating, but in chronic ulcers as well as in chronic, sluggish sinuses, I substitute for ordinary bismuth paste the following:

℞ Bismuth subnitrate .................. 1 ounce
White petrolatum .................. 2 ounces

Dissolve on hot water-bath, stirring until cool; then (still stirring) add 5 per cent. of iodoform (i. e., 72 gr.).

The resulting paste acts not only as an antiseptic, but as a stimulant to granulating areas; but pads must be changed daily or dermatitis results. It must be kept in a dark jar, for light decomposes the iodoform and free iodin is formed. If bismuth paste is made by trituration only and not by heat, it forms a lumpy ointment which does not give as good results. It is quite unnecessary to heat or sterilize the paste before using (if the sinus has no fine ramifications) and it is much more easily handled cold, being placed in the large end of the syringe, while the piston is out, with a spatula. The piston can then be forced in and the paste passes easily through nozzles of small caliber.

In all chronic sinuses in which healing is slow and granulations unhealthy and in which ordinary bismuth paste does not seem to benefit, the bismuth-formic-iodid paste is very stimulating. It causes a sensation of heat and slight burning for about an hour, but assists in a more rapid cure.

### CONCLUSIONS

1. Bismuth paste as a drainage for acute suppurating sinuses is painless and efficacious, but does not assist in rapidity of cure.
2. When a sinus shows sluggishness, if 5 per cent. iodoform be added to the bismuth paste it is much more stimulating to granulations.
3. As a packing and drainage for localized intra-abdominal and pelvic sinuses bismuth paste is safe, painless, rapidly curative, prevents the formation of pockets of pus, lowers temperature and to a limited extent prevents postoperative adhesions.
4. It may be used as an aid to diagnosis in fecal fistulas as well as act as a curative agent.
5. In large cavities requiring 4 or more ounces of paste it should be watched carefully for symptoms of bismuth or arsenic (impurity) poisoning. Unless there is free exit for paste it is dangerous.
6. Bismuth "stones" may form in a closed sinus.
7. In clean wounds or those discharging seropus it retards healing and tends to chronic conditions. To get results the discharge should be frankly purulent.

400 McLeod Street.

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# PELLAGRAPHOBIA: A WORD OF CAUTION

GEORGE M. NILES, M.D.

ATLANTA, GA.

As in many past visitations of disease, where the causative factors were not worked out, undue alarm prevailed, coupled with an unreasoning attitude in their management, so we may view pellagra, whose threatening visage is now confronting this country.

History, and not very ancient history at that, will furnish such instances. I well remember the graphic description of a small-pox epidemic, as related to me by a physician, now gone to his reward. In this epidemic, occurring about seventy years ago in a western village, the populace almost fell over each other in a wild hegira, leaving hardly enough well ones to care for the necessities of the sick. Those remaining suffered untold privations for food, which the panic-stricken neighbors feared to bring even to the outer borders of the town, while the infected houses were burned with all their contents before the refugees would consent to return to the vicinity.

During the last yellow-fever epidemic but one, before the *Stegomyia fasciata* was tried and convicted, many needless regulations, entailing terrific expense, were forced on a frightened and bewildered people, while some of the prophylactic maneuvers were, in the light of our present knowledge, silly and grotesque. For instance, the postal regulations requiring all mail matter to be fumigated, all bulky packages to be sterilized, and letters to be perforated, no doubt would have excited the risibilities of the aforesaid stegomyias, had they been officially notified.

In the present instance, while the zeists and antizeists are waging their verbose warfare as to the etiology of pellagra, both the health authorities and the people at large are passing through a period of pellagraphobia, mild in some instances, but severe and unreasoning in others.

It is admitted that the specific etiologic factor in pellagra has not been traced to its lair. Until this factor is proved beyond a peradventure, there will necessarily be that element of uncertainty in which timid people will take no risks, keeping as far as possible on what they consider the safe side.

I, for my part, feel morally certain that pellagra is due to a toxicochemical poison generated in spoiled maize, and becoming active after being ingested in the human body. The weight of evidence bears this out; the majority of the careful students of the disease base their treatment on this assumption; and in those nations among whom the battle against pellagra has been fought, and apparently won, it was fought along the lines of zeistic belief.

I might assert, further, that practically all who have studied this disease join in the belief that it is neither contagious nor infectious. The nature of its onset and general course precludes this hypothesis, and I have no hesitancy in coming into close contact with pellagrins or permitting the attendants to do the same.

This growing pellagraphobia is to a certain extent chargeable to the physicians who, either directly or by innuendo, set in motion such fears. I might mention a hospital in this city which refuses to receive pellagrins on the ground that "it is an incurable disease," as if they had the prognostic functions of a supreme court. Less than two years ago there occurred in another hospital in this city a strike among the undergraduate nurses, aided and abetted by one of the house physicians, in which the *casus belli* was the nursing of these patients.

Several months ago there was under my care a woman from another state who suffered from an extremely mild attack of pellagra. The report becoming rife in the family hotel where she was stopping that she had this trouble, such alarm was excited that the landlady was informed that unless this lady left, the house would become vacant. The patient was requested to seek another hotel, which she did. I might mention many other instances, were it necessary to prove the prevalence of this phobia.

It is the consensus of opinion among the majority of the thoughtful observers of pellagra that the most efficient prophylactic measures consist in avoidance of corn products, unless the corn is known to be sound, abstention from alcoholics of all kinds, reasonable care in eating, and all those hygienic precautions calculated to keep the body up to par and in a resistant state.

While pellagra is unpleasant to nurse and treat, the attendants should be reassured, for a little ripple of fear, if encouraged, may grow into a billow of huge proportions, engulfing a whole neighborhood or community. In addition, while it is of the utmost importance to the patient that an early diagnosis should be made, the physician should be careful not to make a "snap diagnosis" on insufficient evidence. To diagnose as pellagra a sore mouth from pyorrhea alveolaris, an asymmetric skin lesion, an atypical gastro-intestinal disturbance, or some mental perversion, unless supported by other corroborative symptoms, is both unwise and unkind.

The object of this article, therefore, is to request the profession at large, while assuming a judicial attitude toward the unsolved problems of pellagra, and realizing the possible gravity of the situation, not to permit the seeds of an immoderate fear among the laity to take such root, that they may grow into a wide-spread pellagraphobia, a consummation earnestly to be deprecated.

920 Candler Building.

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# GAS-OXYGEN ANESTHESIA

## OBSERVATION IN 2,000 CASES

E. M. PRINCE, M.D.
BIRMINGHAM, ALA.

The noticeable increase of articles on gas-oxygen anesthesia shows the attention this anesthetic is attracting; and we see men who have only given a few hundred anesthesias attempt to draw therefrom conclusions which should be only speculative were this number increased threefold. One also notes the attempt to increase the death-rate from this anesthetic by reporting deaths due to this method, even when it was not used and in no way responsible for the death reported. I refer to the death quoted by Gwathmey,[1] as reported by Lydston.[2] At the time this death was reported I requested my anesthetist, Dr. James R. Dawson, to write Dr. Lydston, and after several letters had been exchanged it proved not to be a gas-oxygen anesthesia, and Dr. Lydston kindly consented to rectify the report.

Freeman Allen,[3] in his article on gas-oxygen anesthesia, cites three deaths, one in his own practice and two others in the hands of "young doctors," and then draws the conclusion that this is not a safe anesthetic. This does gas-oxygen anesthesia a great injustice, especially when we note the fact that in Allen's own case, according to his report, "the patient was a profoundly uremic, almost pulseless man." One would not expect patients who are almost pulseless to do well under any anesthetic, and one would not be greatly surprised if they died, although it would hardly be fair to hold the anesthetic wholly responsible for their death.

Unless the "two young doctors of Boston" were in the true sense anesthetists, their cases should not be charged up to the gas-oxygen anesthesia, and this anesthetic could not be condemned any more than one would condemn a certain surgical operation because one knew of two "young doctors" (not surgeons) who had attempted it and the patient died.

No one contends that this anesthetic is devoid of danger in unskilled hands any more than one would attempt to prove that a simple appendectomy is devoid of danger if performed by the untrained or unskilled doctor. Allen is to be commended on drawing the distinction between the pure gas-oxygen anesthesia and the gas-oxygen with "just a little ether," for the method is done a great injustice by many supposed gas-oxygen anesthetists who use "just a little ether," and whose patients have the same unpleasant after-effects as if the usual ether anesthesia is used.

No one will deny that there must be a mortality rate to gas-oxygen anesthesia, but I think that any surgeon who has observed the administration of several thousand of these anesthesias, by one skilled in this work, and observed the ease with which the patient is anesthetized, as well as the shock-free condition at the end of every operation, will be very loath to take up any other anesthetic again if it can be avoided. I have during the past four years performed over 2,000 operations under gas-oxgen anesthesia, and I am to-day using nothing in my surgical work except gas-oxygen anesthesia, regardless of the kind of operation, size of patient, or previous habits.

When I speak of gas and oxygen I do not mean gas-oxygen with "just a little ether." I mean that there is not one drop of ether used during the entire operation.

We (my colleagues at the South Highland Infirmary and I) would not hesitate to use another kind of anesthetic should occasion demand it, and we will perhaps find a patient who cannot be anesthetized quietly with gas-oxygen before we give many more thousand, but should this emergency arise I am quite sure that a search of our drug room would disclose a can of ether or chloroform with which we could "put him to sleep."

There are two ways of making a patient insensible to pain while he is undergoing an operation. One is to anesthetize him; the other is to "put him to sleep." The first requires skill; the latter usually requires strength. The first is performed by a man of sound gray matter; the second is selected because of the anesthetist's lack of this substance. Surgeons, as a whole, are very slow to appreciate the difference between trained anesthetists and the untrained, but if they will try 100 laparotomies under the former and 100 under the latter they will leave more happy homes and fewer widows and orphans in the former than in the latter class.

Having operated on over 2,000 patients under gas-oxygen, most of them in major surgical operations (no extraction of teeth), I feel that I know something of this anesthetic, but I fully realize the amount of study and observation required before one can feel that one understands it in every individual case. One thing that I am quite sure of is that it requires an anesthetist thoroughly trained in the work to administer it, and that it should never be intrusted to the intern, but to a well-paid specialist.

*Selection of Cases.*—We always examine surgical patients with care before the administration of the anesthetic, but regardless of findings gas-oxygen is given.

*Weight.*—It has been said that very large, robust men cannot be given gas-oxygen, but my January, 1912, record shows three men to whom this anesthetic was used, each weighing over 225 pounds, and they took it with much more ease than they would have taken ether.

*The Heart.*—In heart lesions we do not hesitate to use this anesthetic, as the rise in blood-pressure is not observed to any great extent where plenty of oxygen is given. This point is spoken of by Teter in a recent article.[4] At the clinic we also made observations in about fifty cases, taking the patients' blood-pressure before, during and after gas-oxygen anesthesia, and found little variation in the pressure if plenty of oxygen was given.

*Lungs and Kidneys.*—When there is damage to these important organs no one would for a moment question the superiority of gas-oxygen anesthesia over other methods. The reason for this has been so thoroughly gone into by men whose findings are so generally accepted that it would be useless to speak of them in this article. We refer to the work of Crile, of Cleveland, and the investigations of Hamburger and Ewing.[5]

*Race.*—The patient of dark-skinned race is the one who requires the most careful watching, for one of the most important signals is lacking in this class of patients; that is, the color, which should always be little less than pink. At our clinic we usually have from two to four of this race each month. Dr. Dawson informs me that he is governed by the pulse-rate and respiration as to the amount of oxygen to give.

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[1] Gwathmey: THE JOURNAL A. M. A., Feb. 17, 1912, p. 466.

[2] Lydston: Med. Rec., Nov. 12, 1910, and Feb. 11, 1911.

[3] Allen, Freeman: THE JOURNAL A. M. A., Feb. 10, 1912, p. 395.

[4] Teter in John B. Murphy's Surgical Clinics, i, No. 1.

[5] Hamburger and Ewing: THE JOURNAL A. M. A., Nov. 7, 1908, p. 1586.

*Previous Habits.*—The hard drinker or the morphin habitué we find a very undesirable patient for an anesthetic of any kind, but no more so for gas-oxygen than for other anesthetics. It is in this class of cases that the use of scopolamin plays a very important part.

*Kind of Operation.*—The operations about the anus, where divulsion is required, are the most difficult for the anesthetist to relax thoroughly, but usually a few extra minutes will solve the difficulty.

*Preliminary Medication.*—We routinely give morphin 1/4 grain, strychnin 1/30 grain, and atropin 1/100 grain, three-quarters of an hour before operation, unless there is some contra-indication to their use. The administration of morphin is not only for its aid in quieting the patient and assisting the anesthetist, but because the patient awakes so quickly that the pain would be almost unbearable if some means were not used to assist him. In young children, who, as a rule, bear morphin poorly, we give camphorated tincture of opium about one hour before operation. This can be continued after operation as they are, as a rule, free from the vomiting seen after ether.

*Administration.*—The first essential is to have an anesthetist of ability and one who has given much time and thought to this subject. He should be employed to give every anesthetic, so that his experience in this work would enable him to become more efficient, and he should be paid as every other specialist is paid; no attempt should be made to secure the services of a high-class physician at the price of a workman. The gentle manner and the assurance of the anesthetist will calm the patient's excitement, and render him a much better subject for the anesthetic.

I have been using the Cunningham apparatus, which has proved very satisfactory. The only improvement one could suggest is to leave off the ether-chamber, so the gas-oxygen anesthesia with "a little ether" could not be administered with this machine. Any apparatus in which one can get definite proportions is all that is required. This machine receives its supply from tanks, the gas coming in 3,200-gallon, the oxygen 750-gallon, the carbon

## OPERATIONS

PERFORMED UNDER NITROUS-OXID AND OXYGEN
- DURING JANUARY - 1912 -

| Nº | NAME | SEX | AGE | CHEST | URINE | BLOOD | WHT | ANESTHETIC | PULSE BEFORE OPERATION | OPERATION | TIME MINUTES | PULSE AFTER OPERATION | DRAINED | RECOVERY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | H.C | M | 33 | NEG. | NEG. | W.B.C<br>8000<br>HEMO-80 | 180 | GAS & OXYGEN | 88 | APPENDIX | 38 | 128 | NO | YES |
| 2 | T.D. | F. | 32 | NEG. | NEG. | W.B.C<br>11500<br>HEMO-85 | 120 | GAS & OXYGEN | 132 | APPENDIX | 17½ | 132 | YES | YES |
| 3 | W.S | F. | 47 | NEG. | NEG. | W.B.C<br>8000<br>HEMO 90 | 158 | GAS & OXYGEN | 104 | HEMORRHOIDS & PERINEORRHAPHY | 13 | 104 | — | YES |
| 4 | C.H. | M. | 25 | TUBERCULOUS | ALB. AND GRANULAR CASTS | W.B.C<br>20000<br>HEMO-85 | — | GAS & OXYGEN | 132 | GANGRENOUS APPENDIX | 22 | 120 | YES | YES |
| 5 | J.P. | F. | 48 | NEG. | NEG. | W.B.C<br>7000<br>HEMO 95 | — | GAS & OXYGEN | 108 | HYSTERECTOMY | 37½ | 116 | YES | YES |
| 6 | J.T. | M. | 27 | NEG. | ALB. | W.B.C.<br>20000<br>HEMO-100 | — | GAS & OXYGEN | 120 | APPENDIX | 11 | 92 | NO | YES |
| 7 | W.R. | F. | 18 | MITRAL STENOSIS | NEG. | W.B.C<br>7000<br>HEMO-100 | — | GAS & OXYGEN | 132 | FERMORAL HERNIA | 20 | 132 | NO | YES |
| 8 | R.B. | M. | 36 | NEG. | NEG. | —<br>HEMO 80 | — | GAS & OXYGEN | 116 | TUBERCULOUS GLANDS OF NECK | 28 | 112 | YES | YES |
| 9 | B.S | M. | 24 | NEG | NEG. | W.B.C.<br>10000<br>HEMO-100 | NEGRO | GAS & OXYGEN | 116 | INGUINAL HERNIA | 29 | 100 | NO | YES |
| 10 | E.H. | F. | 21 | NEG | NEG | W.B.C<br>14700<br>HEMO-100 | — | GAS & OXYGEN | 140 | RUPTURED APPENDIX | 27 | 96 | YES | YES |
| 11 | P.G. | M. | 22 | NEG. | NEG | W.B.C.<br>8000<br>HEMO — | — | GAS & OXYGEN | 104 | APPENDIX | 27 | 128 | YES | YES |
| 12 | H.G. | M. | 50 | T B | NEG | W.B.C<br>40000<br>HEMO-85 | — | GAS & OXYGEN | 84 | OSTEOMYELITIS OF HUMERUS | 17 | 72 | YES | YES |
| 13 | W.K. | F | 38 | NEG | NEG | W.B.C<br>10000<br>HEMO 80 | — | GAS & OXYGEN | 120 | PAN HYST. FOR CARCINOMA | 47 | 124 | YES | YES |
| 14 | T.M. | F | 18 | NEG. | NEG | W.B.C<br>8950<br>HEMO 85 | — | GAS & OXYGEN | 96 | APPENDIX | 22 | 136 | NO | YES |
| 15 | J.S | F | 57 | NEG. | NEG. | W.B.C<br>7500<br>HEMO-100 | — | GAS & OXYGEN | 116 | URETHRAL CARUNCLE | 5 | 100 | NO | YES |
| 16 | H.P | F | 30 | NEG | LARGE AMT. ALB AND R.B. CELLS | W.B.C<br>19000<br>HEMO 65 | — | GAS & OXYGEN | 160 | RUPTURED ECTOPIC | 20½ | 160 | YES | YES |
| 17 | W.P | F | 26 | NEG | NEG | W.B.C<br>17000<br>HEMO 90 | — | GAS & OXYGEN | 124 | ABSCESS OF BREAST | 4 | 120 | YES | YES |
| 18 | T.B. | F | 16 | NEG. | NEG | W.B.C<br>12000<br>HEMO 90 | — | GAS & OXYGEN | 96 | OSTEOMYELITIS OF TIBIA | 19 | 118 | YES | YES |
| 19 | P.B. | M. | 18 | NEG | NEG | W.B.C<br>8000<br>HEMO-90 | — | GAS & OXYGEN | 76 | INGUINAL HERNIA | 13 | 70 | NO | YES |
| 20 | J.D. | F. | 43 | NEG | NEG. | W.B.C<br>11000<br>HEMO-80 | — | GAS & OXYGEN | 112 | PAN HYST. FOR CARCINOMA | 59 | 120 | YES | YES |
| 21 | M.R. | F. | 28 | NEG. | NEG. | W.B.C<br>18000<br>HEMO-75 | — | GAS & OXYGEN | 128 | PERINEORRHAPHY | 5 | 120 | NO | YES |
| 22 | J.P. | F | 22 | NEG. | ALB. | W.B.C.<br>13800<br>HEMO 90 | — | GAS & OXYGEN | 140 | RUPTURED ECTOPIC | 13 | 104 | YES | YES |
| 23 | J.B | F. | 21 | NEG | NEG. | W.B.C<br>7000<br>HEMO-80 | — | GAS & OXYGEN | 100 | PLASTIC OPERATION | 5 | 120 | YES | YES |
| 24 | M.M. | F. | 54 | NEG. | ALB. | W.B.C<br>11000<br>HEMO-95 | — | GAS & OXYGEN | 104 | HYSTERECTOMY & APPENDECTOMY | 27 | 108 | YES | YES |
| 25 | B.R. | F | 16 | NEG | ALB. | W.B.C<br>18000<br>HEMO 75 | — | GAS & OXYGEN | 148 | APPENDECTOMY | 8½ | 144 | YES | YES |
| 26 | J.H. | M. | 26 | NEG. | NEG. | — | — | GAS & OXYGEN | 88 | ABSCESS OF HAND | 2 | 94 | YES | YES |
| 27 | W.P. | M | 31 | NEG. | NEG. | W.B.C.<br>17000<br>HEMO-95 | — | GAS & OXYGEN | 100 | CERVICAL ADENECTOMY | — | 112 | YES | YES |
| 28 | T.Y. | M. | 19 | NEG | NEG. | — | — | GAS & OXYGEN | 104 | UNITED TENDON & NERVE | 12 | 108 | NO | YES |
| 29 | B.M. | M. | 35 | NEG. | LARGE AMT ALB-HYALINE & GRAN CASTS | W.B.C<br>26000<br>HEMO-85 | — | GAS & OXYGEN | 112 | CHOLECYSTOTOMY | 21½ | 124 | YES | YES |
| 30 | M.N. | F | 28 | NEG. | ALB. | W.B.C.<br>25000<br>HEMO-65 | — | GAS & OXYGEN | 128 | RUPTURED APPENDIX | 22½ | 158 | YES | YES |
| 31 | V.D | F | 19 | NEG. | LARGE AMT. ALB. | W.B.C<br>12000<br>HEMO 80 | — | GAS & OXYGEN | 160 | DRAINED | 3 | 160 | YES | NO |
| 32 | W.M. | M. | 30 | NEG. | — | — | — | GAS & OXYGEN | 100 | DRAINED BLADDER | 10 | 100 | YES | YES |
| 33 | W.B. | M. | 18 | NEG | NEG. | — | — | GAS & OXYGEN | 72 | PLASTIC OPERATION | 4 | 72 | NO | YES |
| 34 | J B | F. | 21 | NEG. | ALB | W.B.C<br>10000<br>HEMO-75 | — | GAS & OXYGEN | 142 | AMP OF THIGH FOR GANGRENE | 11½ | 148 | YES | YES |
| 35 | J C. | M. | 3 | NEG. | NEG. | W.B.C<br>17000<br>HEMO-80 | — | GAS & OXYGEN | 120 | RUPTURED APPENDIX | 3 | 104 | YES | YES |
| 36 | B.W. | M | 21 | NEG. | ALB | W.B.C<br>7000<br>HEMO 85 | — | GAS & OXYGEN | 100 | INGUINAL HERNIA | 10 | 100 | NO | YES |
| 37 | J.D. | F. | 50 | NEG | ALB. & CASTS | W.B.C.<br>19000<br>HEMO 80 | 160 | GAS & OXYGEN | 120 | DRAINED ABDOMEN | 8 | 120 | YES | YES |
| 38 | W.W | M | 38 | TUBERCULOSIS | ALB. | W.B.C<br>10000<br>HEMO-100 | — | GAS & OXYGEN | 72 | APPENDIX | 36 | 100 | NO | YES |
| 39 | W.B. | M. | 48 | NEG. | NEG. | W.B.C.<br>13400<br>HEMO 100 | 248 | GAS & OXYGEN | 88 | GANGRENOUS APPENDIX | 24 | 108 | YES | YES |
| 40 | B.F. | F. | 29 | NEG. | ALB | W.B.C<br>10000<br>HEMO-80 | 160 | GAS & OXYGEN | 100 | APPENDIX | 21½ | 116 | NO | YES |
| 41 | L.D. | M. | 34 | NEG. | NEG. | W.B.C<br>—<br>HEMO-65 | — | GAS & OXYGEN | 132 | PERINEORRHAPHY | 14 | 100 | NO | YES |
| 42 | M.T. | M. | 37 | NEG. | NEG. | W.B.C<br>16000<br>HEMO 90 | 227 | GAS & OXYGEN | 116 | GANGRENOUS APPENDIX | 18 | 140 | YES | YES |
| 43 | T.M. | F. | 21 | NEG. | ALB. | W.B.C<br>22500<br>HEMO-90 | — | GAS & OXYGEN | 140 | INTESTINAL OBSTRUCTION | 15½ | 152 | YES | YES |
| 44 | L.S. | M. | 34 | NEG. | NEG. | — | NEGRO | GAS & OXYGEN | 76 | HERNIA | 14 | 96 | YES | YES |
| 45 | D.M | F. | 35 | MITRAL STENOSIS | NEG. | W.B.C<br>12000<br>HEMO 85 | — | GAS & OXYGEN | 132 | HYSTERECTOMY | 29 | 128 | YES | YES |
| 46 | J.P. | F. | 21 | NEG. | NEG. | W.B.C<br>10000<br>HEMO-75 | — | GAS & OXYGEN | 120 | SALPINGECTOMY & APPENDECTOMY | 13½ | 128 | YES | YES |
| 47 | H.M. | M. | 23 | NEG | ALB | W.B.C<br>8000<br>HEMO 85 | — | GAS & OXYGEN | 68 | APPENDIX | 22 | 120 | NO | YES |
| 48 | T.H. | M. | 36 | NEG | NEG. | — | — | GAS & OXYGEN | 68 | CIRCUMCISION | 5 | 88 | NO | YES |
| 49 | A.O. | M. | 4 | NEG | NEG. | — | — | GAS & OXYGEN | 116 | HYPOSPADIAS | 42 | 120 | NO | YES |
| 50 | L.W. | M. | 26 | NEG | NEG | W.B.C.<br>10500<br>HEMO-85 | — | GAS & OXYGEN | 96 | SARCOMA OF CECUM | 14½ | 96 | YES | YES |
| 51 | C.H. | M | 12 | NEG. | NEG. | — | — | GAS & OXYGEN | 136 | AMPUTATION OF FINGERS | 12 | 120 | YES | YES |
| 52 | J D | M. | 34 | NEG. | ALB H & G CASTS | W.B.C<br>22500 | 238 | GAS & OXYGEN | 88 | GANGRENOUS APPENDIX | 13 | 104 | YES | YES |
| 53 | W.P. | F. | 27 | NEG | NEG. | W.B.C<br>8000<br>HEMO 95 | — | GAS & OXYGEN | 140 | SALPINGECTOMY & APPENDECTOMY | 19 | 132 | NO | YES |
| 54 | G.C. | M. | 50 | NEG. | NEG. | W.B.C<br>22500<br>HEMO-95 | 190 | GAS & OXYGEN | 126 | GANGRENOUS APPENDIX | 15 | 90 | YES | YES |
| 55 | W.S | F. | 31 | NEG | ALB | W.B.C<br>12000<br>HEMO-95 | — | GAS & OXYGEN | 136 | SALPINGECTOMY & PERINEORRHAPHY | 29 | 128 | NO | YES |
| 56 | W.L | F. | 30 | NEG. | NEG. | W.B.C<br>11000<br>HEMO-85 | — | GAS & OXYGEN | 104 | APPENDIX | 21 | 128 | NO | YES |
| 57 | J.S. | M. | 28 | MITRAL REG. | NEG | — | — | GAS & OXYGEN | 128 | INF. AXILLARY GLANDS | 13 | 100 | YES | YES |
| 58 | W.M. | M. | 28 | NEG. | NEG. | — | — | GAS & OXYGEN | 104 | AMP. OF ARM | 30 | 128 | NO | YES |
| 59 | J.B | F. | 31 | NEG. | NEG | — | 185 | GAS & OXYGEN | 80 | PLASTIC OPERATION | 6½ | 92 | NO | YES |
| 60 | O.S | M | 30 | NEG. | NEG. | — | — | GAS & OXYGEN | 76 | VARICOCELE | 15 | 104 | NO | YES |
| 61 | W.H | M. | 29 | NEG. | NEG. | — | — | GAS & OXYGEN | 88 | LARGE CERVICAL ABSCESS | 5 | 64 | YES | YES |
| 62 | J S | F. | 35 | NEG. | ALB ++ CASTS & BLOOD | W.B.C.<br>12000<br>HEMO-80 | — | GAS & OXYGEN | 80 | APPENDIX & NEPHRECTOMY | 31½ | 112 | YES | YES |
| 63 | G.M. | F | 23 | NEG. | NEG. | W.B.C<br>8000<br>HEMO-80 | — | GAS & OXYGEN | 112 | HYST | 38 | 112 | YES | YES |
| 64 | W.W. | F | 27 | MITRAL REG. | NEG. | W.B.C<br>8000<br>HEMO-90 | — | GAS & OXYGEN | 90 | ECTOPIC | 26 | 110 | YES | YES |
| 65 | B.B | F. | 17 | NEG. | ALB ++ CASTS | W.B.C [illegible]<br>R.B.C [illegible]<br>HEMO [illegible] | 158 | GAS & OXYGEN | 120 | CESAREAN SECTIONS | 32½ | 136 | NO | YES |

dioxid in 100-gallon cylinders. If procured in these large cylinders the gas is less expensive, and the flow to the machine is perfectly smooth and regular.

*Complications on the Table.*—The respiration is the main factor to be watched, and if it is suspended in any case a punch over the stomach will suffice. Carbon dioxid can be given if desired. The pulse-rate is altered very little by this anesthetic. If the heart becomes unusually fast or slow the administration of oxygen in proper quantity will correct it.

*Postoperative Complications.*—The observation of men whose experience in the work is so much more extensive than my own is that there are no postoperative complications which may be attributable to the anesthetic. The urine excreted after gas-oxygen is greater in quantity than after ether; it is always free from albumin, which is not the case after ether. The patients awaken in a few minutes and are better able to care for themselves, and the vomiting is very infrequent, unless the Trendelenburg position is used for some time, in which case they very frequently vomit while on the table. The rapid elimination of the anesthetic is quite noticeable in the difference between the cesarean-section baby under this anesthetic and under ether. The question of rebreathing is one which has been much discussed of late. There seem to be two questions at issue when the subject of rebreathing is under discussion; first and foremost is cheapness; second, the value of carbon dioxid as a respiratory stimulant. If the question of cheapness is to be considered, then why not use ether or chloroform? They are much cheaper. The value of carbon dioxid as a respiratory stimulant has been proved, but we find this is very seldom needed, so why give a stimulant in each individual case? It should be more logical to have a tank of carbon dioxid in the pure state attached to the machine where we would always have it at our command to use in an emergency. This we now have, though seldom used. If we need a respiratory stimulant we would certainly want it at once, and as the exhaled breath is composed of only 4 per cent. carbon dioxid it would require quite a number of breaths to get the stimulating action of carbon dioxid desired, and at the same time the patient is breathing in the other waste products of expiration. There is no necessity of carbon dioxid being given in the ordinary gas-oxygen anesthesia, for carbon dioxid is slightly increased over normal in the blood while the patient is under gas-oxygen (Teter[4]).

It would be hard to convince the physician, striving at all times, by proper ventilation in buildings, to prevent rebreathing, that rebreathing is a good therapeutic measure, or that when he needs a heart stimulant nux vomica is superior to strychnin, although one might contend that nux vomica has strychnin in it, as the advocates claim the expired air contains carbon dioxid. Both are right. In the daily routine of operative work we of necessity operate on several tuberculous patients in each one hundred. I think few advocates of rebreathing would enjoy breathing from the same bag after a tuberculous patient. The bags I have seen cannot be boiled, and it is practically impossible to sterilize them in any other way. As we can get carbon dioxid without contamination the only argument in favor of rebreathing is cheapness, which should never be considered if the welfare of the patient is at stake.

The majority of my gas-oxygen anesthesias have been administered by Dr. James R. Dawson, whose superior in this work would be hard to find, and to him and Dr. D. S. Moore, my associate, I owe much for the low mortality seen in this work.

# ABOUT OURSELVES

ANTHONY BASSLER, M.D.
NEW YORK

As medical men to take what comes to us honestly is our privilege, but righteousness with a full view of the future is our duty. This righteousness is even more necessary with us to-day than it had been with those of the years gone by. In former days when traveling was by stage-coach, people settled down in their communities; a near-by town was too difficult of access to visit frequently, and the medical man was a part of the stay-at-home community. Now, however, the well-to-do people are spending less time in the country and more in towns, where there is congregated learning, business, wealth and society.

Not many years ago it was an event causing considerable gossip for a medical man to leave his place of practice and repair to one of the great cities in search of learning in medicine. After his rather early return it was satisfying and even gratifying for his neighbors to feel that superior wisdom had come to him, he and they were convinced that he was now entitled to recognition as a specialist, and a framed certificate signed by a leader in the subject attesting to his having taken a few weeks' course in a post-graduate school further helped to make this assumption valid. Not to be outdone, other ambitious ones of his fellow practitioners soon began to do likewise, and then it became necessary for men to make annual pilgrimages to the centers of learning to maintain their status. In these communities in the last ten years men have settled for practice who were the products of medical colleges of good quality. They, because of education, were more scientific than the older practitioners, and they journeyed to the cities as a duty to science. The literature of the medical journals has gone to the most remote recesses of the country, carrying with it information of the developments in medicine and awakening ambitions generally. Ready and inexpensive transportation placed the far parts of the country in quick touch with thickly populated localities, and the medical men traveled and came into contact with each other.

The magazines, lecture platforms, lay press, etc., have given decidedly more knowledge of medical matters to the lay people than ever before, and there are now many persons who can intelligently discuss medical subjects. The exclusiveness and dictatorialness of the former-day medical man have become rare and are now regarded by the lay people as signs of effrontery or cloaks of ignorance. From all over the medical man has been drawn into the melting-pot of progress, so that the distinctions between him and the lay people are dropping like leaves in the fall.

In this development of the times, it seems that we should think of how we should conduct ourselves to meet the changing conditions, not only those of to-day, but those which will come. As all great movements are built on tradition and segmentary development, are we as medical men of to-day not shirking the responsibility of building props of development for the practitioners to come? From the conduct and interests of lay people we can learn nothing that would be helpful to us in professional ways, yet, they now being within our ranks, should we not be more careful of exhibitions of our ideas, temper and style of talk, morals, etc., than ever before?

There are those among us who have no confidence in their fellow practitioner, because they are keenly aware of their own unworthiness. With these, definite assertions of opinion, a look of dissatisfaction, a shrug of the shoulders, a word dropped here and there so that it might go into the channels of another practitioner's case, are still cheap bids for practice. With the awakening knowledge of us among the lay people, why do some men persist in practicing these when they can only react to their own discredit and limitation? Why not accept the standard that every one is worthy of the price he puts on his service, and not engage in fee-splitting, or having fees lowered for a patient so that he may feel dependent for guidance in medical affairs when the patient can and is liable to go elsewhere for service without considering any one of us? We must not, while we pretend to be friends, engage in backbiting and defaming one another, but be real friends at all times, or at least be silently indifferent toward those we have no regard for. When we meet scientifically, let us do so on the basis of individual merit, and when socially, let us do so on the basis of congeniality of taste or good comradeship, and not for a feverish craving for self-advertisement, admiration or excitement. Remember that the lay people are close to us now, seeing, hearing, learning and deeply interested in all of the affairs that we engage in.

The practice of medicine is the noblest profession of man, and the art full of fine examples of the past and present. Then why, in these gatherings of ours to which we invite members of the boards of directors of our hospitals, and when other lay people are present, do we engage in questionable stories, common talk, and tell tales about some other practitioner or speak humorously of things that should be sacred with us? It seems that the day has come when all of us should show more pride in our calling, our institutions and ourselves and act before the public with dignity so that they must respect us fully, now, and when we show them the wares of ours that they are still to see and learn of. This is the course that will educate the people away from ready criticism of doctors and medical matters, stop the publishing of rticles and those overdrawn jokes on doctors in the lay ress, and make for opposition against the establishment f creeds, sects and cults. Democratic demeanor is the oble standard of America, but it does not require the ebasement of our profession or ourselves for its development or perfection—far from it.

126 East Sixtieth Street.

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**Newspaper and Medical Journal Advertising.**—While the nedical profession is making a great hue and cry about patent nedicines and quack doctors, and lampooning the editors of ewspapers and popular magazines for their selfish attitude n accepting advertising from such perpetrators of fraud, it nay not be amiss to look at some of the inconsistent prac- ices on the part of supposedly reputable members of the med- al profession. It is our candid opinion that most of us live n glass houses and have no right to throw stones. For nstance, what right have we to complain about the adver- sing carried by newspapers and magazines when we not only olerate but support medical journals that carry the worst ind of nostrum advertising? What right have we to com- lain about the people dosing themselves with patent med- ines when we prescribe proprietaries about which we know tle or nothing, and which usually are misrepresented by e manufacturer? What right have we to complain of the rafting done by the quack doctor when so-called reputable edical men will operate for the sake of the fees, and will t only give or accept the commissions but will actually affic in the ills of humanity in a manner that would do edit to Captain Kidd? Surely the medical profession needs house cleaning and the sooner we begin, the better.—*Jour. diana State Medical Association.*

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# CONTRIBUTION TO THE SURGERY OF BONES, JOINTS AND TENDONS

JOHN B. MURPHY, A.M., M.D., LL.D.
President of the American Medical Association
CHICAGO

*(Continued from page 1265)*

### TREATMENT OF ACUTE INFECTIVE ARTHRITIS NOT COMMUNICATING WITH SUPPURATIVE FOCI OUTSIDE THE JOINT

The treatment of acute arthritides to avoid the baneful, irreparable conditions that have been resultant from these infections involves a masterly, preconceived, well-calculated, accurately directed and timely activity in place of the passive, expectant, inefficient, if not harmful, management which they have received in the past.

*While we may not always be able to control the infections or prevent the ankylosis, we are always able to control the deformities and avoid the horribly disfiguring contortions resultant from these infections called rheumatism that we see in our every-day practice.*

The general plan consists of:

1. Relief of the tension of infection products by careful aspiration of the fluid in the joint. This retards the destruction of the joint and joint capsule, which is so much accelerated by tension. It might be relieved by drainage, but drainage of a joint with the insertion of tubes means a subsequent ankylosis in 96 per cent. of the cases. The ankylosis following drainage is a very extensive one; therefore drains should never be used. The joint may be incised and immediately sutured without causing any particular injury.

2. Relief of the intra-articular pressure on the bone ends caused by involuntary muscular contraction. This is best effected by an ordinary Buck's extension with a weight *sufficient to overcome the muscular contraction,* and ranging from 10 to 25 pounds, depending on the patient's musculature. It can be applied to the upper and lower extremities with equal advantage. It is the best means for the relief of pain; it avoids ankylosis, as in many of the cases the only ankylosed point in a knee-joint, for instance, is a nickel-sized area where the bones were pressed into each other during the inflammatory process. It corrects positions and avoids deformity. It is always at hand and *should be applied the first day in every type of acute arthritis, no matter what name is given to it.*

3. Suppression of the infection in the joint cavity. It can be rendered sterile or nearly sterile by injecting into it daily 10 to 20 c.c. of formaldehyd solution in glycerin, or every two or three days, until the inflammatory process subsides, controlling the intra-articular fluid tension by aspiration, as outlined above.

In 1890, shortly after Trillot demonstrated the powerful germicidal properties of formaldehyd, I began making injections of liquor formaldehydi, iodoform and glycerin into tuberculous joints, and in 1900 I began using it with glycerin alone as an antiseptic and immunizing fluid in joint cavities. Its effect is fourfold: A. It renders the fluid in the joint a poor culture medium. B. It produces a great local polynuclear leukocytosis in the joint fluids. In a large number of cases examined by me the percentage of polynuclears increased from 1 and 30 per cent. to 60 and 88 per cent. This, I believe, is the most important factor in the action of the liquor formaldehydi and glycerin injections of the lymph spaces, and resists the invasion by the microorganisms that are thrown into or produced in the joint. C. It produces a local cofferdamming and infiltration, as these polynuclear cells give up a trypsin ferment which aids in converting the albuminous substances into peptones, thus rendering them absorbable, as was shown by Jochman in his experiments with iodoform and glycerin. In addition, they have their phagocytic action, which is a powerful factor in overcoming the infection of the synovial membrane and checks intoxication. D. It produces a great constitutional leukocytosis, as indicated in the following examples.

The following tabulation shows some of my early laboratory findings in this work, taking the white blood-count before and after the formaldehyd and glycerin injections:

Case 1.—Mr. F., gonorrheal arthritis.
20 hours before injection, w. b. c., 7,500
12 hours after injection, w. b. c., 12,500

Case 2.—Miss X., cryptogenic arthritis.
21 hours before injection, w. b. c., 8,600
8 hours after injection, w. b. c., 11,800

Case 3.—Mr. V., acute gonorrheal arthritis.
18 hours before injection, w. b. c., 15,200
10 hours after injection, w. b. c., 21,600

Case 4.—Mr. F., gonorrheal arthritis.
18 hours before injection, w. b. c., 8,000
7 hours after injection, w. b. c., 13,000

Case 5.—Mrs. W., traumatic arthritis.
22 hours before injection, w. b. c., 8,400
8 hours after injection, w. b. c., 13,400

Case 6.—Miss K., chronic metastatic arthritis.
16 hours before injection, w. b. c., 11,800
7 hours after injection, w. b. c., 13,600

4. The use of autogenous vaccines has a striking effect in many of the metastatic arthritides. When it is known that they are of the streptococcic type, the streptolytic serum should be used in large doses and frequently repeated. One of the peculiarities of this metastatic variety of infection is that it exhausts its virulence very rapidly. The overcoming of the immediate toxic effect is, therefore, of prime importance and tides the patient over until the constitutional and local resistance are of themselves able to overcome the infection.

Luxations and subluxations should be avoided carefully during the progress of the inflammatory condition. They are very common and most detrimental in their final result preventing even an arthroplasty for the subsequent restoration of function, and are always available through proper attention in the early stage of infection.

*Essential hydrops genu* without demonstrable lesion in the bone or deep synovial membrane should be treated by aspiration and an injection of 2.5, 3 and 3.5 per cent. dilution of liquor formaldehydi in glycerin, increasing the strength, depending on the reaction produced by the milder solutions. Two or three injections suffice for the cure of this condition. The patient should be confined to bed with a Buck's extension for ten days after each injection.

*Summary.*—The treatment of acute articular arthritis in the large joints, of metastatic origin, should always be surgical, and consists in, first, relief of the joint tension (aspiration); second, relief of the intra-articular pressure (Buck's extension); third, neutralization of the infection in the joint and the production of local immunity through injections; fourth, the administration of vaccines; fifth, the avoidance of laxations or deformities during the period of inflammatory activity.

By this means practically all deformities resultant from arthritides can be overcome, the number of ankyloses greatly diminished, and the period of invalidism materially reduced.

It is probable that in the future we will find some medicament that will produce a greater local polynuclear leukocytosis than the liquor formaldehydi and glycerin mixture does, and not too much local irritation. This, however, we must leave to the future. Venice turpentine produces the superlative polynuclear leukocytosis, practically 100 per cent. of cells of that type, but the combinations of Venice turpentine which I have made have produced a too active local irritation to admit of their use in the joint. I hope someone will work out a usable formula for the use of Venice turpentine, as it is an ideal leukocyte stimulant.

### ANKYLOSIS

Ankylosis should be divided into (1) bony; (2) cartilaginous; (3) fibrous; (4) periarticular-ligamentous-capsular; (5) extra-articular, skin scars, tendons, sinews, nerves, arteries.

Ankyloses occur at all ages and from the many different conditions I have mentioned. They are most common in the aged, but they also exist in the prenatal period. I have one case illustrating this, the skiagram of which was published in The Journal.[1] The picture was ordered made by me to determine why the hand remained so far in front of the face of the fetus *in utero*, from which position I could not displace it, in an examination made in the eighth month of gestation. It seemed as though the hand would come through the wall of the uterus. The $x$-ray shows the forearm in practically the full extended position and also shows that the right elbow-joint is ankylosed.

The fetus was delivered one month later and a complete fixation of the right elbow was present. The left one admitted of some flexion. The fixation in the right arm was attributed to an arrest of development in the ossification before the joint had completely formed. There was a paralysis of all of the muscles of both arms as well as a paralysis of sensation due to peripheral nerve interruptions which were caused by pressure from the cord, and not an amniotic band. It was not due to a central lesion, as spasticity, reflexes, as well as pain response would be present. This was the first skiagram of a fetus *in utero* that had been made by Dr. P. H. O'Donnell, whose skill with the $x$-ray instrument gave such a splendid result, enabling us to make a differential diagnosis before delivery.

My treatment of ankylosis was based on the knowledge of the pseudo-articulation after fractures, and the pathologic evolution of hygromata. In the management of ankyloses it can be seen that the various elements producing the ankylosis must be taken into consideration. From a practical standpoint, however, the osseous cartilaginous, intra-articular fibrous varieties may be treated under the same head.

The osseous-fibrous and capsular varieties yield only to arthroplasty, while the periarticular and extra articular types may be treated successfully by capsulotomy, tendon elongation, or excision of the exostoses When the arteries, bones and nerves are materiall shortened by prolonged flexions, excision of part of th bone, thus shortening it, is the only operation that giv good results.

### TECHNIC OF ARTHROPLASTY IN THE VARIOUS JOINTS

*Hip.*—After having made the usual aseptic prepar tions and iodin application to the field of operation,

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[1] March 16, 1912, p. 748.

U-shaped incision is made, the flap measuring about three inches in width, and the base directed upward. Incision is begun three inches above the trochanter and extends downward two inches below the trochanter (Fig. 25), so that it is placed exactly in the center of the U. The knife passes through the skin, superficial fat and fascia lata, so that all these tissues are dissected and displaced upwards in the flap.

The next step in the operation is to free the trochanter, leaving its muscles attached to it from the shaft. A large, curved, flat, blunt-pointed needle, chain-saw carrier, threaded with heavy silk, is passed around the base of the trochanter from before backward under the muscles attached to it. This serves as a carrier for the chain-saw which is next brought into position. The trochanter is carefully sawed off downward and outward and is retracted upward out of the field of operation, carrying with it the attached muscles. The obturators and pyriformis are then divided and both ends transfixed with sutures for subsequent approximation. The joint is now freely exposed and the next step in the operation consists in incising the capsule of the joint without, however, separating it from its attachment to the acetabulum. It is loosened from the neck of the femur and stripped upward toward the head of the bone, so that it can be interposed later between the head of the bone and the acetabulum, if needed, so as to assist in the formation of a new lining for the acetabular cavity.

### ANKYLOSIS OF HIPS

Case 22.—*Patient.*—R. C., aged 31, was admitted to Mercy Hospital March 29, 1911. Family history: Father died at 60 from dropsy; otherwise negative. At 16 the patient contracted gonorrhea, was treated but never entirely cured. He has had a discharge off and on till the present time. He had malaria at 18 but no jaundice.

*Present Trouble.*—Eleven years ago, four years after the ttack of gonorrhea, he had a slight pain in the back between he shoulders, which gradually increased in severity, especially n motion, until in three or four weeks the back became tiff. He occasionally had pain in the right hip, which ncreased in severity until he had to go to bed, where he emained for nine months. Pain in both shoulder-joints on notion was severe. For two years he has complained occasonally of stiffness of the left knee-joint. Had an evening ise in temperature with sweats. During his stay in bed e wore a body cast and both legs were extended. On being eed from the cast the right hip was found firmly ankylosed nd both legs were extended. Under anesthesia the motion the hips was restored but within a few weeks they again ecame stiff. About four years ago the hip-joint (left) became ainful. He went to bed but kept up passive motion in the oint. In three or four weeks it became stiff and ankylosed, that after four years both hips were stiff and ankylosed. e has also had much pain in both shoulder-joints, and the iffness which resulted has continued up to the present.

*Examination.*—This revealed ankylosis of all of the vertee from the second cervical down to and including the sacrum. ere was no flexion whatever of the spine. Both hips were kylosed with the legs slightly abducted, but otherwise pracally straight; it was impossible to spread them. Patient uld not sit down because of absolute lack of motion in the ps.

*Treatment and Results.*—The left hip was operated on first. typical arthroplasty was done with interposition of a fascia a flap. Buck's extension was kept on for five weeks. Comte primary union of soft parts resulted. Passive motion resorted to earlier. At the end of six weeks he was rmitted to get up and walk about and was able to bear full ight on the limb without the slightest discomfort. He had siderable range of motion in the hip, external and internal ation of the thigh and excellent abduction.

The right hip was operated on next. Typical arthroplasty was done with fascia lata flap. Primary union resulted. Patient was up at the end of seven weeks. He was permitted to walk on crutches and advised to put weight on both legs. There was a little more pain in the right hip than in the left. He was able to abduct legs as much as the average individual, and at the time he left the hospital, in March, 1912, he was able to assume a semisitting position for the first time in eleven years. There was then no pain in the left hip. His range of motion will increase rapidly. He is able to balance himself on his limbs. He was an excellent patient and forced his efforts at motion (Figs. 84-88).

This is only one of the interposing tissues which may be used in the operation. It serves, in the main, to provide a perfectly smooth acetabular margin, so that it will at no time subsequently permit of the reformation of a bony ankylosis or bone collar formation. This procedure thus far does not disturb the attachment of the gluteus maximus.

The next step in the operation is the formation of a new acetabular cavity and a new femoral head. The first thing to be done is to separate the ankylosed head from the ilium as near the normal anatomic line as possible. This is done by chiseling out the bony tissue filling the acetabular cavity, by means of an ordinary carpenter's curved chisel, about 1½ inches in width. With properly directed blows and sufficient force, the chisel is driven in obliquely toward the acetabular cavity for the depth of one inch all the way around the head, as near the normal conformation as possible. When the chiseling process is complete, with the chisel as a lever and the thigh as an assistant, the head is fractured out of the acetabulum, the acetabular cavity is then fashioned with my special globular drill or reamer, so as to receive the new femoral head, which will be similarly fashioned from the bony mass chiseled out of the acetabulum. For this purpose use is made of my specially constructed cup-shaped end-mill, making it possible to provide a new femoral head of normal conformation and smoothness. (Figs. 7 and 8).

These two instruments used in fashioning the acetabulum and the femoral head constitute, in reality, parts of the same appliance; the globular portion fits into the cup-shaped portion in such a manner that unless the interposing tissues are in position the fit is perfect.

The main reliance for obviating the reoccurrence of the ankylosis is placed on the flap of the deflected fascia lata, which is made by splitting the original U-shaped flap. This flap is dissected from the subcutaneous fatty tissue which formed a part of the original skin and fascia flap, the base of the U being directed upward so that the nutrition of the flap is preserved as much as possible to insure its continued vitality. Grasping the edge of the flap with tissue forceps, it is drawn into the joint, passed over the femoral head and the edge may be sutured to the acetabular margin or to the remnant of the capsular ligament still attached to the neck of the bone with phosphor-bronze wire, thus forming a complete covering for the head and neck of the femur. When the head is placed into the acetabular cavity, this flap also serves as a lining for this cavity reenforcing the capsular ligament, although the latter is used mainly for the purpose of preventing a "locking" of the joint by the formation of exostosis from the acetabular rim.

### ANKYLOSIS OF HIP

Case 23.—*Patient.*—Mrs. B. S., aged 32, was admitted to Mercy Hospital Jan. 1, 1912. Her mother died of tuberculosis when patient was 3 years old. Personal history was negative.

*Present Trouble.*—Four years ago, following severe exposure to cold, the patient complained of severe pain in the right shoulder and hip for which she took morphin. Following this she had a severe chill, but does not know whether she had any temperature elevation. Pain was present, radiating from hip to groin, severe in character and extending upward over the entire abdomen. The abdomen was very tender to pressure; pain most intense in right groin. This lasted for two weeks. Shortly afterward she had fever for two weeks, then a leukorrheal discharge which subsided with the pain. There was a mass in the right side of the abdomen about the size of a teacup. She did not menstruate for six months.

The pain in the right hip increased on motion and she remained in bed for three months, the hip not being moved. When motion was attempted in the hip it was found to be ankylosed. The right knee was also stiff, but was relieved by massage and active motion. No other joint was involved, but the ankylosis of the hip was complete and the leg was adducted across the middle line, occluding the inlet and outlet to the pelvis.

*Treatment.*—A typical arthroplasty was done on the hip with the interposition of a pedicled fascial flap. The wound was closed in the regular way without drainage. At the end of seven days a hematoma threatened to open the line of suture. Some of the stitches were removed to allow the blood to escape. Eight or ten days after this the patient had a pyocyaneus infection with a large quantity of greenish purulent discharge. She was given three injections of a stock vaccine and the discharge subsided entirely. The case went on to primary union.

*Result.*—She left the hospital four months after the operation, and at that time was able to put the limb through a great latitude of motion and practically without pain. Following her return home she had two attacks of suppuration from the trochanter. This was believed to be due to the iron nails. She came back to the hospital and the iron nails were removed. Primary union resulted and there was no return of manifestation of the ankylosis. She walks with an elevation on the heel of her shoe of three-quarters of an inch. There is practically no limitation of motion in the hip; no pain (Figs. 92-95).

It is very important, and cannot be emphasized sufficiently, that the entire articular surfaces of the bones must be covered by fascia if good functional results are to be expected. Everything being in readiness for reposition of the head of the femur, the leg is extended and adducted, and internal rotation applied, when it will be found that the head of the femur slides into the acetabular cavity freely and remains there without accessory retention.

The next step is to replace the trochanter, which it will be remembered was sawed off from the bone without disturbing the muscular attachment. Then the ends of the obturator and pyriformis muscles are reunited. The trochanter is brought down, fitted on to its original position, and securely fastened with a wire nail, eight or ten-penny, depending on the size of the trochanter and the degree of tension which may be required. This nail is driven into the bone along the axis of the neck.

The deep fascia is reapproximated by means of phosphor-bronze wire, the superficial structures are sutured with chromicized catgut, and the skin with interrupted silkworm-gut, and horsehair sutures. No drainage is used.

The field of operation is freely dusted with bismuth subiodid powder, and the wound is then sealed with gauze saturated with collodion. A large pad of 5 per cent. moist phenolized gauze is placed over the hip, extending from 4 to 6 inches beyond the line of incision on either side. A sterile cotton dressing is placed over all, and held firmly in place by spica bandages and wide strips of adhesive plaster. The patient is then placed in the Rainey Travois splint and a Buck's extension, with 20 pounds' weight, applied to the leg in the usual manner to overcome the involuntary muscular contraction of the flexors and adductors of the thigh, and to prevent pressure necrosis of the newly interposed flap. The limb is dressed in an abducted position.

The patient is kept in bed in the dorsal position, as quiet as possible, for from seven to ten days, when passive motion is instituted. This consists at first in raising and lowering the leg as much as conditions will permit, and in attempting to flex the leg on the thigh and the thigh on the abdomen. This is done every day, and at the beginning of the second or third week, depending on the progress of the case, lateral movements are begun, consisting in forcible abduction and adduction. The splint is allowed to remain on for about three to four weeks. It is removed when it is apparent that the patient has a fair degree of motion in the joint, without much pain or discomfort. He is then allowed to be up and around on crutches and is encouraged to swing the leg in all directions, increasing motion in the joint by every means possible. The stitches are usually removed on the tenth to the twelfth day, and a fresh dressing is made, minus the collodion. The subsequent treatment of the wound is that usually employed in any operative procedure.

*Knee.*—The knee is the most difficult joint in which to get a perfect restoration of function and perfect approximation of the two joint surfaces. In the plan of reconstruction I adopt two courses: The first one used in my original cases was the implantation of the fascia lata and vastus externus as the interposing tissue.

The usual preparations for operation are made. An Esmarch constrictor is placed around the thigh high up. In our original operation a vertical incision was made just to the outer side of the patella, extending 6 inches above and 3 inches below the joint. The wound margins were well retracted, so as to expose the field of operation. The patella was then freed from the femur with scalpel and chisel and another vertical incision—only 4 inches long, however—was made over the inner side of the joint. The joint line of ankylosis was then opened and the patella was separated from its union with the femur, without, however, dividing the ligamentum patellæ. It was elevated; the curved chisel then separated the tibia from the femur on each side, maintaining the normal anatomic conformation of the join surfaces of the external and internal condyles of th femur. With a smaller curved chisel a piece of th external and internal tuberosity of the tibia was remove sufficiently deep to permit the flexed leg to assume straight position without putting tension on the poplitea structures. This is artistically shaped to resemble th normal articular concavities of the external and interna tuberosities of the tibia, with their semilunar cartilage attached. The intercondyloid tubercle and ridge shoul be preserved in an exaggerated degree. The intercondy oid groove of the femur should be excavated dee enough to accommodate itself to the exaggerated tubercl and ridge.

### ANKYLOSIS OF KNEE

CASE 24.—*Patient.*—Miss L. L., aged 21, was admitted Mercy Hospital Dec. 24, 1908. Her father died of carcinoma stomach; family history was otherwise negative. She had ha diphtheria, measles, pains in calf of legs and in arms durin a cold which was called rheumatism.

*Present Trouble.*—In July, 1907, a finger of the right ha was infected while picking flowers. She thinks she was poi oned by an insect. The evening of the next day the finger w contracted and painful and during the night became swollen. She was awakened at 4 a. m. by severe pain radiating into hand and forearm. At 9 a. m. the finger was much swollen. An incision was made and pus and dark blood were evacuated. A linseed poultice was then applied. At 8 p. m. pain was very severe and extended above the elbow. The swelling increased extending into the shoulder, and she had severe pains in muscles in back of neck. She had high temperature (how high not stated). On the sixth day she was taken to the hospital. She was delirious part of the time. The infection extended to the muscles of the neck and lower jaw. She developed trismus. This condition continued for nine days when improvement began. Four weeks later while walking she had a sudden severe pain in the knee-joint. She went to bed and the pain disappeared as suddenly as it came. It returned in the evening and the knee began to swell and redden. On the tenth day the joint was much swollen and flexed. Under anesthesia, the leg was straightened and put in a tin splint. The infection in the finger and neck had subsided almost completely. September 1, the knee was opened under anesthesia. The swelling gradually subsided but the knee could not be lexed because of pain. She went home October 1 with a plaster mold extending from ankle to hip and the leg straight. Under massage the pain gradually disappeared, but the knee was stiff and the leg straight. March 1, 1908, adhesions were broken up and extension applied. Every third day the knee was bent forcibly without anesthesia. She remained in the hospital five weeks, when the knee was straight and stiff. The oint gradually flexed again. July 16, knee was again bent under anesthesia and that evening she had a slight fever and evere local pain. The knee was constantly under treatment with frequent attempts made to flex it. Each attempt was ollowed by fever and severe pain. About the middle of Sep- ember the knee became flexed to its present extent and has emained so.

*Examination*—There was bony ankylosis of right knee with nee flexed at a bad angle.

*Treatment.*—Typical arthroplasty of the knee was done with splitting operation of the patella. The interposition of short ateral flaps was resorted to in this case, and the external alf of the patella was rotated 180 degrees so as to form the xternal half. Primary union of the superficial and deep aps resulted. Passive motion was resorted to early.

*Result.*—This patient was able to walk and sustain the full weight on her limb five weeks and six days after the opera- on. She could flex the limb almost to right angles eight eeks after the operation. Since that time she has learned to ex the knee to an acute angle with the thigh and to extend fully and voluntarily. She has no pain whatever on walking nd the slight limp can scarcely be detected. She has ⅓ of n inch elevation on the heel of her shoe to compensate for e shortening. In the skiagram it can be seen that there is close conformation to the normal joint in the one operated n, so that it is almost impossible to determine which was e knee operated on (Figs, 109-113).

An interposing flap of tissue in these cases consisted fascia lata, with a thin layer of muscle removed from e outer surface of the vastus externus, the base being rected downward and slightly anterior. This flap was rned over the outer condyle of the femur, drawn rough the joint between the femur, patella and tibia means of heavy catgut sutures which had been passed rough the free edge of the flap, and through the brous capsule on the inner side of the joint. These tures were tied in the inner incision.

A similar, though smaller, flap of tissue was dissected om the vastus internus and placed between the patella d the femur on the inner side. This flap was sutured the capsule with catgut. After removing the Esmarch nstrictor, all bleeding points were secured, and the ound closed with catgut sutures. We also employed that time a small drain, which was placed in the per angle of the external wound.

This operation gave splendid results, but it was rather extensive and complicated, and I have modified it it somewhat in a number of points. When performing the operation of arthroplasty on the knee, it is best for the surgeon to stand on the right side of the patient. As in the case of the hip operation, a U-shaped incision is made, extending through the skin and superficial areolar fascia. The incision is begun one inch above the highest level of the patella and one inch to the inner side. It extends downward and across the lower end of the patella to the external condyle. The incision is then extended one inch upward, passing to the outer side of the patella, and stopping at the level of the starting-point. The flap is then freed carefully, caution being observed not to buttonhole it and including, besides the skin, the superficial fat. The prepatellar bursa is not disturbed in any way. When this flap is lifted up the anterior surface of the knee-joint is exposed. The base of the flap is upward.

Next a second U-shaped incision is made, with the base downward and encircling the patella, passing within half an inch of its free border above and on both sides. This incision passes through the aponeurosis of the patella. The margins of the flap are dissected free up to the border of the patella, leaving a fringe of the aponeurosis, about half an inch in extent, attached to the margin of the patella all the way around except where it joins with the ligamentum patellæ and the quadriceps tendon. Thus the patella, femur and tibia are exposed and the ankylosis is within easy reach. The patella is then chiseled free from its attachment to the femur so that it is freely movable.

The normal anatomic conformation of the anterior surface of the femur must be preserved, in order that the patella may subsequently find its natural resting-place. Therefore, in doing the chiseling work, the chisel should be directed downward and inward toward the median line from both sides. The same chisels are used in this operation as in the hip arthroplasty, suiting the size and shape of the chisel to the work to be done.

### ANKYLOSIS OF PATELLA

Case 25.—*Patient.*—Mrs. M. G., aged 36, was admitted to Mercy Hospital Oct. 18, 1909. Her father died of brain abscess at 71 years; her mother of tuberculosis of the lungs. She had had measles, mumps, whooping-cough and chicken-pox when a child.

*Present Trouble.*—In January, 1906, the patient had pain, dulness and stiffness in the muscles of the thighs which persisted for weeks, together with soreness, pain, stiffness and swelling of the left hand and right foot. There was no fever, chills, or trauma. After four weeks the symptoms were referable only to the left knee and right hand. She had profuse sweats, high fever, but no chills. She was in bed for four months, during which time the knee was so painful that she could not lift it off the pillow. When she got out of bed she could flex the leg a little but could not walk without crutches for over a week. She had a forcible flexion and extension under anesthesia in 1908, after which she had more extension than before.

*Examination.*—There was bony ankylosis between the tibia and femur and the patella and femur, with considerable flexion of the knee.

*Treatment.*—A regular arthroplasty was done with the interposition of two short lateral flaps. The patella was divided by splitting it horizontally, leaving the internal and upper portion attached to the quadriceps tendon and the lower portion attached to the ligamentum patellæ. The normal conformation of the tibia was secured after chiseling the tibia free, and removing enough of its upper end to permit of extension of the limb into a straight position. The tuberosities of the tibia were remodeled to their normal anatomic conformation.

The lateral fascial flaps were inserted and the lower half of the patella rotated 180 degrees and attached to the upper part

*Result.*—There was primary union of all the soft parts. The patient was ordered passive motion on the third week. She rapidly developed a flexion to almost right angles. She could flex and extend the leg voluntarily before she left the hospital. One year after the operation, the flexion was to an acute angle with the thigh without causing pain. There was no fatigue on exercise; both legs were equally strong. The result was excellent (Figs. 89-91).

Instead of using the fascia lata as before, I now take two lateral rectangular flaps, measuring 2½ inches in length and breadth, from the inner and outer side of the joint—the flap including capsule, ligament and subcutaneous fat. The base of each flap is directed downward, and is left attached to the base of the tuberosities of the tibia, just below the line of bone division to be made later. This flap must include all of the lateral ligaments, fascia and fat, because they will serve as the interposing membrane to be placed between the freshened bony surfaces of the tibia and femur and prevent the recurrence of an ankylosis.

The patella has been handled in four different ways:

1. By using an interposing flap from the vastus externus and vastus internus to prevent reconsolidation of the under surface of the patella with the femur.

2. Splitting it into two parts from above downward, and then turning the upper half under the lower half, so that the smooth aponeurotic surface came next to the femur, thus making it impossible for bony union to take place.

3. Freeing the vastus externus and internus attachments for a distance of 2 inches above and below the patella; next dislocating it from side to side during the operation; and when the limb is straightened out and the interposing flap is in position a 180° rotation of patella is made, so that the upper surface of the patella now becomes its articular surface. The vastus externus and internus are now sutured to the opposite sides from which they were freed, to prevent luxation of the patella and the return to its former position.

4. Covering the under surface of the patella and the entire articular surface of the femur with a fascial graft taken from and detached from the trochanteric zone of the fascia lata, without rotation of the patella.

I have had good results with all these methods. The rotation, however, is the simplest one and after operation gives an additional leverage to the quadriceps tendon. It has some disadvantages, as it taxes the vitality of the skin flaps.

Since adopting this plan, I have encountered cases in which so many operations had been performed about the knee-joint that even the capsular flap could not be secured in the adjoining tissues. Then I resorted to the final or third means for securing the interposing flap. After denuding the bone and freshening its surfaces, molding them, removing as much as was necessary of the upper end of the tibia or lower end of the femur to completely extend the limb, I took a portion of fascia lata and trochanteric bursa with the overlying flap of fat, measuring 3½ by 5 inches, from the patient's hip and interposed it *en masse*, in the knee-joint, suturing it first to the posterior condyloid portion of the capsule; second, bringing it clear over the anterior surface of the femur and upper end of the patella; third, accurately suturing it on both sides and both ends, so that it covered all of the lower end of the femur and prevented a bony contacting of either the patella or tibia with the femur.

### ANKYLOSIS OF KNEE

Case 26.—*Patient.*—Miss V. S., aged 12, was admitted to Mercy Hospital Oct. 30, 1911.

*Present Trouble.*—Seven years ago she slipped on the sidewalk, striking the knee against the ground. The physician called at the time said no fracture was sustained and merely applied a bandage. The following day she was able to walk with comfort and the injury was forgotten. About four weeks later patient complained of pain in the right knee and limped when walking. These symptoms increased in severity and the knee became swollen. A physician advised operation. A U-shaped incision was made with the curve upward and the base on a level with the tuberosity of the tibia. The patella was divided and the articular surface removed. The capsule of the joint was excised, the cartilaginous ends of the bone sawed off, and an end-to-end approximation made of the femur and tibia. The patella was sutured with silver wire—all with the purpose of securing a bony ankylosis of the femur, tibia and patella. The result was successful. The flap evidently suppurated and was drained. The epiphyseal lines were not removed as the bones had continued to grow in length. The patient was in the hospital a year, the knee discharging all the time. When discharged from the hospital the right knee was healed with a complete bony ankylosis. The leg has remained stiff and slightly flexed, about 35 degrees, causing the pelvis and spine to tilt when walking. This has caused some lordosis of the lumbar spine. Occasionally she has slight pain in the joint but it has not been swollen since she left the hospital. The description of the operation is taken from the physical findings and the skiagrams. The name of the operator is unknown.

*Examination.*—This showed the condition mentioned above with so much superficial tissue around the joint that it was impossible to get a flap to interpose between the ends of the bone in an arthroplasty. It was therefore decided to take the trochanteric portion of the fascia lata and a portion of the gluteus maximus for the interposing flap. It appeared that it would be a difficult case, but that the worst result that could be obtained was a straight, stiff leg.

*Treatment.*—A U-shaped incision was made through the cicatricial tissue of the former scar. The lines of union of the joint were exposed. The anterior intercondyloid compact bony wall of the femur was chiseled out with the remnant of patella, the quadriceps tendon and ligamentum patellæ remaining attached. The femur and tibia were then chiseled free from each other with a large curved chisel, so as to imitate the normal convexity of the femoral condyle, driving the chisel on each side inward to the mid-intercondyloid line. The leg was then fractured and the surfaces of the femur and tibia exposed by dislocating the patella outward and flexing the knee. One-half inch of tibia was removed, reserving an intercondyloid elevation resembling the intercondyloid tubercle of the tibia. The tuberosities of the tibia were excavated to the normal concavity. The end of the femur was then restored to its normal conformation. An aponeurotic flap was then remove from the trochanteric portion of the fascia lata, carrying wit it ½ inch of adipose tissue. It measures 4 by 5½ inches It was sutured over the lower end of the femur and approximated to the posterior intercondyloid connective tissue, remnants of the crucial ligaments and of the posterior capsule Laterally, it was sutured to the connective tissue over th condyles, and it extended upward beneath the patella, bein attached to the under-surface of the quadriceps tendon. Thu was procured a good interposing flap between the tibia an patella, on the one hand, and the femur on the other. Th leg was straightened, the vastus internus reunited to th margin of the quadriceps, and the U-shaped skin-flap suture in place. Considerable of the scar tissue of this flap slough but the new joint remained aseptic.

The child was very nervous and would not allow passi motion. Notwithstanding all of these drawbacks, she has co siderable motion in the joint. The leg is perfectly plumb und her and she will have a good functional result. This shows th a flap from a distant part of the body may be detached an transplanted into the joint and serve the purpose for whic it was intended. This was my original ideal plan for arthr plasty, but there was no case in which I was compelled to adopt it, and I did not feel justified to hazard a case when I was getting such good functional results from the attached flap method (Figs. 98-100).

The patella, from the previous tuberculosis around the joint, had smelted into and become a part of the anterior surface of the femur. It was chiseled out of the anterior surface of the femur, retaining its quadriceps and ligamentum patellæ attachment so as to make a fairly good new patella.

Notwithstanding the sloughing of the tip of flap and a part of the skin which was cicatricial, the transplanted flap healed in perfectly and the conformation of the limb and the motion thirty days after the operation was as good as any of the previous pedicle flap results in that period. *And this, I believe, is the final step in the production of new joints, namely, that the detached autogenous transplantation of the interposing flap—the ideal material — is the trochanteric fascia lata and bursa.*

This establishes a principle that the autogenous transplant can be used efficiently for this purpose. A much smaller one than I used will suffice in the knee, by simply covering the tibial head and possibly the under surface of the patella, in place of the femoral head.

With this digression from the procedure which is usually employed in this operation and which is permissible here because of the desirability of presenting in a concise way all that may be said at this time about the interposing flap, I will now return to a discussion of the further steps of this operation.

Having made the initial incision, as described, exposed the joint, made the flaps and separated the patella from its attachment to the femur, we are now ready to sever whatever ankylosis may exist between the femur and the tibia. This is also done by means of a carpenter's chisel, using both grooved and straight chisels, as may be necessary.

The points to be observed at this stage of the operation are: 1. *The normal configuration of the articular surface of both the tibia and the femur must be reproduced as nearly as possible, so that luxation of the joint will be prevented.* 2. These surfaces must be so fashioned that the leg is strictly in plumb. 3. Sufficient bony tissue must be removed so that the pressure brought to bear on the interposing tissue flap will not be great enough to cause pressure necrosis.

It is not always necessary to change the conformation of the articular surface of these bones, because the ankylosis in the case may have been limited to a bony union between femur and patella. As a rule, however, most of these cases are of long standing, and there is always some bony union between all the bones of the joint. A good fit should be secured between the intercondyloid notch of the femur and the intercondyloid ridge and tuberosity of the tibia, because it is only by doing this that the femur can be steadied and luxation prevented.

It is at this stage of the operation that the interposing flaps are placed in position. These flaps are drawn inward, one from either side of the joint, over the head of the tibia, and are accurately sutured to each other over the intercondyloid ridge, a few stitches on the anterior edge securing the flaps to the base of the ligamentum patellæ. The posterior margin of each flap is sutured to the posterior wall of the capsule — which, it will be remembered, has not been disturbed at any stage of the operation. The object in view is to fix these flaps permanently on the articular surface of the tibia, so that every part of the freshened bony surface is covered by this tissue. The suture material used is phosphor-bronze wire for the deeper sutures and chromicized catgut for the periarticular.

It is now that the work on the patella is done as described above. If the knee has been flexed to a considerable degree for a long period of time, it may be necessary to shorten the quadriceps tendon. This tendon is vital to the motion of the joint. The patella, on the other hand, is of less importance — in fact, I have been able to demonstrate time and again that it may be removed entirely and yet a splendid result may be obtained.

It is not always necessary to rotate the patella, except when ankylosis is apt to reoccur. As a rule, however, I rotate the patella as described above, suture the vastus muscles in place, remove the constrictor and close the wound. This closure is the same as that described in the operation on the hip.

### TUBERCULOSIS OF PATELLA

Case 27.—*Patient.*—Mr. DeR., aged 27, was admitted to Mercy Hospital Sept. 11, 1907. Family history was negative. He was a hard drinker for years. He had a Neisserian infection six years ago. Recovery was uncomplicated. Nine years ago he had two lesions on the foreskin. They were painless but kept enlarging till practically the whole foreskin was involved. Lesions persisted for about four months. Four months later a single similar lesion appeared on the prepuce; it disappeared under treatment in about a week. Eight months after this one healed, another lesion of the same character appeared. This also disappeared under treatment in about a week. He has had no secondary manifestations of a luetic character. Romberg sign is absent. Pupils react to accommodation and to light. There is no muscular incoordination. During the past year he has at irregular intervals, perhaps to the number of 15 or 20, experienced girdle sensations. He had measles and typhoid during childhood, uneventful recovery; also had skin lesions on anterior surface of both legs during early childhood. Scars present now show location of original trouble. Ten years ago he was operated on for appendicitis; made a good recovery. Two years ago was operated on for hydrocele. During the past three years at irregular intervals, and always following exposure or chilling, has had "rheumatic pains" in muscles of arms and chest.

*Present Trouble.*—Two years ago while in bed convalescing from his hydrocele operation, he had sudden sharp sticking pains in left patellar region. (Gives no history of any injury, slight or otherwise, to left knee.) The initial pain lasted a few hours, and then the character changed to a dull ache, which was constantly present. This was lessened when he threw the weight of his body on his left foot. From the first he noticed a slight swelling of the left knee, and the left patella seemed larger than the right one. In the next six months the increase of swelling in the knee and the enlargement of the patella were very slow, but were noticeable. Six months after the onset of the trouble, while stepping up on a curb stone, his foot slipped, and he made a violent effort to regain his equilibrium which prevented him from falling but he experienced a sharp severe pain in the left patella, a feeling of something giving way there. He was unable to step on his left foot and describes the pain as being excruciating. He was about a block from home and alone at the time. Says it took him over a quarter of an hour to cover the distance, hopping on one leg, and hanging onto railings and supporting himself by leaning against the walls of buildings. He fainted when he reached his own doorstep. The knee swelled and the next day was about three times its original size. The swelling and acute pain gradually subsided and he was able to bear part of his weight on his left leg for about a week and a half. Since that time has had a continuous dull pain and has been unable to extend the leg on the thigh. At irregular intervals pain would be more severe and there would be more or less swelling, lasting a few days, disappearing after giving injured part a rest. There has never been any redness of the knee during these attacks. There has been a steady loss of weight, with a continuous decrease in general strength for the past two years, the loss in weight being about 30 pounds. During the past three years, patient had had night sweats nearly every night and says that there has been an evening rise in temperature but not as often as the sweats. Another thing the patient mentions is that after any attempt at exertion (mental or physical) the left knee—anterior surface—is bathed in copious perspiration and that perspiration is localized in this location.

*Examination.*—This revealed tuberculosis of the patella with foci involving both upper and lower fragments. There was a pathologic fracture a little below the middle.

*Treatment.*—The left knee was aspirated and about 2 ounces of serous fluid removed. The knee was injected with about one ounce of a 2 per cent. dilution of liquor formaldehydi in glycerin. At the operation the patella with its bursa was excised, detaching it from the ligamentum patellæ below and the quadriceps tendon above. The synovial membranes were somewhat thickened. There was no disturbance of the cartilage, no evidence of tuberculous infection of the joint itself. The quadriceps tendon was then split beginning half an inch above the joint, where it was separated from the patella upward for a distance of 5½ inches on parallel lines, and a strip, ¾ of an inch wide, was lifted, the base of the strip being downward. This strip was turned down over the former seat of the patella and united to the surface of the ligamentum patellæ in the manner described under the head of "Operations on the Patella." The lateral margins of the capsule were approximated so as to close the joint completely, and then the skin and other soft tissues were approximated. A plaster mold was applied (Figs. 107, 108).

*Result.*—Complete primary union resulted with passive motion at the end of seven weeks. The patient has perfect motion in his knee-joint; no inconvenience or discomfort from the absence of his patella. It was the excellent result obtained in this case that led me to the utilization of the quadriceps tendon as a supplement to the treatment of fractures of the patella (Figs. 101, 102).

As stated, the results in the knee are more difficult to secure than in any other joints. This is so because the knee-joint must be mechanically perfect and plumb, so that it may be freely movable, without causing any pain or discomfort.

The wound is sewed up without drain. The skin is freely powdered with bismuth subiodid, a collodion dressing is applied, with 5 per cent. moist phenol (carbolic) gauze over this, and then the usual dry dressing. A Buck's extension, with a 12-pound weight, is attached to the leg and is worn continuously to reduce the interarticular pressure, and thus preventing necrosis of the flaps, and to maintain the limb in a straight position. The limb is placed in a plaster cast, and passive and active motion are begun, as after the hip operation. When these patients become ambulant, we apply a laced leather splint or legging, reaching from the groin to the ankle. This splint is patterned after the plaster mold of the leg, so as to secure an accurate fit and give the needed support to the knee. To favor increased flexion of the limb, the patient bends the knee passively over a stand designed by Dr. N. B. McCauley, a sand-bag being attached to the toes (Fig. 103).

*(To be continued)*

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**Ergot to Prevent Postanesthetic Vomiting.**—A. Sansores, Jr., states that a subcutaneous injection of ergot will prevent or arrest the vomiting after chloroform anesthesia. He says his experience in 150 cases has confirmed this. His communication on the subject is published in the *Prensa Medica*, 1912, p. 37; he ascribes the effect mainly to the vasoconstricting action of the ergot reducing the congestion in the stomach from the toxic influence of the drug.

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# PROCTOCLYSIS

## SOME CLINICAL AND EXPERIMENTAL OBSERVATIONS

HUGH H. TROUT, M.D.
ROANOKE, VA.

The suggestion of employing tap water in the place of the usual so-called normal saline solution was first brought forward by Dr. George B. Lawson, in 1908, and to him is largely due any credit which might result from this study.

A glance at the literature[1] on proctoclysis reveals so many appliances that a review would in itself constitute an article.

We, of the Jefferson Surgical Hospital, have used the visible dropper first described in THE JOURNAL[2] in the majority of cases. Also a small soft rubber catheter has taken the place of the hard nozzle of Murphy except in cases in which the patient's power of resistance was so low the discomfort of the hard plug was not painful, and in those cases in which it was desirable to insert large quantities of tap water, or solution.

Proctoclysis has been employed in all the cases, except those in which the type of operation prevents, e. g., perineal repairs, hemorrhoids, etc.

The anesthetics have been nitrous oxid and oxygen, ether, chloroform and cocain. The types of cases include the vast majority of all surgical and gynecologic operations.

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[1] In addition to the other references cited later in this article, the following may be listed:

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[2] Lawson: THE JOURNAL A. M. A., April 18, 1908, p. 1267.

The method of comparison has been to alternate the cases as they leave the operating-room, irrespective of the type of case, duration of operation or any other factor, and in this study of 400 operations it is interesting to notice how near an average in all respects the cases occur except in the results.

An investigation of 100 hospitals has been made to ascertain the reason of using sodium chlorid solution per rectum instead of tap water and the method of preparing the solution. In answer to the first question, one suggested that normal saline solution was employed to prevent water from dissolving "out the salts from the cells of the epithelium which takes on water to such a degree that the cells, themselves, actually burst. . . . Salt solution prevents this and is absorbed without any destruction of the epithelium." Our experimental studies do not bear out this theory, but we find we can continue tap water over a longer period with less rectal irritation than we can any saline solution.

In these replies one hospital is seen to have used water for a short time, but as yet we have not been able to ascertain the results. Another hospital mentions the "disinfectant and stimulating" action of salt. In twenty the solution is employed to "prevent hemolysis." One states that plain water is used in their nephritis cases without bad effect. The remaining seventy-six give in various terms some association between the solution and the chemical similarity or isotonicity with blood. From none was there any reason advanced why we should give salt water by the rectum any more logically than we should give it by the mouth to relieve thirst, or from fear of hemolysis or dread of having a solution not isotonic with blood.

The manner of preparation varies from careful attention to the most minute detail and containing potassium, calcium and sodium chlorid, sterilized and filtered, to the simple placing of two teaspoonfuls of table salt to a quart of tap water. In other words, the replies show that there is no uniformity in preparation and in some the solution if injected intravenously would probably allow hemolysis and certainly all of them cannot be isotonic with blood, when they vary to such a large extent.

It does not require any prolonged search of the literature to show the many ill effects of sodium chlorid; and even the surgeons of to-day know that therapeutists sometimes obtain wonderful results in the treatment of acute and chronic nephritis by substituting a salt-free diet.

Rössic[3] called attention to the changes in the heart, blood and kidneys in patients who had died following salt solution given subcutaneously and showed experimentally that they were due to the sodium chlorid and not to the amount of water or to hemolysis.

The experimental work of Christian[4] is in itself convincing of the dangers of the too free employment of salt; and along with Smith and Walker, Christian has actually produced not only an acute, but a chronic nephritis in rabbits by the continual administration of this drug.

Much interesting experimental work has been done with the administration of various drugs and any who are especially interested in this part of the subject are referred to the reports from the laboratory of the Department of the Theory and Practice of Physic, Medical School, Harvard University.

The neurologists have not been slow to recognize the harmful effects of salt, and Lepine[5] seems to believe that most cases of hysteria present a toxic element and often this can be found in relationship of the sodium chlorid retention and the kidneys. In one of his cases he studied the serum of his patient and found the sodium chlorid content almost twice the normal amount during the height of his patient's attack. Vincent was able to control to a large extent a number of cases of hysteria by employing a salt-free diet, without their knowledge, and, furthermore, accentuated the symptoms by a corresponding increase in salt. He further asserts that sodium chlorid in large doses will produce symptoms somewhat similar to lead and mercury poisoning, such as nausea, vomiting, diarrhea and abdominal pain.

Jackson and Elting[6] report a case of general edema of obscure origin without evidence of cardiac or renal lesions which was very definitely associated with sodium chlorid and in their case even the salt air of a sea voyage apparently increased the condition.

John B. Murphy[7] says:

> If the patient is getting too much solution, after the third or fourth day he will show a slight edema of the ankles, hands and even of the face. Then it should be discontinued until his circulatory equilibrium is restored, when the treatment may be repeated if indicated.

It is more than possible that some of these cases of edema are due to the amount of sodium chlorid and not necessarily to the amount of water. Especially is this point worthy of consideration when we realize that the patient receives during this time from 3,500 to 29,160 grains of salt, depending on the manner of preparation, when being forced on an average of 18 pints to the twenty-four hours as Murphy recommends.

In the replies to our questions, salt is said to be employed in varying proportions ranging from about 80 grains to "two heaping teaspoonfuls" to the quart. Testing the various table-salts we find a level teaspoonful will average 115 grains and a "heaping teaspoonful" will average 270 grains.

In other words, when we follow Dr. Murphy's directions about the quantity of fluid we force into the rectum anywhere from 1 to 10 ounces of sodium chlorid each day. Of course, if the solution is made so as to be about 0.6 per cent. the patient would only receive 1⅛ ounces of sodium chlorid daily, which is about the usual amount an average man in good health consumes by mouth in one month in the form of table salt.

In one case in our series, an interval appendix, there followed a transient albuminuria which remained for two days. Water was then substituted for the salt solution per rectum and at the end of twenty-four hours the albumin had disappeared. At the end of the next twenty-four hours salt solution was again used and albumin appeared within the next twenty-four hours. Salt solution was then discontinued and water started, and the patient did not show any more albumin up to the time of his discharge from hospital. In this case there was never any edema.

Henkel,[8] however, contends that the experimental work on lower animals does not correspond with his clinical experience concerning pregnant women who have nephritis. In such cases he found subcutaneous infusion of normal salt solution of much benefit. Of course, this has no direct connection with solution by rectum, but is mentioned on account of his experience being at variance with that of most other writers on this subject.

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[3] Rössic: Gibt es Schädigungen durch Kochsalzinfusion? Berl. klin. Wchnschr., Sept. 18, 1907.

[4] Christian: Experimental Nephritis, Boston Med. and Surg. Jour., 1908, clviii, 416.

[5] Lepine, J.: Hystérie, insuffisance rénale, rétention chlorurée, Rev. de Méd., Paris, September, 1911.

[6] Jackson and Elting: Studies from the Bender Hygienic Laboratory, 1908, v.

[7] Murphy, J. B.: THE JOURNAL A. M. A., April 17, 1909, p. 1249.

[8] Henkel: Einfluss der Kochsalzinfusion, München. med. Wchnschr., Nov. 29, 1910.

Horatio C. Wood[9] says that the use of saline infusion in cases of toxemia with the idea of increasing the rapidity of elimination is founded on an erroneous conception.

When a poison is introduced into the system it unites to form new compounds with the cell protoplasm and this molecular union must be broken up before the poison can be eliminated. Salt solution has no specific action in either bacterial or vegetable poisoning.

If absorption is a process of osmosis it is certainly reasonable to presume that a solution which is not isotonic with blood will be more readily absorbed from the rectum, and our series of cases tend to confirm this view.

I am especially indebted to Dr. T. H. Gilland for his assistance in the tabulation on which the following conclusions are based.

### CONCLUSIONS

1. All patients show less rectal irritation to proctoclysis if given a soap-suds enema before the operation.
2. The patients given water by rectum absorbed nearly 400 c.c. more to the twenty-four hours than did the patients given salt solution, the average for the water series being 2,444 c.c. per twenty-four hours, and the average for the salt series being 2,041 c.c. per twenty-four hours.
3. The patients given salt solution by rectum required nearly twice as much water by mouth to relieve thirst, or, to give exact figures, in the water cases only 332 c.c. were taken in the first twenty-four hours, in the salt cases 696 c.c. were required in the first twenty-four hours.
4. The amount of urine was practically the same in both classes of cases, there being 2 c.c. more in the water cases for the first twenty-four hours after operation, and 3 c.c. more in the salt cases for the next twenty-four hours.
5. In seventeen cases the patients complained of tasting salt without having any idea that normal saline solution was being given by rectum. None of the water series made any such complaint.
6. In drainage cases more fluid may be taken by rectum than in those laparotomies closed without drainage.
7. Our observations on the comparative study of patients taking methylene-blue by rectum, phenolsulphonephthalein (Rowntree and Geraghty), etc., are as yet too limited to justify any deductions.
8. A comparative study of the sodium chlorid estimation in urine presents too many uncertainties to be of much value.
9. Proctoclysis should be employed more frequently than it has been in the past and in all classes of cases in which it is possible.
10. Care should be exercised to prevent "water-logging" of the entire system and this applies to both salt and water.
11. In peritonitis cases with drainage it is possible to have the patients take four or five times as much fluid by rectum as in the cases on which this paper is based.

1303 Franklin Road.

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[9] Wood: The Journal A. M. A., April 17, 1909, p. 1277.

## CASE OF SEPTICEMIA WITH ORIGIN BEFORE ONSET OF LABOR

James Farrage, M.D., Deering, N. Dak.

*History.*—Mrs. H., 27 years of age, an American of Norwegian parents, became pregnant for the first time. I examined her urine at intervals, but never found anything abnormal. The date of delivery was fixed, approximately, for November 28. November 12 I was called and found her suffering from pains in the joints, with a temperature of 103 F. and a pulse of 120, having been this way for eight days. The lungs were quite clear. I ordered the patient to bed and gave her the usual remedies for influenza. Next day the temperature was still over 102, and the pulse about 120. The blood-pressure was normal. November 14 I was called hurriedly, with the information that labor had started about 7 a. m. Examination, made with gloves, under strict asepsis, showed the membranes ruptured and the head engaged in left occipito-anterior position. After an exceedingly easy labor of five hours she gave birth to an intensely cyanosed male child, at 12:50 p. m. The afterbirth was delivered intact. No enema was used, as the bowels had been previously moved. No feces were passed at delivery. It was with the greatest difficulty that I succeeded in making the child breathe, fifteen or twenty minutes of Schultz's method being successful. Twenty-four hours after delivery the child had four convulsions in two hours, with very intense cyanosis at each attack.

*Course.*—After delivery the mother's temperature and pulse dropped to normal, but at 4 p. m., three hours after delivery, the temperature was 99.2, and at 1 a. m., twelve hours after delivery, it was 100.2, with a pulse of 96. The patient was catheterized twice, being unable to void urine. She slept very little and was very nervous during the night. November 15, twenty-four hours after delivery, temperature was 103.4 and pulse 120. The patient complained of numbness in the arms and right leg, and at times was a little irrational. Blood-clots came away from the nose. The flow was considerable and without odor. November 16 she showed a temperature of 103.8 and a pulse of 122. A quantity of clotted blood was discharged from the vagina. November 18 I called in Dr. Sihler of Devil's Lake for consultation, and it was decided that we had a case of septicemia. From the start the respirations had been over 30 per minute and the tongue had been coated, but at no time during the course of the disease was the breath foul. The milk-flow was never established. The temperature and pulse remained about the same level; nothing we tried made any impression on either. November 22 a blood-clot with a foul odor, was passed from the vagina, and from that time the discharge gradually became less, until November 27, when it finally ceased. November 25 the abdomen was markedly tympanitic, which was relieved by a turpentine enema, a dark green stool being passed. November 26 the temperature reached 104.6 (vagina) and the pulse became very thready, reaching 150. After this exacerbation had passed, the temperature varied between 103 and 104.8 till December 2, when the pulse again became thready and reached 156, with a temperature of 105 (vagina). Again the patient was tided over this collapse until December 5, when her temperature went to 105.6, and her pulse was uncountable, the patient expiring at 10:50 a. m. She never had a chill at any time during the course of the disease. From November 25 until the time of her death, there was a great amount of tympanites, which was relieved by turpentine enemas. All the stools passed were dark green, with a very foul odor. November 27 Dr. Ramstad of Bismarck, the family physician, was called in consultation. He concurred in the diagnosis already made, but could suggest nothing further in the matter of treatment.

*Bacteriologic Examination.*—Swabs were sent to Dr. G. F. Ruediger of Grand Forks at different intervals. He discovered a mixed infection of a bacillus and a coccus. The bacillus proved to be the colon bacillus, but Dr. Ruediger was unable to grow a culture of the coccus, although over twenty plates were tried. After the third swab was received, he succeeded in isolating a few chains of *Streptococcus pyogenes*, which were not typical, and may have been only a close relative, as the zone of hemolysis was very small, but there was no green coloration. As this organism was present in such small quantities, and was so difficult to isolate, he is doubtful whether this could be the cause of the infection. Had it been the cause, it would have been very easily detected. To quote from his letter of December 12: "I do not know how much of the trouble, if any, was due to these cocci and the colon bacillus." In Dr. Ruediger's letter of November 28, he says: "The coccus seen in smears did not look like a streptococcus, as we could find no chains, but most of them were present in pairs." Blood examination gave a negative Widal reaction.

*Treatment.*—Polyvalent antistreptococcic serum was used from the beginning, and later colon vaccine was also used. Cold packs and sponging at stated intervals, continuous proctoclysis of normal saline with patient in Fowler position, hypodermoclysis of normal saline solution and Credé ointment, also strychnin and digitalis when indicated, were all used. We tried quinin over a short period. At no time during the course of the disease did our therapy make any appreciable effect on either pulse or temperature, except during the last week, when cold packs would reduce the temperature about 1 degree and the pulse about 10 to 20 beats, but within an hour it would be back to where it was before. Uterine douches were used, but without effect at any time. Nourishment was pushed at all times during the course of the disease, the patient taking as high as 72 ounces of liquid food in twenty-four hours. Brandy was given every two hours.

*Remarks.*—I elicited the information from the husband that the patient had been using a patent preparation, called "Mother's Friend," which was applied to the perineum and genitals each day and well rubbed in. This is of the same nature as petrolatum, and had been used for some weeks previous to delivery. The husband denied ever having had any venereal disease.

*The Child.*—For the first three weeks the baby did very badly, and at the end of that time weighed barely 5 pounds and was distinctly marasmic. Under treatment, the condition cleared up, and at nine weeks it weighed between 9 and 10 pounds. In the fourth week it showed a gain of 12 ounces and in the fifth 8 ounces. At ten weeks the child died of bronchopneumonia, being sick only about fourteen hours.

I wish to thank Drs. Sihler and McIntosh of Devil's Lake, and Dr. Ramstad of Bismarck, for their help and advice in this case.

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## TECHNIC IN GRAFTING CORNEA OF A RABBIT'S EYE FOR DESTRUCTIVE ULCERATIVE CORNEA

R. M. Benson, B.S., M.D., and C. S. Austin, A.M., M.D.,
Carrollton, Mo.

*Patient.*—J. T., Marceline, Mo., entered South Side Hospital Feb. 1, 1912. Examination revealed almost complete destruction of cornea of the right eye and patient was entirely unable to see from the eye at the time of entrance to the hospital. The eye was properly conditioned, pupil dilated and the cornea removed as follows:

*Technic.*—Under local anesthesia the cornea was completely excised, except 1/16 inch near the limbus, and the cornea of the rabbit's eye was cut to fit the excised area. Superficial sutures were taken in the conjunctiva, both horizontal and perpendicular and drawn over the graft to hold it firmly in position. Small cannulas, bent to fit, were placed in the internal and external canthi and connected with vacuum-bottles by rubber tubing to draw off secretions which otherwise would flood the eye and prevent union. These were held n position by bands of adhesive plaster and the eye was bandaged for three days. Bandages were then removed to see hat the tubes were kept clear for proper drainage. The patient was kept in the recumbent position. The cornea of he rabbit's eye was removed under anesthetic, after the patient had been prepared, and transferred to a normal saline solution at a temperature of 99 F. until ready for use. The orneal graft is perfect and clear and vision is 16/20.

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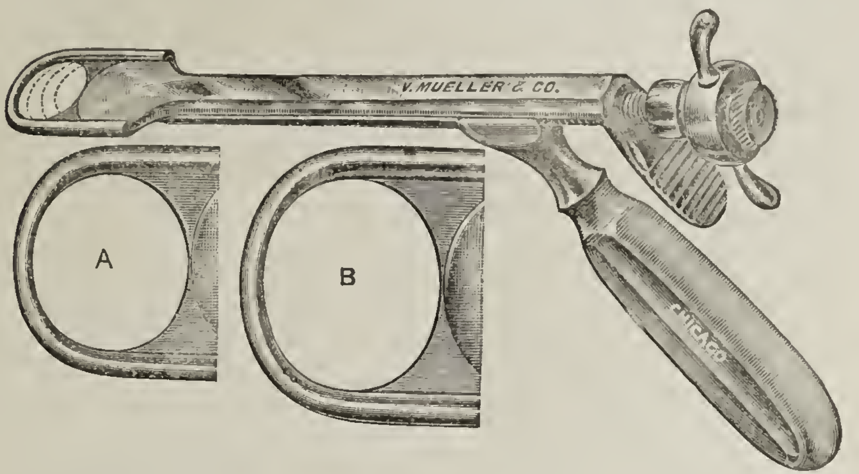
## TONSIL GUILLOTINE WITH A DULL BLADE

William E. Sauer, M.D., St. Louis

The accompanying illustration shows a modification of the Sluder guillotine. The cutting-blade, instead of being sharp, is dull, and, instead of being forced through by thumb-pressure alone, is gradually pushed forward by means of a screw attachment, making the blade act as an écraseur.

The technic of Sluder, or the one employed by Beck, both of which have been recently described,[1] can be followed with this instrument. The only change is, after the tonsil is engaged and the blade is pushed as far as possible by the thumb, the thumb-screw is then quickly turned against the thumb-piece, after which the nut is slowly turned to the right, gradually but completely enucleating the tonsil. The attachments are completely severed. The great advantage of the dull blade is the comparative freedom from hemorrhage.



Tonsil guillotine with a dull blade. The instrument is made in two sizes, A and B.

201 Humboldt Building.

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## AN IMPROVED CARBOLFUCHSIN SOLUTION

F. H. Verhoeff, M.D., Boston

The usual method of preparing carbolfuchsin for staining tubercle bacilli is to add a saturated alcoholic solution of fuchsin to a 5 per cent. aqueous solution of phenol (carbolic acid). Owing to a chemical reaction which takes place between water and phenol, a fine precipitate is gradually formed and the staining power of the solution becomes progressively impaired. For the best results, therefore, the solution should be freshly made, a fact that does not seem to be generally recognized. The following method of preparation has been found superior to the usual one, in that only a single stock solution is required which is permanent, uniform in its action, and, when once prepared, never afterward requires to be filtered. From this stock solution an active staining solution may be immediately prepared by the simple addition of distilled water.

The stock solution is as follows:

| | |
|---|---|
| Phenol crystals, melted......... | 25 c.c. |
| Absolute alcohol ............... | 50 c.c. |
| Fuchsin (basic) ............... | 2 gm. |

Allow to remain over night in an incubator or on a steam radiator to ensure complete solution, cool and filter.

For use, add 2 drops of this stock solution to 8 drops of distilled water. For spreads of sputum, etc., the dilution may conveniently be made on the slide or cover-slip. When larger quantities of staining solution are required, the dilution is made in the proportion of 1 c.c. of the stock solution to 6 c.c. of distilled water.

The same method will be found advantageous in preparing other stains containing phenol, notably carbolthionin. The latter makes a beautiful and rapid contrast stain for sections stained for tubercle bacilli in carbolfuchsin.

101 Newbury Street.

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[1] The Journal A. M. A., March 25, 1911, p. 867, and Jan. 27, 1912, p. 240.

# *New and Nonofficial Remedies*

The following additional articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association. Their acceptance has been based largely on evidence supplied by the manufacturer or his agent and in part on investigation made by or under the direction of the Council. Criticisms and corrections are asked for to aid in the revision of the matter before publication in the book "New and Nonofficial Remedies."

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that, so far as known, it complies with the rules adopted by the Council.

W. A. Puckner, Secretary.

**PROFERRIN.**—Iron Nucleo-proteid.—Proferrin is a compound of iron and milk casein containing iron equivalent to about 10 per cent. elementary iron and phosphorus equivalent to about 0.5 per cent. elementary phosphorus.

Proferrin is prepared by treating an alkaline solution of casein with a solution of an iron salt and precipitating with acetic acid.

Proferrin is a brown powder, almost odorless and tasteless, insoluble in water and dilute acids, slowly soluble in alkalies.

If, to the dry powder, fuming nitric acid be added, an orange red color, due to the proteid, results. If the dry powder be heated in a crucible, the odor of burning nitrogenous matter will be given off and the residue if dissolved in hydrochloric acid will give the usual tests for iron. If 0.5 Gm. be shaken with 10 Cc. distilled water, and the mixture filtered, the filtrate should give no precipitate on addition of ammonium hydroxide, and not more than a faint bluish tint on addition of a few drops of potassium ferro-cyanide solution (limit of *inorganic iron*).

If about 2 Gm. proferrin be digested for three hours at 40° C., with 40 Cc. of 0.2 per cent. hydrochloric acid containing 0.006 Gm. pepsin, U. S. P., and the resulting mixture filtered, 5 Cc. of the filtrate diluted to 100 Cc. should produce not more than a faint blue color on the addition of a drop of potassium ferrocyanide solution.

The iron and phosphorus may be determined by the usual methods for organic compounds containing these elements.

*Action and Uses.*—Proferrin has been recommended as a ferruginous tonic and as a means of restoring the iron and phosphorus waste of the body. It undergoes very little change in the stomach but is said to be quickly digested and absorbed in the intestine. Its hematogenous actions resemble those of other organic iron preparations.

*Dosage.*—.13 to .3 Gm. (2 to 5 grains).

Manufactured by H. K. Mulford Co., Philadelphia, Pa. No U. S. patent. U. S. trademark No. 38,614.

Dosage forms:

*Proferrin Tablets, 1 grain.*—Each tablet contains proferrin 0.065 Gm. (1 grain).

*Proferrin Tablets, 2 1/2 grains.*—Each tablet contains proferrin 0.15 Gm. (2½ grains).

*Proferrin Tablets, 5 grains.*—Each tablet contains proferrin 0.3 Gm. (5 grains).

**TYRAMINE.**—Tyramine is para-hydroxy-phenyl-ethyl-amine hydrochloride $OH.C_6H_4.CH_2.CH_2.NH_2.HCL$, the hydrochloride of the base para-hydroxy-phenyl-ethyl-amine $OH.C_6H_4.CH_2.CH_2.NH_2$ obtained synthetically.

The base para-hydroxy-phenyl-ethyl-amine was first isolated by Barger from ergot and also prepared synthetically by him by the reduction of para-hydroxy-acetonitrile with sodium in alcoholic solution, (Transactions of the Chemical Society, Vol. 95, 1909). It is chemically and physiologically related to epinephrine ($C_6H_3(OH)_2(CHOH.CH_2NHCH_3)$.

Tyramine occurs as an almost white crystalline powder, easily soluble in water forming a neutral solution.

*Actions and Uses.*—Taken internally or injected subcutaneously tyramine increases the blood pressure; for this reason it can be used in shock or collapse; it is also claimed to be valuable for producing post-partum contraction of the uterus. It is useless as a local hemostatic.

The action is similar to epinephrine, being weaker and slower, but lasting longer.

*Dosage.*—It is best used subcutaneously, in doses of 0.02 Gm. (1/3 grain) dissolved in water.

Manufactured by Burroughs Wellcome & Co., London, England, and New York. British patents Nos. 1560 and 1561 (Jan. 22, 1909). British trademark No. 309,250. No U. S. patent. U. S. trademark applied for.

*Tabloid Tyramine Hypodermic.*—Each tablet contains tryamine 0.02 Gm. (⅓ grain).

**TUBERCULIN—Rosenbach.**—A modified "old tuberculin."

The preparation of this tuberculin is in general similar to that of Koch's old tuberculin except that the tubercle bacilli are grown in a culture with Trichophyton holosericum album.

*Actions and Uses.*—The toxicity of the tuberculin is claimed to be materially reduced by the action of the trichophyton while the other properties are not altered. It is claimed that larger doses may be used and that it is more efficient than other forms of tuberculin. The validity of the claims for this preparation has not yet been fully confirmed by clinical observation.

It is used (by hypodermic injection) for diagnostic purposes and for the treatment of pulmonary and other forms of tuberculosis.

*Dosage.*—The dose and method of administration must be governed by conditions of the case.

Manufactured by Kalle & Co., A. G., Biebrich a. Rh. No U. S. patents or trademarks.

## PHARMACEUTICAL PREPARATIONS

The following dosage forms of accepted proprietary articles have been accepted for N. N. R.:

*Novocain Tablets "D."*—Each tablet contains novocain 0.2 Gm. (3 grains).

*Novocain Tablets "F."*—Each tablet contains novocain 0.05 Gm. (¾ grain).

*Novocain Suprarenin Tablets "A."*—Each tablet contains novocain 0.125 Gm. (2 grains) and suprarenin 0.000125 Gm. (1/500 grain).

*Novocain Suprarenin Tablets "B."*—Each tablet contains novocain 0.1 Gm. (1½ grains) and suprarenin 0.00025 Gm. (2/500 grain).

*Novocain Suprarenin Tablets "C."*—Each tablet contains novocain 0.05 Gm. (¾ grain) and suprarenin 0.000083 Gm. (1/1000 grain).

*Novocain Suprarenin Tablets "E."*—Each tablet contains novocain 0.02 Gm. (⅓ grain) and suprarenin 0.00005 Gm. (1/1200 grain).

# *Therapeutics*

## THE SARSAPARILLA ABSURDITY

Spring seems to be the time of the year when the various sarsaparilla nostrums come to the front with special pleas of their being the one alterative (whatever that word may mean) to rehabilitate or reconstruct the human body, and incidentally to be so combined as to purge it of all left-over winter infelicities. The persistency of the recurrence of this epidemic foolishness is the cause of the following study of this drug.

The Pharmacopeia makes official the "dried root" of several kinds of "smilax," and then makes official:

Fluidextract of Sarsaparilla.
Compound Fluidextract of Sarsaparilla.
  Sarsaparilla,
  Glycyrrhiza,
  Sassafras,
  Mezereum,
  Glycerin,
  Diluted alcohol.
Compound Syrup of Sarsaparilla.
  Fluidextract of sarsaparilla,
  Fluidextract of glycyrrhiza,
  Fluidextract of senna,
  Sugar,
  Oil of sassafras,
  Oil of anise,
  Oil of gaultheria,
  Water.

Sarsaparilla contains small amounts of three glucosids (parillin, saponin and sarsosaponin), an oil, a resin and about 15 per cent. of starch.

Sarsaparilla has no local action, and internally is practically devoid of any physiologic action whatever. The only active principles that it possesses are the saponins, and they are in such small amount as to be practically negligible. If there is no physiologic activity to the drug, nothing that can be demonstrated, it certainly has no unusual value. The fact that the drug (if it deserves the name) is almost never used alone, that it is almost always combined with something more active such as potassium iodid, renders even a concealed activity and value doubtful.

Sarsaparilla seems to have been introduced into Europe, in the sixteenth century, as a treatment for syphilis. It was used for this disease for about a century, and then on account of its supposed worthlessness, was dropped and more or less forgotten. But late in the eighteenth century it was again brought to notice and urged as a drug of value in syphilis, and as a general alterative in obscure diseases. For a great many years its virtues have been lauded and its value urged by nostrum and patent-medicine firms.

Medical men have inherited from their fathers and grandfathers and great-grandfathers the belief that sarsaparilla has value in syphilis, gout, rheumatism, and as a general promoter, or disturber for good, of metabolism. But it is exceedingly rare that sarsaparilla is ordered alone; it is always in one of its multiple combinations, as described above, or in combination with a positive active drug, such as an iodid. That it, in one of its combinations, can make iodid taste less disagreeable is another inherited belief. Iodid given in milk or effervescing water can be rendered very slightly disagreeable. The sarsaparilla combinations are disagreeable of themselves.

To show how little value even nostrum-venders believe sarsaparilla itself to have, one has but to study the analysis of various nostrum sarsaparilla mixtures. In part second of the 1911 annual report of the Connecticut State Agricultural Experiment Station (discussed editorially in The Journal, March 30, p. 939), page 188, occurs the following:

> Nine samples of proprietary compound extracts of sarsaparilla were analyzed. According to the labels they are of most complex composition. The following drugs, according to the labels on these bottles, are included in their preparation: sarsaparilla, yellow dock, stillingia, burdock, licorice, sassafras, mandrake, buckthorn, senna, black cohosh, pokeroot, wintergreen, cascara sagrada, cinchona bark, prickly ash, alcohol, glycerin and iodids of potassium and iron.

The only possible value of this combination of drugs s the cathartic action of the well-known senna and cascara sagrada, etc., the tonic action of the iron, the appetizing action of the cinchona, the very potent action of potassium iodid, and the possible desired effect of alcohol. It is seen that the sarsaparilla is so overpowered hat if it had any action it could not be found.

The Massachusetts State Board of Health, quoted in his report, remarks that the majority of laymen, while mistakenly believing sarsaparilla to have therapeutic powers, know that it is harmless; therefore its combination with an active drug like potassium iodid, in a upposedly harmless preparation sold by druggists, grocers and department stores is censurable. Potassium odid can generally do harm in large doses, and may do arm in small doses.

The Connecticut report goes on to state that the labels f five samples of these sarsaparilla preparations claimed o contain from 7 to 27 per cent. of alcohol. One contained 22.5 per cent. of alcohol, although none was stated n the label. Three samples contained a large amount of lycerin. Many contained sugar in the form of molasses.

The A. D. S. (American Druggist Syndicate) Sarsaparilla Compound is said on its label to be "a preparation of vegetable substances that eliminates poison from blood and tissues. This is not a patent medicine, but a Premium Remedy selected and warranted by an association of 12,000 qualified druggists." This "vegetable" preparation contained 7.5 grains of potassium iodid per fluidounce. It is therefore misbranded.

Ayer's Compound Concentrated Extract of Sarsaparilla contains 53.5 per cent. of glycerin and no alcohol. This preparation was found to contain 3.4 grains of potassium iodid per fluidounce.

Callahan's Our Sarsaparilla claims to be the "king of all purifiers." It contained 5.6 grains of potassium iodid to the fluidounce. It is a highly alcoholic preparation.

Hood's Compound Extract of Sarsaparilla, the label states, "contains 18 per cent. of alcohol, the smallest quantity that will extract and preserve all the remedial properties of the ingredients." This contained 4.4 grains of potassium iodid per fluidounce.

Jamieson's Compound Extract of Sarsaparilla contained but 1.4 grains of potassium iodid per fluidounce.

Nyal's Spring Sarsaparilla Compound states on its label that "the cultivation of cheerfulness of mind, purity of life, and habits of cleanliness greatly conduce to aid the medicine in the cure of disease." The Connecticut report remarks that "this delightful truism cannot be contradicted." Glycerin in this preparation has been substituted for alcohol, and it claims to contain 4.5 grains of iodids of potassium and iron per fluidounce. Potassium iodid was calculated to be present, 3.4 grains per fluidounce.

Sayle's Compound Extract of Sarsaparilla was found to have a high alcohol content and 3.4 grains of potassium iodid per fluidounce.

Rexall Sarsaparilla Tonic contained 22.5 per cent. of alcohol by volume, not declared on the label. It is therefore misbranded. It contained no iodids.

Wilson's Compound Sarsaparilla issues the warning on its label, "Patients should cautiously avoid the use of beer and alcoholic stimulants even in small quantities, which is distinctly calculated to produce the very diseases which they wish to cure." Such advice is stated by the Connecticut report to be "most refreshing when connected with a preparation containing 5.1 per cent. of alcohol, more than is usually found in beer itself." This preparation contained no iodids, but over half of its very high solids consists of cane-sugar in the form of molasses.

It is extremely improbable that there is any therapeutic value in sarsaparilla, or that there is any indication whatsoever in medicine for the use of sarsaparilla as a medicament. The Pharmacopeia should be purged of such absolute nonsense, if it is to continue to enjoy its own self-respect.

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**Definitions of Idiocy, Imbecility, Abnormality, Etc.**—Drewry (*Virginia Med. Semi-Month.*) defines amentia in the words of J. T. Searcy as "a comprehensive term which has been used to designate an all-around want of normal mentality which has existed all the person's life, or since he has been old enough to have his mentality graded." In other words, "amentia is want of normal efficiency in all departments of thought." An idiot is "an ament who cannot be taught to be useful in any way to himself or to others, one who is utterly helpless and dependent"; an imbecile is "an ament who can be taught to do useful things under the immediate care and direction of others"; a feeble-minded person is "one who can be trained and educated to be quite useful and sometimes can work independently of outside help, if the work is not too complicated." De Moor defines abnormal children as "those afflicted with anything whatever that unfavorably affects their lives in relation to the social medium in which they live."

# THE ATLANTIC CITY SESSION

AMERICAN MEDICAL ASSOCIATION, SIXTY-THIRD ANNUAL SESSION, ATLANTIC CITY, JUNE 4-7, 1912

## OFFICIAL CALL

### Sixty-Third Annual Session of the American Medical Association, Atlantic City, N. J., June 3-7, 1912

The sixty-third annual session of the American Medical Association will be held at Atlantic City, N. J.

The House of Delegates will convene at 10 a. m., Monday, June 3. In the House, the representation of the various constituent associations for the years 1910, 1911 and 1912 is as follows:

| | | | |
|---|---|---|---|
| Alabama | 3 | Montana | 1 |
| Arizona | 1 | Nebraska | 2 |
| Arkansas | 2 | Nevada | 1 |
| California | 3 | New Hampshire | 1 |
| Canal Zone | 1 | New Jersey | 3 |
| Colorado | 2 | New Mexico | 1 |
| Connecticut | 2 | New York | 11 |
| Delaware | 1 | North Carolina | 2 |
| District of Columbia | 1 | North Dakota | 1 |
| Florida | 1 | Ohio | 7 |
| Georgia | 2 | Oklahoma | 2 |
| Hawaii | 1 | Oregon | 1 |
| Idaho | 1 | Pennsylvania | 9 |
| Illinois | 9 | Philippine Islands | 1 |
| Indiana | 4 | Rhode Island | 1 |
| Iowa | 3 | South Carolina | 2 |
| Kansas | 2 | South Dakota | 1 |
| Kentucky | 4 | Tennessee | 3 |
| Louisiana | 2 | Texas | 5 |
| Maine | 1 | Utah | 1 |
| Maryland | 2 | Vermont | 1 |
| Massachusetts | 6 | Virginia | 3 |
| Michigan | 3 | Washington | 2 |
| Minnesota | 2 | West Virginia | 2 |
| Mississippi | 2 | Wisconsin | 3 |
| Missouri | 5 | Wyoming | 1 |

The fourteen scientific sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy and the Public Health and Marine-Hospital Service are entitled to one delegate each.

The general meeting, which constitutes the opening exercises of the scientific functions of the Association, will be held at 10:30 a. m., Tuesday, June 4. The various sections will meet Tuesday, June 4, at 2 p. m., and subsequently, according to their programs, on Wednesday and Thursday, June 5 and 6, and in some cases also on Friday morning, June 7.

The registration Department will be open from 8:30 a. m. until 5 p. m., on Monday, Tuesday, Wednesday and Thursday, June 3, 4, 5 and 6, and from 9 to 10 a. m., on Friday, June 7.

JOHN B. MURPHY, President.

ALEXANDER R. CRAIG, Secretary.

## THE MEMBERS OF THE HOUSE OF DELEGATES

### A Preliminary Roster of the Legislative Body of the American Medical Association

To give in this issue a complete list of the members of the House of Delegates for the session is impossible, as a number of state societies are yet to hold their meetings at which delegates will be elected. The following is a list of the holdover delegates and of the newly elected members who have been reported to THE JOURNAL in time to be included:

### *STATE DELEGATES*

ALABAMA
W. H. Sanders, Montgomery.
Seale Harris, Mobile.

ARKANSAS
G. A. Warren, Black Rock.

CALIFORNIA
O. D. Hamlin, Oakland
Granville MacGowan, Los Angeles.

COLORADO
Hubert Work, Pueblo.
Edward Jackson, Denver.

GEORGIA
W. H. Daughty, Jr., Augusta.

ILLINOIS
E. J. Brown, Decatur.
Hugh T. Patrick, Chicago.

INDIANA
Miles F. Porter, Ft. Wayne.
F. A. Tucker, Noblesville.
J. Rilus Eastman, Indianapolis.
Edwin Walker, Evansville.

IOWA
Max White, Clarinda.

ISTHMIAN CANAL ZONE
Col. W. C. Gorgas, Ancon.

KANSAS
O. P. Davis, Topeka.

KENTUCKY
Curran Pope, Louisville.
A. T. McCormack, Bowling Green.
W. W. Richmond, Clinton.
J. W. Ellis, Masonville.

LOUISIANA
Oscar Dowling, Shreveport.

MARYLAND
G. Lane Taneyhill, Baltimore.

MASSACHUSETTS
F. H. Thompson, Fitchburg.
F. G. Wheatley, N. Abington.
Hugh Cabot, Boston.
Horace D. Arnold, Boston.
H. G. Stetson, Greenfield.
H. W. Van Allen, Springfield.

MICHIGAN
F. W. Robbins, Detroit.
R. R. Smith, Grand Rapids.
E. T. Abrams, Dollar Bay.

MINNESOTA
George D. Head, Minneapolis.
R. C. Dugan, Eyota.

MISSISSIPPI
J. W. Young, Grenada.

MISSOURI
E. J. Goodwin, St. Louis.
R. M. Funkhouser, St. Louis.

NEBRASKA
A. R. Mitchell, Lincoln.

NEVADA
J. E. Pickard, Reno.

NEW JERSEY
E. L. B. Godfrey, Camden.
C. R. R. Fisher, Bound Brook.
Luther M. Halsey, Williamstown.

NEW MEXICO
W. R. Tipton, E. Las Vegas.

NEW YORK
A. T. Bristow, Brooklyn.
Edward E. Cornwall, Brooklyn.
Henry L. Elsner, Syracuse.
James W. Fleming, Brooklyn.
Wesley T. Mulligan, Rochester.
Edgar A. Vander Veer, Albany.
Wendell C. Phillips, New York.
Dwight Murray, Syracuse.
James P. Warbasse, Brooklyn.
L. H. Neuman, Albany.
Julius Ullman, Buffalo.

NORTH CAROLINA
J. Howell Way, Waynesville.
J. F. Highsmith, Fayetteville.

NORTH DAKOTA
Victor H. Stickney, Dickinson.

OHIO
J. E. Tuckerman, Cleveland.
E. J. March, Canton.
J. H. J. Upham, Columbus.

OREGON
Kenneth A. J. MacKenzie, Portland.

PENNSYLVANIA
Thomas D. Davis, Pittsburgh.
Thomas S. Arbuthnot, Pittsburgh.
Fremont W. Frankhauser, Reading.
William T. Hamilton, Philadelphia.
George W. Guthrie, Wilkes-Barre.
Theodore B. Appel, Lancaster.
John B. Lowman, Johnstown.
M. Howard Fussell, Philadelphia
Luther B. Kline, Catawissa.

RHODE ISLAND
John Champlin, Westerly.

SOUTH CAROLINA
John L. Dawson, Charleston.
E. A. Hines, Seneca.

SOUTH DAKOTA
T. B. Smiley, Mt. Vernon.

TENNESSEE
Jere L. Crook, Jackson.
A. B. Cooke, Nashville.
S. R. Miller, Knoxville.

TEXAS
A. C. Scott, Temple.
Vard H. Hulen, Houston.
Joe Becton, Greenville.

UTAH
Sol G. Kahn, Salt Lake City.

VERMONT
J. N. Jenne, Burlington.

VIRGINIA
C. N. Miller, Richmond.

WASHINGTON
G. W. Libbey, Spokane.
J. E. Else, Pullman.

WEST VIRGINIA
F. L. Hupp, Wheeling.
P. A. Haley, Charleston.

WISCONSIN
Byron M. Caples, Waukesha.

### *DELEGATES FROM THE SECTIONS*

PRACTICE OF MEDICINE
J. A. Capps, Chicago.

SURGERY
H. A. Royster, Raleigh, N. C.

OBSTETRICS AND GYNECOLOGY
H. G. Wetherill, Denver.

OPHTHALMOLOGY
Hiram Woods, Baltimore.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY
W. S. Bryant, New York City.

DISEASES OF CHILDREN
William Hollopeter, Philadelphia.

PHARMACOLOGY AND THERAPEUTICS
Reid Hunt, Washington, D. C.

PATHOLOGY AND PHYSIOLOGY
E. R. Le Count, Chicago.

STOMATOLOGY
G. V. I. Brown, Milwaukee.

NERVOUS AND MENTAL DISEASES
W. A. Jones, Minneapolis.

PREVENTIVE MEDICINE AN
PUBLIC HEALTH
W. A. Evans, Chicago.

### REGISTRATION

#### The Importance of Registering Early — A Few Instructions Given

The Registration Headquarters will be found in connection with the Scientific Exhibit, the Postoffice and Commercial Exhibit in the Exposition Building, Boardwalk and Kentucky Avenue.

One must register in order to obtain the official badge and program. The badge will be necessary for admission to entertainments. Members are urged to register as soon as they can name their hotels.

The Registration Department will be open from 8:30 a. m. to 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, June 3, 4, 5 and 6, and from 9 to 10 a. m. on Friday, June 7.

Attention is called to the following directions:

1. Each physician desiring to register will first fill out the registration card. One should write very plainly, or print, as the cards are given to the printer to use as "copy" for putting the names in the daily *Bulletin*.
2. *Each member who has paid his annual dues* in full will present his pocket card (which was sent him from the Chicago office) and his filled-out registration card at a window marked "Registration by Pocket Card."
3. *The registration of members* who have paid their dues, but *who have failed to bring their pocket cards* must be delayed, while the records are consulted. Be sure to bring your "pocket card."
4. *Members who have not paid* their dues will present registration card and make payment at a window marked "Cash."
5. *Each applicant for membership* will present his registration card at the window marked "New Members," with a certificate of membership in his state society. Prospective members, however, will save delay and annoyance by sending in their applications before the session. All such applications should be mailed to the American Medical Association, 535 Dearborn Avenue, Chicago, so as to arrive not later than May 20.
6. Each member on registration will receive a badge, a copy of the Official Program containing the full details of the scientific proceedings, invitations to the social functions, and such other announcements as may be of interest.

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### LOCAL COMMITTEE ON ARRANGEMENTS

Walt Ponder Conaway, Chairman, 1723 Pacific Avenue.
H. A. Doherty, Secretary. J. A. Joy, Treasurer.

COMMITTEE ON FINANCE

George Scott, Chairman, 1109 Pacific Avenue.
W. M. Pollard, A. D. Cuskaden, E. A. Reilly,
Walter Reynolds.

COMMITTEE ON ENTERTAINMENT

J. C. McVay, Chairman, 707 Pacific Avenue.
Emery Marvel, W. Blair Stewart, D. J. M. Miller,
William Martin.

COMMITTEE ON SECTION ENTERTAINMENT

Bernard R. Lee, Chairman, 901 Pacific Avenue.
V. W. Metzler, W. P. Davis, Eugene L. Reed.

COMMITTEE ON HOTELS

W. E. Darnall, Chairman, 1704 Pacific Avenue.
Joseph C. Marshall, L. R. Souder, E. H. Madden.

COMMITTEE ON HALLS AND MEETING PLACES

David Berner, Chairman, 1509 Pacific Avenue.
Clyde M. Fish, William H. Schmidt, George P. Pennington.

COMMITTEE ON SECTION MEETINGS

Samuel Barbash, Chairman, 1902 Pacific Avenue.
H. C. Munroe, Joseph Poland, Theodore Boyeson.

COMMITTEE ON PROGRAM

Jay I. Durand, Chairman, 1616 Pacific Avenue.
E. H. Harvey, Mary E. Townsend, M. G. Frank.

COMMITTEE ON PRINTING

I. E. Leonard, Chairman, 2842 Atlantic Avenue.
E. S. Sharpe, H. S. Doriss, C. Garrabrant.

COMMITTEE ON BADGES

Thomas G. Dunlap, Chairman, 921 Pacific Avenue.
Clara K. Bartlett, M. H. Kudlich, J. C. Tull.

COMMITTEE ON SCIENTIFIC EXHIBIT

W. J. Carrington, Chairman, Ryanhurst Apartments.
Theodore Senseman, Samuel Stern, W. A. Hickman.

COMMITTEE ON REGISTRATION

H. T. Harvey, Chairman, Morris and Atlantic Avenues.
H. L. Harley, A. B. Shiner, H. C. James, R. Bew.

COMMITTEE ON INFORMATION

M. S. Ireland, Chairman, 23 S. California Avenue.
Byron Davis, Samuel E. Weiner, F. C. Burt.

COMMITTEE ON ALUMNI ENTERTAINMENT

W. C. Wescott, Chairman, Delaware and Pacific Avenues.
E. J. Porteous, Roy Woolbert.

COMMITTEE ON POSTOFFICE AND TELEPHONES

E. C. Chew, Chairman, 603 Pacific Avenue.
A. E. Ewens, T. D. Taggart.

COMMITTEE ON COMMERCIAL EXHIBIT

Edward Guion, 34 S. North Carolina Avenue.

COMMITTEE ON LADIES' ENTERTAINMENT

Mrs. W. Blair Stewart, Chairman.

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## ATLANTIC CITY

### A Descriptive Article From the Committee on Arrangements on this Queen of Resorts

When a city maintains for thirty-five years the acknowledged position of being queen of the seaside resorts of the world, and when that admission is grudgingly bestowed to-day even by her most ambitious sister cities, the conclusion is inevitable that such supremacy must be established on rock-ribbed reasons and not on empty pretentions designed to attract patronage and create temporary prosperity.

#### UNIQUE CHARACTER OF ATLANTIC CITY

Atlantic City possesses the distinction of being the most original seaside resort on the face of the globe. Much of it she has created herself, but much more of it came as an endowment from Dame Nature. "I have no brother; I am like no brother," said Richard, Duke of Gloucester, and in truthful paraphrase Atlantic City can assert "I have no competitor; I am like no competitor."

When the Angel of Destiny bade the ocean waves bite remorselessly into the sands of what perhaps was once an unbroken mainland, there was left unharried by the sea a ten-mile strip of land that eventually was christened Absecon Island, whose future was to be at once the playground and the health restoring center of the world. Its location is the most ideal of any spot along the seaboard. Extending as it does from East to West, its 5,575 acres receive sunshine so generously that a vigilant weather observer states that for thirty-three years the average has been 61 per cent. annually. From one extreme to the other of its ten miles of length, the waters of the Atlantic Ocean bathe its shores in never ceasing undulations, occasioning a condition of climate that constitutes one of the imperishable charms of Atlantic City. The extreme cold weather that descends on the rest of the north, through the ameliorating influences of the Gulf Stream and the bright sunshine, is relieved of its harshness and produces but an invigorating tone to the system that no medicine can approach. With the arrival of the hot days the island is caressed by a breeze that is seldom absent, but which frequently is not felt a score of miles inland.

It was inevitable from these factors alone that Atlantic City, once its attractions became known, should develop from the nucleus it formed in 1854. The paralysis of the Civil War left inactive a nation and for twenty years afterward Atlantic City slumbered until the forces of regeneration had impregnated the country. Then new life began to manifest itself and the people began to appreciate the possibilities of Absecon Island. It may be said that practically from that time the giantess began to stir. She has not ceased since to push forward on a path that leads to tremendous achievements in the coming years. She is preeminently the City of Destiny.

To-day Atlantic City has exceeded the early prophecies of greatness. Other resorts have builded mediocre fame on their attractions in summer. Atlantic City can claim exclusive title to being the most popular gathering-ground in the world the year through. The invasion of the summer crowds is but one feature of the steadily increasing patronage that continues twelve months of every year.

### HISTORY

Look into the history of Atlantic City and you will find that its most enthusiastic champions were physicians from the near-by city of Philadelphia and from territory as far as New York. Some of them came here themselves after a debilitating round of duties in professional circles.

Some of them sent their patients here as a possible source of relief from perplexing physical complaints. The cures were many and some relief was almost universal. The fame of the resort as a health center gradually was disseminated throughout the country, and step by step its unrivalled attractions reached the ears of Europeans, whose boast until that time had been that their spas and their watering-places for the elect were the *ne plus ultra* of resorts. They, too, sought to verify the reports and they returned amazed. The result has been that titled names of the cream of the old-world nobility may be found on the registry books of the big hotels that dot the Boardwalk. From Great Britain, from Canada, from every country in Europe, from the coast towns of Africa, and from New Zealand and Australia there is a yearly influx of travelers who consider a trip to the United States incomplete without a taste of the marvels of Atlantic City's glorious weather. Foreigners concede that nothing in Europe can approach the attractions of this city.

Climate alone could not bring about this steadily increasing rise in popularity. Atlantic City has proceeded with a wisdom beyond her years. Hand in hand with the growing inrush of visitors, the city has seen to it that her municipal growth has not been neglected. The resort has become a city marvelously developed on three sides, each of them contributing to make up a wonderful whole. Each summer there pours in at the height of the season frequently as many as 300,000 visitors a day. It is a period of constant arrival and departure. From all over the country, with its heaviest contributions from the middle West, from Pennsylvania, New York and adjacent states, trainload after trainload of human freight is deposited on Absecon Island. Yet Atlantic City is not a summer resort. Nor is it purely a winter resort, despite the great wave of arrivals that begin after the summer throng has vanished until another summer rolls around. Nearly 50,000 people reside there the year through, and a full-fledged city with a government as capable as any elsewhere carries on its activities with a hustle and bustle that occasions astonishment to the casual visitor. Atlantic City then is a year round seaside resort, a novelty among other watering-places on the globe.

Consider some of the attractions that await the visitor or that are constantly the pleasure of the resident. The desire of Atlantic City is to please. She offers no inducement that cannot be fulfilled. Her hotels are a marvel of beauty and comfort, and they are so plentiful that great as are the crowds arriving, they melt away behind the doors of a thousand caravansaries, some magnificent and imposing, and scores of others designed to meet the needs of every pocketbook.

### THE BOARDWALK

There stretches nearly the entire length of the island a splendidly constructed Boardwalk, whose like cannot be found the world over. Attempt to walk it from end to end and you will realize the distance it covers. On the seaward side there is nothing to check the view of the Atlantic Ocean, except the piers in the center of the busiest section, between which are wide stretches of unbroken vista. So famous has this planked highway become that it is known even to the isles of the sea. On this walk there occurs every Easter day a parade of fashion and spring millinery never seen elsewhere, a perfect moving picture for hours, having for a background massive hotels, stores and shops of limitless description, transforming the seafront into a veritable city by itself. Paris or Hyde Park does not excel in brilliancy the Easter parade at Atlantic City.

At night the Boardwalk becomes a kaleidoscope of colors, myriads of electric lights swing in festoons above the heads of pedestrians while huge ornamental lamps of high power placed at intervals, help to make the highway as bright as day. To this is added the glitter of hundreds of private signs, of huge billboards with designs in motion, the whole effect being one surpassingly alluring to the eye. To stroll the Boardwalk at night, the breakers rolling in with unceasing rhythm, a constant succession of white caps driving on the sands, and with an invigorating sea air filling the lungs and sending a tingle through the veins, is one of the most sought-for delights of all who come to the seaside.

The roller chairs are a boon to hundreds. Comfortably cushioned, open or enclosed, agile pushers take their patrons for miles at reasonable rates. They are as popular as carriages are on the avenues, and a constant delight to visitors, while to invalids they are a positive agency toward accelerating health.

To enable visitors to get closer to the ocean, the big piers offer an excellent opportunity. Filled with pleasures of great variety, they grant relief from the heat of midsummer or in winter; warmed by steam and brilliantly illuminated, they enable patrons to forget that anything but amusement is worth while. Excellent orchestras carrying high grade performers give concerts the year through, and superior dance floors always well filled with couples are plentiful for those who would participate.

### THE HOTELS

But it is to the hotel that one must look if the features that give distinctive tone to the Boardwalk are to be considered. Rising in a massive grandeur, the Marlborough-Blenheim presents a view to the Boardwalk promenader that is unequalled in Atlantic City. Within its walls assemble enough persons to constitute a small city in themselves. Towering into the air a picturesque work of architecture, at nights its gleaming windows give an impression of an ancient castle of fairy story. Close beside it is the Brighton, another structure less pretentious in size, but rivalling its neighbor in the excellence of its service and the character of its clientele. At intervals other big hotels loom up along the Boardwalk, the Chelsea, the Dennis, the Traymore, Chalfonte and Haddon Hall, each an example of the highest type of management, and each patronized by a following of select people to whose wants they all cater at rates reasonable and unvarying. There is no prettier spot in the resort than the vast plaza of which the Marlborough-Blenheim flanks one side, its green surface broken only by spraying fountains and by flowers and ornamental shrubbery.

The Traymore gives an appearance at first sight of solidity and strength. It rears its tower high above the roofs of adjacent buildings, and within it is the acme of comfort and refinement. Nor is it possible to overlook the Chalfonte with its red and white construction, a caravansary as ornamental as it is complete in all that goes to make hotel life agreeable. Haddon Hall, its companion, on the opposite side of the street, modest and unassuming in its appearance, is the favorite quarters of hundreds who have once tasted its hospitality. Further up the Walk, the Rudolf claims a large circle of patrons, while the Dennis, recently remodelled and enlarged, and the Chelsea, present inducements that keep patrons returning year after year.

With second-class hotels the city is well provided. There are hundreds of them, while a large list of boarding-houses with reasonable rates can be found on every hand. No city in the world is so well prepared to receive visitors as Atlantic City.

### SURF-BATHING, FISHING AND YACHTING

For variety in winter recreation the opportunities are unrivalled. For lovers of surf-bathing there are miles of beach smooth and hard as a rolled floor, on which during the summer hundreds of thousands of human beings gather every day. It is not uncommon to find over a hundred thousand bathers filling the beach in midsummer. For their protection an adequate force of life guards is employed throughout the season, equipped with modern apparatus designed to facilitate their work. The brawny, red-garbed men are alert, throughout the day, assisting the exhausted or battling against odds to save some reckless swimmer beyond the safety lines, while a beach physician and a corps of aids occupy a hospital tent, filled with the most modern appliances to meet any serious situation.

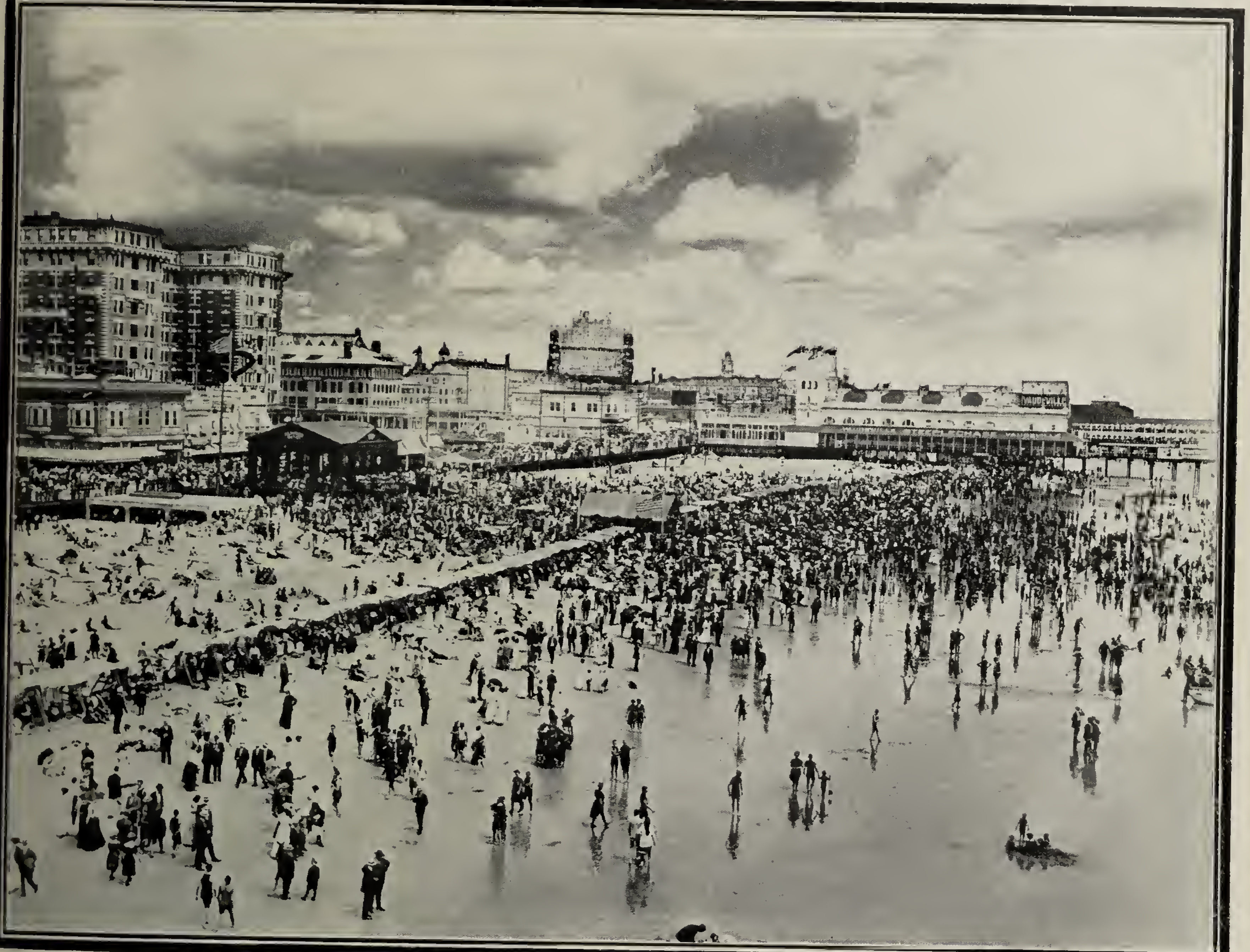

Fig. 1.—Atlantic City beach scene with pier and Board Walk in the background. Hotel Chalfonte on the left, headquarters of Section on Surgery. Most of these illustrations are from photographs copyrighted by Harper B. Smith, Atlantic City, N. J.

Stroll along the Boardwalk to the Inlet, if you are a fisherman. There a fleet of yachts is kept in readiness, some going out to sea at intervals to enable patrons to spend long hours with baited lines, returning with good loads of finny game, and some making long trips for the pleasure of the voyage. If the desire is for a quiet sail and to avoid the rough motion of waves, there is the thoroughfare which encircles the rear of the city extending from the Inlet to Longport, affording a fine opportunity to observe the life of the city from an intimate view by water. A dozen routes are open to steam launch and motor craft, weaving about the meadows, and there are the Chelsea or the Seaside or the Atlantic City Motor Boat Club to visit.

If the fancy turns to golf, one of the most attractive links in the East is established at the Country Club's pretty home at Northfield. With eighteen holes this field has had some of the most widely known men in the country, judges, jurists, prominent physicians, expert professionals and clever amateurs drive the balls over hillocks and gullies, sometimes making new records.

### HIGHWAYS, SEWERAGE, WATER-SUPPLY, ETC.

For automobiles, Atlantic City provides advantages to be found nowhere else. Besides the highways on the island, a wide and imposing Boulevard extends seven miles to Pleasantville, thence enabling cars to travel over superior roads to Philadelphia and New York.

Atlantic City has excellent sewage disposal facilities, and there is at present under construction a million-dollar drain that will work wonders in cleansing the city.

Of her water-supply no disparagement can be made. Sparkling and pure, the water is brought to the city across the meadows, through a timber water-main that stretches to Absecon, where the supply is plentiful enough to ensure no possibility of a water famine for years to come. Some of the hotels still use the artesian system, the product from these deep driven wells meeting all the requirements both in quantity and quality.

Atlantic City's permanent population is growing by leaps and bounds. Ten years ago Chelsea marked the residential limit of the city. To-day Chelsea is practically but the beginning of the fashionable, select cottage and private home section of the island. Ventnor has sprung into being, grown into a city with its own government, and Margate City and Longport now are taking on new life. As a result the social side of Atlantic City and its suburbs is one of the delights of the resort. Clubs flourish, lyceums and forums are popular, musical organizations of great merit are liberally patronized, the local Y. M. C. A. each Sunday introduces prominent lecturers and few features of metropolitan existence are lacking.

A finely equipped fire department guards the city with vigilance. Brilliant with electric lights are over sixty miles of avenues, broad, well paved, cared for in winter and summer by city servants. Imposing buildings are on every side. Five national banks, three trust companies, thirty-three churches, fourteen public schools and several private ones, numerous theaters, one a Nixon house in which are produced numerous big attractions before they are seen on Broadway, New York. A well-provided public library is accessible in the center of the city; there are two large and thoroughly up-to-date hospitals and sanatoriums abound. Three daily newspapers and one issued Sundays record the events of the county.

In railroad accommodations the city is well cared for. A score of the fastest trains on two big railroads, made up of fourteen cars, draw into this resort. In less than an hour Philadelphians can be at the seashore and New Yorkers can reach the island in three hours. Then there are two third-rail roads, while excellent trolley service taps important local centers.

Harvey Thomas.

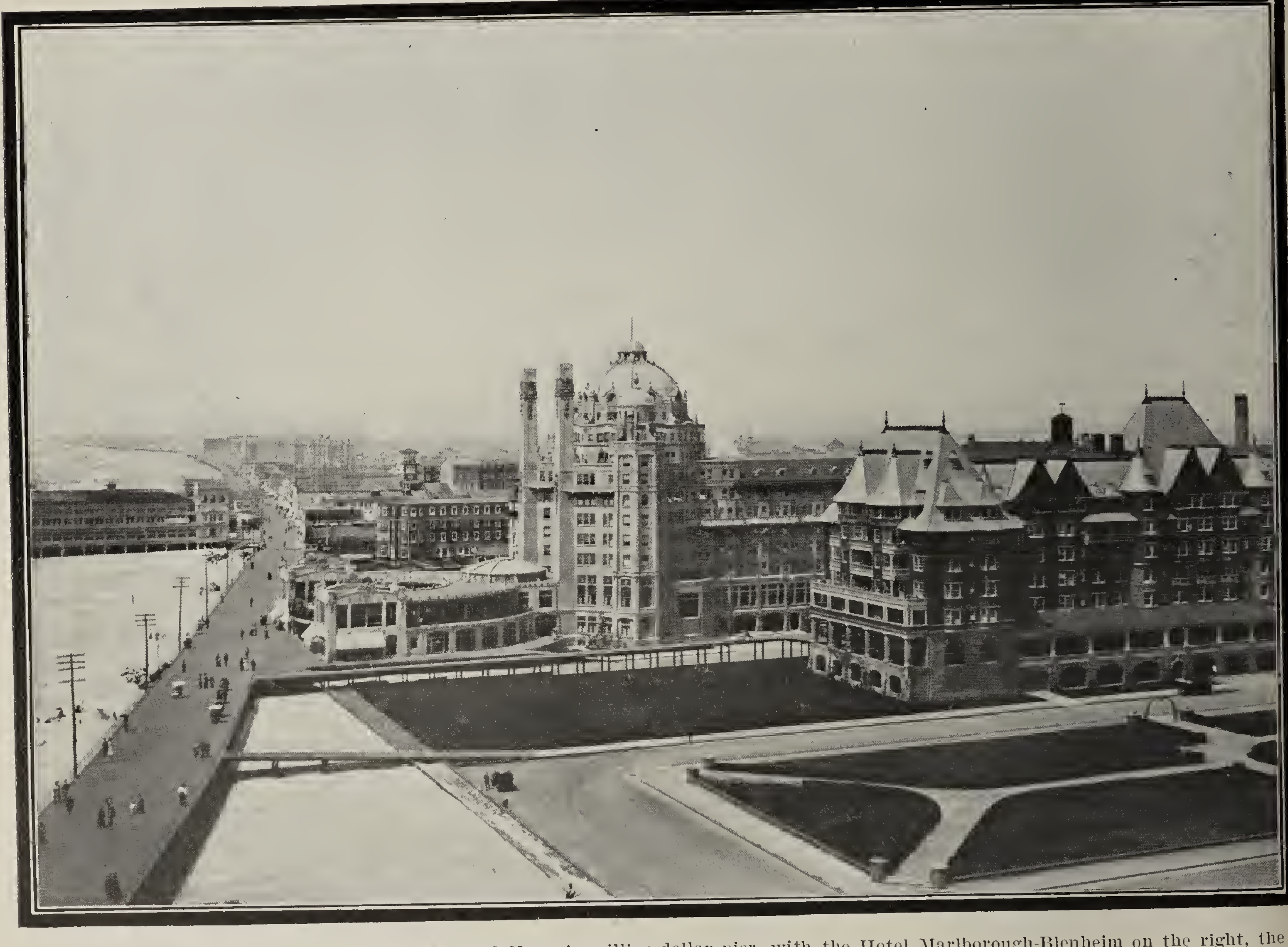

Fig. 2.—View of the beach and Boardwalk and Young's million-dollar pier, with the Hotel Marlborough-Blenheim on the right, the General Headquarters, and the meeting-place for the Section on Ophthalmology.

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## THE PROGRAMS OF THE SECTIONS

### Outline of the Scientific Proceedings—The Preliminary Program and the Official Program

The following is a partial list of titles of papers to be read before the various sections. The order here is not necessarily the order which will be followed in the Official Program. This Official Program will be a pamphlet similar to those issued in previous years, and will contain the final program of each section, arranged by days, with abstracts of the papers, also lists of committees, programs of the General Meeting and of the meetings of the House of Delegates, lists of entertainments, map of Atlantic City, etc. To prevent misunderstandings and to protect the interests of advertisers, etc., it is here announced that this Official Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each member on registration.

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### SECTION ON PRACTICE OF MEDICINE

Chairman, Wilder Tileston, New Haven, Conn.; Secretary, Roger S. Morris, St. Louis

**Tuesday, June 4—2 p. m.**

Arteriosclerosis. Thomas D. Coleman, Augusta, Ga.

Primary Adenomata of the Liver Simulating Hanot's Hypertrophic Liver Cirrhosis. H. C. Gordinier, Troy, N. Y.

Urobilin: Its Clinical Significance. Ray Lyman Wilbur, San Francisco

Chloroma: A Clinical Study of Two Cases. Walter L. Bierring, Des Moines, Ia.

The Treatment of Leukemia and Pseudoleukemia with X-Rays. Alfred Stengel and Henry K. Pancoast, Philadelphia.

Clinical Observations on an Epidemic of Sore Throat due to Streptococcus. J. A. Capps and J. L. Miller, Chicago.

Tonsillar Infection in Relation to Arthritic, Cardiac and Renal Disease. David J. Davis, Chicago.

The Relation of Aortitis to Syphilis, and the Importance of its Recognition. C. L. Cummer and Richard Dexter, Cleveland.

**Wednesday, June 5—9 a. m.**

Personal Experience with Diabetes Mellitus Patients Living Ten or More years. Elliott P. Joslin, Boston.

Family Hematoporphyrinuria and its Association with Chronic Gastroduodenal Dilatation and Thyreopathy.
L. F. Barker, Baltimore, and W. L. Estes, Jr., South Bethlehem, Pa.

Pneumonia in the Massachusetts General Hospital from 1889 to 1912.
F. C. Shattuck, Boston.

Immunization in Pneumonia and Other Pneumococcus Infections.
E. C. Rosenow, Chicago.

Pleural Vomicæ with a Report of Fourteen Cases.
Elsworth Smith, St. Louis.

The Treatment of Pulmonary Tuberculosis by Compression of the Lungs.
Mary E. Lapham, Highlands, N. C.

The Intensive Treatment of Syphilis.
Homer F. Swift and Arthur W. M. Ellis, New York.

### Thursday, June 6—9 a. m.

Hunger Pain.
Allen A. Jones, Buffalo, N. Y.

Cardiospasm with Sacculation of the Esophagus, with Special Reference to Persistence of the Sac.
Jesse S. Myer and R. D. Carman, St. Louis.

The Value of Serial Radiography in the Diagnosis of Gastroduodenal Lesions.
Lewis Gregory Cole, New York.

A New Method of Treatment of Ulcer of the Stomach.
J. W. Weinstein, New York.

Comparative Studies in Cancer and Normal Tissue Ferments.
Walter W. Hamburger, Chicago.

Diverticulitis of the Large Bowel: Clinical Review of Twenty-Seven Cases.
H. Z. Giffin, Rochester, Minn.

Fig. 3.—The Easter Sunday parade, 1912, on the Boardwalk near the steel pier. "Everybody happy."

### Wednesday, June 5—2 p. m.

Oration in Medicine: Prognosis in Heart Disease as Affected by Certain Medical Traditions.
Charles Lyman Greene, St. Paul, Minn.

Tertiary Syphilitic Fever.
William S. Thayer, Baltimore.

Diagnostic Pitfalls.
Richard C. Cabot, Boston.

The Etiology of Pellagra.
C. C. Bass, New Orleans.

Five Years' Experience with the High Calorie Diet in the Treatment of Typhoid Fever.
Warren Coleman, New York.

An Analysis of Five Hundred Cases Showing High Blood-Pressure.
Theodore C. Janeway, New York.

A Plea for the More Frequent Scientific Employment of Physical Therapeutics.
Philip Marvel, Atlantic City, N. J.

Constrictions of the Bowel: Their Demonstration and Clinical Significance.
G. E. Pfahler, Philadelphia.

### Thursday, June 6—2 p. m.

SYMPOSIUM ON INTERNAL SECRETIONS

### Joint Meeting with the Section on Surgery

The Internal Secretion of the Pituitary Body.
Harvey Cushing, Baltimore.

Relation of the Genital Organs to Internal Secretions.
Eugene L. Opie, St. Louis.

The Internal Secretion of the Pancreas.
Joseph H. Pratt, Boston.

The Anatomic and Physiologic Effect of Iodin on the Thyroid of Exophthalmic Goiter.
David Marine, Cleveland.

Remarks on the Functional Activities of the Adrenals.
S. J. Meltzer, New York.

## SECTION ON SURGERY

Chairman, Thomas W. Huntington, San Francisco; Secretary, Fred T. Murphy, St. Louis

### Tuesday, June 4—2 p. m.

Chairman's Address: The Hospital Problem.
Thomas W. Huntington, San Francisco.

The Results of Operations, Especially Abdominal, Performed on the Principle of Anoci-Association.
George W. Crile, Cleveland.

Physiologic Basis of Thoracic Operations.
Joseph M. Flint, New Haven, Conn.

Surgery of Chronic Infectious Diseases of the Lung.
Samuel Robinson, Boston.

The Obliteration of Empyemic Cavities.
E. M. von Eberts, Montreal.

Nature's Method of Rectifying the Surgeon's Carelessness as Illustrated by Three Cases.
Ingersoll Olmstead, Hamilton, Ont.

### Wednesday, June 5—2 p. m.

Gastroptosis and Its Surgical Treatment.
T. Rövsing, Copenhagen.

The Functions of the Large Intestine.
Walter B. Cannon, Boston.

Dilatation of the Large Bowel. Arthur D. Bevan, Chicago.

Adhesions of the Colon. M. L. Harris, Chicago.

The Symptoms of Chronic Intestinal Stasis.
J. Fairbairn Binnie, Kansas City, Mo.

Diverticula of the Gastro-Intestinal Tract and Their Surgical Importance. Charles H. Mayo, Rochester, Minn.

The Rôle of the Movable Kidney in Vascular and Intestinal Stasis. Kenneth A. J. MacKenzie, Portland, Ore.

### Thursday, June 6—9 a. m.

Further Experimental and Clinical Work Bearing on the Value of Lane's Bone Plate. Willard Bartlett, St. Louis.

Operative Treatment in Joint-Fractures.
F. J. Cotton, Boston.

Fig. 4.—New Hotel Dennis, headquarters of the Section on Practice of Medicine and meeting-place of the Section on Laryngology, Otology and Rhinology.

Fig. 5.—Hotel Strand, headquarters of the Section on Ophthalmology.

Abnormal Involution of Mammary Gland.
W. L. Rodman, Philadelphia.

### Wednesday, June 5—9 a. m.

Oration on Surgery: An Aseptic Route to the Pituitary Body Through the Orbital Vault.
Lewis L. McArthur, Chicago.

Aphasia and Agraphia in Some of Their Practical Surgical Relations.
Edward Martin and Charles K. Mills, Philadelphia.

Preservation of Tissues and Its Application in Surgery.
Alexis Carrel, New York.

Cardiospasm: A Report of One Hundred Cases.
H. S. Plummer, Rochester, Minn.

Experimental Intestinal Obstruction.
John A. Hartwell and J. P. Hoguet, New York.

Tumors of the Small Intestine. W. D. Haggard, Nashville.

The Relation of the Duodenum to Surgery of the Stomach and Colon. Joseph C. Bloodgood, Baltimore.

Operative Treatment of Fractures and Dislocations.
William Darrach, New York.

The Surgery of Bones and Joints. Leonard W. Ely, Denver.

The Treatment of Fractures Near to or Into Joints.
Harry M. Sherman, San Francisco.

An Operation for Pott's Disease of the Spine
Russell A. Hibbs, New York.

### Thursday, June 6—2 p. m.

SYMPOSIUM ON INTERNAL SECRETIONS

### Joint Meeting With the Section on Medicine

The Influence of the Secretion of the Pituitary Gland.
Harvey Cushing, Baltimore.

Relation of the Genital Organs to Internal Secretions.
Eugene L. Opie, St. Louis.

The Internal Secretion of the Pancreas.
Joseph H. Pratt, Boston.

The Anatomic and Physiologic Effect of Iodin on the Thyroid of Exophthalmic Goiter. David Marine, Cleveland.

The Functional Activities of the Adrenals.
S. J. Meltzer, New York.

**Friday, June 7—9 a. m.**

A Further Contribution to the Statistics of Endo-Aneurysm or the Intrasaccular Method of Suture in the Radical Cure of Aneurysm, with Commentaries on the Present Status of this Operation.
Rudolph Matas, New Orleans.

Further Experience with Aneurysmorrhaphy (Matas).
John H. Gibbon, Philadelphia.

The End Results in Fifteen Cases of Chronic Pancreatitis Treated by Permanent Drainage.
LeGrand Guerry, Columbia, S. C.

The Reconstruction of the Bile-Ducts.
Arthur G. Sullivan, Madison, Wis.

The Ligation of the Ovarian or Deep Pelvic Veins in the Treatment of Puerperal Thrombophlebitis.
R. R. Huggins, Pittsburgh.

Postoperative Femoral Thrombophlebitis: Cause and Prevention.
Daniel H. Craig, Boston.

Hysterotomy.
John B. Deaver, Philadelphia.

Intra-Abdominal Pressure and the Dynamics of the Female Pelvis.
J. Riddle Goffe, New York.

A Simple Operation for Repair of the Female Perineum Based on the Anatomy of the Parts.
Walter B. Dorsett, St. Louis.

Uterovaginal Prolapse in Elderly Women—Technic of the Operation.
George B. Somers, San Francisco.

**Wednesday, June 5—9 a. m.**

The Resistance of the Patient as a Guide to Operative Procedures.
Walter B. Chase, Brooklyn.

Fig. 6.—The Boardwalk and Hotel Traymore, meeting-place of the House of Delegates and headquarters of the Section on Diseases of Children.

An Aseptic Method of Intestinal Anastomosis.
Willis D. Gatch, Indianapolis.

Thrombophlebitis of the Left Leg.
H. D. Kistler, Butte, Mont.

A New Method of Suturing Blood-Vessels.
J. Shelton Horsley, Richmond, Va.

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## SECTION ON OBSTETRICS AND GYNECOLOGY

Chairman, C. Jeff Miller, New Orleans; Secretary, F. F. Simpson, Pittsburgh

**Tuesday, June 4—2 p. m.**

Chairman's Address: The Present Status of the Surgical Treatment of Puerperal Pyemia by Ligation or Excision of Trombosed Veins.
C. Jeff Miller, New Orleans.

Incomplete Abdominal Surgery.
Horace G. Wetherill, Denver.

A Plea for More Careful Technic in Doing Intrapelvic Reconstructive Work.
W. Francis B. Wakefield, San Francisco.

Corpus Luteum Extract; With Suggestions as to Its Use in Gynecologic Practice.
Curtis F. Burnam, Baltimore.

The Relation of Pelvic Conditions to Intestinal Displacement in Women.
C. A. L. Reed, Cincinnati.

The Coincidence of Cholelithiasis with Gynecologic Diseases.
John G. Clark, Philadelphia.

**Wednesday, June 5—2 p. m.**

The Advantages Afforded by Vaginal Celiotomy in the More Perfect Application of Antisepsis.
Prof. Dmitrig Oskarovic Ott, St. Petersburg, Russia.

Intestinal Complications in Gynecologic Operations.
Lewis S. McMurtry, Louisville.

Puerperal Infection.
Thomas J. Watkins and A. H. Curtis, Chicago.

Inflammation of the Fallopian Tubes.
Herman J. Boldt, New York.

Gynecologic Pelvic Drainage.
J. Wesley Bovée, Washington, D. C.

Conservative Operative Treatment of Salpingitis.
I. S. Stone, Washington.

A Further Study of the End Results of the Conserved Ovary.
John O. Polak, Brooklyn.

### Thursday, June 6—9 a. m.

Pulmonary Tuberculosis Complicating Pregnancy.
C. S. Bacon, Chicago

Cardiac Complications of Pregnancy and Labor.
Franklin S. Newell, Boston

Proteid Metabolism in Pregnancy and the Puerperium.
J. R. Murlin and Harold C. Bailey, New York.

Nephritis in Pregnancy. Joseph B. DeLee, Chicago.

Drainage of the Kidney, by Incision, for Bacillus Coli Communis Infection in Pregnant and Parturient Patients, with Report of Cases. Edward P. Davis, Philadelphia.

Appendicitis Complicating Pregnancy, Labor and Puerperium.
Palmer Findley, Omaha.

Fig. 7.—The Chelsea Yacht Club.

### Thursday, June 6—2 p. m.

The Radical Treatment of Abortion with Results in 3,400 Cases from the Wards of the New York Lying-In Hospital.
Ross McPherson, New York.

Personal Experience with Cases of Ruptured Uterus.
Barton C. Hirst, Philadelphia.

Difficult and Dangerous Labors: Selecting the Method of Delivery. Harold A. Miller, Pittsburgh.

Cesarean Section. Charles A. Stillwagen, Pittsburgh.

Chronic Inversion of the Uterus.
Samuel M. D. Clark, New Orleans.

Averages in Attitude and Trunk Development in Women and Their Relation to Pain.
Robert L. Dickinson and Walter Truslow, Brooklyn.

### Friday, June 7—9 a. m.

Acetonuria: Its Relation to Postoperative Vomiting in 700 Cases of Ether Anesthesia.
Sidney A. Chalfant, Pittsburgh.

Sarcoma of the Vagina. P. Brooke Bland, Philadelphia.

Gynecologic Disease in the Insane.
Fred J. Taussig, St. Louis.

Some Types of Ureteral Obstruction in Women.
Henry D. Furniss, New York.

Treatment of Tubal Gestation. L. J. Ladinski, New York.

## SECTION ON OPHTHALMOLOGY

Chairman, Adolf Alt, St. Louis; Secretary, Edgar S. Thomson, New York

Chairman's Address. Adolf Alt, St. Louis.

A Clinical Communication on Certain Visual-Field Defects in Hypophysis Disease with Special Reference to Scotomas.
G. E. de Schweinitz and T. B. Holloway, Philadelphia.

Disease of the Optic Nerve in Myxedema; Its Relationship to the Thyroid Gland and to the Hypophysis.
George S. Derby, Boston.

The Krönlein Operation as an Exploratory Procedure in Affections of the Orbit. Arnold Knapp, New York.

The Surgical Treatment of Exophthalmos
Martin B. Tinker, Ithaca, N. Y.

Pemphigus of the Conjunctiva; with the Report of a Case.
Walter Baer Weidler, New York.

Subconjunctival Injections in Ophthalmic Therapy.
E. L. Jones, Cumberland, Md.

Sympathetic Optic Neuritis; with report of a Case.
Edgar S. Thomson, New York.

Phlyctenular Ophthalmia and its Etiology.
H. D. Bruns, New Orleans.

Removal of the Lens in High Myopia.
Walter Eyre Lambert, New York.

Orbital Cellulitis from Disease of the Superior Maxilla in Children.
William Campbell Posey, Philadelphia.

Sclerosis of the Ligamentum Pectinatum and its Relation to Glaucoma (with Lantern Demonstration). F. H. Verhoeff, Boston.

Nasal Hydrorrhea; Its Relations to Lesions of the Brain, and Visual Apparatus.
Casey A. Wood, Chicago.

Some Early Diagnostic Retinal Signs of Arteriosclerosis, and Chronic Bright's Disease.
Albert E. Bulson, Jr., Ft. Wayne, Ind.

Visual Disturbances from Distant Hemorrhage.
William Zentmayer, Philadelphia.

Address; Provision for the Proper Teaching of Ophthalmology in Medical Schools.
Edward Jackson, Denver.

Cataract Extraction with Corneal Suture.
Edward C. Ellett, Memphis.

Preparatory Capsulotomy in Extraction of Immature Senile Cataract.
Percy Fridenberg, New York.

Suggestions Regarding Some Points in the Technic of Cataract Extraction.
Samuel Theobald, Baltimore.

Visual Results After the Smith Intracapsular Cataract Operation. D. W. Greene and J. W. Millette, Dayton, O.

Eye Complications Caused by Hookworm Disease.
F. P. Calhoun, Atlanta, Ga.

Measurement of Fatigue of the Ocular Muscles.
Lucien Howe, Buffalo, N. Y.

The Findings of the Tropometer in 100 Normal Eyes, and Its Value in the Study of Strabismus.
Wendell Reber, Philadelphia.

Normal Values of the Accommodation at All Ages: A Statistical Study. A. Duane, New York.

Dangers to and Requirements of the Eyes of the National Marksman. John A. Donovan, Butte, Mont.

Case of Uniocular Polyopia Existing in Both Eyes.
John C. Bossidy, Boston.

Morgagnian Cataract. Burton Chance, Philadelphia.

## SECTION ON DISEASES OF CHILDREN

Chairman, Isaac A. Abt, Chicago; Secretary, J. P. Sedgwick, Minneapolis

### Tuesday, June 4—2 p. m.

Chairman's Address. Isaac A. Abt, Chicago.

The Ability of Women to Nurse Their Children.
J. P. Crozer Griffith, Philadelphia.

Supplemental Breast-Feeding in Infants.
H. M. McClanahan, Omaha, Neb.

Long-Interval Feeding of Premature Infants.
J. C. Litzenberg, Minneapolis.

A Plea for Longer Intervals in Milk-Feeding.
Julius H. Comroe, York, Pa.

Intestinal Toxemia in the New-Born.
John Lovett Morse, Boston.

### Wednesday, June 5—9 a. m.

Clinical Notes from the Willard Parker Hospital, New York: Intestinal Intoxication. Louis Fischer, New York.

The Properties, Uses and Indications of the Various Carbohydrates in Infant Feeding.
Henry Dwight Chapin, New York.

Use of Polycarbohydrates in the Diet of the Young Infant.
Jules M. Brady, St. Louis.

A Series of Infants Fed on a High-Percentage Albumin Milk.
Frank C. Neff, Kansas City, Mo.

Pneumonic Empyema in Children; With Especial Reference to the Diagnosis and Management of Those of Small Extent. Edward F. Wells, Chicago.

### Wednesday, June 5—2 p. m.

Allergy to Common Foods. 1. Idiosyncrasy to Hens' Eggs.
Oscar M. Schloss, Chicago.

A Note on the Influence of Food on the Intestinal Flora in Infants. Alfred Friedlander, Cincinnati.

The Use of Raw and Boiled Milk in Infant Feeding.
Joseph Brennemann, Chicago.

The Caloric Requirements of Bottle-Fed Infants.
Roger H. Dennett, New York.

The Relation of the Infant Welfare Movement to Pediatrics.
Thomas B. Cooley, Detroit.

The Value of the Social Service Department to the Children's Dispensary. Maurice Ostheimer, Philadelphia.

### Thursday, June 6—9 a. m.

Pellagra in Children. J. Ross Snyder, Birmingham, Ala.

Exophthalmos in Scorbutus. L. R. DeBuys, New Orleans.

Influence of Climate on Summer Diarrhea of Infants.
L. T. Royster, Norfolk, Va.

Functional Cardiac Murmurs.
Samuel McClintock Hamill, Philadelphia.

1. An Automatic Device for Reading Systolic and Diastolic Blood-Pressures in Children. 2. Effect of Cold Air on the Blood-Pressure of Tuberculous Children.
B. Raymond Hoobler, New York.

### Thursday, June 6—2 p. m.

The Relationship Between the Tuberculous Infection in the Child and Clinical Tuberculosis in the Adult.
F. M. Pottenger, Monrovia, Cal.

Tabes Mesenterica in Infants and Young Children.
Fritz B. Talbot, Boston.

The Diagnosis of Enlarged Bronchial Glands.
Henry F. Stoll, Hartford, Conn.

Methods of Estimating Kidney Function.
Richard M. Smith, Boston.

The Hypodermic Injection of Hematinics in the Treatment of Anemia in Children, with Report of Cases.
H. Lowenburg, Philadelphia.

### Friday, June 7—9 a. m.

The Menace to the Young Child of the Common Infectious Cold. Thomas S. Southworth, New York.

Effect on Later Development of Severe and Prolonged Illness in Infancy. Thomas D. Parke, Birmingham, Ala.

Anesthesia by Pharyngeal Insufflation.
Frank W. Pinneo, Newark, N. J.

Juvenile Psychasthenia.
Tom A. Williams, Washington, D. C.

leocolitis with Meningeal Symptoms.
A. L. Goodman, New York.

## SECTION ON PHARMACOLOGY AND THERAPEUTICS

Chairman, Torald Sollmann, Cleveland; Secretary, M. I. Wilbert, Washington, D. C.

### Tuesday, June 4—2 p. m.

Chairman's Address. Torald Sollmann, Cleveland.

Address of the Delegation from the American Pharmaceutical Association.

#### SYMPOSIUM ON PATENTS AND TRADE-MARKS

Report of the Committee of the American Medical Association on the Present Status of the Laws.
M. I. Wilbert, Washington, D. C.

The Relation of the Patent and Trade-Marks Laws to Materia Medica Nomenclature. F. E. Stewart, Philadelphia.

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The Effect of Pathologic Conditions in Modifying Drug Action.
George Barclay Wallace, New York.

How Can the Science of Therapeutics be Furthered?
J. L. Miller, Chicago.

Candy Medication. Bernard Fantus, Chicago.

Fig. 8.—Absecon Lighthouse.

The Uses of High-Frequency Desiccation, Fulguration and Thermoradiotherapy in Therapeutics.
William L. Clark, Philadelphia.

### Wednesday, June 5—9:30 a. m.

#### SYMPOSIUM ON ROENTGEN THERAPY

Theory of the Therapeutic Action of the Roentgen Ray.
George Coffin Johnston, Pittsburgh.

Practical Application of the Roentgen Ray to the Management of Malignant Growths.
Clarence E. Skinner, New Haven, Conn.

Roentgen Treatment of Non-Malignant Diseases.
Russell H. Boggs, Pittsburgh.

#### SYMPOSIUM ON THE DESIRABILITY OF A MORE RESTRICTED MATERIA MEDICA FROM THE STANDPOINT OF:

The Chemist (The Unreliability of Unimportant Medicaments). W. A. Puckner, Chicago.

The Pharmacist Henry P. Hynson, Baltimore.

Medical Instruction. E. Le Fevre, New York.

The Medical Practitioner (The Drugs We Need).
Oliver T. Osborne, New Haven, Conn.

Report of the Committee on Useful Remedies. Reid Hunt, Washington, D. C.

### Wednesday, June 5—2 p. m.

SYMPOSIUM ON ANTISEPTICS AND GERMICIDES

**Joint Meeting with Section on Preventive Medicine and Public Health**

Intestinal Antiseptics. Norman MacL. Harris, Chicago.

The Phenol Coefficient of Certain Disinfectants. John F. Anderson, Washington, D. C.

The Influence of Sodium Iodoxybenzoate on Reactions of Inflammatory Character. Samuel Amberg and J. H. Mason Knox, Jr., Baltimore.

The Relative Advantages of Organic and Inorganic Iodin Preparations. J A. Capps, Chicago.

The Duodenal Medication of Ipecac in the Treatment of Amebic Dysentery. Harvey G. Beck, Baltimore.

### Thursday, June 6—9:30 a. m.

The Persistence of Action of the Digitalis Bodies. Robert A. Hatcher, New York.

Clinical Observations on the Duration of Digitalis Action. Cary Eggleston, New York.

Clinical Investigations of Cardiovascular Drugs. David L. Edsall, St. Louis.

SYMPOSIUM ON DRUG STANDARDS

Report of Progress of the U. S. P. Revision. Joseph P. Remington, Philadelphia.

The Quality of Drugs on the Market. L. F. Kebler, Washington, D. C.

Drug Plant Cultivation. R. H. True, Washington, D. C.

The Ideals and Limitations of Bio-Assay. Horatio C. Wood, Jr., Philadelphia.

The Retail Pharmacist as a Purveyor of Pure Drugs. Henry Kraemer, Philadelphia.

Prescribing Versus Dispensing. Julius H. Comroe, York, Pa.

An Investigation of Certain Galenical Preparations of the Pharmacopeia of the United States with Special Reference to Their Stability. M. Clayton Thrush, Philadelphia.

### Thursday, June 6—2 p. m.

SYMPOSIUM ON ANESTHESIA

**Joint Session with the Section on Pathology and Physiology**

Chemistry of Anesthetics. Charles Baskerville, New York.

American Statistics. James T. Gwathmey, New York.

Postoperative Mortality from Anesthetics; the Recorded Death-Rate from Ethyl Chlorid. A. H. Miller, Providence, R. I.

Practical Helps in Surgical Anesthesia. Joseph E. Lumbard, New York.

Anesthesia in Brain Surgery. S. Griffith Davis, Baltimore.

Principles Involved in the Scientific Administration of Nitrous Oxid with Oxygen and the Limitations of Nitrous Oxid with Oxygen as a General Anesthetic. Charles K. Teter, Cleveland.

Spinal Anesthesia. Freeman Allen, Boston.

Spinal Anesthesia. W. S. Bainbridge, New York.

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## SECTION ON PATHOLOGY AND PHYSIOLOGY

Chairman, Leo Loeb, St. Louis; Secretary, A. W. Hewlett, Ann Arbor, Mich.

### Tuesday, June 4—2 p. m.

Chairman's Address. Leo Loeb, St. Louis.

SYMPOSIUM ON RECENT ADVANCES IN OUR KNOWLEDGE OF ACUTE INFECTIONS

Pneumococcus Infection and Immunity. Rufus Cole, New York.

Recent Advances in Our Knowledge of Scarlet Fever. Karl K. Koessler, Chicago.

Blood-Pressure Observations in Epidemic Meningitis; Use of Blood-Pressure in Controlling the Administration of Serum. A. Sophian, New York.

Recent Advances in Our Knowledge of Measles. Joseph Goldberger and John F. Anderson, Washington, D. C.

Some Recent Advances in Our Knowledge of Typhus Fever. Joseph Goldberger and John F. Anderson, Washington, D. C.

### Wednesday, June 5—9 a. m.

The Wassermann Test in the Tropics (Canal Zone—Panama). Lewis B. Bates, Canal Zone.

Demonstration of a Sarcoma Transmitted by a Filterable Agent. Peyton Rous, New York.

Blood-Changes Caused by the Hypodermic Administration of the Cancer Proteid. J. W. Vaughan, Detroit.

Immunity and Specific Therapy in Experimental Cancer. Isaac Levin, New York.

Acute Poliomyelitis, Transverse Myelitis Type. A. L. Skoog, Kansas City, Mo.

The Pathology and Classification of Chronic Joint Disease. Leonard W. Ely, Denver.

### Wednesday, June 5—2 p. m.

SYMPOSIUM ON MERCURY AND SALVARSAN IN THE TREATMENT OF SYPHILIS

**Joint Meeting With the Section on Dermatology and Scientific Exhibit**

Differentiation of Spirochæta Pallida and Other Allied Species of Spirochetes in Culture. Hideyo Noguchi, New York.

A Study of Antibody Formation in Syphilis. Homer F. Swift and Arthur W. M. Ellis, New York.

The Administration of Salvarsan in Syphilis. J. A. Fordyce, New York.

The Proper Place of Mercury and of Salvarsan in the Treatment of Syphilis. Abner Post, Boston.

The Relative Value of Mercury and Salvarsan from a Serologic Point of View. Howard Fox, New York.

### Thursday, June 6—9 a. m.

Experimental Studies in Blood Transfusion. Roswell T. Pettit, Chicago.

The Physiopathologic Aspects of the Use of Blood as a Therapeutic Agent. A. L. Soresi, New York.

An Experimental Study of the Changes of the Blood Following Splenectomy. J. H. Musser, Jr., Philadelphia.

The Roethlisberger Uricometer for the Study of the Uric Acid of the Blood-Serum. J. Harold Austin, Philadelphia.

The Influence of Splenectomy on the Production of Hemolytic Jaundice. R. M. Pearce, J. H. Austin and E. B. Krumbhaar, Philadelphia.

Experiments Comparing Death from Acute Mechanical Intestinal Obstruction with that Due to Gangrene of the Intestines. J. Shelton Horsley, Richmond, Va.

### Thursday, June 6—2 p. m.

SYMPOSIUM ON ANESTHESIA

**Joint Meeting with the Section on Pharmacology and Therapeutics**

Chemistry of Anesthetics. Charles Baskerville, New York.

American Statistics James T. Gwathmey, New York.

Postoperative Mortality from Anesthetics; the Recorded Death-Rate from Ethyl Chlorid A. H. Miller, Providence, R. I.

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Spinal Anesthesia. Freeman Allen, Boston.

Spinal Anesthesia. W. S. Bainbridge, New York.

### Thursday, June 7—9 a. m.

The Use of the Crehore Micrograph in Clinical and Experimental Studies of Cardiovascular Conditions. J. H. Austin, Philadelphia.

The Topography of the Heart-Valves as Revealed by the X-Ray.
George Fetterolf and George William Norris, Philadelphia.

Studies in Infarction: Experimental Bland Infarction of the Lungs. Howard T. Karsner, Boston.

Influence of Certain Antiseptics on Bacteria in Wounds.
Howard S. Prince, Ithaca, N. Y.

The Theory and Practice of Pasteurization.
M. J. Rosenau, Boston.

Experiments with Louisiana Rice as Bearing on the Etiology of Beriberi. Creighton Wellman, New Orleans.

A Kinetic Hypothesis Relating to the Origin of the Emotions and of Certain Diseases.
George W. Crile, Cleveland.

## SECTION ON STOMATOLOGY

Chairman, S. L. McCurdy, Pittsburgh; Secretary, Eugene S. Talbot, Chicago

### Tuesday, June 4—2 p. m.

Chairman's Address: Oral Surgery and Its Relationship to General Medicine. Stewart L. McCurdy, Pittsburgh.

The Origin and Progress of the National Oral Hygiene Movement. Richard Grady, Annapolis, Md.

Wanted: A Sense of Asepsis.
John S. Marshall, Berkeley, Cal.

Unclean Mouths. M. H. Fletcher, Cincinnati.

### Wednesday, June 5—2 p. m.

Some Hygienic Errors of Dentists.
L. G. Noel, Nashville, Tenn.

The Care of the Mouth of the Sick.
William C. Fisher, New York.

Extra-Oral Bilateral Resection of the Mandible Posterior to the Second Molar for the Correction of Prognathism.
William T. Harsha and Joseph Eisenstaedt, Chicago.

Acute Osteomyelitis of the Lower Jaw.
W. Wayne Babcock, Philadelphia.

### Thursday, June 6—9:30 a. m.

Blind Abscesses. M. L. Rhein, New York.

Infections of the Upper and Lower Jaw.
Frederic V. Hussey, Providence, R. I.

The Hospital's Need of a Dental Staff.
Andrew J. Flanagan, Springfield, Mass.

The Cubical Contents and Superficial Area of the Maxillary Sinuses. Virgil Loeb, St. Louis.

### Thursday, June 6—2 p. m.

The Pathologic Findings of Some Diseases of the Teeth and Gums. Vida A. Latham, Chicago.

Saliva in Its Relation to the Hardening and Softening of Tooth Enamel. Joseph Head, Philadelphia.

The Reciprocal Influences of Morbid Conditions of the Mouth, Jaws and General Economy.
M. I. Schamberg, New York.

The Speech Relation of Cleft Palate Operations.
George V. I. Brown, Milwaukee.

Iodoglycerol in the Treatment of Mouth Infections.
Eugene S. Talbot, Chicago.

## SECTION ON DERMATOLOGY

Chairman, Charles J. White, Boston; Secretary, H. R. Varney, Detroit

### Tuesday, June 4—2 p. m.

Chairman's Address: The Shortcomings of Dermatology.
Charles J. White, Boston.

Cancerous Degeneration in Chronic Leg Ulcer.
William S. Gottheil, New York.

Benign Epithelioma. M. L. Heidingsfeld, Cincinnati.

Parakeratosis Scutularis. Ludwig Weiss, New York.

Keratosis Follicularis Contagiosa (Brooke).
David Lieberthal, Chicago.

### Wednesday, June 5—9:30 a. m.

Kératodermie Blennorrhagique With Report of a Case.
Frank Edward Simpson, Chicago.

Observations on Keratosis Follicularis.
W. B. Trimble, New York.

Pityriasis Rubra (Hebra). Report of a Case.
H. J. F. Wallhauser, Newark, N. J.

A Clinical Study of Certain Pityriasic Eruptions.
George Henry Fox, New York.

Acne. Marcus Haase, Memphis.

### Wednesday, June 5—2 p. m.

SYMPOSIUM ON MERCURY AND SALVARSAN IN THE TREATMENT OF SYPHILIS

**Joint Meeting with the Section on Pathology and Physiology**

Differentiation of Spirochæta Pallida and Other Allied Species of Spirochetes in Culture.
Hideyo Noguchi, New York.

A Study of Antibody Formation in Syphilis.
Homer F. Swift and Arthur W. M. Ellis, New York.

The Administration of Salvarsan in Syphilis.
J. A. Fordyce, New York.

The Proper Place of Mercury and of Salvarsan in the Treatment of Syphilis. Abner Post, Boston.

The Relative Value of Mercury and Salvarsan from a Serologic Point of View. Howard Fox, New York.

### Thursday, June 6—9:30 a. m.

Injurious Effects of the X-Ray Applied for Therapeutic Purposes on the Skin. A. Ravogli, Cincinnati.

Diet and Hygiene in Diseases of the Skin.
L. Duncan Bulkley, New York.

The Clinical Histories of Certain Cases of Infantile Eczema Which Suggest Disturbance of the Digestion as an Important Causative Factor.
Harvey P. Towle and Fritz B. Talbot, Boston.

Psoriasis Treated with High Grade Colonic Irrigations and Lactic Acid. James M. Winfield, Brooklyn.

Psoriasis Familialis. Frank C. Knowles, Philadelphia.

### Thursday, June 6—2 p. m.

Myomatosis Cutis Disseminata with the Report of Three Probable Cases of the Condition.
Richard L. Sutton, Kansas City, Mo.

Lupus Erythematosus with Superimposed Carcinoma.
J. B. Kessler, Iowa City, Iowa.

Some Uncommon and Often Unrecognized Forms of Toxic Dermatitis. Joseph Zeisler, Chicago.

A Plea for an Earlier Diagnosis of Pellagra.
M. L. Ravitch, Louisville.

Hypertrichosis. Henry Clay Baum, Syracuse, N. Y.

The Most Practical Methods of Teaching Syphilis and Dermatology. William Thomas Corlett, Cleveland.

## SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

Chairman, Rupert Blue, Washington, D. C.; Secretary, C. Hampson Jones, Baltimore

### Tuesday, June 4—2 p. m.

Chairman's Address and Oration.
Rupert Blue, Washington, D. C.

Standardizing Health Board Statistics.
Le Grand Powers, Washington, D. C.

Classification and Grouping of Health and Sanitary Expenditures. M. N. Baker, New York.

The Desirability of Uniform Methods of Procedure in Quarantine Practice, Especially as Relates to the Minor Infectious Diseases. J. W. Kerr, Washington, D. C.

Reporting of Suspicious Cases by the Laity, a Prerequisite for the Efficient Control of Communicable Disease.
M. Solis-Cohen, Philadelphia.

Laws Relative to the Sanitary Control of Public Eating and Drinking Places.
Walton Forrest Dutton, Carnegie, Pa.

The Control of Contagious Diseases in a Municipality. Guy L. Kiefer, Detroit

Problems of Venereal Diseases. Robert N. Willson, Philadelphia.

### Wednesday, June 5—9 a. m.

SYMPOSIUM ON INDUSTRIAL DISEASES

**Joint Meeting with the American Association for Labor Legislation.**

Classification of Occupational Diseases. W. Gilman Thompson, New York.

Occupational Skin Diseases. John A. Fordyce, New York.

Occupational Neuroses. Charles L. Dana, New York.

Nomenclature of Occupations. Warren Coleman, New York.

The Need of Cooperation in Promoting Industrial Hygiene. Henry R. Seager, New York.

### Wednesday, June 5—2 p. m.

SYMPOSIUM ON ANTISEPTICS AND GERMICIDES

**Joint Session with Section on Pharmacology and Therapeutics**

Intestinal Antiseptics. Norman MacL. Harris, Chicago.

The Phenol Coefficient of Certain Disinfectants. John F. Anderson, Washington, D. C.

The Influence of Sodium Iodoxybenzoate on Reactions of Inflammatory Character. Samuel Amberg and J. H. Mason Knox, Baltimore.

Effect of Iodids on the Circulation and Blood-Vessels. J. A. Capps, Chicago.

The Duodenal Medication of Ipecac in the Treatment of Amebic Dysentery. Harvey G. Beck, Baltimore.

Is Infection Carried by Books? Otis B. Nesbit, Valparaiso, Ind.

### Thursday, June 6—9 a. m.

Methods of Water Purification for Large Cities. Rudolph Hering, New York.

Purification of Water-Supplies for Small Towns. A. J. Wehr, Baltimore.

A Preliminary Report on the Treatment of Baltimore Drinking Water with Calcium Hypochlorite. William Royal Stokes and F. W. Hachtel, Baltimore.

Protection of Water-Supply and Methods of Disposal of Excreta Aboard Ship on Fresh Water. J. O. Cobb, Chicago.

Relation of Interstate Waters to the Spread of Typhoid Fever. Allan J. McLaughlin, Washington, D. C.

Local Typhoid Outbreaks. J. S. Neff, Philadelphia.

The Application of Medicosociology in Civic Betterment. Otto P. Geier, Cincinnati.

A Cost-Finding System for Health Departments. W. F. Snow, Sacramento, Cal.

### Thursday, June 6—2 p. m.

Control of Measles. E. C. Levy, Richmond, Va.

The Necessity for Rodent Extermination in American Seaports. W. C. Rucker, Washington, D.C.

A Short Discussion of Some of the Recent Hygienic and Economic Improvements in Dairying. Richard Cole Newton, Montclair, N. J.

Results of Epidemiologic Studies of Infection by Typhoid-Colon-Dysentery Groups. C. J. Hunt, Harrisburg, Pa.

Antityphoid Inoculation: Three Years Experience With Its Use in Training Schools For Nurses in Massachusetts. Leslie H. Spooner, Boston.

Typhoid Vaccination in the Army. F. F. Russell, Washington, D. C.

A Further Report on the Preventive Inoculation Against Typhoid Fever in Public Institutions and in Civil Communities. Frank W. Hachtel and Harry W. Stoner, Baltimore.

## SECTION ON HOSPITALS

Chairman, W. B. Russ, San Antonio, Texas; Secretary, John Allan Hornsby, Chicago

### Tuesday, June 4—2 p. m.

Chairman's Address. W. B. Russ, San Antonio, Texas.

SYMPOSIUM ON THE RELATION OF THE HOSPITAL TO THE PATIENT

The Problem of Diet in the Modern Hospital. Harvey W. Wiley, Washington, D. C.

A Clinical View of the Special Diet. H. D. Arnold, Boston.

Does the Trained Nurse of To-day Meet the Requirements of the Patient, the Medical Profession and the Public? Arthur R. Edwards, Chicago.

The Hospital Versus the Home in the Care of Patients—An Evolution. P. E. Truesdale, Fall River, Mass.

### Wednesday, June 5—9 a. m.

SYMPOSIUM ON THE RELATIONS OF THE HOSPITAL TO THE PHYSICIAN

Hospital Pathology—Asepsis and Cleanliness from the Clinician's Point of View. John B. Murphy, Chicago.

The Proper Division of the Medical Services of the Hospital. Henry M. Hurd, Baltimore.

Problems of Hospital Organization. F. A. Washburn and Louis H. Burlingham, Boston.

The Medical Superintendent: His Advantages, His Duties and His Limitations. H. B. Howard, Boston.

The Relations of the Hospital to the Medical School. Arthur Dean Bevan, Chicago.

Individual Prophylaxis in Children's Hospitals. Isaac A. Abt, Chicago.

### Thursday, June 6—9 a. m.

Report of Special Committee on the Present Status of the Hospitals of this County in Regard to Scientific Equipment.

SYMPOSIUM ON THE RELATIONS OF THE HOSPITAL TO THE PUBLIC

Out-Patient Medical Service: The Most Important and Most Neglected Part of Hospital Work. Richard C. Cabot, Boston.

The Efficiency of Out-Patient Work. Michael M. Davis, Jr., Boston.

The Relations of the Hospital to Corporations Interested in Patients. Samuel C. Plummer, Chicago.

The Legal Aspects of the Relations of the Hospital to Corporations Interested in Patients. M. L. Bell, Chicago.

The Relations of the Civil Hospital to the Military Establishment in Time of Peace; in Time of War. Charles Richard, Washington, D. C.

Hospitals and the Health Problem, with Special Reference to the Necessities of Rural America. E. E. Munger, Spencer, Iowa.

## SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

Chairman—George E. Shambaugh, Chicago; Secretary, Burt R. Shurly, Detroit.

### Tuesday, June 4—2 p. m.

Chairman's Address: The Specialist in Medicine. G. E. Shambaugh, Chicago.

Exploratory Needle Puncture of the Maxillary Antrum in One Hundred Individuals Demonstrating the Marked Dissimilarity Between the Clinical and Post-Mortem Findings. Ross H. Skillern, Philadelphia.

Ethmoiditis a Common Sequel of Hay Fever. F. C. Todd, Minneapolis.

The Roentgen Ray in Oto-Laryngology. P. M. Hickey, Detroit.

### Wednesday, June 5—9 a. m.

SYMPOSIUM ON INTRACRANIAL COMPLICATIONS

Operative Technic for the Relief of Brain Abscess of Otitic Origin. James McKernan, New York.

Diagnosis and Localization of Brain Abscess. F. X. Dercum, Philadelphia.

Diseases of the Ear Which Lead to Brain Abscess. Max Goldstein, St. Louis.

### Wednesday, June 5—2 p. m.

Use of Salvarsan in Lesions of the Nose, Throat and Ear. C. R. C. Borden, Boston.

Bronchoscopic Dilatation of Bronchial Stenoses. Chevalier Jackson, Pittsburgh.

Relation of Nasal Conditions to Asthma.
JUSTUS MATTHEWS, Rochester, Minn.

Further Experience with Endobronchial Therapy of Asthma.
WOLFF FREUDENTHAL, New York.

Treatment of Chronic Laryngeal Stenosis by Prolonged Intubation. HOMER DUPUY, New Orleans.

### Thursday, June 6—9 a. m.

Refinements Which Render Tonsillectomy Safe, Surgical and Satisfactory. M. M. CULLUM, Nashville, Tenn.

#### SYMPOSIUM ON CORRECTION OF DEFORMITIES OF THE NASAL SEPTUM

The Submucous Resection of Deflections of the Nasal Septum—The Author's Present Perfected Method.
OTTO T. FREER, Chicago.

Methods of Correcting Deflections of the Nasal Septum.
CHARLES W. RICHARDSON, Washington, D. C.

Indications and Contra-Indications to Resection of the Nasal Septum. H. W. LOEB, St. Louis.

### Thursday, June 6—2 p. m.

A Study of Cellular Change During and After Acute Mastoiditis. E. R LEWIS, Dubuque, Ia.

Report of Cases of Purulent Labyrinthitis and Meningitis, with Operations and Remarks on Same.
WENDEL C. PHILIPS AND S. J. KOPETZKY, New York.

#### SYMPOSIUM ON THE SURGERY OF THE LABYRINTH

Diffuse Suppuration of the Labyrinth and the Indication for Operative Interference.
R. B. CANFIELD, Ann Arbor, Mich.

Technic of Radical Labyrinth Surgery.
JOHN D. RICHARDS, New York.

A Plea for Conservative Labyrinth Surgery.
NORVAL H. PIERCE, Chicago.

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## SECTION ON GENITO-URINARY DISEASES

CHAIRMAN, W. T. BELFIELD, CHICAGO; SECRETARY, HUGH H. YOUNG, BALTIMORE

### Tuesday, June 4—2 p. m.

#### YMPOSIUM ON TESTS ON THE FUNCTIONAL VALUE OF KIDNEYS

The Results of Two Hundred Chromo-Ureteroscopies Employing Indigocarmin as a Functional Kidney Test.
B. A. THOMAS, Philadelphia.

Practical Value of Blood Cryoscopy for Determination of Renal Function.
MARTIN KROTOSZYNER AND GEORGE W. HARTMAN, San Francisco.

A Study of the Value of the Various Tests for Kidney Insufficiency. H. M. JOHNSON, St. Louis.

A Study of the Accuracy of the Phenolsulphonephthalein Test for Renal Function.
JOHN T. GERAGHTY, Baltimore.

#### SYMPOSIUM ON RENAL SURGERY AND PATHOLOGY

Address by THORKILD RÖVSING, Copenhagen, Denmark.

ilateral Multiple Renal Calculi.
EDWARD MARTIN, Philadelphia.

he Diagnosis and Indications for Operation in Early Hydronephrosis. Definition of Hydronephrosis.
HUGH CABOT, Boston.

athologic Lesions (Non-Congenital) Associated with Double Ureter. Report of an Unusual Case.
A. RAYMOND STEVENS, New York.

### Wednesday, June 5—9 a. m.

nfluence of the Operation of Resection of the Kidneys on the Function of the Organ.
JOHN H. CUNNINGHAM, JR., Boston.

nilateral Renal Hematuria.
B. ALEXANDER RANDALL, Philadelphia.

ephritis and Hematuria: Report of Cases.
H. A. FOWLER, Washington, D. C.

he Use of Tuberculin in the Treatment of Tuberculosis of the Urinary Tract.
GEORGE S. WHITESIDE, Portland, Ore.

#### SYMPOSIUM ON TREATMENT OF TUMORS OF THE BLADDER

The Treatment of Papillary Tumors of the Urinary Bladder with the High-Frequency Current (Oudin).
EDWIN BEER, New York.

Interesting Cases of Bladder Tumor Treated by the High-Frequency Current.
E. L. KEYES, JR., New York.

Cancer of the Bladder. R. F. O'NEIL, Boston.

The Surgical Treatment of Tumors of the Bladder.
E. S. JUDD, Rochester, Minn.

The Suprapubic Excision of Vesical Tumors.
FRANCIS R. HAGNER, Washington, D. C.

### Wednesday, June 5—2 p. m.

#### SYMPOSIUM ON TREATMENT OF VESICAL CALCULUS

Litholapaxy: The Operation of Choice for the Removal of Stone in the Bladder. ARTHUR TRACY CABOT, Boston.

Litholapaxy. MAURICE H. RICHARDSON, Boston.

Suprapubic Cystotomy for Vesical Calculi. Indications and Operative Procedure. W. E. LOWER, Cleveland.

Contracture of the Neck of the Bladder.
CHARLES H. CHETWOOD, New York.

A New Procedure (Punch Operation) for Small Prostatic Bars, and Contracture of the Prostatic Orifice.
HUGH HAMPTON YOUNG, Baltimore.

The Human Prostate Gland at Birth, with a Brief Discussion of Its Fetal Development. Demonstration of Enlarged Wax Reconstruction.
OSWALD S. LOWSLEY, Los Angeles.

The Non-Operative Treatment of Prostatitis.
WILLIAM BENHAM SNOW, New York.

Impermeable Stricture of Bulbomembranous Urethra (Impermeable to Passage of Instrument).
JOHN B. DEAVER, Philadelphia.

### Thursday, June 6—9 a. m.

Chairman's Address: Hematogenous Disease of the Genital Organs in the Male.
WILLIAM T. BELFIELD, Chicago.

Seminal Vesiculotomy. Its Purpose and Accomplishments.
EUGENE FULLER, New York.

Treatment of Chronic Seminal Vesiculitis by Vasostomy (Belfield Operation). ROBERT H. HERBST, Chicago.

Surgical Routes of Entrance to the Male Pelvis.
L. E. SCHMIDT, Chicago.

Influence of the Hypophysis on Growth and Development with Especial Reference to the Genito-Urinary System. Some Experimental and Clinical Facts.
EMIL GOETSCH, Baltimore.

Recent Advances in Our Knowledge Concerning the Causes of Glycosuria. T. B. FUTCHER, Baltimore.

#### SYMPOSIUM ON GONORRHEAL INFECTIONS

Present Status of Treatment of Acute Gonorrheal Urethritis.
JAMES PEDERSEN, New York.

Systemic Gonococcal Infections. Some of the Immunologic Reactions of the Gonococcus.
ERNEST E. IRONS, Chicago.

### Thursday, June 6—2 p. m.

#### SYMPOSIUM ON SYPHILIS

The Importance of the Early Diagnosis of Syphilis.
RICHARD DEXTER AND C. L. CUMMER, Cleveland.

A Comparison of Extracts of Syphilitic and Normal Tissues by Means of the Wassermann and Epiphanin Reactions.
ALBERT KEIDEL AND S. H. HURWITZ, Baltimore.

The Luetin Reaction. HIDEYO NOGUCHI, New York.

Nerve Recurrences Following Treatment With Salvarsan.
ARTHUR W. M. ELLIS, New York.

Four Years' Experience With the Wassermann Reaction in Practice. A Further Report of Cases Treated from the Standpoint of the Wassermann Reaction with Mercury Alone, with Salvarsan Alone, and by the Combined Method (Salvarsan and Mercury), Including a Preliminary Report on the Noguchi Luetin Skin Reaction.
B. C. CORBUS, Chicago.

## SECTION ON NERVOUS AND MENTAL DISEASES

Chairman, Edward D. Fisher, New York; Secretary, E. E. Southard, Cambridge, Mass.

Chairman's Address: Injuries of the Spinal Column; With and Without Fracture and Dislocation.
Edward D. Fisher, New York.

The Anatomic Basis for and Technic of the Surgery of Intramedullary Affections of the Spinal Cord, With Report of Cases. Charles A. Elsberg, New York.

A Case of Tumor of the Spinal Cord: Surgical Removal and Difficulties of Differential Diagnosis.
B. Sachs, New York.

Tumors of the Spinal Cord and Their Operability.
Joseph Collins, New York.

Complications in Tabes Dorsalis.
Edward Livingston Hunt, New York.

Intradural Root Anastomosis for the Relief of Paralysis of the Bladder and the Application of the Same Method in Other Paralytic Affections.
C. H. Frazier and C. K. Mills, Philadelphia.

A Case of Traumatic Psychosis Associated With an Old Depressed Fracture of the Skull, Frontal Region: Operation; Recovery.
Charles E. Atwood and Alfred S. Taylor, New York.

Symptomatology of Trifacial Neuralgia.
Hugh T. Patrick, Chicago.

Thoracic Pains of Neural Origin. Frank R. Fry, St. Louis.

Pathologic Study of a Case of Acute Poliomyelitis.
A. L. Skoog, Kansas City, Mo.

A Contribution to the Etiology of Poliomyelitis.
M. Neustaedter, New York.

Some Considerations on Primary Lateral Sclerosis.
James Hendrie Lloyd and S. D. W. Ludlum, Philadelphia.

The Pathology of Little's Disease, With Report of a Case.
C. L. Dana, New York.

Multiple Sclerosis. L. Harrison Mettler, Chicago.

Some Morphologic Aspects of the Brain With Respect to Race, Sex and Intellect.
Edward Anthony Spitzka, Philadelphia.

A Case of Multiple Cerebrospinal Sclerosis, Presenting Unusual Symptoms Suggesting Paresis; Clinical and Pathological Findings. F. X. Dercum, Philadelphia.

The Present Status of Histopathology of the Cerebral Cortex in the Various Mental Diseases (with demonstration).
H. A. Cotton, Trenton, N. J.

Aneurysm of the Cerebral Arteries.
J. H. W. Rhein, Philadelphia.

Clinicopathologic Study of Illuminating Gas Poisoning of the Central Nervous System.
J. W. McConnell and William G. Spiller, Philadelphia.

A Case of Extensive Brain Disease from Endarteritis Probably of Syphilitic Origin.
Samuel T. Orton, Worcester, Mass.

Paranoid Type of Insanity with Jacksonian Convulsions: Syphilitic Pachymeningitis with Microscopic Findings.
N. S. Yawger, Philadelphia.

Nonne's Four Reactions in Diagnosis of Syphilitic Disease of the Nervous System.
C. R. Ball, St. Paul, Minn.

Predementia Præcox.
William Rush Dunton, Jr., Towson, Md.

Cyanosis in Dementia Præcox.
William Burgess Cornell, Hathorne, Mass.

Novel Provisions of the Revised Insanity Laws of Massachusetts. Henry R. Stedman, Boston.

Concept of Quasi Peripheral Stimuli in Neuropathology.
E. E. Southard, Boston.

Convulsive Seizures Associated with Postmenstrual Gastro-Intestinal Disorders. Arthur C. Brush, Brooklyn.

A Clinical Contribution to the Irregular and Unusual Forms of Status Epilepticus. L. Pierce Clark, New York.

Adipositas Cerebralis in Relation to Tumor of Hypophysis.
Alfred Gordon, Philadelphia.

The Influence of Defective Secretion of the Ductless Glands as a Cause for Neurosis. M. Allen Starr, New York.

Heredity in Nervous Diseases and its Social Bearings.
C. B. Davenport, Cold Spring Harbor, N. Y.

Atypical Dystrophy and Myasthenia.
Pearce Bailey, New York City.

Some Cases of Hysteria Presenting Symptoms Usually Found Only in Organic Diseases.
Beverley R. Tucker, Richmond, Va.

The Practical Lessons to be Derived from Recent Work on Hysteria. Tom A. Williams, Washington.

The Study of the Urine in Nervousness. A Test of Clinical Importance in Functional Disturbances of the Nervous System. Edward B. Angell, Rochester.

Erythromelalgia. George A. Moleen, Denver.

Pellagra: Its Nervous Manifestations, Based on Personal Observations of Several Cases.
David Edward Hoag, New York City.

Exhibit of a Series of Charts Illustrating the History of Cerebral Localization and of Spinal Organization.
Charles K. Mills, Philadelphia.

Ibsen's Master Builder: Its Psychologic Interpretation.
Smith Ely Jelliffe, New York City.

Unrecognized Tabes and Morphinism.
G. Wilse Robinson, Kansas City, Mo.

Dr. T. H. Weisenburg will exhibit motion pictures of mental diseases on Thursday evening.

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## SCIENTIFIC EXHIBIT

1. *Continuous Demonstrations.*
By those in charge of exhibits.
2. *Special Demonstrations.*

### Wednesday, 2 p. m.

DEMONSTRATIONS RELATING TO SYPHILIS

1. Laboratory Phases. Dr. Hideyo Noguchi, New York. Presentation of cultures of the different types of spirochetes. Will demonstrate inoculated animals and the luetin test.
2. Specimens Showing the Visceral Lesions of Syphilis. Drs. William H. Welch, Baltimore, and W. M. L. Coplin, Philadelphia.
3. The Bone Lesions of Syphilis. Dr. D. S. Lamb, Washington, D. C.

### Thursday, 2 p. m.

The demonstrations at this hour will include the presentation of gross specimens, cultures, microscopic sections and lantern slides in illumination of the following:

1. Tumors of the Uterus. Dr. J. A. Sampson, Albany, N. Y.
2. Experimental Endocarditis. Dr. E. C. Rosenow, Chicago.
3. Experimental Nephritis. Dr. M. H. Fischer, Cincinnati.
4. Experimental Intestinal Anastomosis. Dr. W. D. Gatch, Indianapolis.
5. Malaria and Amebic Dysentery. Dr. W. M. James, Canal Zone.
6. A Series of Photomicrographs Illustrating Pathologic Histology. F. B. Mallory, Brookline, Mass.

### Tuesday, Wednesday, Thursday and Friday, a. m.

Employees' Welfare Exhibits, dealing chiefly with the Venereal Peril.—National Cash Register Co.

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## OTHER MEETINGS

As usual, a number of organizations of specialists or o those engaged in special lines of work will hold their annua meetings just before or after the session of the America Medical Association and in the same city. A list of most o these various societies is given under the heading of "Comin Meetings," under "Society Proceedings" on page 1395 of thi issue.

Dr. Charles McIntire, Easton, Pa., secretary of the America Academy of Medicine, sends an announcement of its thirty seventh annual meeting. This will be held at the Hotel Den nis, Friday, May 31, and Saturday, June 1, with a conferenc in one of the churches, Sunday, June 2, on "Medicine in Mis sion Fields."

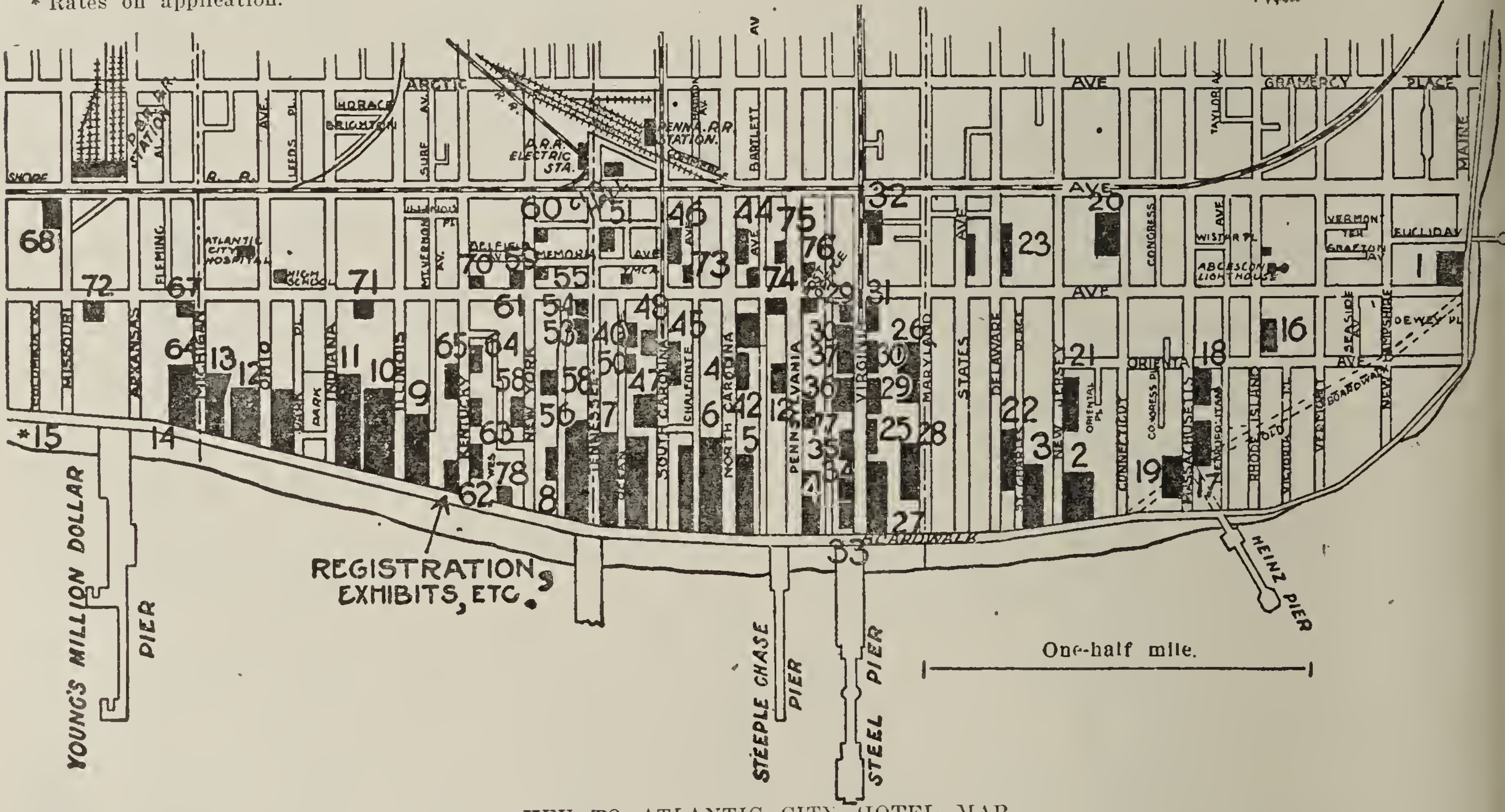
TABLE OF DAILY RATES AND ACCOMMODATIONS OFFERED BY ATLANTIC CITY HOTELS

| Hotels Grouped by Streets | Plan | Rooms Without Private Bath | | | | Rooms with Private Bath | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | For One Person | | For Two Persons | | For One Person | | For Two Persons | |
| | | Single Room | Double Room | Double Room | Extra Large Room | Single Room | Double Room | Double Room | Extra Large Room |
| n the Boardwalk— | | | | | | | | | |
| Royal Palace | American | $3.00 | $4.00 | $8.00 | $9.00 | $6.00 | $7.00 | $10.00 | $12.00 |
| Rudolf | American | 4.00 | 4.50 | 7.00 | 9.00 | 5.00 | 6.00 | 9.00 | 12.00 |
| Rudolf | European | 2.00 | 3.00 | 3.00 | 4.50 | 3.50 | 4.00 | 5.00 | 7.00 |
| St. Charles | American | 3.00 | 4.00 | 6.00 | 8.00 | 6.00 | 8.00 | 8.00 to | 12.00 |
| Seaside House | American | 3.50 | 5.00 | 7.00 | .... | .... | 6.00 | 10.00 | 12.00 |
| Strand | American | 4.00 | 6.00 | 8.00 | 10.00 | 6.00 | 8.00 | 10.00 | 12.00 |
| Haddon Hall | American | 3.50 | 5.00 | 6.00 to | 12.00 | 6.00 | 7.00 | 10.00 to | 14.00 |
| Chalfonte | American | 3.50 | 4.00 | 6.00 | 8.00 | .... | 6.00 | 10.00 | 12.00 |
| Youngs | European | 1.50 | 2.00 | 3.00 | 4.00 | 2.50 | 3.00 | 4.00 | 5.00 |
| Traymore | American | 4.00 | 6.00 | 8.00 | 9.00 | 5.00 | 13.00 | 10.00 to | 16.00 |
| Brighton | American | 4.00 | 9.00 | 9.00 | 12.00 | 7.00 | 11.00 | 11.00 | 14.00 |
| Marlborough-Blenheim | American | 4.00 | 5.00 | 8.00 | 9.00 | 6.00 | 7.00 | 10.00 | 12.00 |
| Marlborough-Blenheim | European | 2.00 | 3.00 | 4.00 | 5.00 | 4.00 | 5.00 | 6.00 | 8.00 |
| Dennis | American | 4.00 | .... | 7.00 | .... | 6.00 | 7.00 | 10.00 | 16.00 |
| Shelburne | American | 4.00 | 6.00 | 8.00 | 10.00 | 6.00 | 8.00 | 10.00 | 14.00 |
| Shelburne | European | 2.00 | 4.00 | 4.00 | 7.00 | 4.00 | 6.00 | 7.00 | 10.00 |
| Gladstone | American | 3.00 | 3.50 | 6.00 | 7.00 | 4.00 | 5.00 | 8.00 | 10.00 |
| Chelsea | American | 4.50 | 5.00 | 8.00 | 10.00 | 6.00 | 7.00 | 10.00 | 12.00 |
| Ostend | American | 3.00 | 5.00 | 6.00 | 7.00 | 5.00 | 6.00 | 8.00 | 10.00 |
| Ostend | European | 1.50 | 2.00 | 2.50 | 3.00 | 2.50 | 3.00 | 5.00 | 8.00 |
| acific Avenue— | | | | | | | | | |
| Hall's Cottage | American | 2.00 | 4.00 | .... | .... | .... | .... | .... | .... |
| Hall's Cottage | European | 1.00 | 2.00 | .... | .... | .... | .... | .... | .... |
| New Dunlop | American | 2.50 | 3.00 | 5.00 | 6.00 | 3.00 | 3.50 | 6.00 | 7.00 |
| New Dunlop | European | 1.00 | 2.00 | 2.50 | 4.00 | 2.00 | 3.00 | 4.00 | 5.00 |
| Lexington | American | 3.50 | 4.00 | 5.00 | 6.00 | .... | .... | 8.00 | 10.00 |
| Lexington | European | 2.00 | 3.00 | 3.00 | 4.00 | .... | .... | .... | .... |
| Channell | American | 2.50 | 3.00 | 4.00 | 4.50 | .... | .... | .... | .... |
| Channell | European | 1.00 | 1.50 | 2.00 | 2.50 | .... | .... | .... | .... |
| ermont Avenue— | | | | | | | | | |
| New Merion | American | 4.00 | 5.00 | 8.00 | 9.00 | 6.00 | 7.00 | 10.00 | 12.00 |
| onnecticut Avenue— | | | | | | | | | |
| Phillips House | American | 3.00 | 3.50 | 6.00 | 7.00 | .... | 5.00 | 8.00 | 9.00 |
| t. Charles Place— | | | | | | | | | |
| Loraine | American | 3.00 | 3.50 | 6.00 | 7.00 | 4.50 | 5.50 | 7.00 | 8.00 |
| Loraine | European | 1.50 | 2.00 | 2.50 | 3.00 | 3.00 | .... | 4.00 | .... |
| Raleigh | American | 3.00 | 4.00 | 5.00 | 6.00 | 4.00 | .... | 7.00 | 8.00 |
| aryland Avenue— | | | | | | | | | |
| Cornell | American | 2.75 | 3.00 | 5.50 | 6.00 | .... | .... | .... | .... |
| Cornell | European | 1.75 | 2.00 | 3.00 | 4.00 | .... | .... | .... | .... |
| irginia Avenue— | | | | | | | | | |
| Islesworth | American | 2.75 | 3.00 | 5.50 | 6.00 | 4.50 | 5.00 | 7.00 | 8.00 |
| Islesworth | European | 1.75 | 2.00 | 3.00 | 4.00 | 3.00 | 4.00 | 5.00 | 6.00 |
| Majestic | American | 3.00 | 3.50 | 5.00 | 6.00 | .... | 5.00 | 6.00 | 7.00 |
| Berkshire Inn | American | 2.50 | 2.50 | 5.00 | 6.00 | 4.00 | 4.50 | 7.00 | 9.00 |
| Berkshire Inn | European | 1.00 | 1.00 | 2.00 | 3.00 | .... | .... | .... | .... |
| Grand Atlantic | American | 3.00 | 3.50 | 5.00 | 6.00 | 4.00 | 4.00 | 6.00 | 8.00 |
| Bothwell | American | 3.00 | 3.50 | 5.50 | 6.00 | 5.00 | .... | 8.00 | 9.00 |
| Wiltshire | American | 2.50 | 3.00 | 5.00 | 6.00 | 4.00 | 5.00 | 8.00 | 10.00 |
| Morton | American | 2.50 | 3.00 | 5.00 | 6.00 | .... | .... | 7.00 | 8.00 |
| Raymond | American | 2.50 | 2.50 | 4.00 | 5.00 | .... | .... | 7.00 | 10.00 |
| Shoreham | American | .... | 2.50 | 5.00 | 6.00 | .... | .... | 7.00 | 8.00 |
| Clarendon | American | 3.00 | 3.50 | 5.00 | 6.00 | .... | 5.00 | 7.00 | 8.00 |
| New Camblos | American | 2.00 | 3.50 | 4.00 | 5.00 | .... | .... | .... | .... |
| New Camblos | European | 1.00 | 1.50 | 2.00 | 2.50 | .... | .... | .... | .... |
| ennsylvania Avenue— | | | | | | | | | |
| Holmhurst | American | 3.00 | 4.00 | 6.00 | 7.00 | .... | 5.00 | 7.00 | 8.00 |
| Melrose Hall | American | 2.00 | .... | .... | .... | .... | 3.00 | .... | .... |
| New Chatham | American | 2.50 | 3.00 | 5.00 | 6.00 | 3.50 | 4.00 | 7.00 | .... |
| outh Carolina Avenue— | | | | | | | | | |
| Warwick | American | 2.00 | 4.00 | 4.00 | .... | 3.00 | 5.00 | 6.00 | .... |
| Seminole | American | 2.50 | 3.00 | 4.00 | 5.00 | 3.00 | 4.00 | 5.00 | 6.00 |
| Lakewood | American | 2.00 | .... | 4.00 | 4.00 | .... | .... | .... | .... |
| Dupont | American | 2.00 | .... | 3.00 | .... | .... | .... | .... | .... |
| Radnor | American | 1,50 | .... | 3.00 | .... | .... | .... | .... | .... |
| Radnor | European | 1.00 | .... | 2.00 | .... | .... | .... | .... | .... |
| Iroquois | American | 2.50 | 2.50 | 5.00 | 5.00 | 3.00 | 3.00 | 6.00 | 6.00 |
| Iroquois | European | 1.00 | 1.00 | 2.00 | 2.00 | .... | .... | .... | .... |
| Brevort | American | .... | .... | 4.00 | 5.00 | .... | .... | .... | .... |
| ennessee Avenue— | | | | | | | | | |
| Dixie | American | .... | .... | 4.00 | 6.00 | .... | .... | .... | .... |
| Dixie | European | .... | .... | 2.00 | 3.50 | .... | .... | .... | .... |
| Elberon | American | 2.00 | 2.50 | 4.00 | 5.00 | .... | 3.50 | 6.00 | 7.00 |
| Continental | American | 2.00 | 2.50 | 4.00 | 5.00 | 3.00 | 4.00 | 5.00 | 6.00 |
| Continental | European | 1.00 | 2.00 | 2.00 | 3.00 | 2.00 | 3.00 | 4.00 | 4.50 |
| Fredonia | American | 2,00 | 2.50 | 4.00 | 4.50 | 3.00 | 3.50 | 5.00 | 6.00 |
| Fredonia | European | 1.00 | 1.50 | 2.00 | 3.00 | 2.00 | 2.50 | 3.50 | 3.50 |
| Greater Pittsburg | American | 2.00 | 2.50 | 3.00 | 5.00 | 3.00 | 4.00 | 6.00 | 7.00 |
| Greater Pittsburg | European | 1.00 | 1.50 | 2.00 | 3.00 | 1.50 | 2.00 | 3.00 | 3.50 |
| Bouvier | American | .... | 2.00 | .... | .... | .... | .... | .... | .... |
| Tennessee | American | 2.00 | 2.00 | 4.00 | 4.00 | .... | .... | .... | .... |
| Tennessee | European | 1.00 | 1.00 | 2.00 | 2.00 | .... | .... | .... | .... |
| Tracy | American | .... | 2.50 | 3.00 | 4.00 | .... | .... | .... | .... |
| . James Place— | | | | | | | | | |
| St. James | American | 2.00 | 3.00 | 4.00 | 5.00 | .... | .... | .... | .... |
| St. James | European | 1.50 | 2.00 | 2.00 | 2.50 | .... | .... | .... | .... |
| Flanders | American | 2.00 | 3.00 | 4.00 | 6.00 | .... | .... | .... | .... |
| Sea Crest | American | 2.00 | 2.00 | 4.00 | .... | 3.00 | .... | .... | .... |
| Ebbitt House | American | 2.00 | 3.00 | 4.00 | 5.00 | .... | 4.00 | 6.00 | .... |
| Elwood | American | 2.50 | 3.50 | 5.00 | 6.00 | .... | .... | .... | .... |
| Elwood | European | 1.50 | 2.50 | 3.00 | 4.00 | .... | 3.00 | 4.00 | .... |
| Devonshire | American | 2.50 | 3.00 | 5.00 | 6.00 | .... | 4.00 | 7.00 | .... |
| De La Mar | American | .... | 2.00 | .... | .... | .... | .... | .... | .... |
| w York Avenue— | | | | | | | | | |
| Netherland | American | 2.00 | 2.50 | 4.00 | 5.00 | .... | 3.00 | 5.00 | 6.00 |
| New Holland | American | 2.00 | 3.00 | 4.00 | 5.00 | .... | .... | .... | .... |
| Waldorf | American | 2.50 | 2.50 | 4.00 | .... | .... | .... | .... | .... |
| Chester Inn | American | 2.50 | 2.50 | 5.00 | 5.00 | 3.50 | 3.50 | 6.00 | 6.00 |
| Hygeia | European | .75 | 1.00 | 1.50 | 2.00 | .... | .... | .... | .... |

TABLE OF DAILY RATES AND ACCOMMODATIONS OFFERED BY ATLANTIC CITY HOTELS—*Continued*

| Hotels Grouped by Streets | Plan | Rooms Without Private Bath | | | | Rooms with Private Bath | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | For One Person | | For Two Persons | | For One Person | | For Two Persons | |
| | | Single Room | Double Room | Double Room | Extra Large Room | Single Room | Double Room | Double Room | Extra Large Room |
| Kentucky Avenue— | | | | | | | | | |
| NEW CLARION | American | 2.00 | 2.50 | 4.00 | 5.00 | 3.00 | 3.50 | 5.00 | .... |
| FRONTENAC | American | 2.50 | 2.50 | 4.00 | .... | .... | .... | .... | .... |
| DEVILLE | American | 2.50 | 3.00 | 5.00 | 6.00 | 3.50 | .... | 7.00 | 10.00 |
| MONTICELLO | American | 2.50 | 3.00 | 4.00 | 5.00 | 4.00 | 5.00 | 6.00 | 7.00 |
| MONTICELLO | European | 1.00 | 2.00 | 2.00 | 3.00 | 2.50 | 3.50 | 3.50 | 4.50 |
| WESTMINSTER | American | 2.00 | 2.50 | 4.00 | 5.00 | 3.00 | 3.50 | 6.00 | 7.00 |
| WESTMINSTER | European | 1.00 | 1.50 | 2.00 | 3.00 | 1.50 | 2.00 | 3.00 | 4.00 |
| SILVERTON | American | 2.00 | 3.00 | 3.00 | 4.00 | .... | .... | .... | .... |
| SILVERTON | European | 1.00 | 1.50 | 1.50 | 2.00 | .... | .... | .... | .... |
| RICHMOND | American | 2.00 | 3.00 | 4.00 | .... | 4.00 | 4.00 | 7.00 | .... |
| RICHMOND | European | 1.00 | 1.50 | .... | .... | 2.50 | 3.00 | 5.00 | .... |
| STERLING | American | 3.00 | 5.00 | 6.00 | 6.00 | 5.00 | 7.00 | 7.00 | 7.00 |
| WALLINGFORD | American | 1.50 | 1.75 | 2.25 | 3.00 | .... | .... | .... | .... |
| WALLINGFORD | European | 1.00 | 1.25 | 1.50 | 2.00 | .... | .... | .... | .... |
| Illinois Avenue— | | | | | | | | | |
| CRAIG HALL | American | 2.50 | 3.00 | 5.00 | 6.00 | ....<br>3.00 | ....<br>3.50 | 6.00 | 7.00 |
| Park Place— | | | | | | | | | |
| GLASLYN-CHATHAM | American | 2.50 | .... | 5.00 | .... | .... | .... | .... | .... |
| CHELTENHAM-REVERE | American | 2.50 | 3.00 | 5.00 | 6.00 | .... | 5.00 | 7.00 | 8.00 |
| RUNNYMEADE | American | * | * | * | * | * | * | * | * |
| Michigan Avenue— | | | | | | | | | |
| PENNHURST | American | 3.00 | 3.50 | 6.00 | .... | .... | 6.00 | 7.00 | 8.00 |
| ARLINGTON | American | 2.50 | 3.00 | 5.00 | 6.00 | .... | 5.00 | 8.00 | 10.00 |
| ARLINGTON | European | 1.50 | 2.00 | 2.50 | 3.00 | .... | .... | .... | .... |
| EDISON | American | 2.00 | 3.00 | 4.00 | 5.00 | .... | .... | .... | .... |
| EDISON | European | 1.00 | 1.50 | 2.00 | 3.00 | .... | .... | .... | .... |
| FRANCIS | American | 2.00 | 2.50 | 3.50 | 5.00 | .... | 3.00 | 5.00 | 6.00 |
| FRANCIS | European | 1.25 | 2.00 | 2.50 | 3.00 | .... | 2.00 | 3.50 | 4.50 |
| Mississippi Avenue— | | | | | | | | | |
| SIEGMUND | American | 1.50 | 3.00 | .... | .... | .... | .... | .... | .... |
| SIEGMUND | European | 1.00 | 2.00 | .... | .... | .... | .... | .... | .... |
| Georgia Avenue— | | | | | | | | | |
| MILLER COTTAGE | American | 1.50 | 2.50 | 2.50 | 3.00 | .... | .... | .... | .... |

* Rates on application.



## KEY TO ATLANTIC CITY HOTEL MAP.

ON THE BOARDWALK:
1. Royal Palace
2. Rudolf
3. St. Charles
4. Seaside House
5. Haddon Hall
6. Chalfonte
7. Poinsettia
8. Young's
9. Windsor
10. Traymore
11. Brighton
12. Marlborough-Blenheim
13. Dennis
14. Shelburne
*15. Chelsea. (Hotel is one-half mile down Boardwalk from termination of map.)

RHODE ISLAND AVENUE:
16. Westmont

MASSACHUSETTS AVENUE:
17. Lelande
18. Phillips House
19. New Avalon

CONNECTICUT AVENUE:
20. Troxell Hall

NEW JERSEY AVENUE:
21. Pierrepont.

ST. CHARLES PLACE:
22. Raleigh.

DELAWARE AVENUE:
23. Leith Villa

STATES AVENUE:
24. Hanlon

MARYLAND AVENUE:
25. Imperial
26. Allenhurst

VIRGINIA AVENUE:
27. Islesworth
28. Ponce de Leon
29. Avon Inn
30. Berkshire Inn
31. Victoria
32. Colonnade
33. Jackson
34. Bothwell
35. Wiltshire
36 Morton
37. Belmont
38. Shoreham
39. Clarendon

PENNSYLVANIA AVENUE:
40. Craig Hall
41. New Chatham
42. St. Clare
43. Hampton Terrace
75. Holmhurst

NORTH CAROLINA AVENUE:
44. Pembroke

SOUTH CAROLINA AVENUE:
45. Roxborough
46. Lloyd
47. Iroquois
48. Radnor

OCEAN AVENUE:
49. Bon Air
50. Renovo

TENNESSEE AVENUE:
51. Continental
52. Fredonia
53. Howard House
54. Louvan
55. Beaumont

ST. JAMES PLACE:
56. De La Mar
57. Ralston

NEW YORK AVENUE:
58. Morris
59. Bingham
60. Roanoke
61. Hygeia

KENTUCKY AVENUE:
62. Bretton Hall
63. Acme
64. Westminster
65. Stickney

MICHIGAN AVENUE:
66. Pennhurst
67. Edison

MISSOURI AVENUE:
68. Speidel

PACIFIC AVENUE:
69. Hall's (No. 1311)
70. Wittig's (No. 1421)
71. McClelland's (No. 1722)
72. Lexington

## MEETING-PLACES AND HEADQUARTERS

### A List of the Various Meeting-Places and of the Hotels Chosen as Headquarters

The accompanying list shows where the House of Delegates, the Board of Trustees and the various sections are to hold their meetings and also the hotels which have been assigned to certain sections for convenience of members who wish to be together. The locations can be found on the map.

Board of Trustees: Directors' Room, Marlboro'-Blenheim (12).
Judicial Council: Marlborough-Blenheim (12).
House of Delegates: Traymore Solarium (10).
Council on Health and Public Instruction: Marlborough-Blenheim (12).
General Meeting: Apollo Theater (78).
Scientific Exhibit, Commercial Exhibit, Registration Bureau, Information, Telephones and Branch Post-Office: Exposition Building, Kentucky Avenue and Boardwalk.
Microscopic Demonstrations: Young's Hotel (8).

| SECTION | HOTEL HEADQUARTERS | MEETING-PLACE |
|---|---|---|
| Practice of Medicine....... | Hotel Dennis..... | First Presbyterian Church (76) |
| Surgery ................. | Hotel Chalfonte.. | Music Hall, Steel Pier |
| Obstetrics and Gynecology. | Haddon Hall..... | Ball Room, Steel Pier |
| Ophthalmology ........... | The Strand ...... | West Solarium, Marlborough-Blenheim (12). |
| Laryngology, Otology and Rhinology ............. | The Seaside ..... | Playroom, Hotel Dennis (13). |
| Diseases of Children....... | Hotel Traymore.. | Hotel Holmhurst (75). |
| Pharmacology and Therapeutics ............... | Hotel Dennis..... | Chapel, First Presbyterian Church (76). |
| Pathology and Physiology. | St. Charles....... | Playroom, Chalfonte (6). |
| Stomatology ............ | Young's Hotel ... | Young's Hotel (8). |
| Nervous and Mental Diseases ................. | Hotel Brighton... | First Baptist Church (74). |
| Dermatology ............ | St. Charles....... | Central M. E. Church (73) |
| Preventive Medicine and Public Health .......... | Hotel Shelburne.. | Masonic Hall (77). |
| Genito-Urinary Diseases.... | Hotel Rudolf .... | Casino, Steel Pier |
| Hospitals ............... | The Rudolf....... | The Rudolf (2). |

## ATLANTIC CITY CLINICS

### The New Feature of the Session—Monday's Clinical Program Given

At the 1911 meeting of the House of Delegates, it was voted o establish a Committee on Clinic Days for the purpose of olding clinics the day before and the day following the nnual meeting. Dr. Charles L. Mix, Chicago, Chairman, nnounces the following program which the committee has rranged to be given Monday, June 3, at Atlantic City in the entral pavilion on the Steel Pier.

Clinics have also been arranged to be given at Philadelphia, ew York City and Baltimore, after the session. The prorams for these will be announced subsequently. The proram for Monday, June 3, is so representative of the best in he medical profession that the committee hopes for an excelnt attendance.

MONDAY MORNING

Dr. Milton B. Hartzell, Philadelphia.—Recent Contributions to the iagnosis and Therapy of Skin Diseases. 9:15-9:45 a. m.

Dr. Alfred Stengel, Philadelphia.—Recent Contributions Toward a uller Understanding of Cardiovascular Diseases. 9:45-10:25 a. m.

Dr. Robert W. Lovett, Boston.—Recent Advances and Some Fundaentals in Orthopedic Surgery. 10:25-11:00 a. m.

Dr. John B. Murphy, Chicago.—Recent Contributions Toward the dvancement of Clinical Surgery. 11:00-12:00 a. m.

MONDAY AFTERNOON

Dr. Louis B. Wilson, Rochester, Minn.—Recent Advances in Medine and Surgery Incident to the Study of Living Pathology. 2:00-:30 p. m.

Dr. Christopher Graham, Rochester, Minn.—Recent Advances in Diagnosis of Affections of the Gastro-Intestinal Tract. 2:30-:00 p. m.

Dr. Chevalier Jackson, Pittsburgh.—Improved Diagnostic Methods the Study of the Respiratory Tract. 3:00-3:30 p. m.

Dr. S. Flexner (or associate).—Recent Contributions to Medicine, ith special reference to the work of the Rockefeller Institute. :30-4:00 p. m.

Dr. Harvey R. Gaylord, Buffalo.—Recent Contributions to the lution of the Cancer Problem. 4:00-4:30 p. m.

MONDAY EVENING

Dr. W. E. Deeks, Ancon, C. Z.—Observations on Disease at the Canal. 7:45-8:15 p. m.

Major Frederick F. Russell, Medical Corps, U. S. Army.—Army Experience with Typhoid Prophylaxis. 8:15-8:45 p. m.

Medical Inspector E. R. Stitt, U. S. Navy, and Surgeon A. W. Dunbar, U. S. Navy.—Recent Advances in Sanitation in the United States Navy. 8:45-9:15 p. m.

Passed Assistant Surgeon J. F. Anderson.—Recent Contributions by the United States Public Health and Marine-Hospital Service to Preventive Medicine. 9:15-9:45 p. m.

## THE ATLANTIC CITY HOTELS

### List Issued by the Publicity Bureau for the Period of June 1 to 8, 1912

The following extensive list of hotels is recommended by the local Committee on Arrangements. It is wise for those who will go to Atlantic City to engage their accommodations early in advance. By reference to the map one can see the location of the hotel. Correspondence may be had direct with the hotels, but the Committee on Hotels, of which Dr. W. E. Darnall, 1704 Pacific Ave., Atlantic City, is chairman, will be glad to give further information, advice and assistance.

### Bureau of Information

There will be a Bureau of Information in the Exposition Building, Kentucky Avenue and Boardwalk. It will occupy a booth near the Registration Bureau and will be manned by efficient clerks to give out data on the meetings, hotels, etc.

It follows, of course, that all concerned in any arrangements for any events at Atlantic City should give full particulars to the Committee on Bureau of Information. Especially should the committee be informed of any changes in previously announced arrangements.

### The Branch Post-Office

It will facilitate matters if those who have reserved rooms at hotels will have their mail from home addressed to those hotels. Others may have their mail addressed "Care American Medical Association, Exposition Building, Atlantic City." The Branch Post-Office is in the Exposition Building, near the Registration and Information Bureaus and is open all day Monday to Friday.

## THE ENTERTAINMENTS

### The Plans for Social and Amusement Features at the Annual Session

The members and guests of the Association have had provided for their entertainment and amusement the following program:

Monday night there will be banquets and smokers of some of the societies which meet before the meeting of the Association. The Association of State Secretaries and Editors is one of the organizations that meets on this evening. The program is given in another column.

Tuesday night the banquets, smokers and vaudevilles of the sections and the various medical alumni and class reunions, will be held. The time and place for these various entertainments and further details will be announced later, or information concerning these events may be had at the registration bureau.

Wednesday night a reception in honor of the President will be given in the Music Room, Steel Pier. The reception will be followed by a dance. This is the most formal of the social functions of the meeting.

Thursday night there will be a musicale in the Ball Room and Music Room on the Steel Pier.

*(Continued on page 1406)*

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[*For other information see second page following reading matter*]

SATURDAY, MAY 4, 1912

## RHEUMATIC MYOCARDITIS

In 1904 Aschoff described certain peculiar, microscopic nodules in the myocardium, which he regarded as specifically characteristic of acute articular rheumatism. These nodules are made up of large cells with one or more large, irregular or polymorphous nuclei, and often but not always of small and large lymphocytes as well as ordinary polymorphonuclear leukocytes, especially at the margins. Aschoff named the process "myocarditis rheumatica."

Since then these peculiar formations have been made the subject of three or four communications in German periodicals, most recently by Fraenkel,[1] who discusses their nature and significance on the basis of a careful investigation of twenty cases, in eight of which there was a definite history of rheumatism, while in most of the others the character of the endocarditis present and other indications pointed to the previous existence or presence of this disease. He found the nodules in all of his cases save three. In these three cases there was, it is true, a history of rheumatism, but from three to twenty years had elapsed since the attack. In another case, however, in which the nodules were present in large numbers, the patient had had rheumatism eighteen years before. The nodules were not present in the myocardium of patients who had died from infectious diseases of well-established etiology.

Fraenkel reaches the conclusion that the peculiar formations in question occur only in instances of genuine rheumatic infection although not necessarily in all such instances. He even goes so far, in his claims for their specifically rheumatic nature, as to maintain that the streptococcal nature of articular rheumatism must be regarded as questionable because, while certain streptococci reproduce very completely the picture of rheumatism in rabbits, yet they have not been shown to induce in this animal the formation of the myocardial nodules discovered by Aschoff. Fraenkel is inclined, therefore, to the view that we have not yet learned the true cause of acute articular rheumatism and the valvular and myocardial lesions that so frequently are associated with it.

In view of the fact that the nodules may be absent in rheumatism, it may well be questioned whether so much importance should be given to the failure so far to observe them in the hearts of rabbits infected with streptococci from cases of rheumatism. Thorough search for the nodules should be made in rabbits infected with rheumatic streptococci, because, if found, it would strengthen greatly the evidence in favor of the streptococcal nature of articular rheumatism. According to Fraenkel the nodules arise in the periadventitial tissue of the smaller vessels. They are always microscopic. With the Unna-Pappenheim pyronin-methylene-green stain the protoplasm of the cells stains a characteristic red so that they are easily recognized. The areas occur especially in the subendocardial parts of the septum and it seems that with time they may change into scars. It is interesting that Fraenkel found these areas in the myocardium in a case of chorea. He regards this as a further support of the view that chorea and articular rheumatism depend on the same causes. The discovery of these peculiar areas in the myocardium in rheumatism is important and interesting. Further investigations are necessary before their full significance can be settled.

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[1] Fraenkel: Beitr. z. path. Anat. u. z. allg. Path., 1912, lii, 597.

## THE GENERAL EFFECTS OF VEGETABLE AND MIXED DIETS ON THE ALBINO RAT

The effects of special diets on animals have been studied mostly for so short a time that often definite conclusions are hardly warranted. The fact, for instance, that an animal maintains its weight and apparent health for a limited time on a special diet is not a reliable indication that it could do so throughout its whole life. Consequently, the study of the effects of special diets ought to be continued during the animal's lifetime and, if the effect on the offspring is to be ascertained, the study should extend also to succeeding generations.

An experiment of this general nature to test the effect of a strictly vegetable diet and a mixed diet on the spontaneous energy, the growth, and the length of life of the albino rat has been conducted by Slonaker,[1] and the results obtained are interesting. From the observations it appears that the omnivorous rats were much more active and voluntarily did more work than the vegetarian rats, the average ratio of the efficiency, as measured by special apparatus, being 7½ to 1. This difference in activity did not become noticeable to any extent until about two or three months after the experiment began.

Slonaker placed four rats, male and female, of the same parentage and age, in rotary cages with speedometers attached. At the end of twenty-five months the record of the meat-eating female rat was 5,477 miles, while the meat-eating male rat had 1,447 miles to his credit. The female vegetable-fed rat covered 447 miles and the vegetable-fed male rat only 200 miles.

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[1] Leland Stanford Junior University Publications, University Series, 1912.

The vegetarian rats became old earlier and their growth was greatly retarded, the ratio of the maximum weights being as 1.62 to 1 in favor of the omnivorous animals, and the general conditions of the latter were very much better, the vegetarians being frail, weak and without energy. While the average life of the omnivorous rat was 1.020 days, that of the vegetarians was 555 days only.

To what extent these very striking results may be applied to man is difficult to determine. It is to be remembered that the rat, like man, is by nature an omnivorous animal. Slonaker points out that numerous recorded observations on man with respect to the effects of diets, seem to indicate that he does more work, attains greater stature and accomplishes more both mentally and physically on a mixed diet than on a vegetable diet, or almost exclusively vegetable diet. There is a very strong likelihood, then, that the results of the experiments on the white rat would be duplicated in the case of man if he were subjected to similar conditions throughout his lifetime. The experiment of Professor Slonaker, without perhaps settling anything, adds to the joy of life as a contribution to the perennial discussion of vegetarianism versus a mixed diet.

## THE TOXIC PROPERTIES OF FAMILIAR INTESTINAL PARASITES

The great advances which have been made in the last generation or two in matters of public and personal hygiene have served to diminish the possibility of serious trouble from the verminous parasites which may infest man. Enforced habits of cleanliness, governmental food inspection, the development of sanitary engineering and modern methods of sewage disposal are among the potent factors which have made the zooparasitic diseases of man less conspicuous among educated peoples. Tapeworms, eelworms, pinworms and whipworms no longer occur in epidemic invasions where careful personal habits are cultivated; yet it must be remembered that there are large groups of individuals, particularly in the warmer countries, whose traditions and modes of life invite the continued existence of animal parasites in the human host.

The existence of some of these parasites, in particular those which inhabit the alimentary tract, calls forth little more than passing curiosity among physicians. Innumerable cases of such infection presumably pass through the hands of physicians without detection, although undoubtedly the striking studies on the hookworm and some of the intestinal protozoa of man have served to center attention on alimentary conditions in a routine way that was unknown a few years ago. It is, of course, realized that a tapeworm or pinworm is something which should be eliminated when once detected, but no serious consequences are apprehended from its presence as a rule.

The purely mechanical injury to be expected from two or three eelworms in a patient seems minimal on hasty consideration; yet the possibilities which their presence involves in the way of local injury to the intestinal mucosa by the mere presence and wandering habits of the parasites are brought home when some of the statistical facts are reviewed. A boy is known to have discharged 600 eelworms in a single day and no less than 5,100 in the course of three years. Is it surprising if these erratic organisms escape into this or that duct, or perforate an ulcer, or find their way into the most distant passages of the body, such as the respiratory tract, the eustachian tubes or the urinary tracts? Manson is stated to have treated his young patients in China twice a year with santonin as a matter of routine. The interesting monograph of Stiles[1] on the zooparasites of man furnishes data enough to make it seem important, at least in unhygienic tropical countries, from a prophylactic standpoint to treat all cases of ascaris infection which are found, even independently of the question as to whether any moderate or serious local and perhaps reflex symptoms are traced to the presence of the worms in the patient under consideration.

Modern experience with the abnormal bacterial parasites of the alimentary tract has taught that they may become prolific sources of chemical products potent for harm in the organism. The toxins elaborated by the microorganisms are among the most subtle of poisons. It is readily conceivable that the animal parasites also may secrete toxic or otherwise active substances which are not without moment to their hosts; and we may well inquire whether the possible dangers of the enteroparasites are limited solely to the harm which they may institute in a purely mechanical way. The entire lack of symptoms referable to these organisms, or their extremely mild character, has sufficed to divert attention from the possible production of specific poisons by them. There have at times been suggestions of the existence of toxic substances (toxins, ptomains, leukomains, alkaloids) in connection with parasites, indicated by diverse symptoms referred to the presence of the latter in man. Urticarias, pallor, vertigo, psychoses and a host of other apparently unrelated conditions have been attributed to these parasitic infections; but the possible etiologic association has awaited more definite knowledge regarding the biochemistry of the organisms.

An important contribution to this subject has lately been made by Dr. Flury[2] in Professor Faust's laboratory at Würzburg in a comprehensive study of the eelworm (ascaris). It is made clear by this report that the tissues and excreta of these worms contain numerous compounds capable of inducing local hyperemia, inflammation and necrosis. Volatile aldehyds and fatty acids, including such representatives as valerianic, butyric, formic, acrylic and propionic acids were actually isolated, as well as various alcohols and esters which act as local irritants.

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[1] Stiles: Osler's Modern Medicine, 1907, i, 527.

[2] Flury, Ferdinand: Zur Chemie und Toxikologie der Ascariden, Arch. f. exper. Pathol. u. Pharmakol., 1912, lxvii, 275.

With this wealth of pharmacologically active compounds available in ascariasis, some of the occasionally described symptoms can now better be understood. The irritation of the mucous membranes which some zoologists have described in making dissections of eelworms is presumably attributable to the familiar irritant action of some of the aldehyds. The action of acid esters on the capillaries serves to throw light on the urticarial eruptions which have been noted. With such an array of formidable chemical compounds it is not necessary to call on mechanical factors to explain the reported digestive disturbances and the severe damages to the intestinal mucosa. The secreted acid irritants are sufficient to induce such pathologic conditions. Even the disturbances of the central nervous system—the hallucinations, hysteria, delirium, etc., described in the literature —are now referable to the incoordinations characteristic of intoxication with the valerianic derivatives present in notable amounts. The anemias characteristic of many who are afflicted with invasions of animal parasites find their explanation in the well-known hemolytic action of the unsaturated acids, notably oleic and acrylic acids. By experiments with ascaris products on animals Flury was able to induce many of the typical phenomena incidentally noted in the past by clinical observers. It seems likely, therefore, that not one, but many toxicologic substances are furnished by the organism of ascaris, thereby explaining the great diversity of symptoms which may be associated from time to time with these parasites.

Every new inroad into such hidden mysteries is a step toward the eradication of unnecessary disease.

## SYNTHETIC FOOD AND ARTIFICIAL NUTRITION

Proteins, fats and carbohydrates — the substances which make up the conspicuous bulk of the food intake of man and animals — are compounds of marked chemical complexity. It must be confessed that we have at best been able to form only a vague idea of the real make-up of the material offered, when proteins, for example, are fed to an individual. Considerable is known about the amino-acid "building-stones" which enter into the protein complex, and something about their probable arrangement therein. But great gaps still remain to be filled. This lack of knowledge has placed a serious barrier before any really fundamental study of nutrition. The plant physiologist has an easier problem. He can mix together extremely simple chemical substances—phosphates, nitrates, chlorids, etc.—and watch the vegetable organism grow through synthesis almost from the elements themselves. And so it has happened that this marked constructive efficiency of the plant has long been contrasted with the relative lack of synthetic power in animal tissues.

From time to time new evidences of the power of animals to build up as well as to break down have been collected. No recent report, however, has awakened the interest which centers in experiments just published by Prof. Emil Abderhalden,[1] the well-known physiologic and chemical investigator now located at Halle. Engaged as he has been for years in common with others in attempting to unravel the complexity of protein structure, he has at length furnished a beautiful demonstration that the animal organism is able to construct all of its cell constituents from the simplest "building-stones." This was accomplished by feeding animals on food mixtures in which the proteins have been completely predigested so that only amino-acids remain; while the carbohydrates were furnished in the form of simple sugars and the fats were replaced by glycerol and fatty acids into which they are ordinarily resolved in the digestive tract. The experimental animals remained in excellent nutritive equilibrium and even gained weight in some cases, showing the possibility of growth, i. e., constructive activity, as well as mere maintenance. Abderhalden has even gone a step further and prepared the foods in the form of a mixture of isolated chemically pure amino-acids, along with the other simple compounds referred to above; and he had success in feeding these likewise.

Here surely is an experiment in simplified nutrition! Amino-acids, sugar, fatty acids, glycerol and inorganic salts built up with apparent ease into living animal structures! We must at length admit that the synthetic capabilities of the animal organism have been greatly underestimated. Nor were these trials of brief duration only. Some of the feeding experiments with the simple products of complete digestion extended over seventy-four days—too long a time to call on the stored nutrients to satisfy the tissue-requirements. There is, moreover, a wider outlook disclosed by these important investigations. The chemist has already solved the possibility of manufacturing the compounds above referred to in the laboratory from the very elements. As Abderhalden remarks, it is now merely a question of cost to prepare all these essential fragments. The complete synthesis of an adequate diet has almost become a reality.

Although it may be remarked that the familiar use of a synthetic diet is likely to remain beyond the realm of probability long past our day, there is nevertheless a practical aspect of these investigations that deserves emphasis. Since it is an assured possibility that the organism can be nourished appropriately with predigested foodstuffs, these products appear in a new light in the domain of therapy. It is possible that if the gastro-intestinal tract, with its digestive ferments, leaves us in the lurch through disease, we may be able to carry on the same cleavages outside of the body and to offer predigested products.

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[1] Abderhalden, E.: Fütterungsversuche mit vollständig abgebauten Nahrungsstoffen, Ztschr. f. physiol. Chem., 1912, lxxvii, 22.

# Current Comment

## INFANTILE PARALYSIS IN 1910 AND 1911

While the number of cases of infantile paralysis in 1911 was not nearly so large as that in 1910, yet the collected statistics, as given in *Public Health Reports*, April 19, 1912, show that the disease was widely distributed throughout the United States. The number of reported cases in 1910 was 5,861, with 950 deaths; in 1911, 1,931 cases with 440 deaths. These figures are taken from the reports of states in which the disease was reportable and from the printed bulletins of some other states. The report compiled by the Bureau of the Census from the registration area shows that the number of deaths for 1910 was 1,459. The data, however, are incomplete, and therefore the number of cases was undoubtedly considerably larger than these figures indicate. The deaths are probably more completely reported than the total number of cases. These figures, however, bear out our previous knowledge that the disease has alternate active and more or less quiescent periods owing to lack of susceptible individuals or to the attenuation of the infection. Both causes probably operate. An extension of the registration area to all of the states and the securing of complete reports would no doubt greatly increase the number of reported cases and would give valuable aid in the epidemiologic study of the disease.

## THE PREPARATION OF MANUSCRIPTS FOR PUBLICATION

The preparation for publication of the many papers read in the annual meetings, not to mention the volunteer contributions, is a more formidable task in THE JOURNAL office than many imagine. It is not probable that even authors who are extremely careful in the preparation of their manuscripts realize the amount of editorial work required on them before they are ready for the printer. With a little care and attention to a few simple suggestions, this labor could be greatly lessened, while no more work would be imposed on the writers of papers. It would, of course, require too much space here to mention all the points to which authors may profitably give special care. This subject, moreover, has been fully covered in a recent publication.[1] Attention, however, may be called to two or three points. It is almost needless to say that in this day manuscripts should be typewritten; in fact, nearly all of them are so prepared. But many are written in whole or in part with single spacing — an inexcusable fault, since double or triple spacing, which gives room for adding subheads, directions to the printer, etc., is just as easy. We have previously[2] mentioned the frequent lapses found in case reports. A third matter to which attention should be called concerns references to other papers or authors. THE JOURNAL publishes a pamphlet[3] explaining the bibliographic style followed in this office. It is better to treat bibliographic references as foot-notes; and all foot-notes, bibliographic or not, should be numbered consecutively in a single series from the beginning to the end of the paper. This may seem trivial, but is really important. If the author wishes to refer, further on in his article, to an author and publication already cited in precisely the same manner, he need not repeat the foot-note, but should merely use the reference number already assigned to that particular foot-note. In the manuscript the foot-notes may be placed at the bottom of the pages or at the end of the paper. Care in following these few simple directions and in reading manuscripts over after they have been copied will earn the undying gratitude of manuscript editors, compositors and proof-readers, not to mention the "ultimate" readers. It will also repay the author with the consciousness of having produced a creditable piece of work.

## SOME ROMANTIC RUBBISH OF PSEUDOSCIENCE

The average editor is often tempted to quote a striking or interesting item without due regard to the correctness of the information given or the weight of authority sustaining it. The more striking an item is, however, the greater the chance that, having gone through a great many hands, it may be correspondingly full of errors. An example in point is an inventory of the constituents of an average man of 150 pounds alleged to be based on chemical analysis. There is said to be enough hydrogen in combination in such an average man to fill a balloon and carry him above the clouds; enough lime to whitewash a chicken-coop; enough sulphur to rid a dog of fleas. These and other points mentioned made the paragraph seem of enough value to be printed not only in newspapers, but also in several medical journals. But these are the only items that are uniform in all versions. In one paper a man is said to contain enough iron for one medium-sized nail; in another, four ten-penny nails. In one his fat is alleged to be sufficient to make a cake of soap; in another, seven bars. The phosphorus constituent is said in one paper to be sufficient to make 2,200 matches, and in another, 8,064 boxes of matches—some difference. The average editor, to be sure, may argue that the items are interesting no matter which amounts are the correct ones. The heading used in one paper is "Unromantic but Scientific." We submit that a better one would be "Romantic but Unscientific Rot."

## OXYGEN INTOXICATION

It was recently asked if the authorities in charge of the Olympian Games this year to be held in Stockholm would permit the competitors to carry oxygen bags to take whiffs from while they run; it was contended—and this by so eminent a scientist as Sir Edwin Ray Lankester —that "as oxygen gas is not a drug, but as natural an article of consumption as water, there seems to be no reason why the runner should be disqualified from refreshing himself with it, as he may with water or soup." Oxygen gas is a drug in the sense that it has therapeutic value in affections of impaired respiration, such as comas and lobar pneumonia. Otherwise pure oxygen is as deleterious as any stimulant, for the stimulation is followed by depression. Frequent intoxication by this means must inevitably exhaust the vitality and shorten life. Nor is it true that "pure oxygen is as natural an article of consumption as water." Oxygen is safe for those in health only in its mixture as atmospheric air, with several parts of nitrogen. This is the only suitable form of oxygen inhalation for normal individuals — the form to which human and all other life has during the ages become adapted. Meddling with Nature is bound to be disastrous in the long run. Athletes have before this been given "jags" of undiluted oxygen, to stimulate them to outdistance their opponents. But such oxygen-made records will not for a moment stand in the estimation of a true sportsman, because they are not made under the conditions with which human life must ordinarily cope. Besides, such "sport" must inevitably invite collapse, ruined myocardia and premature death.

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[1] Suggestions to Authors, published by the American Medical Association. Sent on receipt of 25 cents.

[2] Easy Writing versus Easy Reading: A Hint to Authors, THE JOURNAL A. M. A., March 11, 1911, p. 750.

[3] The Bibliographic Style of the American Medical Association Press. Sent on receipt of 10 cents.

### A MEMORIAL PLANNED TO BE FORGOTTEN

It seems contradictory to charge the founder of a memorial with plotting its destruction, and yet it is easily possible so to arrange a commemorating institution that its existence is self-limited. An instance in point is the passing of a library left as a memorial to a physician, and housed in a building which he provided. There was no fund for the adding of books to this library. The result was that it contained only the books that were left by the physician himself, and these of course were old. Few of them, however, were old enough to be of great value; only one or two were rare books. the others only the ordinary type of fifty odd years ago. The income consisted solely of the rents from the building itself, which was managed by the heirs to whom the building was to revert when it ceased to be self-supporting. The natural result was that finally the income was not sufficient to maintain the place. The matter was taken into court and permission given to close it up. Libraries, when they cease to add new books, also become dead and therefore, apart from sentiment, there may be little to regret in the fact that this library protracts no longer its separate existence. Indeed, it is possible that there is too much striving for post-mortem immortality, and that a similar euthanasia for some other memorials would be a good thing for the world. Still, one must not disparage the pious sentiment that seeks to perpetuate the names and virtues of the dead, and since memorials must be the form in which many good works are embodied, it is instructive to note an example of the way in which a memorial should not be planned.

### THE ATLANTIC CITY SESSION

Next month the American Medical Association will hold an annual session at Atlantic City for the fourth time. This week we devote considerable space to the subject, especially to the programs of the fourteen sections. A glance at these programs will reveal that a variety of first-class scientific work is to be offered; in fact, one cannot realize the variety, the number and the character of the subjects to be discussed without realizing what modern medicine means, and what tremendous educational and uplifting influence such meetings as the annual sessions of the American Medical Association must be. But, while the scientific programs will be attractive to every medical man interested in his professional work, these gatherings offer opportunities for relaxation, for social enjoyment and for professional intercourse that can be obtained at no other time and under no other circumstances. There are brought together the city physician, the physician from a remote corner of the country, the specialist, the laboratory worker and the research student — all coming together for a common purpose: the improvement of self and of others. Ordinarily, after meetings had been held three times at one city, that city itself might not be considered any attraction. With Atlantic City, however, it is different. Here, indeed, it is less the city than the location—the proximity to the mighty, ever-changing Atlantic Ocean — that offers the attraction, especially to the inlander. Atlantic City, however, is practically attractive because it offers hotel facilities that are unique, in that there is accommodation for all who attend: those who want luxuries and are willing to pay for them can get them; those who are satisfied with plain, ordinary, every-day rooms and living can get them at a reasonable expense. Then, the Atlantic City people intend to do as they did before: make it pleasant for all who attend. They are, as usual, preparing for the coming meeting, and are evidently determined to make it even more satisfactory than any of the previous sessions. Appearances indicate that the coming session at Atlantic City will be the largest ever held by the Association.

### DR. PEARSONS

With the death of Dr. D. K. Pearsons, chronicled in another column of this issue, a remarkable character has passed away. After practicing medicine in New England for a few years, Dr. Pearsons came to the west and engaged in the real estate business, in which he made a fortune of several million dollars. For many years past he has been happily busy dispensing this immense sum in the endowment of various institutions, choosing mainly those smaller colleges of the middle west which seemed to him to be especially efficient in the upbuilding of Christian character. It was his pet fancy to be his own administrator, and he died a poor man, having reserved for his current expenses simply an annuity which terminated with his death. His name is honored throughout the country, and his greatest memorial is in the lives of young men and women who are better able to prepare themselves for life through the endowments he made to institutions of learning.

### WHAT DETERMINES THE ONSET OF LABOR?

The existence of a chemical correlation between the mammary glands and the uterus and its appendages has long been postulated. The modern discussion of hormones has concerned itself with the activators of milk secretion; and their origin in this case has variously been ascribed to the placenta, the developing fetus and even the uterus. But regarding the stimulus which incites this latter organ to activity, in other words, which brings on the onset of labor in the pregnant female, little is known. Still less can be said with reference to the precise causes of premature or delayed labor. In connection with experiments on the etiology of milk fever in cattle and its relation to human eclampsia which were recently discussed in THE JOURNAL,[1] Healy and Kastle[2] made the observation that pregnant guinea-pigs aborted after receiving intraperitoneal injections of the colostrum of cows. Fresh milk failed to produce abortion after injection. Whether the substance, present in colostrum but not in milk, and capable of bringing about abortion, is of the nature of the so-called hormones cannot yet be stated with any certainty. The fact that it retains its potency after being heated to boiling for a short time indicates that it differs from soluble ferments or enzymes and many toxins. For the moment the classification of the substance is of secondary consequence. The chief interest in this announcement centers in the suggestion of a hitherto unrecognized correlation between the mammary glands and the uterus — an indication that the internal secretion of the mammary gland may stimulate the mother to labor and thus induce the birth of the offspring.

# Medical News

## ALABAMA

**New Officers.**—Marengo County Medical Society: president, Dr. J. B. Whitfield, Demopolis; secretary, Dr. W. H. Abernethy, Old Spring Hill.

**Personal.**—Dr. William H. Sanders, Montgomery, has been reelected state health officer. Dr. Sanders, who has been ill with influenza, is reported to be much better.——Dr. T. L. Robertson, Birmingham, has resigned as a member of the state board of medical censors.——Dr. J. W. Lawrence, Turkeytown, was kicked by a horse, April 13, fracturing his collar bone and causing serious bruises on the face and body.

**Home-Coming Week.**—The "Home-Coming Week" of the alumni of the School of Medicine of the University of Alabama, Mobile, will be held May 3-6. An interesting program has been arranged, both for the reading of papers and in clinical work. On the first day there will be a symposium on public health matters and sanitation; on the second day, the Rhett Goode lecture will be given; on the third day, there will be a boat ride to the Eastern Shore of Mobile Bay or Fort Morgan, and on the fourth day, the meeting of the State Alumni Association will be held. The following officers were recently elected: president, Dr. John O. Rush; vice-president, Dr. Percy O. Chaudron; secretary, Dr. Eugene Thames, and treasurer, Dr. Marion J. Bancroft, all of Mobile.

**State Association Meeting.**—The annual meeting of the Medical Association of the State of Alabama was held in Birmingham, April 17-19, under the presidency of Dr. Lewis Coleman Morris, Birmingham. Resolutions were presented by Dr. L. G. Woodson, Birmingham, and adopted by the association, placing the association on record as giving its unqualified endorsement to the policy of the *Birmingham Ledger* in refusing to receive quack medical advertisements. Mobile was selected as the next place of meeting and the following officers were elected: president, Dr. Harry T. Inge, Mobile; vice-president, Dr. H. W. Blair, Sheffield; secretary, Dr. J. Norment Baker, Montgomery (reelected); treasurer, Dr. H. G. Perry, Montgomery (reelected); orator, Dr. Henry Green, Dothan, and censors, Drs. William H. Sanders, Mobile; Russell M. Cunningham, Ensley, and Charles A. Mohr, Mobile.

## CALIFORNIA

**New Officers.**—Santa Barbara County Medical Society: president, Dr. Rexwald Brown; secretary, Dr. T. A. Stoddard, both of Santa Barbara.

**New Hospital.**—Dr. H. S. Warren, Coalinga, has purchased the American Hospital, Coalinga, which will from this time on be known as the Coalinga General Hospital. Dr. Tillotson is to be retained in charge of the institution.

**Anniversary Meeting.**—The forty-fourth anniversary of the founding of the Sacramento Society for Medical Improvement was celebrated March 17, with a banquet at the Hotel Sacramento. Dr. George A. White acted as toastmaster and Dr. H. L. Nichols, a charter member, and Dr. T. W. Huntington, San Francisco, were guests of honor.

**Personal.**—Dr. J. B. Wood, Oakland, was seriously injured in a collision between his automobile and a railway train at Emeryville.——Dr. Thomas W. Huntington has resigned from the Health Board of San Francisco.——Dr. S. W. Hopkins, Lodi, has been elected medical director of the Grand Army of the Republic for the Departments of California and Nevada.

**The Battle Against Tuberculosis.**—The executive committee of the State Tuberculosis Commission, headed by Dr. George H. Kress, Los Angeles, has named a group of fifty citizens—more than one-half of whom are from Los Angeles and vicinity—as members of ten sub-committees which are to make a comprehensive report of the conditions in their respective localities. On the summit of a hill, near San Dimas, the largest tuberculosis sanatorium in the world is planned, to be erected by the state, at an initial expense of about $150,000.

**Medical Building for Los Angeles.**—At a meeting of medical men of Los Angeles, April 2, the Los Angeles Medical Association Building Company was organized and the following were elected directors: Drs. H. Bert Ellis, Albert Soiland, O. O. Witherbee, Stanley P. Black, J. R. French, Granville MacGowan, John R. Haynes, William M. Lewis, C. W. Bryson, E. C. Moore and C. H. Whitman. The directors elected Dr. H. Bert Ellis, president, and Dr. J. R. French, secretary. It is proposed to build a twelve-story office building at the corner of Sixth and Olive Streets for the exclusive use of physicians and dentists, to cost a million and a half dollars. The building is to have stores on the ground flour; offices up to the twelfth floor and on the twelfth floor the clubrooms, museum, library, etc., of the Los Angeles County Medical Association, with an amphitheater on the roof, roof-garden and probably an emergency hospital.

## ILLINOIS

**New Officers.**—Edgar County Medical Society, at Paris, April 17: president, Dr. B. G. R. Williams, secretary-treasurer, Dr. George H. Hunt, both of Paris.

**Tuberculosis Colony Opened.**—The tuberculosis tent colony at the Oak Forest Infirmary was opened April 24. Twelve tents are already occupied and others are being prepared.

### Chicago

**Personal.**—Dr. William Lenneker, for more than forty years a practitioner of Chicago, is reported to be seriously ill at his home.——Dr. Frank Billings and daughter sail for Europe, May 22.——Dr. and Mrs. E. N. Elliott sailed for Europe, April 22.

**New Lying-In Hospital.**—At a meeting of the Mothers' Aid of the Chicago Lying-In Hospital and Dispensary, April 24, it was announced that the association would soon erect an additional hospital building at Fifty-First Street and Vincennes Avenue, to cost $250,000. The new building will be five stories in height and will have accommodation for 107 patients.

**Postgraduates Banquet.**—At the close of a course of postgraduate study by some eighty-two men from various states in the middle west, they were tendered a banquet by the faculty of the Chicago Policlinic and Hospital. There were first a series of surgical clinics, then a reception with addresses by Dr. John H. Chew, president of the faculty, and by Dr. C. W. Barrett, with responses by members of the class. It was a happy occasion. While in Chicago, a number of the members of the class took occasion to visit the Association building and to see some of the details of the various departments.

**Medical Reserve Corps Election.**—The annual meeting of the Medical Reserve Corps, U. S. Army, Illinois Division, was held at the Sherman House, April 29, Lieutenant Frank Billings presiding. Lieut-Col. William B. Bannister, M.C., U.S. Army, gave an interesting practical talk on the routine of the officer of the Medical Reserve Corps from the time he is called into service until he reaches the front, and his duties there. The following officers were then elected: president, Lieut. Edmund J. Doering; vice-president, Lieut. Samuel C. Stanton; secretary-treasurer, Lieut. J. Allan Hornsby, and councilors, Lieuts. Jacob Frank and Thomas J. Sullivan.

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[1] New Suggestions Regarding Eclampsia, THE JOURNAL A. M. A., April 20, 1912, p. 1201.

[2] Healy, D. J., and Kastle, J. H.: The Internal Secretion of the Mammæ as a Factor in the Onset of Labor, Jour. Infect. Dis., 1912, x, 244.

### INDIANA

**School of Public Hygiene.**—The Indiana University School of Medicine announces that a school of public hygiene will be opened, beginning with the fall term of this year. The course will be post-graduate and will lead to a degree of Doctor of Public Hygiene.

**Appointments in Medical Corps.**—Dr. La Rue D. Carter, Richmond, has been appointed major and Dr. Frank C. Robinson, Martinsville, captain, and Drs. John W. Emhardt and Blanchard D. Pettijohn, both of Indianapolis, have been appointed first lieutenants in the Medical Corps of the National Guard, Ind.

**State Board Election.**—At the annual meeting of the State Board of Medical Registration and Examination, Dr. James M. Dinnen, Fort Wayne, was elected president; Dr. William A. Spurgeon, Muncie, vice-president; Dr. William T. Gott, Crawfordsville, secretary, and Dr. Moses S. Canfield, Frankfort, treasurer.

**District Society Meeting.**—At the annual meeting of the Twelfth District Medical Society held in Fort Wayne, April 10, the following officers were elected: president, Dr. J. W. McKinney, Bluffton; vice-presidents, Drs. S. V. Wilking, Roanoke, and M. E. Klinger, Garrett; and secretary-treasurer, Dr. Lyman T. Rawles, Huntertown.

**Counties of State Grouped.**—The ninety-two counties of the state have been separated into five groups by the State Board of Health for the work of the five commissioners appointed by the governor to arouse interest in and prepare an exhibit for the International Congress of Hygiene and Demography. The north section is to be in charge of Dr. J. B. Berteling, South Bend; the north central section in charge of Dr. J. S. Boyers, Decatur; the central section in charge of Dr. S. E. Bond, Richmond; the southeast section in charge of Dr. H. H. Sutton, Aurora, and the southwest section, in charge of Dr. J. H. Morrison, Hartsville.

**The Tuberculosis Conflict.**—The Antituberculosis Society from Montgomery County organized at Crawfordsville, April 16. Dr. F. A. Dennis was elected secretary.——An antituberculosis society has been organized at Danville, with Dr. T. J. Beasley president and Dr. Amos Carter, Plainfield, treasurer.——Dr. C. C. Morris, Rockville, has been elected president of the Parke County Antituberculosis Association.——At the annual meeting of the Vanderburg County Antituberculosis Society in Evansville, it was reported that during the year 52 patients were treated at the Boehne farm, with six deaths; 13 patients left without the consent of the physicians; 11 were discharged in the regular way and 3 were expelled for insubordination. There are at present 16 patients at the camp. Dr. J. Y. Welborn was elected president; Dr. Leopold Heimann, vice-president; Dr. C. A. Hartley, general secretary and superintendent of the Boehne farm, and Dr. G. C. Johnson, recording secretary.

**Personal.**—Drs. E. D. Clark and Thomas B. Noble have resigned as members of the Indianapolis Board of Health.——Dr. J. McLean Moulder, Kokomo, has been elected superintendent of the Methodist Episcopal Hospital, Indianapolis, vice Dr. Willard T. Graham, resigned, to accept a similar position in the Methodist Hospital, Des Moines, Ia.——Dr. Charles R. Crow, Indianapolis, is ill with locomotor ataxia.——Dr. J. W. Birchfield, Indianapolis, has been appointed assistant to the secretary of the State Board of Health.——Dr. O. J. Gronendyke, Newcastle, who has been seriously ill with erysipelas, is reported to be convalescent.——Dr. J. W. Patterson, Fairmount, is reported to be seriously ill with rheumatism.——Dr. S. G. Rogers, Darlington, is reported to be critically ill.——Dr. W. M. Bramigk, Fort Wayne, recently fell heir to a legacy of $16,700 by the death of an uncle in Germany.——Dr. John S. Coffman, Muncie, who has been seriously ill with influenza, is reported to be convalescent.——Dr. T. R. Rice, Petersburg, was painfully injured in a runaway accident recently.——Dr. Brose S. Horne, Gas City, was seriously injured in a trolley car collision recently.

### KENTUCKY

**Ice Cream Must be Wrapped.**—The health office of Louisville has decided to refuse permits to vendors of ice cream who do not wrap the ice cream in impervious paper.

**Bids for Sanatorium.**—Bids for the new building, to be erected on the grounds of Waverly Hill Sanatorium, near Louisville, have been received. The structure is to be of frame and stucco and will cost about $25,000.

**New Home for Nurses.**—A building permit has been issued for a home for nurses of the Jewish Hospital Association, to be erected on the lot adjoining the hospital, at a cost of $9,000. The building will be two stories in height and will contain twenty rooms, a reception room, office and recreation rooms.

**Hookworm in Kentucky.**—*Bulletin 8* of the State Board of Health of Kentucky just issued takes up the question of hookworm in Kentucky and is illustrated by a map which shows the twenty-five counties, chiefly in the southern and eastern portions of the state, which are infected. The bulletin is profusely illustrated, showing the individuals and families affected, the poor housing conditions and the common absence of privies. It also tells how the disease can be cured and prevented.

### LOUISIANA

**New Officers.**—Iberville Parish Medical Association, at White Castle: president, Dr. A. A. Landry; secretary, Dr. Roman D. Martinez.——Calcasieu Parish Medical Society, at Lake Charles: president, Dr. H. L. Sanders, Westlake; secretary-treasurer, Dr. Van Glenn Yeager, Lake Charles.——East Feliciana Parish Medical Association, at Clinton: president, Dr. W. D. Wall, Slaughter; secretary-treasurer, Dr. R. P. Jones, Clinton.——Natchitoches-Red River Bi-Parish Medical Society, at Coushatta: president, Dr. W. F. Sibley, Victoria; secretary-treasurer, Dr. E. W. Breazeale, Campti.

**State Society Meeting.**—The thirty-third annual meeting of the Louisiana State Medical Society was held in New Orleans, April 23-25, under the presidency of Dr. R. O. Simmons, Alexandria. The following officers were elected: president, Dr. B. A. Ledbetter, New Orleans; vice-presidents, Drs. G. C. Chandler, Shreveport; George S. Bel, New Orleans, and J. L. Adams, Monroe; secretary, Dr. Joseph D. Martin, New Orleans; treasurer, Dr. Maurice J. Gelpi, New Orleans; delegate to the American Medical Association, Dr. Charles L. Chassaignac, New Orleans, and alternate, Dr. Joseph D. Martin, New Orleans. Baton Rouge was selected as the place of meeting for 1913.

**Personal.**—Dr. L. H. Jastremski, Houma, has been elected president of the Ice Manufacturers of Louisiana.——Surgeon J. H. White, U.S.P.H. and M.-H. Service, returned to New Orleans, April 8, after a three weeks' tour of Central American ports.——Dr. B. C. Fry has resigned as president of the Jennings Board of Health.——Dr. Ernest S. Lewis, senior professor in Tulane University, celebrated the fiftieth anniversary of his entrance into practice of medicine last month.——Dr. Emmet A. Welsh has succeeded Dr. Arthur A. Herold as pathologist of the Shreveport State Charity Hospital.——Dr. Oscar Dowling has been suffering with an abscess of the nasal cavity and was obliged to undergo operation April 6, and this prevented him from presiding at the health conference of the Southern Commercial Congress at Nashville.

### MARYLAND

**New Officers.**—Cecil County Medical Society: president, Dr. H. Arthur Mitchell; secretary-treasurer, Dr. Howard Bratton, both of Elkton.

**Directors Entertain Consulting Staff.**—The directors of the Havre-de-Grace Hospital entertained the consulting staff and physicians of Harford County with a baked shad dinner April 23.

**Personal.**—Dr. J. L. Mann, Cumberland, who was operated on for appendicitis in St. Leo's Hospital, is reported to be progressing favorably.——Dr. Marshall B. West, Catonsville, sanitary officer of the First District of Baltimore County, is reported to be ill with pneumonia.——Dr. T. J. Conrey, Chesapeake City, has been appointed secretary of the Cecil County Board of Health.

**Saccharin an Adulteration.**—The State Board of Health has announced that after May 1 it will regard as adulterated any foods containing saccharin which are manufactured or offered for sale in Maryland, but substances containing saccharin and plainly labeled to show that they are intended for use in sickness are not affected by the prohibition. They come under the designation of "drugs."

**Annual Meeting of Faculty.**—The Medical and Chirurgica Faculty of Maryland held its one hundred and fourteenth annual meeting in Baltimore, April 23-25.——The State Board of Medical Examiners announced that in future no candidate would be permitted to take the state examination unless he could present a diploma from a high school.——The success of the new orchestra, headed by Dr. Charles F. Nolen, was complete and the chorus also sang well. The orchestra consists of sixteen pieces and the chorus of nineteen, under the direction of Dr. B. Merrill Hopkinson.——Dr. Harry Friedenwald presented the John M. T. Finney fund of $10,000 for the advancement of surgery, which was accepted by the faculty on the terms imposed by the donors, namely, that it is to be a permanent fund and in the hands of a committee who are to have charge of the purchase of books, arrangements of lectures, etc. The committee elected consists of Drs. J. M. H. Rowland, J. C. Bloodgood, S. T. Earle, W. W. Russell and Harry Friedenwald.——On behalf of friends, Dr. William H. Welch presented to the society an oil painting of Dr. Eugene F. Cordell, past president.——The following officers were elected: president, Dr. A. C. Harrison, Baltimore; vice-presidents, Drs. C. F. Davidson, Easton; J. Staige Davis, Baltimore, and E. B. Claybrook, Cumberland; councilors, Drs. J. S. Bowen, Mount Washington; P. Wroth, Hagerstown; David Streett, Baltimore, and Guy Steele, Cambridge; secretary, Dr. John Ruhräh, Baltimore; treasurer, Dr. William S. Gardner, Baltimore; trustees, Drs. J. W. Chambers, Baltimore, and M. L. Todd, Baltimore; delegate to the American Medical Association, Dr. Hugh H. Young, Baltimore; alternate, Dr. W. R. Stokes, and members of the state examining board, Drs. Herbert Harlan, Baltimore, and Franklin B. Smith, Frederick.

### Baltimore

**Personal.**—The resignation of Dr. Ira Remsen as president of Johns Hopkins University was formally accepted, April 21. ——Drs. J. Whitridge Williams and A. G. Rytina have been appointed members of the City Board of Charities.——Dr. Howard E. Harmon, a member of the surgical staff of Mercy Hospital, was operated on in that institution, April 23, for appendicitis.

## MICHIGAN

**Leper in Bay City.**—Dr. A. S. Warthin of the pathologic department of the University of Michigan, after examination, has reported that Herman Hirschfield of Bay City, who is being held as a leprosy suspect at Centerville, Ia., is suffering from leprosy.

**Clean-Up Day.**—Governor Osborn has designated May 15 as public health and clean-up day in Michigan and the State Board of Health requests that this day be made a day of general cleaning up of unsanitary surroundings, and the establishment of sanitary and healthful conditions.

**State Health Officers to Meet.**—At a meeting held in Detroit the first week in April of the officers of the Michigan Health Officers' Association, which was informally organized in January last, it was decided to hold a meeting for formal organization May 22 and 23 at Ann Arbor, at which the new constitution and by-laws will be presented and acted on, and permanent officers will be elected.

**The Commission Question.**—At a meeting of the Detroit Academy of Medicine, April 23, a resolution was unanimously adopted setting forth that Article VI Section 4 of the Principles of Ethics, which refers to payment of commissions, be approved by the Detroit Academy of Medicine and that any member convicted of this offense before the board of directors be expelled from membership.

**Personal.**—Charles E. Marshall, Ph.D., professor of bacteriology and hygiene in the Michigan State Agricultural College, has accepted the directorship of the graduate school and professorship of microbiology at the Massachusetts Agricultural College.——Dr. William H. Deerhake of the Michigan State Soldiers' Home has been appointed a member of the medical staff of the Soldiers' Home, Dayton, O.——Dr. Jeanette Brigham has been appointed health officer of Howell——Dr. William F. Breakey, Ann Arbor, for forty-four years a member of the medical faculty of the University of Michigan, resigned April 25.——Dr. Russell P. Wixom, Detroit, is reported to be ill with heart disease at his home.——Dr. M. P. Fenelon, Escanaba, is reported to be seriously ill at his home.——Dr. Roland F. Webb, Grand Rapids, was seriously bruised and suffered a nervous shock in a collision between his automobile and a Pere Marquette train.——Dr. S. S. Lee, chief physician of the Osceola Mine, Calumet, has resigned and will practice in Lowell.—Dr. L. A. Roller has been reappointed a member of the Grand Rapids Board of Health.

## MISSISSIPPI

**Tri-County Society Organized.**—The Tri-County (George, Greene and Perry) Medical Association met at Lucedale for organization March 13 and elected Dr. W. D. Ratliff, Lucedale, president, and Dr. J. E. Green, McLain, secretary-treasurer.

**Bettter Sanitary Conditions Demanded.**—The Railroad Commission has cited every railway doing business in Mississippi to appear before the commission, May 7, and show cause why the windows of every passenger coach should not be screened; why sanitary closets should not be built at every stopping-place where there is no sewerage system, and why those located in towns with a sewerage system should not be kept in sanitary order.

**Personal.**—Dr. John S. Ewing has succeeded Dr. B. B. Martin, resigned, as city physician of Vicksburg.——The home of Dr. C. L. Bufkin, near Columbia, was destroyed by fire, March 24.——Dr. K. T. Klein has been appointed house surgeon of the Matty Hersee Hospital, Meridian.——Dr. B. B. Martin assumed charge of the State Charity Hospital, Vicksburg, March 24, relieving Dr. S. W. Johnston, who will reenter private practice.——The four-story brick building in Aberdeen, belonging to Dr. J. W. Eckford, was burned to the ground, March 15. Dr. Eckford loses $10,000, and Dr. W. M. Paine, $2,000.

## NEW JERSEY

**Attending Staff Appointed.**—At the annual meeting of the Camden County Medical Society, April 22, the following attending staff for the Camden City Dispensary were appointed: medical and surgical, Drs. W. H. Pratt, E. W. Rosell, H. F. Rose, M. M. Osmun, H. F. Palm, E. M. Richardson and H. I. Goldstein; gynecology, Dr. E. M. Richardson; nose, throat and ear, Drs. H. H. Sherk and H. F. Rose; district physicians, Dr. H. F. Palm and W. H. Pratt; microscopist, Dr. L. B. Hirst.

**New Officers.**—Camden County Medical Society, at Delair, April 22: president, Dr. John K. Bennett, Gloucester City; secretary, Dr. Daniel Strock, Camden.——Union County District Medical Society, at Elizabeth: president, Dr. Charles H. Schlichter; secretary, Dr. Milton A. Shangle, both of Elizabeth.——Cumberland County Medical Society, at Millville: president, Dr. John W. Wade; secretary, Dr. H. Garrett Miller, both of Millville.——Passaic County Medical Society, at Paterson: president, Dr. Robert M. Curts; secretary, Dr. Charles R. Mitchell, both of Paterson.

**Personal.**—Dr. R. C. Purnell Truitt, for two years a member of the staff of the New Jersey State Hospital, Trenton, has been appointed chief resident physician of the Hospital for the Insane, Bayview, succeeding Dr. H. D. Purdum, Sykesville.——Dr. and Mrs. W. H. Nafis, Trenton, sail for Europe this month.——Dr. James T. Wrightson, Newark, has been appointed by Dr. Herman C. H. Herold, president of the Board of Health, as a member of the special committee to act with the common council in designing the proposed central public health building at Newark.

**Preventorium Opened.**—The Tuberculosis Preventorium for Children, at Farmingdale, was opened April 25. The original site for the institution was in Lakewood, but after the institution had been opened, opposition developed to the presence of an institution of that kind in Lakewood and its location was changed to Farmingdale, where 170 acres of woodland and farm property had been donated. The idea of the institution is to help to save the growing generation by attacking tuberculosis early and so srengthening the body that it may resist the development and spread of the disease. At an outlay of $150,000 the institution has been built and equipped and will care for 172 children at a time, or about 600 per annum, as the average stay of the individual is from three to four months. The children are placed in simple, attractive open camps, no discrimination is made as to race or creed and the care and treatment is absolutely free. Records are kept and a follow-up system is carried on.

## NEW YORK

**Chairmen of State Society Committees.**—At the meeting of the Medical Society of the State of New York, the following chairmen of committees were appointed: scientific work, Dr. Thomas J. Harris, New York City; legislation, Dr. R. P. Bush, Horse Heads; public health, Dr. J. M. Van Cott, Brooklyn, and arrangements, Dr. W. T. Mulligan, Rochester.

**Tuberculosis Notes.**—Camp Healthmore near Utica was opened May 1. The rule that only incipient cases be admitted is to be strictly observed and the executive committee from the camp will consist of Drs. F. D. Crim, T. C. Gifford, L. B. Amsbry and F. T. Owens.——Sunny Crest Hospital, the municipal tuberculosis sanatorium of Auburn, has opened and on May 1 there were fifteen patients in the building.

**Working of the Tuberculosis Law.**—The State Department of Health has appointed Dr. C. S. Prest of Waterford a special representative to visit the various cities of the state and investigate the working of the tuberculosis law. He will not only ascertain the tuberculosis situation in each locality, but what proportion of cases are being reported to the health authorities, and whether other provisions of the tuberculosis law are being carried out and what organized efforts are being made to control the disease. He will also suggest methods by which the efficiency of the work being done may be increased.

**Personal.**—Dr. W. C. Roser, Northwestern, was struck in the eye by an iron bar, April 21, and so injured that the removal of the eye was necessary.——Dr. Chester Waterman, Ogdensburg, has been appointed second assistant physician at the St. Lawrence State Hospital.——Dr. O. Howard Cobb, West Haverstraw, has succeeded Dr. James S. Carson as superintendent of the State Institution for Feeble-Minded Children, Syracuse.——Dr. D. V. Still, Johnstown, is reported to be seriously ill in Nathan Littauer Hospital, Gloversville, with uremia.——Dr. Frederick C. Conway has been appointed city physician of Albany, vice Dr. Joseph M. Blatner.——Dr. George G. Lempe has been elected president of the board of trustees of the German Hospital Association, Albany.——Dr. E. H. Bullock, Syracuse, who has been seriously ill with pneumonia, is improving.

**The Insane Alien Problem.**—Governor Dix has appointed Dr. Spencer Dawes to investigate the insane aliens in this state. This is in response to the plea of the Lunacy Commission of the State of New York that the laws regarding the deportation of the criminal insane be investigated. As has been stated before, the alien insane in the institutions of the state number about 75 per cent. of the total while the alien population is estimated at about 25 per cent. Under the present laws, which the Commission in Lunacy maintains are defective, if it can be proved, within three years of his entry, that an alien had insane tendencies before he entered this country, he can be deported. A board appointed in 1904 succeeded in having 3,718 deported. It is thought that Attorney General Wickersham's decision in the early part of the year will greatly limit the power of the board. This decision maintained that the board was acting in its judgments regarding certain forms of insanity on a medical opinion, and not on a fact, and it is feared that this will greatly nullify the power of the board. Dr. Dawes after making an investigation is to report and to suggest legislation to relieve the situation.

### Buffalo

**Medical Women to Meet in Buffalo.**—The annual meeting of the Women's Medical Society of New York State will be held in Buffalo, May 10, under the presidency of Dr. Grace Peckham-Murray.

**Health Department Downtown.**—The offices of the Department of Health have been removed from Fifty-Fifth Street and Sixth Avenue to the new building at Walker and Center Streets, Buffalo.

**Sanitary Measures for Street Cars.**—Under an order from the health commissioner and superintendent of police, smoking on trolley car platforms was discontinued on and after Sunday, April 21.

**West Farm Site Selected.**—Mayor Fuhrmann has approved the action of the common council favoring the purchase of the West farm site, a plot of eighty-one acres at Kensington Avenue and Grider Street, as a site for a hospital for advanced cases of tuberculosis.

**Bids for New Hospital.**—Dr. Roswell Park, chairman of the board of trustees of the State Institute for the Investigation of Malignant Diseases, formerly the Gratwick Laboratory, Buffalo, has received bids for the construction of a hospital to be operated in connection with that institution. The bids varied from $77,113 to $65,219. The building is to be of fireproof construction and four stories in height.

### New York City

**Memorial Services.**—The Medical Society of the County of Kings held special services in the Library Building, April 21, in memory of the members who had died since January 1, 1911.

**Personal.**—Dr. Thomas Addis Emmet, the venerable gynecologist and collector of Americana, is to live on the site of his old home in Madison Avenue, on the sixteenth floor of a new building which he is erecting there.——Dr. A. C. Carpenter was seriously injured at his summer home near Port Jervis, April 24, by a circular saw.

**New Dispensary Opened.**—The Bronx Dispensary, the basis of the first hospital for that borough, was opened April 20 at the new Dispensary Building, 1385 Fulton Avenue. The dispensary at present occupies a frame building of twenty rooms and is divided in sixteen departments, including a department in dentistry, and this department with an emergency hospital will be open day and night. At the opening exercises, April 21, addresses were made by Dr. Abraham Jacobi and others.

**Sanitation in Earlier Times.**—The March *Bulletin of the New York Department of Health* contains an interesting history of sanitation in that city and describes the evolution of the Health Department. From this it may be learned that the first sanitary law passed in 1784 in the state and city was a quarantine act giving the governor power to appoint a physician to inspect all vessels. In 1795 there was an outbreak of yellow fever and a more serious one in 1798 when 2,086 persons out of a population of 55,000 died of the disease. The first city Board of Health was appointed in 1827 and one peculiar feature of all the health laws was that the board's discretion and opinion were always supreme, even above courts, where matters pertaining to health were concerned. When the city first appropriated $100 for street cleaning it was regarded as an outrageous waste of public funds. Even as recently as 1866 there was no provision for the removal of garbage or ashes; there were 20,000 people living in cellars, showing that the tenement problem was as acute then as now; there was a death rate of 30.30 per 1,000, while in 1911 it was 15.13. There were few sewers, many cesspools and many stables; cows were kept in ill-ventilated stables and the milk supply was perniciously unhealthy; slaughter houses and distilleries still further added to the unsanitary condition. *The Bulletin* then describes the activities of the Health Department at the present time and concludes that no one need regret the passing of the "good old days."

### OHIO

**New Officers.**—Morrow County Medical Society, at Mount Gilead, April 10: president, Dr. J. C. McCormick, Mt. Gilead; secretary, Dr. J. H. Jackson, Edison.

**The Coming State Society Meeting.**—Arrangements have been practically completed for the annual meeting of the Ohio State Medical Association to be held in the Memorial Building, Dayton, O., May 7-9, under the presidency of Dr. Horace Bonner, Dayton.

**Hospital Fund Grows.**—The St. Elizabeth Hospital Association, Youngstown, on the third day of its campaign, had obtained subscriptions amounting to $61,129.12 of the $100,000 which it desires to secure. The Mahoning Valley Medical Society, at its meeting, April 16, officially endorsed the campaign and the charity for which it is being conducted.

**Personal.**—Dr. George W. Crile, Cleveland, has been elected a member of the American Philosophical Society.——Dr. W. H. Lewis, for thirteen years superintendent of the Protestant Hospital, Columbus, has resigned, to take effect June 1.——Dr. H. E. Palmer, Dayton, is seriously ill with septicemia, due to an operation wound.——Dr. W. W. Smith, Portsmouth, who underwent operation in Christ Hospital, Cincinnati, in March, has recovered and resumed practice.——Dr. M. S. Clark, Youngstown, announces that he will retire from active practice about June 1 and will move to Mentor.

**Memorial to First Cesarean Operator.**—On April 22, the monument in memory of Dr. John L. Richmond, Newtown, who performed the first cesarean section of record in the United States, was dedicated. Dr. E. Gustav Zinke, Cincinnati, was master of ceremonies and addresses were made by Dr. T. D. Meguire, Cincinnati, president of the McDowell Medical Society; Prof. Charles R. Henderson, Chicago, on "Progress in Saving Infant Life Since my Grandfather's Time;" Dr. Henry Schwarz, St. Louis, on "The Porro Operation and the Revival of the Classical Cesarean Section;" Dr. A. B. Davis, New York City, on "Modern Methods in Cesarean Section;" Dr. L. S. McMurtry, Louisville, on "Richmond and McDowell;" Dr. Miles F. Porter, Ft. Wayne, Ind., on "The Early Pioneers in Abdominal Surgery;" Dr. O. G. Pfaff, Indianapolis, on "The Obstetrician of To-day," and Dr. Charles A. L. Reed, Cincinnati, on "More Recent Celebrities." The monument was unveiled by Professor Henderson.

### Cincinnati

**Detention Ward to be Established.**—The City Hospital Commission has granted the request of Dr. C. S. Rockhill for the establishment of a detention ward at the tuberculosis sanatorium. The ward will be established in one of the old buildings.

**Personal.**—Dr. O. V. Huffman has resigned his several positions at the Cincinnati City Hospital and in the Ohio Miami Medical College to accept an appointment in the department of clinical pathology of the College of Physicians and Surgeons, New York City.——Drs. W. A. Lucas, E. D. Allgaier, G. Mombach, J. S. Caldwell and Starr Ford have been appointed members of the City Hospital laboratory staff.

## PENNSYLVANIA

**Memorial Ward Presented to Hospital.**—The Houston Memorial Ward recently completed was formally presented to the board of managers of the Chester Hospital, April 10. The building is intended for the care and treatment of children up to the age of twelve years, is fire-proof, octagonal in shape, and connected with the main institution by an overhead solarium. The basement will be utilized as a lecture room and class room for nurses and as a meeting place for the Delaware County Medical Society.

**Additions to Hospitals.**—The new laboratory recently installed on the fourth floor of the Scranton State Hospital cost about $8,000. Adjoining the general chemical room is a smaller room used as a library, an office for Dr. J. D. Wilson, the pathologist and bacteriologist in charge, and for bacteriologic work. It also has an animal room where guinea pigs, rabbits and other animals can be kept.——Work was begun April 18 on the three-story addition to the hospital of the Woman's Medical College, Pittsburgh. The building is to be of brick and steel, fire-proof, and will cost $50,000.

**Brown Estate Condemned.**—Two experts, at the invitation of he Citizens' Committee on Municipal Charities, inspected the lexander Brown estate and condemned it as a site for the ome of the Feeble-Minded, as there is accommodation for ot more than 300 and the city must prepare to provide or 1,400 and have room besides for gardening and out-door ork for these inmates. On April 16, a subcommittee met, eceived the report and approved the suggestion of Dr. oseph S. Neff, director of the Department of Health and harities, that the new institution be erected on the Worthngton tract of the Byberry Farms, owned by the city.

**Personal.**—Dr. Smith Armor, Columbia, celebrated his ighty-eighth birthday anniversary April 19.——Dr. J. R. Bor-nd, Franklin, who was struck by a street car several weeks go fracturing his leg, collar-bone and ribs, is reported to be onvalescent.——The automobile of Dr. John N. Becker was tolen April 16, while he was making a call at the Reading ospital.——Dr. A. B. Painter, Mill Hall, has been appointed member of the medical staff of the Lock Haven Hospital. —Dr. John Murphy, Loretto, who went south for his health everal months ago, has returned home considerably improved. —Dr. John M. Sheedy has been elected president of the ltoona Board of Health.——Dr. J. D. Graber, Royersford, as purchased the old homestead of the Late Dr. B. F. Disant, Limerick Center, and will retire from active practice.

### Philadelphia

**Annual Banquet.**—The Northern Medical Association of hiladelphia, now in the sixty-sixth year of its existence, held s annual banquet at the Hotel Majestic, April 30. Dr. illiam H. Welch, Baltimore, was the guest of honor.

**Hospital News.**—An additional building, containing a ma-rnity ward, operating room, private rooms and dispensary as opened in connection with the Northwestern General Hos-tal, April 27, when a reception was given by the ladies' ixiliary.

**Personal.**—Dr. Joseph C. McCracken has just returned from ina, where he has been in charge of the university's medical hool in Canton.——Dr. Herman Trager, resident physician the Mt. Sinai Hospital, was thrown from the hospital ambu-nce in a collision with a trolley on April 27, but escaped rious injury.

**Doctors Qualify for City Service.**—On April 26, the Civil rvice Commission published the list of persons eligible for pointment as assistant medical inspectors in the Bureau of ealth at a salary of $1,400 a year. Seventy-six qualified r the inspectorships, but only one woman qualified as super-sing nurse at the Philadelphia Hospital for Contagious Dis-es, with a salary of $1,200.

**Eligible List for Blockley Interns.**—The Civil Service Com-ssion, on April 23, issued an eligible list of successful candidates for the position of intern at the Philadelphia General Hospital, embracing ninety names of recent graduates from the city medical schools. A senior of Jefferson Medical College headed the Civil Service list, the second place went to a senior of the Women's Medical College and the third place to the Medico-Chirurgical College.

## SOUTH CAROLINA

**New Officers.**—Edgefield County Medical Association: president, Dr. George D. Walker, Johnston; secretary-treasurer, Dr. J. G. Edwards, Edgefield.

**Object to License Fee.**—The physicians of Rock Hill appeared in a body before the city council, April 3, and asked that they be relieved of the necessity of attending to charity cases, or that they be paid a salary equal to the special license tax of $15 imposed on them by the city.

**Personal.**—Dr. J. L. Woffard, Cherokee Springs, is reported to be critically ill at his home.——Dr. J. A. Faison, while making a professional call, April 6, was attacked with a knife by an insane negro and severely cut.——Dr. F. L. Potts, Spartansburg, has decided to close his private sanatorium.

**Monument to Marion Sims.**—The South Carolina Medical Association, at its annual meeting, decided to take active part in securing the necessary funds for the erection of a suitable monument, in memory of the late Dr. Marion Sims. A bill was passed by the legislature appropriating $5,000 for this purpose, provided an additional $5,000 was raised by the citizens of the state. The Sims memorial committee has decided to create a subcommittee in each of the forty-four counties of the state to solicit subscriptions for the $5,000 required.

## TEXAS

**State Association to Meet.**—The State Medical Association of Texas will hold its forty-fourth annual meeting in Waco, May 7-9, under the presidency of Dr. J. H. McCracken, Mineral Wells.

**Contagious Disease Hospital for Galveston.**—A site for the new hospital for contagious diseases at Galveston has been selected on the northeast corner of the grounds of the John Sealy Hospital. An appropriation for $13,000 is available for this building and the plans proposed call for a concrete structure.

**Personal.**—Dr. Frank J. Hall, Dallas, has given $1,000 to the Young Women's Christian Association in memory of his mother, the late Mrs. Mattie A. Hall.——Dr. F. A. Pierce, Dallas, was given a dinner by his medical friends, April 17. Dr. Pierce has started for Europe.——Joe B. Wills has been appointed chief sanitary officer of Dallas.

**Thank Military Surgeons.**—At a special meeting of the San Antonio Board of Health, a resolution was passed tendering a vote of thanks to Colonel Charles G. Treat and the medical officers at Fort Sam Houston "for their prompt and efficient action in the care of the victims of the explosion of March 18, in which twenty-six citizens lost their lives and many were injured."

**Will Have Medical Library.**—Plans to open a library and medical headquarters were discussed at a recent meeting of the Dallas County Medical Society, and four rooms have been secured in the new Southwestern Life Building for these purposes. The new library will contain at the start about 200 medical periodicals and 1,000 medical publications. Dr. M. M. Smith is in charge of the library.

**Sanatorium Notes.**—The State Sanatorium, Carlsbad, is nearly completed and when finished will accommodate seventy-two patients.——Dr. C. D. Hudson, Waco, has secured an option on the old McClain Sanitarium and is remodeling the building on the site.——The Works Sanitarium, Brownsville, has been purchased by Dr. W. H. Lincoln, Wabasha, Minn., who will reopen the institution as soon as improvements are completed.

**New Officers.**—LaSalle-Frio Counties Medical Association, organized at Cotulla April 12: president, Dr. Glen Bartlett, Cotulla; vice-president, Dr. C. M. Hoch, Pearsall, and secretary-treasurer, Dr. R. L. Graham, Cotulla.——Northwest Texas Medical Association: president, Dr. Alf Irby, Weatherford; secretary-treasurer, Dr. A. D. Pattillo, Petrolia.——Denison Medical Society: president, Dr. A. V. Rutledge; secretary-treasurer, Dr. J. A. Rutledge.——Orange County Medical Society: president, Dr. S. W. Sholars; secretary, Dr. A. R. Sholars, both of Orange.——Lavaca County Medical Association: president, Dr. J. E. Lay, Hallettsville; secretary-treasurer, Dr. W. Shropshire, Yoakum.

## GENERAL AND FOREIGN

**Leper Colony to be Moved.**—It is announced that the government proposes to transfer the leper colony of Guam to the Philippines, where the Island of Culion has already been assigned, and is in use as a leper colony.

**National Tuberculosis Association Meeting.**—The eighth annual meeting of the National Association for the Study and Prevention of Tuberculosis will be held in the new Willard Hotel, Washington, May 30-31, under the presidency of Dr. Mazyck P. Ravenel, Madison, Wis. The work of the association is conducted by the advisory council and in sociologic, pathologic and clinical sections.

**Switzerland Introduces Compulsory Insurance Against Sickness.**—The introduction of compulsory insurance against sickness and industrial accidents has been repeatedly voted down in Switzerland, but by a recent referendum vote it was finally adopted by a small majority. The cantons bordering on Germany and Austria voted for it, those bordering on France and Italy against it, confirming again the general trend of the Germanic peoples toward and of the Latin races against compulsory insurance of wage-earners.

**Other Deaths Abroad.**—Besides the deaths mentioned by our foreign correspondents are the following: A. Codivilla, professor of orthopedics at the University of Bologna and one of the leading orthopedists of Europe, died March 14.——L. M. Möller, professor of diseases of the skin and syphilis, at the Karolinska Medico Kirurgiska Institut at Stockholm, and author of various monographs on his specialty, died March 24, aged 55.——I. Svensson, for many years chief of the Sabbatsberg hospital at Stockholm and author of numerous works on rupture, diseases of the urinary apparatus and surgical subjects, died February 19, aged 72, after some years of retirement from active life.——William Francis Norman O'Laughlin, L.R.C.S., Ireland, 1870; L.K., Q. Coll. Phys, Ireland, 1871; senior surgeon of the White Star Line and chief surgeon of the steamship *Titanic;* one of the most genial of men and one of the oldest surgeons in the transatlantic service, well known and beloved by thousands of travelers; went down at his post of duty when the *Titanic* sank, April 15.

## LONDON LETTER

*(From Our Regular Correspondent)*

London, April 13, 1912.

### A Medical Service Organized by the Profession

The deadlock between the government and the profession in reference to the medical benefits of the insurance act continues. No reply has been received to the ultimatum sent to the insurance commissioners by the British Medical Association (described in a previous letter to The Journal). In the meantime, the organization of the profession to resist the act continues. A scheme has been brought forward for the medical profession to organize a plan of medical service, to be administered by itself, free from the objectionable features of the present system of contract practice and of its extension under the act. At present, such a plan has been in successful operation for some time in a few towns, where complete unanimity of the profession in adhering to it has been secured. Thus the friendly societies there have no option but to accept the plan if they wish for contract practice. The council of the British Medical Association is issuing "private and confidential" documents on the subject for the consideration of the divisions of the association. These documents embody the outline of an organization which will come into existence if the insurance commissioners fail to come to terms with the profession. The object of the new organization is declared to be the "provision of medical attendance and medicine for persons unable to pay the ordinary medical charges in the usual manner." Any physician whose professional conduct is in conformity with the rules for the time in force of the division of the British Medical Association in his district may become a member of the service on signing an undertaking to abide by these rules. Members will be of two grades: "honorary," who, while not taking patients under the scheme, agree to conform to its regulations, and "acting," who will work under it. The subscribers are to be persons not earning more than a certain sum, as yet undetermined. They will be medically examined on entry and will pay in advance subscriptions proportionate to their age and means, regard being had *(inter alia;* to the number of children and other dependents. They will have to pay an additional fee for child birth. Subscribers will have the right to select their physician, but capricious changes will be avoided by a condition that they must not ask to be transferred to another physician oftener than once a year. They are to receive a card of instruction and will be entitled to: (1) medical attendance and surgical treatment at either the physician's office or the dispensary of the service; (2) when necessary, medical and surgical treatment at their homes, other than night calls and special visits to be defined; (3) medicines and first dressings for wounds and injuries.

### Pharmacists and Copies of Prescriptions

The passing on, by patients, of prescriptions written for them to friends, with the idea that what has benefited them is likely to benefit others whom they believe to be similarly affected, has always been condemned by the profession as injurious to its interests as well as to those of the public. At a meeting of the Western Pharmacists of London, at which a number of physicians were present by invitation, Mr. J. D. Marshall opened a discussion on the practice of supplying patients with copies of their prescriptions. He read a letter from Dr. Mitchell Bruce, who wrote that such copies were usually required in order that the patient might hand them to his friends and that therefore the practice encouraged quackery, or the suiting of a disease to a remedy instead of a remedy to a disease. The use of a prescription by any person other than the one for whom it was written he considered reprehensible. Mr. Marshall declared that he refused to give copies whenever possible. There were circumstances in which copies might legitimately be given, but, broadly speaking, the practice was not to be encouraged, first, in the interest of the patient and his friends, and second, in the interests of the physician. The chief offenders in asking for copies were ladies who liked to pose as amateur doctors and to dispense among their friends the medicine which had done them good. A frequent excuse for such applications was a change of physician. It was desired to show the second physician what the first one had given. Mr. Marshall's practice was never to give such copy unless the first physician gave his permission. He thought that physicians unwittingly assisted in the "wholesaling" of prescriptions by allowing the use of compressed forms of medications and made-up drugs. One of the physicians present said that the question resolved itself into a matter of copyright. So long as the physicians in this country, unlike their American colleagues, had no copyright in their prescriptions, they were powerless to protect themselves. [The implication with regard to prescriptions in America is, of course, erroneous. It would be impracticable for physicians to "copyright" prescriptions. As to the ownership of prescriptions, various courts in this country have rendered conflicting decisions.—Ed.] He intended to have a printed notice on his prescription papers to the following effect: "In the interests of the public I desire that no copy of this prescription shall be given by the pharmacists." Dr. Phineas Abraham (dermatologist) thought the chief sufferers from the practice were first, physicians, and second, the patients who frequently did themselves injury Thus a woman who had noticed the beneficial effect of an ointment which he prescribed for her husband's eczema had applie it liberally on herself, producing severe dermatitis.

## PARIS LETTER

*(From Our Regular Correspondent)*

Paris, April 12, 1912.

### Sanitary Condition of the French Army

In reply to the sensational article of Dr. Binet-Sanglé o morbidity in the French army (The Journal, March 3 1912, p. 949) a military physician, Dr. Noel, has just published an article in the *Bulletin Médical*, disagreeing not wit Dr. Binet-Sanglé's figures but with his conclusions. Dr. No says that these figures are based solely on diseases of relatively slight morbidity, while all the other diseases, especiall those which are often fatal, are passed by without commen Such figures, without any corresponding data in regard t death, dismissal, etc., give a very inaccurate idea of th soldiers' health. The mortality of the army has decrease during the last decade from 5.73 per thousand in 1900 t 3.95 per thousand in 1909. Dr. Noel believes that the fr quency of contagious diseases in the French army has bee explained by a condition of low resistance in our race. Wh seems to confirm this theory is that the diseases which ha increased in frequency, apart from scarlet fever, mump measles, meningitis and the anginas, are those which indica organic weakness, for example, heart disease, which increas from 1,167 in 1900 to 2,011 in 1909, and hernias, whi increased from 2.9 per thousand in 1901 to 8.6 per thousa in 1909. Mental diseases have increased from 1.6 per thousa in 1900 to 4.9 per thousand in 1909.

### Salvarsan Does Not Prevent the Development of Measles

Certain organic compounds of arsenic, salvarsan in particular, while exercising a favorable influence on the diseases due to spirilla, are inefficacious in most microbic diseases. Dr. A. B. Marfan, professor of therapeutics at the Faculté de médecine de Paris, recently read, at the last meeting of the Société de biologie, a paper by himself and Dr. Lagane on a case which indicates that salvarsan has no influence on the pathogenic agent in measles. A child of 7 years entered the hôpital des Enfants-Malades, Feb. 22, 1912, having already received several mercury treatments for syphilitic pseudoparalysis and the Wassermann reaction was positive. March 2 and 11 the patient received injections of salvarsan; and March 15 had fever and catarrh of respiratory passages and March 18 had typical measles eruptions. The disease had been contracted two or three days after the first injection of salvarsan; the second injection was made during the incubation of the disease. The injection of salvarsan, therefore, had no influence on the development of the measles.

## BERLIN LETTER

*(From Our Regular Correspondent)*

BERLIN, April 4, 1912.

### Headquarters for Reprints

Some time ago Oberstabsarzt (higher staff surgeon) D. Berger, of Berlin, founded medical literary headquarters. This institution serves the purpose of relieving physicians of the trouble of collecting literature for scientific articles and also furnishes scientific treatises on specified subjects. For this purpose Berger has engaged twenty physicians as collaborators. In the last number of *Deutsche medizinische Wochenschrift*, Berger makes the proposal for the foundation of a more extensive institute which shall facilitate medical publication. He adopts an idea of Professor Boas of this city which contemplates the centralization of the reprints of medical articles. Boas declares that it is extremely necessary, in view of the present extension of medical literature, to establish headquarters for furnishing and dealing in special reprints, by which the sending out of abstracts should be organized so that at any time any abstract desired by any one interested, could be furnished at a moderate price. The present method of sending reprints to friends, etc., does not correspond with modern requirements and it is quite incomplete. Berger proposes to add this organization to his medico-literary headquarters. For the organization he proposes the following plan: All physicians joining this special press headquarters are to unite in an organization, the membership of which shall be secured by yearly payment of $2.50 (10 marks). From these contributions the expense of the management will be provided. Every physician joining assumes the obligation to send to this headquarters all his extra reprints, but at least two reprints of each of his articles published in periodical literature. He can send all of his copies direct to the headquarters and provide where these shall be sent in his name. The expense of sending them out shall be borne by the headquarters. Every member has the right to require as large a number of reprints as he wishes, but only one reprint of each article. By this organization Berger believes that physicians will be relieved rom the trouble of sending out their reprints and in addition a headquarters will be established at which reprints can be ound that would otherwise prove very hard to obtain. Physiians will be relieved from accumulating dusty stores of eprints and the expense of reprints will be reduced. From the eprints sent by the members, which might be supplemented y purchase, gradually a library of reprints will be built up which will constitute a valuable supplement to ordinary ibraries. It is evidently important to secure as extensive a epresentation of foreign literature as possible, and Berger olds that it is desirable to secure the establishment of arallel institutions in the principal foreign cities. That such n institution would be practical and would facilitate scientific nvestigation. I also believe beyond doubt. But the question is hether the idea will possess sufficient vitality to rouse the nterest of physicians enough for them to unite in such an rganization.

### nnovations in the Augusta-Victoria Infant Welfare Institution

In the Augusta-Victoria House for combating infant morality in the German empire, a number of alterations have een made during the last year. The number of beds has een increased from 60 to 150. In the necessary rebuilding, rovision has been made for avoiding the spread of infection nd contagion from bed to bed. As a consequence the system of Heubner's stalls has been introduced in some wards. This system consists in separating each bed from the others by glass walls, so that each child lies in a small isolation chamber of its own, and yet can see what is going on in the ward. While the nursing service is impeded by this sort of care for infants, yet it is indisputably the best plan for attaining a satisfactory success in nutrition. Children suspected of having infectious diseases are completely separated in a special isolation building. Another important feature is the installation of twenty-five private first and second-class beds for infants. Furthermore a special water and electric plant and a small stable for experimental animals on which metabolism and growth are to be studied has been erected. For the important purpose of instructing physicians, medical assistants and the public, the house has organized a series of lecture courses. For mothers and young girls a mothers' school, lasting a month, is held four times yearly. As a matter of experiment, an agreement was made with the Elizabeth girls' school by which the pupils are to be given a four-weeks' course of training in the care of infants. Further courses were established for the Berlin midwife association. The central committee for medical postgraduate courses and the seminary for social medicine together held successful courses of lectures for physicians in the Augusta-Victoria House. A primer on the care of infants is being prepared for the common schools. A conference was held January 18 on the training of servants for the care of infants in institutions and families. The Augusta-Victoria House will soon build its own nurses' training school, so that yearly fifty nurses can be trained. April 1 a museum of appliances for the care of infants will be opened in the house for the use of the community. The chief purpose of the institution, namely, the scientific investigation of infant nutrition and the physiology of infancy requires an increase in the medical service. The provision of new positions for assistants and the establishment of the office of department superintendent for hygiene and bacteriology are contemplated. Also the appointment of a director for the chemical laboratory appears to be necessary. The institution is located in a suburb of Berlin and its official title is the Auguste-Viktoria Haus zur Bekämpfung der Säuglingssterblichkeit im Deutschen Reich.

### Influence of Alcohol on Criminality

Bavaria is the first of the German states to institute a systematic investigation of the relations between alcoholism and criminality by collecting statistics in regard to how many of the cases in which convictions were obtained in 1910, for crime or violations of the law of the realm, were to be referred to intoxication or to the habitual use of alcohol. In 1910, 8,864 persons were legally convicted, in whom the criminal offense was referable to the use of alcohol, and among them were 190 chronic alcoholics. Those persons who were drunk or under the influence of alcohol constituted at least 14 per cent. of all those convicted. Dangerous bodily injuries are to be noted as a special crime of drinkers. Among the 10,042 criminal offenses, which the 8,864 convicted persons committed under the influence of liquor, 5,006, almost exactly half, were dangerous bodily injuries. Every third such offense is to be referred to alcoholism.

The small proportion of such crimes as larceny, etc., under the influence of alcohol, is striking. The female sex is represented among the criminals from drunkenness only to a slight extent (28), and also youth with 166 or 1.9 per cent. Drunkenness, as a ground for exemption from punishment, was admitted in 150 cases. The geographic distribution of the alcoholic criminals shows great variations. Generally crimes due to alcohol are much more frequent in the country and in the small towns than in the large cities.

### Canned Meats

Dr. Mayer, the head of the department for hygiene of the Royal Academy for Army Surgeons at Munich, has made thorough investigations of the injury done by canned meats. He reaches the following conclusions: Canned meats prepared according to modern methods form an unobjectionable food material, both for well and sick. Even in private industry, doubled tinned strong plates should be used because such plates readily show bulging and the tin coating undergoes the least change. A single heating at a temperature of 117 C. in double plated cans by steam under pressure for forty-five minutes and subsequent exposures to a temperature of 120.5 C. for ten minutes seem to secure the sterilization of preserved meats and to avoid the change in the flavor which results from cooking at the temperature of 120.5 C. Only pronounced bulging is a sure sign of bacterial decomposition. Elastic or impressible tops and bottoms occur with the formation of gas, both from bacterial and from pure chemical sources whose contents show no signs of decomposition, yet may be bacterially infected, but this is a rare occurrence. In sterilized and properly closed, air-tight cans only the spores of bacteria, but not the vegetative forms, can survive the sterilization, and this only when the inside of the can has not reached 116 C. For safe sterilization and for prevention of corrosion of the tin in the cans and of resulting deterioration in the flavor of the meat, the air must be carefully excluded from the cans. For oiling the cans to prevent rust, oils or fat which have little tendency to become rancid should be used. The addition of spices and vegetables and the introduction of pickled or smoked meat should be carefully avoided for preserves which are to be kept many years without extensive change of the tin coating and of the flavor. For preserves with such additions, three years are the limit of time within which a metallic taste is not noticeable in the contents. The influence of the hardness of the water on the attack on the tin coating in the cans needs further investigation. Cans with slight bulging from gases should not be punctured to let out the gas and sterilized anew after soldering without first testing the contents for bacteria. It would be a desirable advance in technic to replace the tin coating in cans, with its corrosion and disagreeable effect on the flavor, by some other less easily affected coating. The ordinary varnishes are insufficient for the requirements of permanent preserves. Tin poisoning from canned meats cannot normally occur. A plainly legible label bearing the date of preparation should be placed on every can.

## VIENNA LETTER

*(From Our Regular Correspondent)*

Vienna, April 3, 1912.

### The Quantity of Food Consumed in Vienna

In the course of the proceedings of the Congress of Food and Provisions, an interesting paper was read dealing with the quantities of foods required for various communities. Thus, for instance, the population of Vienna consumes daily 1,700,000 pints of milk and 7,000,000 pounds of loaves, rolls, white and brown bread and 800,000 eggs. The yearly consumption of meat was, in 1910, 280,000,000 pounds and 6,250,000 pounds of horse-meat besides! Over 13,000,000 pounds of poultry, an equal quantity of venison, and over 7,000,000 pounds of fish are sold at the market in Vienna. During the last ten years the consumption of meat has not increased at the same rate as the population; the relative quantity of meat per head has fallen by 2.5 per cent. while the sale of cereals and vegetables is very extensive and constantly increasing in relation to the increase of population.

### The Centenary of Public Vaccination in Vienna

An interesting centenary was celebrated on March 25 when a hundred years had elapsed since the institution of public vaccination in this country. The text of the ordinance said that every physician and every head of a family was bound to report every case of small-pox coming to his knowledge. The authorities then could place a board on the house, saying that the disease was within. Eight weeks after the promulgation of the order, the public vaccinator would go from house to house and offer to vaccinate everybody free of charge. This should be repeated twice a year. If a person died from small-pox without being vaccinated, the names of the persons responsible for such conduct of the deceased or crippled persons (the parents, husband) should be made public in the daily papers, stating that by a punishable prejudice they allowed their relatives to become victims of a preventable malady and that they had violated their duties to their family and to the state. Citizenship must have been really patriarchal at that time, when the original ordinance was passed.

## BUDAPEST LETTER

*(From Our Occasional Correspondent)*

Budapest, April 14, 1912.

### Annual Antialcohol Day in the Schools of Hungary

The minister of public instruction has lately ordered all the grade schools in Hungary to appoint one day in every year, on which day two hours shall be devoted to a lecture on the evils of alcohol. The minister has provided suitable texts for the convenience of lecturers. In order that the antialcohol day may have special significance, the minister ordered that day to be a holiday, thus to impress the subject still more effectually on the plastic minds of the children.

### Compulsory Vaccination

Since the annexation of Bosnia and Herzegovina by Austria-Hungary, the minister of public hygiene has done much to raise the standard of public hygiene in the annexed states. The latest advance is the passing of the vaccination act providing for the compulsory vaccination of every child under 2 years of age and revaccination after the eighth year.

### Radium Bed Under Budapest

Dr. Wesselsky, professor of chemistry at the Budapest university, surprised his audience at the annual meeting of the Balneological Society with a sensational discovery. He asserted that under Budapest there are vast radium strata, and that these are what impart the high temperature and healing virtues to the Budapest thermal springs. The eminent radiologist stated that, as the result of three years of investigations, he feels himself justified in announcing that the radium contained in the Budapest soil is of the finest quality, and can compete with the celebrated Joachimsthal radium. Wesselsky has found that the thermal springs of Buda are five or six times as rich in radium as the most celebrated foreign springs, and can be compared only with the Gastein, Baden and Ischia springs. According to him the water of the Buda springs contains 35 mg. of radium in every 10 liters of water.

### Restrictions on Settlement of Doctors in Austria

The new medical practice act has been recently sent to the medical chambers for their discussion. The fourth paragraph of this act deals with the location of doctors in summer resorts and in larger towns, and is intended to introduce the *numerus clausus* system, by which the national political magistrate is authorized to designate the maximal number of practitioners for a five-year period, with the agreement of the respective local magistrates. It is to be hoped that this injurious provision against the locating of outsiders will be strongly objected to by the medical chambers.

### Is Idiocy Curable?

The Hungarian medical papers report the sensational case of Dr. Payr, director of the Leipsic surgical clinic, who attended an idiotic child, on whom he performed an operation consisting of the implantation of a part of a normal thyroid gland in the child's kidney. The thyroid gland maintained its functional capacity in the new body, and within one month the child became regenerated and could be dismissed from the hospital entirely cured. Dr. Alapy, director of the surgical section at the pediatric clinic in Budapest, says that while the administration of thyroid gland to idiots and cretins is neither new nor altogether satisfactory, because the improvement realized is only temporary, Professor Payr's method promises lasting cure, inasmuch as the alien thyroid gland—if developing further in the body—produces itself the fluid which supplies the blood with that constituent the lack of which causes idiocy. This is not the first time that Professor Payr has attracted the attention of the scientific world. Before he left Hungary, while he was still assistant at Gratz, he transplanted different organs into animal and human subjects, with such success that the organs have maintained their functional activity.

### Trachoma in Hungary

Although the government makes every effort to check the spread of trachoma by employing specialists in trachomatous districts, still the disease is appearing in new regions where formerly trachoma was unknown. In some districts in southern Hungary, there are so many trachoma cases that special schools with trachomatous teachers have had to be erected for trachomatous children. The number of soldiers who have to be dismissed from the army on account of trachoma has grown in recent years to such proportions that the minister of war has decided to form trachomatous regiments with trachomatous officers, because, if all the trachoma cases were further to be dismissed from the army, there would be serious deficiencies in the number of soldiers. Another advantage will be gained thereby. It sometimes happens that a soldier, weary of service, simply goes to a trachomatous friend and has the latter insert a penny under his eyelid. Then the soldier puts the infected penny under his own lid and rubs it well to get the disease; and in every instance he gets it. If trachoma is no longer a ground for exemption from service, the soldiers will not risk their eyes in this way.

## Marriages

GEORGE HENRY FIELD, M.D., Coburg, Ont., to Miss Mary Gearing of Annapolis, Md., April 18.

ALBERT FREDERICK RUGER ANDRESEN, M.D., to Miss Margaret Regina Kane, both of Brooklyn, N. Y., April 25.

ARTHUR LIONEL PATCH, M.D., Somerset, Vt., to Miss Mary Amelia Dresser of Woonsocket, R. I., April 16.

FREDERICK L. BOGAN, M.D., to Miss Katherine Louise Spillane, both of Dorchester, Boston, April 17.

DENIS SEBASTIAN DOWNEY, M.D., to Miss Ethel Wadsworth, both of Chickasha, Okla., April 10.

THOMAS M. T. MCKENNAN, M.D., Pittsburgh, Pa., to Miss Eleanor E. Wallace of New Castle, Pa., April 30.

NICHOLAS H. PRUSCH, M.D. San Francisco, Cal., to Miss Grace Benton Dunnegan of Bolivar, Mo., April 4.

GEORGE B. GRADY, M.D., Watervliet, N. Y., to Miss Bertha Judge of Troy, N. Y., April 17.

JOHN FRANCIS MCCONNELL, M.D., to Miss Edith Doris Fowler, both of Colorado Springs, Colo., April 11.

## Deaths

**Samuel Oakley Vander Poel, M.D.** College of Physicians and Surgeons, New York City, 1876; a member of the Medical Society of the State of New York and medical director of the New York Life Insurance Company; died at his home in New York City, April 22, from cerebral hemorrhage, aged 58. After Dr. Vander Poel's graduation and hospital service at Bellevue, he took postgraduate courses in Vienna, Heidelberg and Paris. He returned to Albany, his native city, in 1879 and practiced there until 1885, when he moved to New York ity. Here he was in general practice until 1893, but paid special attention to diseases of the nose and throat. He was ppointed medical examiner of the New York Life Insurance o. in 1883, chairman of the committee of review to determine alue of substandard risks in 1893; consultant assistant medical director in 1894 and medical director four years later, erving in that capacity until the time of his death. His ospital service included membership on the attending staff f St. Peter's Hospital, Albany, and the Albany City Hospital; e was visiting physician for a time at Randall's Island and harity Hospital and assistant surgeon to the Manhattan ye and Ear Hospital and the throat department of the Vanerbilt Clinic. He was instructor for a time on theory and ractice of medicine in Albany Medical College, which conerred on him the honorary degree of doctor of medicine.

**Rawley White Martin, M.D.** Bellevue Hospital Medical ollege, New York City, 1858; a member of the American ledical Association; Tri-State Medical Association of Caronas and Virginia; Southern Surgical and Gynecological ssociation and Association of Surgeons of the Southern ailway; president of the Virginia State Board of Health nd State Board of Medical Examiners; formerly president of e Medical Society of Virginia; a veteran of the Civil War which he served until its close and in which, as commander the Fifty-Third Virginia Infantry, attached to Armistead's rigade of Pickett's division, he led his regiment in the mous charge on the third day at Gettysburg; died at his me in Lynchburg, April 20, from pneumonia, aged 76.

**Louis Nelson, M.D.** Harvard Medical School, 1904; a student the Strasburg Pharmacologic Institute, from which he was aduated in 1907 and for a year thereafter assistant to ofessor Schmidtberg, the bacteriologist; instructor in armacology in his alma mater; a member of the American erapeutic Society; a research worker of great promise; ed in the Eliot Hospital, Boston, April 14, from enterocolis, due to inoculation with the gas bacillus, aged 33. This the third death within a year of research workers connected th Harvard Medical School.

**Daniel Kimball Pearsons, M.D.** Vermont Medical College, oodstock, 1842; a practitioner of Chicopee, Mass., until 1857 d thereafter a resident of Illinois; who had devoted the last ars of his life to practical philanthropy and is said to have en more than $6,000,000 to collegiate institutions; in 75 a member of the Common Council of Chicago; died at nsdale Sanitarium, April 27, from pneumonia, aged 92.

**Norman Riley Cornell, M.D.** Geneva (N. Y.) Medical College, 1847; since 1850 a practitioner of Knoxville, Ia.; a charter member and once president of the Marion County Medical Society and for many years a member of the Iowa State Medical Society; assistant surgeon of the Twenty-Third Iowa Volunteer Infantry and surgeon of the Fortieth Iowa Volunteer Infantry during the Civil War; for many years surgeon to the Burlington System at Knoxville; died at his home, April 9, from cerebral embolism, aged 87.

**Norman F. Terry, M.D.** Miami Medical College, Cincinnati, 1876; a member of the American Medical Association; one of the best known surgeons of southwestern Missouri; an organizer and president of the board of trustees of the Springfield Hospital; died suddenly in his office in Springfield, April 17, from heart disease, aged 59. Members of the Greene County Medical Society attended his funeral in a body.

**Talbert Sleneau, M.D.** University of Michigan, Ann Arbor, 1883; formerly a member of the American Medical Association; a member of the Michigan State Medical Society; a veteran of the Civil War; great medical examiner of the Knights of the Modern Maccabees; died at his home in Port Huron, April 21, aged 66.

**Philippe Ricord, M.D.** College of Physicians and Surgeons, New York City, 1868; a member of the Medical Society of the State of New Jersey; a medical cadet during the Civil War; for more than forty years a practitioner of Newark; died at the home of his sister in that city, April 10, from pneumonia, aged 68.

**George Franklin Floyd, M.D.** Hospital College of Medicine, Louisville, Ky., 1883; a member of the State Medical Association of Texas and once president of the Hunt County Medical Society; local surgeon at Lone Oak for the Missouri, Kansas and Texas Railroad; died at his home April 11, from pneumonia, aged 52.

**Victor Seymour Pier, M.D.** College of Physicians and Surgeons, New York City, 1901; a member of the Medical Society of the State of New York; historian to the Brooklyn Hospital and a member of the dispensary staff of the New York Polyclinic Hospital; died at his home in Brooklyn, April 17, aged 36.

**Samuel Fritz Kessler, M.D.** Ensworth Medical College, St. Joseph, Mo., 1888; Jefferson Medical College, 1889; a member of the American Medical Association; professor of anatomy in Ensworth Medical College; a member of the Board of Health of St. Joseph; died at his home, April 16, from heart disease, aged 49.

**Henry Alexander France, M.D.** Albany (N. Y.) Medical College, 1864; one of the best known practitioners of the Rockaway Peninsula; a veteran of the Civil War; for three terms postmaster of Far Rockaway, L. I., N. Y.; died at his home in Far Rockaway, April 15, from disease of the liver, aged 78.

**Jasper Newton Boyd, M.D.** Medical College of the State of South Carolina, Charleston, 1877; a member of the State Medical Association of Texas; a Confederate veteran; for forty years a practitioner of Hopkins and Delta counties; died at his home in Austin, April 9, from nephritis, aged 69.

**Charles Fitch Grant, M.D.** Long Island College Hospital, Brooklyn, 1886; a member of the Medical Society of the State of California, a much-esteemed practitioner of Cloverdale and a member of the village board of trustees; died at his old home, Grand's Station near Healdsburg, April 15, aged 48.

**Calvin Pancoast Gailey, M.D.** Jefferson Medical College, 1874; mayor of Marion, Ohio, from 1882 to 1890, and treasurer of Marion township for more than twelve years; who had been blind for thirty-four years; died at his home in Marion, April 9, from pernicious anemia, aged 66.

**Samuel Joseph Mayeux, M.D.** University of the South, Sewanee, Tenn., 1906; a member of the Louisiana State Medical Society; coroner-elect of Avoyelles Parish; died in his home in Moreauville, April 4, from disease of the liver, aged 28.

**James Henry Dye, M.D.** Medical College of Ohio, Cincinnati, 1876; a member of the Ohio State Medical Association and Cleveland Academy of Medicine; died in that city, April 17, after an operation for the removal of gallstones, aged 60.

**F. Demetrius Gibson, M.D.** Vanderbilt University, Nashville, Tenn., 1890; a member of the Medical Association of the State of Alabama; died at his home in Moulton, April 17, from pneumonia.

**C. J. Shelton** (license, West Virginia, 1896); of Williamson; died in Ashville, N. C., April 5; from tuberculosis.

# The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

## THERAPEUTIC RESEARCH

**Torald Sollmann, M.D.**

CLEVELAND

It is often said that therapeutics, and especially drug therapeutics, have not kept step with the progress of medical science. The reiteration of the fact may become somewhat tiresome, but it serves a useful purpose, in that it will gradually lead to a correction of the fault. An attempt in this direction is being made by the Council on Pharmacy and Chemistry through the appointment of a Committee on Therapeutic Research, and the Board of Trustees of the American Medical Association has made an appropriation for this work. This is in direct line with the basic objects of the Council—namely, the advancement of therapeutics by substituting definite knowledge for vague impressions and general "beliefs."

It is self-evident that such definite knowledge of the actions of therapeutic agents, under all sorts of conditions, is indispensable to their intelligent application. It is necessary to know their effects, and if possible the mechanism of their actions, not only in healthy animals and men, but also in the diseased conditions in which they may be employed. Every observing clinician has, of course, made incidental observations in this direction; but incidental, and necessarily more or less superficial observations, have but slight permanent value. They are apt to lead to mere vague impressions, which no one, outside of the observer himself, can utilize intelligently. They will not advance our knowledge. These matters must be investigated directly, according to well digested plans, and with the best available methods, quantitatively if possible.

The analysis of well-defined clinical data will set tempting and highly fruitful experimental problems to the pharmacologist, and his results in turn will set further problems for the clinician and thus the two will be mutually helpful toward a common advance of therapeutics. This is well illustrated by the relatively high status of the therapeutics of circulatory diseases—a field in which clinical data have been gathered with some degree of objective accuracy. Even this field is far from being exhausted—witness the confusion concerning the effects of strychnin, of caffein, of aconite and veratrum, etc. If we turn to other fields, such as respiration and diseases, the paucity of exact observations is much more striking. There are isolated exact observations in most all directions; but they are too much isolated, too few and too scattered, to be of much use.

The complexity of therapeutic problems demands a multitude of observations under the most varied conditions; and this generally demands a number of observers, working with common methods and with a common plan.

Moreover, much of the older work, even that of the best quality, needs repetition in the light of our present knowledge, and with modern methods. It is useless to repeat work unless we can improve on the old.

With many therapeutic problems, a critical study, sifting, and compilation of the available data would be of great value to practitioners, and indispensable as a starting-point for further investigation. This has been the experience in other departments of medical science. The paucity of such impartial literary digests in therapeutics has caused the profession to draw its information largely from abstracts circulated by interested manufacturers, which are all too often worse than useless.

The number of practically urgent problems in therapeutics is so great, and their nature so varied and complex, that the most which the members of the Council could accomplish by personal research would be inadequate to improve the situation seriously. The Committee therefore judged that it would be most useful by supporting and facilitating such researches. To this end, the Committee aims to gather data and suggestions; to transmit these to investigators interested in these lines; to bring together those who could effectively cooperate, to extend limited financial assistance where needed; in a word, to serve as a sort of clearing-house to those who care to avail themselves of its cooperation.

In practice, the Council aims to select the lines which appear most promising; to interest competent investigators to take charge of these lines; and to render to them such assistance as it can. Each research is thus supervised by some one especially fitted for the task, who is given complete liberty, responsibility and credit. The investigator may publish his results wherever he desires, but related investigations will be collected and reprinted as monographs, by the Council, for the benefit of the profession.

In the selection of problems, emphasis will be laid mainly on their feasibility and practical importance. All who are interested are invited to submit suggestions along these lines. The following problems, which are now being actively investigated, will give some idea of the intended scope of the work. Other lines will be opened as soon as investigators can be found to undertake them.

The clinical value of cardiovascular drugs; cooperative investigation, starting with strychnin.

Relative efficiency and toleration of natural and synthetic salicylates; experimental, chemical and clinical.

Digitalis bodies: Duration of action and absorption; clinical and experimental.

Efficiency of intestinal antiseptics: A critical examination of literature as well as experimental investigation.

Critical literature of therapeutics of phosphorus compounds.

Standardization of antiseptics and germicides.

Pharmacology of commercial vanadium preparations.

Chloroform: Effects of origin and impurities on toxicity.

Organic Iodids: Fate, efficiency and side actions.

The Committee realizes that it has undertaken a very large task, the outcome of which depends on the cooperation which it can enlist, rather than on its personal endeavors. On the whole, the task is a hopeful one, provided that one does not demand immediate or startling returns. I shall not be disappointed so long as the Committee engages the active and continuous interest of even a single competent investigator.

Suggestions, applications and other communications to the Committee should be addressed to its Secretary, Prof. W. A. Puckner, 535 Dearborn Ave., Chicago.

## ALCOLA

### A Fake Cure for Drunkenness

Most newspaper readers are familiar with an advertisement that, on its face, seems to originate with a Mrs. Margaret Anderson, Hillburn, New York. The reader is told to "write to this woman if you want to stop a man from drink." Those who read advertisements rather carefully, but who are not familiar with the tricks of the trade, may be surprised at the numerous addresses from which Mrs. Anderson advertises. From a few advertisements of this concern in THE JOURNAL's files, Mrs. Anderson seems to live in the following places at Hillburn:

16 Oak Street.
150 Oak Street.
295 Oak Street.
308 Oak Street.
442 Oak Street.
204 Elm Avenue.
12 Pine Avenue.
52 Pine Avenue.
11 Ridge Avenue
843 Home Avenue
904 Home Avenue
808 Home Avenue

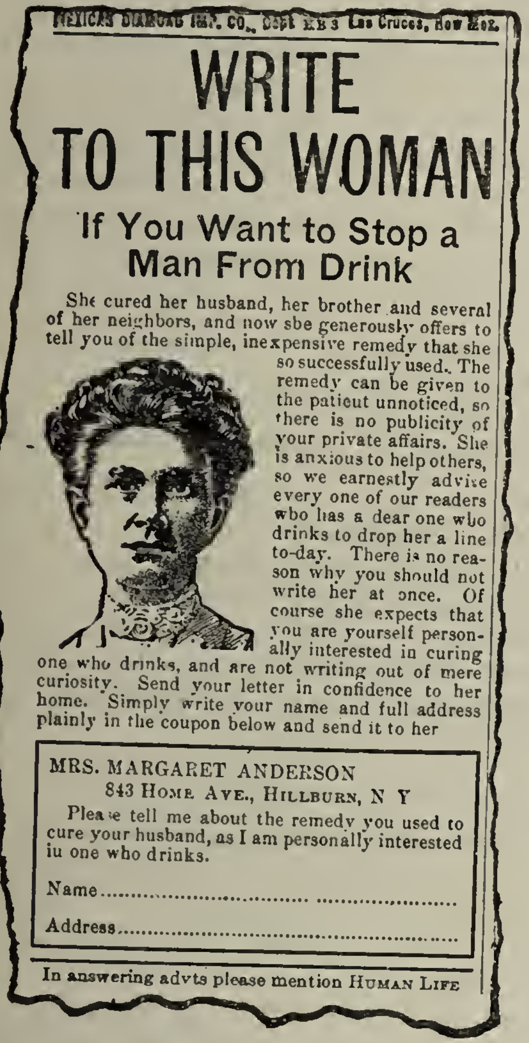
Of course, what this means is that Mrs. Anderson, wishin to find out which newspapers and magazines bring in th largest advertising returns, "keys" her advertisements. Bu it is not Mrs. Anderson who desires this information fo this woman of Hillburn, New York, is but the stool-pigeon fo the Physicians Cooperative Association, 1006 South Michiga Avenue, Chicago, which sells a fake cure for drunkenness tha it calls Alcola. In other words, Mrs. Anderson bears the sam relation to the Physicians Cooperative Association that D ary E. Webb bore the Edward J. Woods concern, employed the same disreputable business.

We understand that the men behind the Physicians Cooper-ive Association are Edward F. Stace, M.D., and Joseph C. owers, M.D. These men are also said to be the chief officers a concern that operates a "correspondence school" of sales-nship.

THE STOOL-PIGEON

According to the older advertisements, Mrs. Anderson cured husband of drunkenness. More recently, she is credited th having "cured her husband, her brother, many of her ghbors and hundreds of friends." She did this—also accord- to the advertisements—by means of a "simple inexpensive ne remedy." Should you wish to stop a friend or relative m drinking, "she will gladly tell you just what it is." And e remedy is perfectly safe and easy to use and the drinker's owledge or consent is not necessary."

Irs. Anderson does not want your money; not at all! "So re is no reason why you should not write her at once."



MEXICAN DIAMOND IMP. CO., Dept EB 3 Las Cruces, New Mex.

WRITE TO THIS WOMAN

If You Want to Stop a Man From Drink

She cured her husband, her brother and several of her neighbors, and now she generously offers to tell you of the simple, inexpensive remedy that she so successfully used. The remedy can be given to the patient unnoticed, so there is no publicity of your private affairs. She is anxious to help others, so we earnestly advise every one of our readers who has a dear one who drinks to drop her a line to-day. There is no reason why you should not write her at once. Of course she expects that you are yourself personally interested in curing one who drinks, and are not writing out of mere curiosity. Send your letter in confidence to her home. Simply write your name and full address plainly in the coupon below and send it to her

MRS. MARGARET ANDERSON
843 HOME AVE., HILLBURN, N Y

Please tell me about the remedy you used to cure your husband, as I am personally interested in one who drinks.

Name.......................................................

Address.......................................................

In answering advts please mention HUMAN LIFE

1.—A typical Alcola advertisement. Notice that no refer-is made to the concern which sells Alcola, neither is there any on of the preparation itself. This advertisement appeared in *n Life.*

ld you write, you will receive a printed letter, skilfully ned to imitate a hand-written communication, in which describes how she learned of the wonderful Alcola, is sold only by the Physicians Cooperative Association, go. She has written to the Chicago concern, says the , asking them "to send you a trial treatment." Sure h. a letter comes from the Physicians Cooperative Asso-n stating that the company had learned from Mrs. Ander-that you wish to stop drinking," hence they are sending al treatment."

trial treatment consists of nine tablets. Three of them, o. 1 tablets, are pale yellow in color; three others, the tablets, are about the same size as the yellow tablets re of a light chocolate color; the remaining three, the tablets, are pinkish-gray. The instructions are to tablets Nos. 1 and 2 alternately, one tablet three a day at meal times, tablet No. 3 is to be given when tient has been "drinking to a noticeable degree."

uld the trial treatment not convince the prospective that it was worth while to send the $5 00 that is—at first—asked for the "complete treatment," he is bombarded with the usual series of follow-up letters. Like every mail-order medical fake, the price asked for Alcola decreases as time goes by. As a final resort, the company sends what purports to be a personal letter from its "medical director," Dr. Edward F. Stace, urging the person written to to send for the treatment at the specially reduced price. Should $5 —or less—be sent for the complete treatment, the purchaser receives a small cardboard box in which are three small boxes labeled respectively, No. 1, No. 2 and No. 3. These small boxes contain tablets identical in color, size and general appearance with those sent as a trial treatment. The instructions for using these tablets are the same as those which came with the "trial treatment."

The tablets were analyzed in the American Medical Association's laboratory with the following results:

LABORATORY REPORT

*Box No. 1.*—This package contained 62 pale yellow tablets, the average weight of each of which was nearly 6 grains. The examination indicated the presence of the following drugs in the quantities given:

| | |
|---|---|
| Caffein (anhydrous) | 3.81 per cent. |
| Strychnin | 0.28 per cent. |
| Talc | 3.19 per cent. |
| Starch | 1.37 per cent. |
| Milk sugar | 83.76 per cent. |
| Gum and coloring matter, of each.... | a trace |

Each tablet contained an average of about ¼ grain (0.23) of caffein and nearly 1/50 (0.017) grain of strychnin.

*Box No. 2.*—This package contained 62 light chocolate-colored tablets, the average weight of each of which was about 5.6 grains. The examination indicated the presence of the following drugs in the quantities given:

| | |
|---|---|
| Strychnin | * 0.18 per cent. |
| Boric acid | 3.68 per cent. |
| Milk sugar | 85.72 per cent. |
| Talc | 3.53 per cent. |
| Starch | 0.98 per cent. |
| Gum and coloring matter, of each.... | a trace |

[* As separated from the preparation this alkaloidal matter contained traces of a basic dye which could not be completely separated from the alkaloid.]

Each tablet contained an average of about 1/100 grain (0.01) of strychnin.

*Box No. 3.*—This package contained thirty grayish-pink tablets the average weight of each of which was nearly 3 grains. The examination indicated the presence of the following drugs in the proportions given:

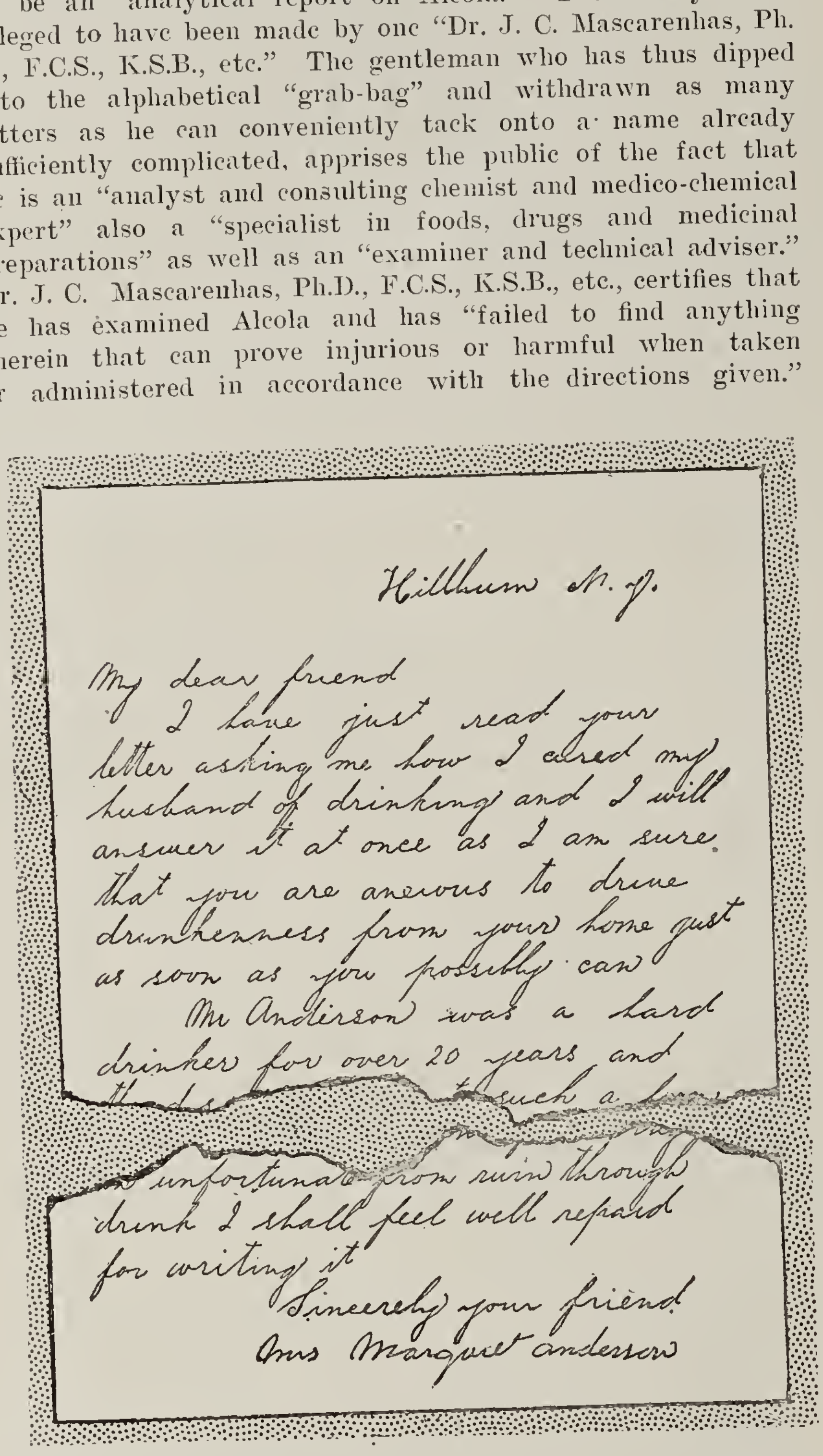
| | |
|---|---|
| Tartar emetic (antimony and potassium tartrate) | 15.50 per cent. |
| Gypsum (crystallized calcium sulphate) | 60.40 per cent. |
| Talc | 3.20 per cent. |
| Starch and other vegetable tissue..... | 1.10 per cent. |
| Gum and coloring matter, of each.... | a trace |

Each tablet contains an average of about ½ grain (0.46) of tartar emetic. The analyses indicate that the composition of Alcola as sold in this country is essentially the same as that of the product sold in Great Britain, a specimen of which was recently examined by the chemists of the British Medical Association. *(Brit. Med. Jour.,* Jan. 20, 1912.)

From this it will be seen that the tablets Nos. 1 and 2 contain strychnin, while tablet No. 3 contains tartar emetic. Each No. 3 tablet contains as much tartar emetic as constitutes an "average dose" according to the Pharmacopeia. This dangerous poison is thus sent out without warning and in a letter, which the purchaser receives soon after the "treatment" comes, the statement is made with reference to these tablets: "Don't be afraid to use them; if one does not produce vomiting, you can in this case [when the victim is under the influence of liquor] use as many as three or four at one time." Thus the victim of alcohol, whose heart action is probably impaired, whose kidneys are affected and whose stomach and intestines are in a more or less irritable condition, is to be given four times the average dose of a poison which is a heart depressant, which is a distinct irritant to the kidneys and to the gastro-intestinal tract and which has been known to cause death in an adult from the very dosage recommended by the exploiters of Alcola.

### A WORTHLESS ANALYSIS

Probably to offset the damaging disclosures of the chemists of the British Medical Association and in the hope of discounting any reports that may be made by American chemists, the Physicians Cooperative Association is now sending out, with its other advertising material, what purports to be an "analytical report on Alcola." The "analysis" is alleged to have been made by one "Dr. J. C. Mascarenhas, Ph. D., F.C.S., K.S.B., etc." The gentleman who has thus dipped into the alphabetical "grab-bag" and withdrawn as many letters as he can conveniently tack onto a name already sufficiently complicated, apprises the public of the fact that he is an "analyst and consulting chemist and medico-chemical expert" also a "specialist in foods, drugs and medicinal preparations" as well as an "examiner and technical adviser." Dr. J. C. Mascarenhas, Ph.D., F.C.S., K.S.B., etc., certifies that he has examined Alcola and has "failed to find anything therein that can prove injurious or harmful when taken or administered in accordance with the directions given."



Hillburn N. J.

My dear friend
I have just read your
letter asking me how I cured my
husband of drinking and I will
answer it at once as I am sure
that you are anxious to drive
drunkenness from your home just
as soon as you possibly can
Mr Anderson was a hard
drinker for over 20 years and
such a
unfortunate from ruin through
drink I shall feel well repaid
for writing it
Sincerely your friend
Mrs Margaret Anderson

Fig. 2.—Typical reproduction of part of the letter received by those who write to Mrs. Margaret Anderson. It is rather skilfully printed to imitate handwriting, and comes on a tinted note paper, such as is used in social correspondence. It is in this letter that Mrs. Anderson tells her correspondents that she is asking the Physicians Cooperative Association to send them a "trial treatment" of Alcola.

Mr. Mascarenhas is further of the opinion that "Alcola will be found to be a valuable and effective remedy for the purpose intended." Assuming that the "purpose" which Alcola serves is that of making money for its exploiters at the expense of those who are anxious to cure alcoholism in themselves or others, we might admit that Mascarenhas' opinion is a correct one. Alcola has doubtless proved itself a "valuable and effective" means of defrauding the public.

By referring to our files, we find that Dr. J. C. Mascarenhas is a member—in fact, the "librarian," indeed—of a fake organization, the "Society of Science, Letters and Art of London" so that, in addition to his other titular appendages, he may place the letters "F.S.Sc." after his name, indicating that he is a "fellow" of the Society of Science, Letters and Art. These "fellowships" come at one guinea ($5) each, cash strictly in advance!

### "GUARANTEED UNDER THE PURE FOOD LAW"

In the advertising matter which the Physicians Cooperative Association sends out, the following falsehood is printed:

> "Alcola complies in every way with this law [the federal Food and Drugs Act] and the government has therefore issued to us 'Guarantee Serial No. 3200.' "

With the haziness that exists in the minds of many people regarding the scope of the national pure food law, it is worth calling attention to the fact that the government does not issue any "guarantees." It does give to any person who asks for it, a "serial number" under which that person may "guarantee" his product. All that this means, of course, is that should the preparation be found to be adulterated or misbranded under the law, the government will hold, as responsible, the person to whom the serial number was issued, and not the individual retailer who may act as an agent for the real seller.

### RE-VES-TO, ANOTHER FRAUD

Nor is Alcola the only product sold by the Physicians Cooperative Association. With the Alcola advertising matter is a circular detailing the marvelous properties of Re-Ves-To, which "quickly cures rheumatism, kidney disease, liver and bladder troubles." A one-dollar package of this wonderful remedy will be sent free "if you will send us only twenty-five cents to pa postage and packing expenses." That you may be able to tel whether you have some disease of the liver, kidneys or bladder the following symptoms are given, among others, as "positiv evidence" of the fact:

> "Cold and sweaty feet."
> "Disinclination to work."
> "Extreme fondness for sweets."
> "Bad smelling breath."
> "Being nervous, fretful, gloomy or despondent."

These are a few of the "positive evidences" of disease of th kidneys, liver and bladder! If Edward F. Stace could mak everybody believe that the symptoms just described indicat serious disease and, further, if he could make them believe tha Re-Ves-To would cure such diseased states, there is litt doubt that Re-Ves-To would be in every home. Fortunatel the number of persons who are willing to take Dr. Stace's wo in matters of this sort is limited.

### SUMMARY

To sum up: The Physicians Cooperative Association engaged in a fraudulent business and obtains victims making false and misleading claims; Alcola will not cu drunkenness, whether administered with or without t patient's knowledge.

Not only is there danger in the public taking repeated dos of pills containing such powerful drugs as tartar emetic a strychnin—especially when lulled into a false sense of securi by the claim that they are perfectly harmless—but a cr and inhuman fraud is practiced on the unfortunate wives children who purchase Alcola in the belief that with it th can cure secretly the husbands or fathers who are the victi of alcoholism. The exploiters of these "secret cures" kn full well that from the very nature of the case no public will be risked and that the money that is sent in will ne be demanded even though the purchasers are convinced th they have been swindled. And it is on this element of secr that the company plays:

> "He will not notice it and need never know why or how he made to stop drinking, unless you want to tell him. This is way, the new way, the modern scientific way, and is it not m simpler, easier and better than wasting your time and temper ing to get him to stop by will power, pledges or promises—wh he doesn't keep?"

Some "patent medicine" frauds are more vicious th others. Next to the vampires who sell narcotic mixt under the specious claim that they will cure drug habits, most heartless are the exploiters of secret cures for drun ness. Of the latter, the Physicians Cooperative Associatio a typical example.

## Correspondence

### Delinquent Medical Milk Commissions

*To the Editor:*—The editorial on certified milk in The Journal of April 20 (p. 1200) leads me to say that the Association of Medical Milk Commissions, which will hold its next meeting in Louisville on April 30 and May 1, will undertake to examine carefully into the fact that certain medical milk commissions are delinquent, and that the system, which cannot be criticized, is brought into reproach by the poor work of many of the medical commissions created.

Our association has admitted into it various commissions which were supposed to be properly organized and properly authorized by a medical society, but it has been found that many of these commissions are indifferent, or do not realize the great responsibility resting on them.

Last year a committee was appointed to inquire thoroughly into the status of many of these commissions. The committee has very laboriously gone over this matter by a voluminous correspondence, and has gathered a mass of data which is the basis of a report to be made in Louisville, including a complete revision of the association's working methods and standards. We expect to be able to eliminate many of these commissions from our association, which are now discrediting the cause of clinically clean milk (certified milk), which represents the crusade inaugurated twenty-four years ago by the medical profession, and was the leader in the pure milk movement.

I have given herewith a definition of the certified milk system which is an attempt on my part to make a concrete statement which will include all the salient features in the system, and I wish to emphasize that any milk called "certified milk" that does not fulfil all of these features, is falsely so called, and is not certified milk in fact, and should not be recognized as certified milk.

#### DEFINITION OF CERTIFIED MILK

Certified milk is a product of dairies operated under the direction of a medical milk commission; which body is appointed for voluntary service by a medical society. The milk is designed to fulfil standards of quality, purity and safety to insure its adaptability for clinical purposes and the feeding of infants.

The certificate of the commission constitutes its authorization for the use of the term "certified." The certification is based on the fulfilment of prescribed medical requirements for the milk and is the guarantee that it conforms to definite standards and to fixed methods and regulations for its production.

The standards of quality consist of fresh, whole milk, unchanged by heat or cold, less than twenty-four hours old when sold, held between the temperatures of 48 and 50 F., with not less than 12 per cent. of total solids, with fat content between 3.5 and 5.5 per cent. and without the addition of any other material, substance, chemical or preservative.

The standards of purity for the milk consist of the entire absence of particles of foreign matter, of the lowest possible bacterial and dust-dropping content consistent with the highest possible practice of dairy hygiene, provided that the numerical bacterial contamination is at all times below an average weekly count of 10,000 per cubic centimeter.

The standards of safety consist in the use of every known means to exclude from the milk pathologic microorganisms, a medical guarantee that every employee handling the milk is free from disease and is not a disease carrier, and a veterinary guarantee that the cattle are in perfect health and cannot transmit through the milk any bovine affection.

The methods and regulations for the production of certified milk are those adopted from time to time by the American Association of Medical Milk Commissions; they are based on the most advanced clinical requirements, prophylactic science and dairy husbandry, and are changed as the action of the association modifies its technic for the attainment of its standards.

I think a proper publicity of the work of this association would be a great impulse to the reforms which the association wishes to inaugurate in drawing the lines more closely about the association's work and the system of milk protection, designed for clinical purposes. Henry L. Coit, Newark, N. J.

## Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### TURPENTINE NOT THE SAME AS OIL OF TURPENTINE

*To the Editor:*—In the formula given in the abstract of Scharff's article, "Salicylic Medication Externally" (The Journal, March 23, 1912, p. 904) no base for the ointment appears to be given. The formula as printed does not give a very satisfactory salve. Cannot an ointment base be added to the formula?

Dr. R. K. Keech, Cedar Rapids, Iowa.

Answer.—In the abstract referred to, the formula given is a copy of the formula printed in the *Therapeutische Monatshefte*, February, 1912. The author states that the intimate mixture of salicylic acid dissolved in oil of turpentine with sulphur and turpentine produces an easily spread, sticky ointment. It is possible that our correspondent in attempting to compound the prescription used only oil of turpentine instead of using also the solid turpentine mentioned; if so, this would account for his difficulty.

### TREATMENT OF HYPERIDROSIS

*To the Editor:*—Please suggest something of value in the treatment of continuous sweating of the forearms or hands, or can you refer me to any recent articles on this subject?

E. E. Tredway, Enterprise, Ore.

Answer.—Local hyperidrosis usually affects the hands and feet. Its occurrence on the forearms is rare. In some cases a nervous disturbance of the vasomotors is at the basis of such symptoms and these cases may demand treatment for neurasthenia, hysteria or other constitutional diseases. As local applications, such remedies as tannic acid, alum or zinc sulphate may be applied. Solution of formaldehyd 1 per cent. is also a useful application. Many recommend the *x*-ray as the best treatment in such conditions.

The following are recent articles on this subject:

Hyperidrosis, Therapeutics in The Journal, March 23, 1907, p. 1059.

Kromayer: Roentgen Ray Cure of Hyperidrosis and Oily Seborrhea, *München. med. Wchnschr.*, Jan. 26, 1909; abstr. in The Journal, March 6, 1909, p. 806.

Herbert, H.: A Case of Hyperidrosis Universalis, with Continuous Fever, The Journal, Nov. 11, 1911, p. 1607.

Meachen, C. N.: Profuse Sweating, *Practitioner*, October, 1911.

### WHIPWORMS AND DWARF TAPEWORMS

*To the Editor:*—Please give symptoms, diagnosis and treatment of (1) whipworms and (2) dwarfworms in the human host. T. J. T.

Answer.—1. There is no certain evidence that the whipworm, *Trichocephalus dispar*, produces any symptoms; therefore no treatment has been recommended. Diarrhea has been attributed to its action in rare cases. No doubt thymol, santonin or possibly male fern might be used with benefit if the symptoms could be definitely traced to this worm.

2. By dwarfworm we presume our correspondent means the dwarf tapeworm, *Tænia nana* or *Hymenolepis nana*. It is believed by some observers that, occurring in children, as it commonly does, this parasite is the cause of epileptiform convulsions and enuresis nocturna. Thousands of worms may be found within a cubic centimeter of fecal matter. Persons infected should occupy separate beds until cured. Male fern is the best remedy.

### EPINEPHRIN IN ASTHMA

*To the Editor:*—Will the preparations of epinephrin that are now being prepared to give internally relieve asthma as well as those given hypodermically? Oswald Kafer, M.D., Edward, N. C.

Answer.—Probably not, since in other conditions the pressure-raising or vasoconstrictor effect of epinephrin itself is found to be less marked when it is given by mouth than when given hypodermically.

## The Public Service

Journal Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

# Medical Economics

This Department Embodies the Subjects of Post-graduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

## ANOTHER TYPE OF PHYSICIAN'S COMBINED RESIDENCE AND OFFICE †

The accompanying illustrations give a front view of the combined office and residence of Dr. Aims R. Chamberlain, Maplewood, N. J., and a ground plan showing the arrangement of the rooms in both residence and office. The style of architecture is colonial and the impression one gets is that of comfort and roominess.

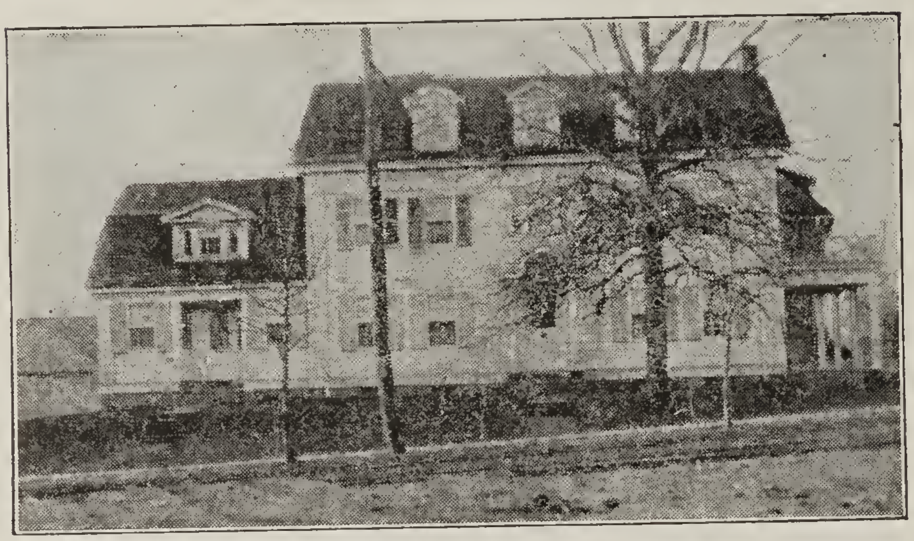


Fig. 1.—Residence and office of Dr. Aims R. Chamberlain, Maplewood, N. J.

The living room, 18x28 feet in size, opens by two sliding windows on a veranda on the side of the house. It also contains a large fireplace, and the possibilities for comfort in such a large living room are apparent. The hall-way is also ample and connects with the rear portion of the house. The large dining-room is in the front of the house and some might object to it on that account, but on the other hand, it allows the physician to see the approach of patients. It is a common and popular plan in these days of outdoor life to have a screened dining porch off the dining-room and in such a case it would probably be desirable to have the dining-room in the rear, for sake of privacy. These various considerations have to be weighed by the one who is planning to occupy the house.

The office portion is practically a separate building, with separate entrance from the street, and connects with the residence only through the pantry. It contains four rooms on the ground floor with ample lavatories, medicine closet, etc., and a laboratory on the second floor. The arrangement of the office rooms is convenient and they are of ample size. The employment of sliding doors between the consulting room and the operating room is an admirable space-saving arrangement. In the plan these doors are indicated by asterisks (*). It is worth noting that there are three doors between operating room and waiting room.

The conformation of the ground in this instance places the garage, which is seen in the illustration, below the level of the residence and is rather a desirable feature, inasmuch as it is not too conspicuous.

There are other interesting features of the residence portion of the house, as may be noted on the plan. The closet by the side of the fireplace in the dining-room is perhaps for china. The detailed plans before us (from which we have had the accompanying illustration copied) show a large number of minor points which we have not reproduced, such as the ice-box in one of the storage places, the cupboard and sink in the kitchen, book-shelves in the office, etc. The doors between the servant's hall and the front hall allow complete separation of the two. All in all, this combined residence and office ought to provide great comfort for Dr. Chamberlain and his family.

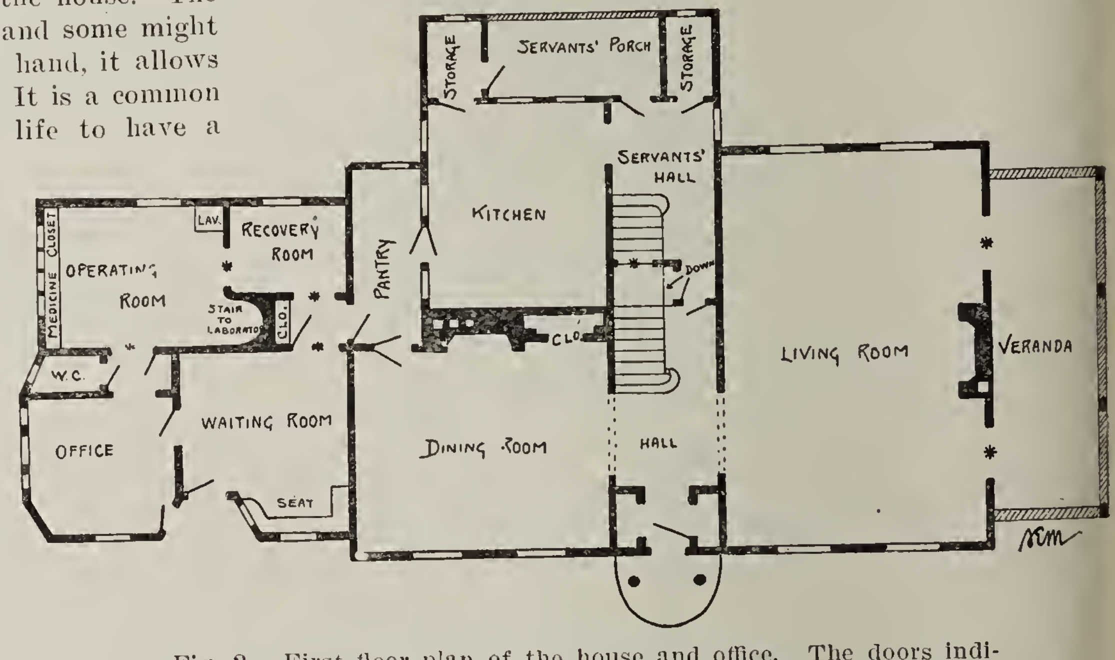


Fig. 2.—First floor plan of the house and office. The doors indicated by asterisk (*) slide into the partitions.

## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

### Ninth Month—Third Weekly Meeting

### Cholelithiasis[1]

#### ETIOLOGY

Classification of gall-stones, chief constituents. Origin of cholesterin and bilirubin—calcium, changes necessary to their production. Effects of chemical and bacterial irritants, organisms usually found in bile, in gall-stones. Effect of stasis of bile. Entrance of micro-organisms (a) by common duct, (b) by blood current, from portal vein. Age and sex. Pregnancy, sedentary life, typhoid fever. Incidence.

#### Symptoms

Obstruction of Common Ducts: Symptoms of cholangitis. Mechanical effects. Jaundice; intensity, duration. Itching. Pain. Temperature, chills, "Charcot's intermittent fever." Gastric disturbances. Physical examination. Symptoms of suppurative or ulcerative cholangitis. Association of pancreatitis.

Obstruction of Cystic Duct: Pain, jaundice, tenderness, gastric and intestinal disturbances, presence of tumor. Sequelæ, empyema, atrophy or calcification of gall bladder.

Remote Effects: (a) Stricture of the duct, (b) intestinal obstruction, (c) fistulæ.

#### Amyloid Disease of the Liver

Etiology: Microbic origin of amyloid degeneration, its occurrence in the body. Sequel of chronic suppurations, necrosis of bones, tuberculosis, pyelitis, syphilis, blood-dyscrasiæ. Tests for amyloid material.

Symptoms: General condition, gastro-intestinal symptoms, mental derangements, pain, urine. Physical examination.

**The Physical Foundation.**—To be a good animal is the first requisite to success in life, and to be a nation of good animals is the first condition of national prosperity.—*Herbert Spencer.*

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† Previous issues of The Journal have contained plans of other houses: Feb. 10, 1912, p. 431; March 9, 1912, p. 728; March 30, p. 957; April 6, 1912, p. 1055.

[1] Progressive Medicine, December, 1908. Transactions of Congress of American Physicians and Surgeons, 1903, vi.

# Medical Education and State Boards of Registration

## COMING EXAMINATIONS

ARKANSAS: Regular, Little Rock, May 14. Sec., Dr. F. T. Murphy, Brinkley.

FLORIDA: Regular, Jacksonville, May 7-8. Sec., Dr. J. D. Fernandez: Eclectic, Jacksonville, May 6-8. Sec., Dr. Hiram J. Hampton, Tampa.

GEORGIA: Homeopathic, Atlanta, May 8. Sec., Dr. R. E. Hinman, 106½ Whitehall Street, Atlanta.

LOUISIANA: Regular, Tulane University, New Orleans, May 30 to June 1. Sec., Dr. A. B. Brown, 108 Baronne Street; Homeopathic, New Orleans, May 6. Sec., Dr. Edward Harper, 702 Macheca Bldg.

MASSACHUSETTS: State House, Boston, May 14-16. Sec., Dr. Edwin B. Harvey, State House.

MISSISSIPPI: State Capitol, Jackson, May 14. Sec., Dr. W. W. Smithson.

NEBRASKA: Senate Chamber, State House, Lincoln, May 22-23. Sec., Dr. C. P. Fall, Beatrice.

NEVADA: Carson City, May 6. Sec., Dr. S. L. Lee.

NEW YORK: May 14-17. Chief of Examinations Division, Mr. Harlan H. Horner, Department of Education, Albany.

WISCONSIN: Milwaukee, May 28-30. Sec., Dr. J. M. Beffel, 3200 Clybourn Street.

## Massachusetts March Report

Dr. Edwin B. Harvey, secretary of the Massachusetts Board of Registration in Medicine, reports the written oral and practical examination held at Boston, March 14-16, 1912. The number of subjects examined in was 13; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 62, of whom 41 passed including 1 non-graduate and 21 failed including 3 osteopaths and 8 non-graduates. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Yale Medical School | (1910) 81.8; (1911) | 81.2 |
| Medical School of Maine | (1877) 80; (1911) | 75.7 |
| College of Physicians and Surgeons, Baltimore | (1910) 75, | 79.5 |
| John Hopkins University | (1911) | 81.2 |
| Harvard University Medical School | (1912) 75, | 75.5 |
| Tufts College Medical School (1910) 75, 75.5, 76.9, 78.6, 81.6; (1911) 75, 75, 75, 75.7, 76.7, 76.7, 78.9. | | |
| College of Phys. and Surgs., Boston | (1909) 75; (1911) | 75 |
| Cornell University Medical College | (1907) | 80 |
| Albany Medical College | (1908) 76.7; (1911) | 79.6 |
| New York University Medical College | (1892) | 80 |
| University of Buffalo | (1907) | 83.4 |
| Dartmouth Medical School (1911) 75, 76.8, 83.2. | | |
| Jefferson Medical College | (1907) | 76.8 |
| University of Pennsylvania | (1910) | 83.1 |
| University of Tennessee | (1911) | 77.5 |
| University of Vermont | (1911) 75, | 75.6 |
| University of Virginia | (1880) | 80 |
| Laval University, Quebec | (1911) | 75 |
| University of Athens, Greece | (1904) | 75.3 |
| Halifax Medical College, Nova Scotia | (1910) | 78.5 |
| FAILED | | |
| Kentucky School of Medicine | (1908) | 69 |
| Atlanta School of Medicine | (1911) | 63.8 |
| College of Physicians and Surgeons, Boston | (1908) 59.8, 62.7, | 69.4 |
| Eclectic Medical College of the City of New York | (1910) | 64.7 |
| University of Vermont | (1911) | 71 |
| Laval University, Quebec | (1911) 54, | 68.9 |
| University of Naples, Italy | (1910) | 66.7 |

## Wyoming March Report

Dr. A. B. Tonkin, secretary of the Wyoming State Board of Medical Examiners, reports the written examination held at Riverton, March 13-15, 1912. The number of subjects examined in was 13; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 3, all of whom passed. Eight candidates were licensed through reciprocity. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| University of Colorado | (1911) | 86.2 |
| Rush Medical College | (1898) | 91.4 |
| St. Louis College of Physicians and Surgeons | (1901) | 85.5 |

LICENSED THROUGH RECIPROCITY

| College | Year Grad. | Reciprocity with |
|---|---|---|
| University of Colorado | (1911) | Colorado |
| Northwestern University Medical School | (1907) | Illinois |
| Rush Medical College | (1902) | Wisconsin |
| Jenner Medical College | (1906) | Illinois |
| State University of Iowa, College of Medicine | (1905) | Vermont |
| Woman's Medical College of Pennsylvania | (1907) | Utah |
| Tennessee Medical College | (1905) | Tennessee |
| University of Vermont | (1909) | Vermont |

# Society Proceedings

## COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 4-7.

American Academy of Medicine, Atlantic City, May 30-June 2.
Amer. Assn. of Genito-Urinary Surgeons, Philadelphia, June 7-8.
American Climatological Association, Hartford, Conn., June 10-12.
American Dermatological Association, St. Louis, May 23-25.
American Gastro-Enterological Association, Atlantic City, June 3-4.
American Gynecological Society, Baltimore, May 28-30.
American Laryngological Association, Atlantic City, May 9-11.
Amer. Laryngolog., Rhinolog. and Otolog. Soc., Phila., May 13-15.
American Medico-Psychological Association, Atlantic City, May 28-31.
American Neurological Association, Boston, May 30-June 1.
American Ophthalmological Society, Atlantic City, June 12-13.
American Orthopedic Association, Atlantic City, May 30-June 1.
American Otological Society, Atlantic City, June 10-11.
American Pediatric Society, Hot Springs, Va., May 29-31.
American Proctologic Society, Atlantic City, June 3-4.
American Society of Tropical Medicine, Atlantic City, June 3.
American Surgical Association, Montreal, May 29-31.
American Therapeutic Society, Montreal, May 31-June 1.
Arizona Medical Association, Bisbee, May 7.
Arkansas Medical Society, Hot Springs, May 13-16.
Association of American Physicians, Atlantic City, May 14-15.
Connecticut State Medical Society, New Haven, May 22.
Florida Medical Association; Tampa, May 8-10.
Illinois State Medical Society, Springfield, May 21-23.
Iowa State Medical Society, Burlington, May 8-10.
Maine Medical Association, Portland, June 12-13.
Massachusetts Medical Society, Boston, June 11-12.
Michigan State Medical Society, Muskegon, July 10-11.
Missouri State-Medical Association, Sedalia, May 21-23.
Montana State Medical Association, Helena, May 8.
Nat. Assn. for Study and Prev. Tuberculosis, Washington, May 30-31.
National Association for Study of Epilepsy, Vineland, N. J., June 3.
Nebraska State Medical Association, Lincoln, May 7-9.
New Hampshire Medical Society, Concord, May 8-9.
New Jersey Medical Society, Spring Lake, June 11-13.
North Carolina Medical Society, Hendersonville, June 18-20.
North Dakota State Medical Association, Valley City, May 14-15.
Ohio State Medical Association, Dayton, May 7-9.
Oklahoma State Medical Association, Shawnee, May 7-9.
Rhode Island Medical Society, Providence, June 12-13.
South Dakota State Medical Association, Mitchell, May 22-24.
Texas State Medical Association, Waco, May 7-9.
Wisconsin State Medical Society, Wausan, May 22-24.

## MEDICAL SOCIETY OF THE STATE OF NEW YORK

*One-Hundred and Sixth Annual Meeting, held at Albany, April 15-18, 1912*

The President, DR. WENDELL C. PHILLIPS, New York City, in the Chair

The officers elected were named in THE JOURNAL last week, in New York news, page 1293.

Resolutions were adopted endorsing a national department of health; approving the action of the American Medical Association in regard to education of the public in health matters, and pledging aid and cooperation in furthering its work in New York; urging that the quarantine service of the state and of the country should be wholly in charge of the federal government; directing the Committee on Experimental Medicine to instruct the laity in the benefits and rewards of animal experimentation related to the prevention and cure of disease and the saving of human life, and to resist by all honorable means, at all times, contemplated legislation directed to opposing or hindering lawful animal experimentation practiced for these purposes; and recommending to county societies every possible effort to enforce the section of the Principles of Medical Ethics of the American Medical Association that relates to giving or receiving commissions for recommending patients.

### Relapses in Typhoid

DR. HERMAN F. L. ZIEGEL, New York City: Serious complications in relapses are comparatively rare, the most frequent being pneumonia and intestinal hemorrhage. The other complications in the twenty-five cases which I studied were bronchitis (in two cases), and bilateral femoral phlebitis, suppurative parotitis and tibial neuritis, each in one case. The ordinary expectant method of treatment was employed in these 166 cases of typhoid among which these relapses occurred.

DISCUSSION

DR. T. WOOD CLARK, Utica: One point that has not been brought out sufficiently is the relative lack of danger from relapses in typhoid. Out of 1,000 cases of typhoid which I studied in an epidemic a few years ago, between 200 and 250 patients had relapses, but every patient who recovered from the original attack likewise recovered from the relapse.

Dr. John M. Swan, Rochester: I would like to ask the author if he has had any experience in the use of the diazo-reaction in differentiating between the recrudescence of fever at the close of the typhoid and genuine relapses?

Dr. Lester, Seneca Falls: I would like to ask Dr. Ziegel if he has seen jaundice many times, and what he considers to be the pathology of jaundice, and what its bearing is on recovery in the relapsed cases.

Dr. H. F. L. Ziegel, New York City: Our cases were really very mild. We had only one fatality, and in that case the diagnosis was difficult. The patient was treated for three weeks outside of a hospital without a diagnosis having been made. The Widal was negative until the patient had been in the hospital a week. Then intestinal hemorrhage came on, and later the patient developed lobar pneumonia from which she died. As to the diazo-reaction, it would be a valuable means of differentiating between the onset of a relapse and the recrudescence of fever if the reaction was fairly constantly present in the relapses, but the fact is in only a very small proportion of the relapses do we get a positive diazo-reaction. As to jaundice, I have not seen a case of jaundice during relapse in typhoid, but in looking up the literature of the subject I remember reading of a case of persistent jaundice occurring during a relapse. This was attributed to toxemia, as we sometimes get jaundice in pneumonia or other infectious diseases. The prognosis is good in such cases.

### Vaccine Therapy in Medicine

Dr. Benjamin W. Stearns, Unadilla: In order to obtain the best results from vaccine therapy the patients must be selected with care. Chronic cases or localized infections in which the body is not doing its full duty in producing natural immunity, should be chosen. Cases in which a temporary increase in the severity of the disease might do permanent injury must be avoided. The etiology of the disease should be proved bacteriologically, and whenever possible an autogenous vaccine should be obtained, although an initial dose of a stock vaccine may be administered while awaiting the manufacture of the autogenous vaccine. The dose should be small at first, and the intervals of injection should not be too short. The symptoms of constitutional reactions should be watched for diligently, and in no case should an injection be given until all symptoms set up by its predecessor have subsided. The users of the vaccine should be thoroughly familiar with the principle and details of Wright's opsonic theory, and know the indications and contra-indications of the various vaccines, and should be conversant with the symptoms of the reaction of an overdose.

#### DISCUSSION

Dr. Alexander Lambert, New York City: Webb, of Colorado, found that it is not the chronicity of the case that makes so much difference as it is the position of the lesion and the site where the vaccines are injected. For instance, in a case of furunculosis or carbuncle, in which the lesion extends under the skin, injection into the subcutaneous tissue was effective, but where the subcutaneous tissue is involved, the best results are obtained by injecting vaccines into the skin cutaneously rather than subcutaneously.

Dr. Charles G. Stockton, Buffalo: The dosage of vaccines in the treatment of infections from the colon bacillus is interesting, and I feel that the matter is still open for discussion as to whether the initial dose of 100 millions is not quite too large. I remember in a discussion which Dr. Billings opened here two years ago on that subject, he took the same ground as Dr. Stearns, of using a large initial dose and subsequently larger ones. I have seen bad results from the large dosage, and I think it is better to begin with a smaller dose. With the larger dosage a leukopenia occurs not infrequently, which continues for a considerable period.

Dr. Egbert Lefevre, New York City: Of late there has been a wave of overenthusiasm in the use of vaccines in the early stages of typhoid, so that we are seeing cases now in which a reactive condition is setting in. I have not seen an acute case of typhoid in the first week in which any marked beneficial effect was obtained from giving large doses of vaccine. I have, however, seen harm done. In relation to colon bacillus infection, especially in cases of pyelitis, I have had a rather unusual experience with a child whose symptoms disappeared, yet the condition, as far as the growth of the microorganisms is concerned, has been absolutely unmodified. The child ran a temperature of 104-105 F. After the use of the vaccines the temperature came down, and the child was practically well, so far as the symptoms were concerned, yet the urinary picture was almost identical with what it was during the height of the disease.

*(To be continued)*

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# Current Medical Literature

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### Surgery, Gynecology and Obstetrics, Chicago

*April, XIV, No. 4, pp. 315-424*

1 *Destruction of Tumors of Urinary Bladder by High-Frequency Currents Known as Desiccation. B. A. Thomas, Philadelphia.
2 *Significance of Blood in Stools. J. M. T. Finney, Baltimore.
3 *Stereo-Arthrolysis. R. T. Taylor, Baltimore.
4 *Operative Treatment of Fractures. J. A. Blake, New York.
5 Esthiomene and Secondary Elephantiasis Vulva. A. Stein and W. J. Heiman, New York.
6 Acapnia and Its Relation to Anesthetic Shock. W. C. Woolsey, Brooklyn.
7 Differences Between Surgery of Children and Adults. C. N. Dowd, New York.
8 Thyroid and Its Diseases. C. H. Mayo, Rochester, Minn.
9 Apoplexia Uteri. J. McFarland, Philadelphia.
10 Congenital Stenosis of Pylorus. C. L. Scudder, Boston.
11 *Method of Treatment for Habitual Dislocation (Congenital) of Patella. G. Robertson. Dunfermline, Scotland.
12 *Transplantation of Fibula. W. R. MacAusland and B. E. Wood, Boston.
13 Operative Method in Case of Intestinal Obstruction. A. Wercelius, Chicago.
14 Tenaculum Forceps for Holding Towel to Protect Wound Margins. W. D. Berry, Muskogee, Okla.
15 Death Under Nitrous Oxid-Oxygen Anesthesia. J. Olow, Lund, Sweden.
16 Death from Nitrous Oxid and Oxygen Anesthesia. C. E. Boys, Kalamazoo, Mich.
17 Adenomyomatous Uterus Removed During Menstruation Showing Occurrence of Menstruation in Adenomatous Islets. W. B. Bell, Liverpool, England.
18 Treatment of Gunshot Wounds of Abdomen. F. B. Walker, Detroit, Mich.

1. **Destruction of Bladder Tumors by Desiccation.**—High-frequency desiccation in Thomas' opinion promises to be the method of the future for the treatment of papillomata of the bladder. The coil seems as effective as the static machine for the generation of the high-frequency current. The Oudin current possesses no selective action for pathologic tissue, as has been claimed, and will destroy normal tissue with equal readiness. Recurrences and metastases promise to be less frequent than by either suprapubic or intravesical incision, and, even should they occur, are far more amenable to a repetition of similar treatment.

2. **Significance of Blood in Stools.**—Finney protests against the prevailing tendency to jump to quick and easy conclusions drawn from certain insufficient clinical data. He endeavors to show that the simple presence of blood in the stools of a patient suffering from an otherwise obscure affection is by no means an evidence of pathognomonic importance. The conditions are so diverse as not to warrant any snap diagnosis, but on the contrary, to indicate the most careful, thorough and painstaking study and investigation. In order to fulfil these conditions, the aid of the despised laboratory man is indispensable. The adoption without his aid of such routine conclusion, as for instance, that this symptom must always mean ulceration of the mucosa somewhere along the gastro-intestinal tract, is to make a grievous mistake in theory, and one which may lead to disastrous results in practice.

3. **Stereo-Arthrolysis.**—After breaking up the ankylosis, Taylor pulls the bones apart as far as possible, after which the articulation is filled with a mixture of wax, 1, lanolin, 5, cooled down to about 108 F., after which the joint is held at an angle of 45 degrees until the paste hardens. In one of the knee cases cited a plaster-of-Paris cast was allowed to stay on for one week, then taken off and the leg manipulated under anesthesia. The result was not satisfactory; therefore a second operation was done. The patella was found to be freely movable. On manipulation of the joint a small amount of wax preparation could be squeezed out of the deeper portion of joint cavity. A greater part of the wax preparation that had been injected during the previous operation had been absorbed. Some of the articular cartilage of both femur and tibia had been removed at the previous operation, but these bones were in too close apposition when joint was opened the second time to permit of any marked degree of motion. There had been apparently some regeneration on the part of the femur; both the external and internal eroded condyles were found to have incapsulated in them the paste mixture which was injected at the previous operation; otherwise there were slight signs of regeneration.

The joint cavity was filled with a paste preparation consisting of the following proportions: Yellow wax, 1 part; mutton tallow, 2 parts; castor oil, 2 parts, with 15 grains to the ounce, by weight, of the mixture of bismuth subnitrate. This arthritic wax melts at 140 F. (60 C.) and is semisolid and begins to congeal at 128 F. (53 C.). The mixture is drawn up in the syringe again and again to get a uniform suspension of the bismuth, and for cooling purposes. The leg is held in full extension with traction while the paste is injected and remains in that position while the paste is hardening, after which the wound is closed with silver wire, etc. Three weeks after the second operation patient had between 40 and 50 degrees of voluntary flexion with little pain, and the remaining motion is simply restricted by voluntary muscular contraction. Other cases are cited. Two special points Taylor calls attention to in this method, and these are the entire absence of fever resulting from the unirritating nature of the interposed substance, nature tolerating it well. Second, voluntary active motion is soon possible, as it is practically painless and the range of motion, if sufficient fibrous and osseous tissue is removed at the time of the operation, should approximate normal limits as soon as the involuntary muscular rigidity from the patient's timidity will permit. The reformation of adhesions have not thus far been demonstrable, even under anesthesia.

4. **Operative Treatment of Fractures.**—Blake's present attitude in regard to operations for fracture of the shaft of the femur is that all should be plated that cannot be reduced and retained in reduction. A moderate amount of displacement is permissible in oblique fractures; but, to his mind, in transverse fractures, reduction without over-lapping is a prerequisite to non-operative treatment. Since union usually takes place in children, and since in them accommodation to deformity is more perfect, more displacement is allowable without recourse to operation.

11. **Treatment of Habitual Dislocation of Patella.**—In Robertson's method the semitendinosus tendon is isolated and cut as near its insertion as possible. A strip of the ligamentum patella is also detached and brought inward to meet the semitendinosus tendon. Those were then united to suture to each other and also to the inner fascial capsule of the knee, which is then plicated by several sutures. The leg is kept fully extended on a posterior splint for four weeks. The patella is prevented from becoming displaced outward during flexion of the knee.

12. **Transplantation of Fibula.**—The entire tibia in this case was removed because of extensive osteomyelitis, leaving the epiphysis at either end. Sinuses in the skin were dissected out and the periosteum brought together with catgut. The wound was drained above and below, and plaster-of-Paris bandage applied. The wicks were omitted in three days, and the patient made an uneventful recovery. The wound healed in the course of three weeks. The progress of healing was followed by means of Roentgen-rays, and no attempt at regeneration of new bone was apparent. The leg was flail-like, the only splint being that of the fibula which made the leg functionally imperfect. It was decided to transplant the fibula into the tibia, which was done. Nine months later the patient was walking about without the aid of crutches, there being about 1¼ inches shortening, and only a very slight limp.

### Virginia Medical Semi-Monthly, Richmond

*April 12, XVII, No. 1, pp. 1-28*

19 After-Care of Abdominal Sections. J. T. Buxton, Newport News.
20 Diagnostic Value of Hemianopsia. T. A. Williams, Washington, D. C.
21 Myositis Ossificans Progressiva Following Uncinariasis. J. C. Walton, Richmond.
22 Mercurial Nephritis. H. H. Hazen, Washington, D. C.
23 Principles of Dietetic Management of Diabetes. E. G. Hopkins, Richmond.
24 Chronic Nasal Diphtheria. C. M. Miller, Richmond.

### Southern Medical Journal, Nashville, Tenn.

*April, V, No. 3, pp. 143-216*

25 Treatment of Simple Fractures. D. Eve, Nashville.
26 Importance of Proper Shoes; Their Relation to Deformities of Foot and Body Efficiency. E. L. Scott, Birmingham, Ala.
27 Strains and Dislocations of Sacro-Iliac Joints. E. S. Hatch, New Orleans.
28 *Why Ligate Sac in Hernia? H. A. Elkourie, Birmingham, Ala.
29 Echinococcus Cyst of Liver; Report of Case. G. J. Winthrop, Mobile, Ala.
30 *Menstrual and Pregnancy History of 129 Females in a Hookworm Infected Factory Village. C. W. Stiles, U. S. P. H. and M.-H. S.
31 *Pellagra; Treatment by Direct Transfusion of Blood; Thirty-One Cases. H. P. Cole, Mobile, Ala.
32 *Introduction of Maize Into Italy and Pellagra. C. L. Alsberg, Washington, D. C.
33 Tuberculous Bladder. M. O. Shivers, Colorado Springs, Colo.
34 Series of Operations for All Forms of Appendicitis. E. G. Jones, Atlanta, Ga.
35 Benign Tumors of Stomach. E. A. Balloch, Washington, D. C.
36 Surgery of Intestines; Report of Fourteen Cases. E. M. Prince, Birmingham, Ala.
37 Surgical Treatment of Bright's Disease. S. Lloyd, New York.
38 Adenoids; Their Rôle in Prophylaxis in Diseases of Children. J. J. King, New York.

28. **Why Ligate Sac in Hernia?**—There is no especially good reason in Elkourie's opinion why we should ligate the sac in hernia. Not, he says, because the sac is a foreign and a harmful piece of tissue to leave intact in the human economy; certainly not. Not because we gain any appreciable advantage in the removal of the sac; and most assuredly not because we save any time; then why in the name of common sense do we ligate the sac? Elkourie maintains that the sac should never be removed, with the possible exception of diseased conditions pathologically affecting the sac itself; a condition he has never seen either in his own cases or in the cases of others. He has done within the last six years twenty-two hernial operations without removing the sac, and his results have been excellent. He has not had a single recurrence. He believes that the removal of the sac has been mostly due to the impress of tradition and the force of long established custom and not because it was, or is, a necessary procedure. The method he pursues, is as follows: Make the usual incision through the skin and superficial fascia, and having gone through both the external and internal oblique, finally expose the sac. Open the sac and deal with the contents, or hernia, according to its nature and the condition it is in. Do not disturb the cord in the least, nor attempt to break up any real or imaginary adhesions that may exist between the sac and cord. Then introduce a purse string suture through the neck of the sac, up in the ring which is tightly and firmly drawn. Then scarify the internal surface of the sac either with a rough strip of gauze or a needle; then take three or four sutures longitudinally introduced through both layers of the sac in order to insure firm adhesions. Elkourie then sutures the transversalis and internal oblique to the lower shelves of Poupart's ligament. The external oblique is sutured to the upper shelves and then the superficial fascia and skin are approximated.

30. Abstracted in The Journal, Dec. 2, 1911, p. 1941.

31. Also appeared in *British Medical Journal*, November, 1911.

32. **Introduction of Maize Into Italy and Pellagra.**—The opinion that the coincidental appearance of pellagra and the

introduction of maize from America has been proved a myth, Alsberg says, is hardly, as yet, warranted. It may be a myth, but proof is lacking.

### American Journal of Gastro-Enterology, Philadelphia

*April, I, No. 4, pp. 1-54*

39 Cancer. E. J. Asnis, Philadelphia.
40 Gastric and Duodenal Ulcer Considered from Medical Standpoint. C. R. Jones, Pittsburgh.
41 Prostatic Enlargement as Cause of Constipation. J. M. Anders, Philadelphia.
42 Tryptophan Test. L. Breisacher, Detroit.
43 Kidney Calculus (Quiescent) in Relation to Gastro-Enterology. K. B. Page, New York.
44 Duodenal Carcinoma. A. Bassler and J. P. Grant, New York.
45 Relation Between Gastro-Intestinal Disturbances and Gynecologic Disorders. J. C. Hirst, Philadelphia.
46 Case of Tuberculosis of Kidney Manifesting Gastric Symptoms. H. B. Mills, E. J. Asnis and R. Boyer, Philadelphia.
47 Diseases of Stomach and Intestines. L. Brinton, Philadelphia.

### Archives of Internal Medicine, Chicago

*April 15, IX, No. 4, pp. 401-524*

48 Linguatula Serrata (Larva) in a Native Central American. S. T. Darling and H. C. Clark, Ancon, C. Z.
49 Effect of Pressure-Lowering Drugs and Therapeutic Measures on Systolic and Diastolic Pressure in Man. C. H. Lawrence, Boston.
50 *Cause of Malarial Anemia and Intravascular Migrations of Malarial Parasite. M. Rowley-Lawson, New London, Conn.
51 *Glycyltryptophan and Tryptophan Tests for Cancer of Stomach. C. H. Sanford and J. Rosenbloom, New York.
52 *Artificial Pneumothorax as Treatment of Pulmonary Tuberculosis. S. Robinson and C. Floyd, Boston.
53 *Chronic Focal Infections and Their Etiologic Relations to Arthritis and Nephritis. F. Billings, Chicago.
54 *Chronic Oral Infections. T. L. Gilmer, Chicago.
55 Bacteriologic and Experimental Observations on Focal Infections. D. J. Davis, Chicago.
56 *Parasitic Amebas in Intestine of Man, with Study of Protozoa Found in Intestines of Healthy Men in Southern United States. E. R. Whitmore, Fort Barrancas, Fla.
57 *Practical Value of Noguchi's Luetin Reaction. H. F. L. Ziegel, New York.
58 *Blood-Pressure in Cheyne-Stokes Respiration. L. J. Pollock, Hospital, Ill.

50. **Cause of Malarial Anemia.**—The grave and rapid anemia occurring in some malarial infections Rowley-Lawson claims can easily be explained as due to the migration of parasites of all ages from corpuscle to corpuscle. The evidence presented in this paper would seem to justify this belief. The most important fact supporting it is the frequent finding of parasites in similar stages of development; (1) free, with varying amounts of pigment included in their substance; (2) on healthy corpuscles (corpuscles showing abundant hemoglobin and no evidence of degeneration); (3) on corpuscles which show conclusive evidence of degeneration. The fact that parasites in each and every stage of development may be seen on healthy corpuscles would seem to be conclusive evidence of migration. For a parasite could not receive nourishment and secrete pigment (if that pigment be derived from the red corpuscle) and complete its life cycle on a single corpuscle without that corpuscle showing conclusive evidence of degeneration. The fact that young parasites are seen on corpuscles with an almost complete loss of hemoglobin, would seem to indicate that the parasite must migrate or perish for lack of food. Rowley-Lawson finds still another support for her hypothesis in cases of multiple infection, in which three or four young parasites (sometimes six or seven) are attached to a corpuscle. She says one can hardly expect that all these youngsters can grow up on a single corpuscle, and if they are not to perish, they must migrate.

51. **Tests for Stomach Cancer.**—The authors agree with Weinstein that the use of glycyltryptophan is unnecessary for the detection of tryptophan-producing peptidase in gastric contents, but their findings do not permit them to believe that the tryptophan test is a reliable one for gastric carcinoma.

52. **Treatment of Pulmonary Tuberculosis.**—Twenty-eight cases of phthisis have been subjected by Robinson and Floyd to artificial pneumothorax therapy within the past two and one-half years. With three exceptions all of the cases have been advanced ones which had previously failed to respond to methods of therapeutic hygiene. The last eight cases have been treated by nitrogen injection too recently to draw conclusions as to the ultimate result of the treatment. It is said, however, that with the exception of the three cases in which a pleural space could not be established, a distinct relief of symptoms has been the immediate result of the lung compression in practically all of the reported cases of our series. The tuberculous process has been brought to a standstill in at least six of the cases which have been under constant observation and continued treatment. In two instances there has been cessation of all activity in both lungs. The promptness and willingness with which most of the patients responded to summons for repeated injections were regarded as conclusive evidence at least of the symptomatic relief attending the therapy. This might have been credited in part to psychic influences had there not been a corresponding improvement in the objective signs revealed by repeated examinations.

From experience with the earlier cases the authors have been led to the employment of more frequent injections. They believe that this factor is of paramount importance. The completeness of the compression is thus more nearly attained; furthermore, the partial mobilization of the lung permitted by the absorption of the nitrogen is promptly prevented by its early renewal. The fatalities recorded were due to the unarrested progress of the disease in certain of the more advanced cases. In no instance was death referable in any way to the pneumothorax therapy. They believe that "pleural eclampsia" (Forlanini), or a reflex inhibition of the heart through vagus irritation from the pleura, is a danger to be considered in this treatment as in other therapy requiring thoracentesis, but that it may always be prevented by anesthetizing the pleura as described in a previous paragraph. They have experienced no accidents, and believing that they are always avoidable, conclude that pneumothorax therapy is a safe procedure.

53 and 54. Abstracted in The Journal, Dec. 30, 1911, p. 2169.

56. **Parasitic Amebas in Intestine of Man.**—Whitmore believes that the finding of parasitic amebas and flagellates in the intestinal tract in cases of pellagra is purely coincidental. The parasites have nothing to do with the disease.

57. **Noguchi's Luetin Reaction.**—The luetin test is regarded by Ziegel as a simple, harmless procedure, consisting essentially of the intradermatic injection of a carbolized emulsion containing dead *Spirochætæ pallidæ*. The reaction is negative in normal and non-syphilitic individuals and in various diseases including tuberculosis, pneumonia, typhoid fever, malaria, carcinoma, eczema and psoriasis (Noguchi). The test can already be accepted as of considerable negative value. As compared with the von Pirquet reaction, the latter gives more than 50 per cent. positive reactions in apparently non-tuberculous adults, whereas the luetin test is constantly negative in both adults and children who are clinically and serologically non-syphilitic. The positive value of the test appears to be more limited. A positive reaction is rarely obtained in primary syphilis and inconstantly in secondary syphilis. Noguchi found the test unsatisfactory in parasyphilitic conditions. Whether the negative reactions usually obtained in patients practically cured of syphilis indicate lasting suppression of the disease remains to be determined. In hereditary and tertiary syphilis, however, Noguchi obtained positive reactions in more than 90 per cent. of the cases. According to Martin Cohen's studies, in eye affections supposedly syphilitic in etiology, the reaction corresponds with the clinical evidence or with the Wassermann reaction in 76⅔ per cent. of cases. In a number of Cohen's cases in which negative Wassermann reactions were presumably due to recent treatment, the luetin test was positive.

58. **Blood-Pressure in Cheyne-Stokes Respiration.**—It would seem from Pollock's observations that the mechanism of the changes of blood-pressure in Cheyne-Stokes respiration associated with increased intracranial tension is as follows: The intracranial tension being higher than the general blood-pressure, cerebral anemia exists and apnea is present. The vasomotor centers are automatically stimulated to raise the general blood-pressure in an effort to produce an equilibrium between it and the intracranial tension. As the general blood-pressure rises respiratory movements recommence; at their height the vasomotor centers are no longer stimulated and the general blood-pressure again falls and the respiratory movements diminish and finally cease.

### Washington Medical Annals, Washington, D. C.

*March, XI, No. 1, pp. 1-83*

59 Civilization, Constipation, Reversion. A. F. A. King, Washington, D. C.
60 Early Symptoms and Ocular Findings in Tumor of Brain. O. Wilkinson, Washington, D. C.
61 Operation for Tumor of Brain. W. P. Carr, Washington, D. C.
62 Thalmic Tumor in Ventricles with Frontal Symptoms. T. A. Williams, Washington, D. C.
63 Leprosy. D. S. Lamb, Washington, D. C.
64 Case of Syringomyelia, Said to Have Shown Itself After Electric Shock. T. A. Williams, Washington, D. C.
65 Dietetics: General Principles of Feeding, Particuarly in Gout. P. S. Roy, Washington, D. C.
66 Feeding in Infancy. F. Leech, Washington, D. C.
67 Diet in Vasomotor Disturbances of the Upper Air Tract. C. W. Richardson, Washington, D. C.
68 Malformations and Monstrosities in Army Medical Museum. D. S. Lamb, Washington, D. C.

### Journal of Nervous and Mental Diseases, Lancaster, Pa.

*April, XXXIX, No. 4, pp. 217-288*

69 *Height and Weight of Feeble-Minded Children in American Institutions. H. H. Goddard, Vineland, N. J.
70 Acute Delirium in Psychiatric Practice, with Special Reference to So-Called Acute Delirious Mania (Collapse Delirium). E. L. Hanes, Rochester, N. Y.
71 Sclerotic Foci in Cerebrum of Infant. J. F. Munson, Sonyea, N. Y.

69. **Height and Weight of Feeble-Minded Children.**—Goddard's findings seem to warrant the conclusion that there is a remarkable correlation between physical growth and mental development. The low grade (idiot) has not only a disturbed brain function but his entire organism is disarranged and growth processes upset. In the imbecile the same is true but to a less extent. In the moron we have the interesting phenomenon of practically normal growth during the immature years, but an arrest of growth earlier than in normals. All defectives are heavier at birth than normals. This would once have been thought to be correlated with the defect through greater difficulty of birth necessitating the use of instruments with resulting injury. But in the light of Goddard's findings in heredity this is seen to be without force. Sex differences are less and less marked as one goes down the grades of defect.

### Journal of Oklahoma State Medical Association, Muskogee

*April, IV, No. 11, pp. 443-484*

72 Treatment of Minor Surgical Injuries and Diseases. C. Blickensderfer, Shawnee.
73 Bronchopneumonia. T. C. Sanders, Shawnee.
74 Abscess of Spleen. F. L. Carson, Shawnee.
75 Indications for Tonsillectomy. J. M. Stooksbury, Shawnee.
76 Auto-Intoxication. J. M. Byrum, Shawnee.
77 Immunity. J. E. Hughes, Shawnee.
78 Differential Diagnosis of Benign and Malignant Tumors. J. A. Walker, Shawnee.

### Boston Medical and Surgical Journal

*April 18, CLXVI, No. 16 pp. 583-618*

79 Aims and Purposes of Robert Dawson Evans Memorial. F. C. Richardson, Boston.
80 Significance to Neurology of Robert Dawson Evans Memorial. J. J. Putnam, Boston.
81 Significance of Homeopathic Foundation for Clinical Research and Preventive Medicine. E. E. Southard, Boston.
82 *Symptomatology of Chronic Duodenal Ulcer. H. S. Bowen, Boston.
83 Diagnosis of Solitary Kidney, Blocked Ureter and Kidney Inactive by Reason of Previous Disease. E. Garceau, Boston.
84 *Mental Hygiene and the Special Child; Chapter in Social Pathology. B. C. Bowning, Worcester, Mass.
85 Two Cases of Precocious Cerebrospinal Syphilis, One Occurring After Salvarsan, the Other with Post-Mortem Findings. A. Myerson, St. Louis.

82. **Symptomatology of Chronic Duodenal Ulcer.**—Eight ses are reported by Rowen. With the exception of the one at came to autopsy, he has seen them from their early symp- ms and treated them medically and surgically. Their sum- ary shows chronic duodenal ulcer without other lesions three nes; once ulcer accompanied by chronic appendicitis, and once symptoms were confused by a marked osteo-arthritis of e spine; another ulcer was found at autopsy. On two casions Rowen came on unsuspected advanced carcinoma of e stomach and once found chronic adhesive appendicitis. He been struck with the uncertainty of finding this condition d of the reasonable certainty of discovering some other thologic change. To most physicians the upper abdomen, til within the last few years, has been a region on the rderland of mystery where there were things which lay beyond the scope of our analysis. Rowen, however, believes that nowadays, when careful medical treatment of stomach trouble appears to do no good, and when after conscientious study one feels that there is something organically wrong, he should have no hesitation in advising a laparotomy.

84. **Mental Hygiene and Special Child.**—Downing emphasizes that neither heredity, environment nor personal choice alone will explain the facts of social life. The tendency of heredity is to produce an environment which perpetuates that heredity. Let us have, he says, preventive education and preventive medicine working hand in hand. Open-air hospital schools for neurotic children are needed in our cities, to be a part of our school system. This should have financial aid from parents, philanthropists and the state.

### New York Medical Journal

*April 20, XCV, No. 16, pp. 781-832*

86 Etiology of Perineal Lacerations. J. C. Edgar, New York.
87 Use of Spinal Fluid (Auto-Therapy) in Treatment of Chronic Syphilides, Especially of Central Nervous System. W. Browning and W. Lintz, Brooklyn.
88 Report on Activity of Department of Physical Therapy of Mount Sinai Hospital Dispensary. H. F. Wolf, New York.
89 Analysis of Results of Rhizotomy in Treatment of Spastic State of Cerebral Diplegia. L. P. Clark and A. S. Taylor, New York.
90 School and the Physician. G. Straubenmuller, New York.
91 Recurrence of Syphilitic Manifestations After Combined Salvarsan and Mercurial Treatment. L. Neuwelt, New York.
92 Summary on Technics Employed in Administration of Salvarsan. S. H. Likes and H. Schoenrich, Baltimore.
93 Ranula. L. G. Hanley, Buffalo.
94 Study of Physiology and Pathology of Skeleton on Oral Extremity of Thorax (Stethographic Method). C. M. Desvernine, Havana, Cuba.

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## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### Practitioner, London

*April, LXXXVIII, No. 4, pp. 489-624*

1 Medical Aspects of Life Insurance. Sir R. D. Powell.
2 Diagnosis and Operative Treatment of Carcinoma of Vulva, Vagina and Uterus. V. Bonney.
3 Nasal Catarrh. W. Stuart-Low.
4 Pneumococcal Peritonitis in Children. S. Barling.
5 Intestinal Stasis in Children and Its Surgical Treatment. L. E. B. Ward.
6 Gridiron Incision; Where to Make It and How to Enlarge It. A. MacLennan.
7 Case of Pulmonary Gangrene; Operation; Recovery. W. Gordon.
8 Relation of Cardiac Systole to Arterial Tension. L. T. Thorne.
9 Cases Illustrating Importance of Examining Scrotum in Tumors of Abdomen. T. S. Tirumurti.
10 Simplicity of Major Surgery. H. G. Webb.

### British Medical Journal, London

*April 6, I, No. 2675, pp. 765-816*

11 Action of Tuberculin and Its Application to Treatment of Different Forms of Tuberculosis. C. Riviere.
12 *Pulmonary Tuberculosis Treated by Continuous Antiseptic Inhalation. D. B. Lees.
13 *Perez' Sign and Audible Motor Crackles. W. Ewart.
14 Influence of Strong, Prevalent, Rain-Bearing Winds on Course of Phthisis. W. Gordon.
15 Genesis of Dicrotic Pulse-Wave. D. W. Samways.
16 *Blood-Pressure Readings in Cases of Auricular Fibrillation. M. D. Silberberg.
17 Calcareous Degeneration of Myocardium. J. A. M. Cameron.
18 *Results of Treatment of Syphilis with Salvarsan at Royal Naval Hospital, Haslar. T. B. Shaw.

12. **Pulmonary Tuberculosis.**—A third series of twenty cases, making a total of seventy patients treated by the method of which full details were given in a previous paper (abstracted in The Journal Jan. 8, 1910, p. 162), is reported by Lees.

13. **Perez' Sign.**—Perez' sign consists essentially in the production of sounds audible over the upper thoracic surface on actively or passively moving the arms at the shoulder-joint, and particularly on raising or lowering them. It was originally described by him, in a case of mediastino-pericarditis, as due to intrathoracic sounds elicited by these movements in the upper part of the chest. The chief recommendation of the method are its simplicity when conducted with the binaural stethoscope and the amount of information which it is capable of furnishing. Ewart suggests to clinicians that they make a rule of combining the articular with the upper

thoracic examination in all cases yielding any stethoscopic sounds, and of noting the result. The most convenient technic is firmly to steady with one hand the cup of the stethoscope over the front of the head of the humerus, which it fits well, or in dorsal examinations over its side or over the flat acromial surface of the spine of the scapula, while the other hand grasps the elbow and imparts to the humerus a full range of strictly passive movements. The sternoclavicular examination presents no difficulty. For articular conditions, as this is by far the finest test that can be applied, the examination should be *de rigueur.* A negative result from auscultation and from manipulations would be the quickest as well as the only conclusive evidence of absolute soundness. Should, however, any articular sounds be heard, continue the movement, and simply shift the chest-piece to the supraclavicular and infraclavicular regions, a matter of a few seconds, and well worth while if any unexpected sounds should happen to be heard. In all doubtful cases submit apical results, whether positive or negative, to the articular test. Perez taught that there are lesions (in Ewart's experience chiefly pleural, but sometimes pulmonary) which may give sounds under the mechanical traction of movement, and not always under that of deep breathing only; and the no less important fact that some of the sounds audible over the apices may be merely conducted from the sternoclavicular or shoulder joints.

16. **Blood-Pressure Readings in Auricular Fibrillation.**—The readings taken by Silberberg from eight patients, all of whom were typical examples of cardiac irregularity due to auricular fibrillation, show the wide range of blood-pressure which an individual case of auricular fibrillation may possess. The blood-pressure reading of smallest beats varied from 80 to 160; maximum blood-pressure ran from 100 to 210. This variation Silberberg says is of importance, because in the cases in which it occurs single observations of blood-pressure, taken in the ordinary manner, possess only a restricted value as an index; the error introduced in continued and comparative observations, where each observation is confined to a reading of the most forcible beats, is also very considerable.

18. **Salvarsan in Syphilis.**—The general plan of treatment at present in use at Haslar is as follows: Immediately a diagnosis of syphilis is made, one injection of salvarsan is given, followed eight to twelve days later by a second. When discharged to duty no further treatment is recommended in the absence of symptoms unless the Wassermann reaction becomes positive. In cases of early secondary syphilis two injections of salvarsan are given as in cases of primary syphilis. Further treatment in the absence of symptoms is based on the Wassermann test. From the results, even in these early secondary cases, Shaw believes two injections will in many cases cure the disease; but unless the Wassermann test can be carried out about once a month mercurial treatment supplemented with iodids is recommended.

### Sei-I-Kwai Medical Journal, Tokyo

*March 10, XXXI, No. 3, pp. 132-150*

19 *Effect of Phenyl Urea on Tetanus Toxin and Tetanus in Laboratory Animals. H. Sewaki.

19. **Phenyl Urea.**—Sewaki's experiments show that tetanus symptoms do not occur when the test-animals are kept under influence of phenyl urea. In other words, if the action of phenyl urea is maintained during the incubatory stage of tetanus poisoning, its manifestations will be prevented.

### Lancet, London

*April 6, I, No. 4623, pp. 911-968*

20 Modern Views on Significance of Skin Eruptions. H. G. Adamson.
21 *Pharmacology and Therapeutics of Lecithin and Phytin. W. Bain.
22 *Case of Angina Abdominis. Sir L. Brunton and W. E. Williams.
23 Acute Poliomyelitis and Allied Conditions. E. F. Buzzard.
24 *Congenital Malposition of Gall-Bladder. A. J. Walton.

21. **Pharmacology and Therapeutics of Lecithin and Phytin.**—Bain's clinical experience leads him to look on lecithin as a valuable drug in cases of anemia and debility. He regards it as a metabolic stimulus, for he can hardly conceive that the small amount of extra nitrogen and phosphorus administered in doses of a few grains daily can act as a tissue-former in any substantial degree. Its beneficial effect on the nervous system he regards as secondary to improvement in general nutritive condition, and not because lecithin is a "brain food." Its most striking effect is seen in the blood, the red corpuscles, white corpuscles (especially the lymphocytes) and hemoglobin percentage all being increased. Illustrative experiments in rabbits are given in detail. Although there is some evidence that phytin (inosite phosphoric acid ester), an important phosphorized constitutent in vegetable tissues, may be of some value in herbivora, Bain says the evidence in favor of its utilization in carnivora and in man is either negative or conflicting. His experiments on rabbits were not sufficiently encouraging to warrant him in testing its usefulness clinically. The enzyme phytase responsible for the cleavage of phytin. though present in plants, appears to be absent in animals; he suggests that it is therefore probable that if cleavage occurs in animals it is due to phytase contained in the food taken. The paper also discusses such questions as the comparative therapeutic value of inorganic and organic compounds of phosphorus, and the possible way in which minute quantities of certain constitutents of the diet may influence nutrition.

22. **Angina Abdominis.**—The case reported by Brunton and Williams was one in which the patient, aged 63, suffered from severe pain which came on when he began to walk. In this respect the pain resembled that of angina pectoris, but it differed in its position as it was most severe in the umbilical region. It was at first confined to the umbilical region and was attributed to flatulence, but it gradually increased in severity and extent so that it spread all over the front and back of the chest and caused perspiration to break out over his body. His sister, aged 64, unmarried, suffered during the past seven years from abdominal pains similar in every respect to the pains felt by the brother. They were felt in the same spot and came on after walking. As most of the cases recorded by others have shown symptoms of locomotor ataxia, it seemed advisable to ascertain the condition of the knee-jerks and of the pupils in the patient and his sister. This was done by Williams, who found the knee-jerks of the patient's sister normal, but the pupillary reflexes sluggish, with pupils much contracted beyond what they ought to be. The patient's knee-jerks were abnormally active, the pupils a good deal contracted and almost insensible to a bright light.

24. **Congenital Malposition of Gall-Bladder.**—The gall-bladder, as will be seen in this case, was situated on the left lobe but was normal in shape and attachment. The neck of th bladder was directed toward the right instead of toward th left side, and there was a well-marked Hartmann's pouch jus before the origin of the cystic duct. The fundus reached to, bu did not project beyond, the free margin of the liver. The gall bladder was well to the left of the umbilical vein but the are between it and the structure, which presumably should be calle the quadrate lobe, was small, so that in life the gall-bladde lay close to the falciform ligament, and was, when viewed fro the right side, wholly covered by this structure. If, therefor symptoms of disease of the gall-bladder or some neighborin structure had arisen, which necessitated exploration throug the usual incision traversing the right rectus, the gall-bladd would, at operation, have been invisible, and even if the liv had been pulled well over to the right it would have remain hidden beneath the falciform ligament, which would have be stretched across it. The cystic duct passed downward to jo the hepatic ducts in the normal manner, and all of the showed a well-defined lumen. The factor of importance in th case was, however, that no other deformities were discoverab and therefore from the point of view of the anatomic structu there was no reason why the child should not have reach adult life.

### Journal of Tropical Medicine and Hygiene, London

*April 1, XV, No. 7, pp. 97-112*

25 *Deep Suppuration of Thigh Associated with Peculiar Bacill H. H. Scott.
26 Case of Suppuration in Encysted Hydrocele of Sperma Cord. J. R. D. Webb.
27 Gloriosa Superba Poisoning. L. G. Fink.

25. **Deep Suppuration of Thigh.**—Three cases are reported y Scott of a hitherto undescribed affection in which he found 1 organism resembling *B. mycoides.* The first patient had ways been in good health until two weeks before she came the hospital when she felt a burning in the skin of the ght thigh posteriorly. The burning increased, and the part came swollen and hard, with great pain and fever. On admis-on she had a temperature of 102 F., and there was a hard awny swelling in the skin of the thigh, reaching from the ittocks to the lower third of the thigh behind; she com-ained of great pain, and could not sleep. Deep incisions were ade, but no pus found. Temperature, 98.4 F. in the morn-gs, rising to 102 F. in the evenings. This continued for a ek, when another incision was made down to the bone, and large deep-seated abscess containing not less than a quart slate-colored pus—no odor—was evacuated. The tempera-re remained normal afterward. There was no abra-on of the skin when she was admitted, and no discoloration, d she says that she could find none before coming to the spital. The second and third cases were similar clinically t terminated fatally. Smears were made of the heart-blood, leen pulp and bone marrow in the last two cases, and of the s and cultures of the blood drawn aseptically by pipette om the heart cavities, of the spleen pulp, of the pericardial id, of the marrow, of the gall-bladder contents, and of the s. Whereas, in the second case the culture from the heart od remained sterile, from that of the last case a growth was tained of a new bacillus together with a few streptococci and phylococci. Similar growth resulted with the spleen and rrow. From the pus the organism was readily cultivated, ough, as would be expected, the contamination by staphylo-ci and streptococci was greater. From the serous fluid only bacillus described was obtained, no pyogenic organisms; ile, lastly, from the contents of the gall-bladder no growth s obtained. The only bacillus which resembles it at all sely is, *Bacillus mycoides*; but there are distinct differences ween the two. Thus *mycoides* does not give rise to acidity milk, renders broth turbid, does not produce indol, and is pathogenic. These three points are all reversed with the illus described. Scott believes that the condition is one of teriemia with arrest locally of the organism at least in t in the marrow of one of the longer bones and formation pus when opportunity for secondary contamination occurs; t happened in five to six days in the first and third cases; second died, probably from an associated enteric fever, too n after the incision for pus to form. If the organism has been previously described and christened, Scott suggests tatively for it the name *Bacillus seroficus*, since the most king feature of each of the cases (apart from the presence the bacillus in the blood-stream) was the swelling set up arently by the enormous quantity of thin serous fluid.

### ournal of Laryngology, Rhinology and Otology, London

*April, XXVII, No. 4, pp. 185-240*

International Collective Investigation of Ozena. A. B. Kelly.
Appeal for Undertaking International Collective Investigation of Ozena. A. Alexander.
Teaching of Otology and Laryngology in Italy. F. Massei.
Analysis of 123 Consecutive Cases in Which Operations Were Performed for Relief of Mastoid, Labyrinthine and Intra-cranial Complications of Suppurative Otitis Media. J. S. Fraser and J. K. M. Dickie.

### Archives Générales de Chirurgie, Paris

*March 25, VI, No. 3, pp. 249-372*

*Congenital Dislocation of the Hip-Joint. (La luxation congénitale de la hanche.) P. Le Damany. Commenced in No. 2.
*Bullet Wound of Spinal Cord. (Plaie de la moelle et syndrome de Brown-Séquard.) J. Ducuing and P. Rigaud.
*Tardy Traumatic Deformity of Spine. (Déformations vertébrales traumatiques tardives—maladie de Kümmell-Verneuil.) P. Mauclaire and Burnier.

2. **Congenital Dislocation of the Hip Joint.**—Le Damany rks that the difficulty of keeping the children clean is the t drawback to applying orthopedic appliances to very g children, but that this is far outbalanced by the superior-of the results when treatment is begun early, when the l is from 1 to 3 years old. The children wearing ppliance should use a special flat chamber-pot; those that ot be trained to use this vessel should sleep in little hammocks with large meshes through which the exereta fall into a vessel below. He gives sixteen illustrations of the various orthopedic apparatus and radiographic findings, stating that he has been able to realize an anatomic cure in 97 per cent. of 426 children treated on these principles. In all the bilateral cases the children were under 7 and in the unilateral cases under 11. In the 300 cases between his very earliest and very latest series, the cure was anatomic in 291; in three other cases the head of the femur was left a little too high on one side, and in four cases the outcome was a failure on one or both sides. He found that the functional outcome was perfect in from six months to two years after the close of the treatment in children from 1 to 4 years old. Functional training by weight-bearing is an important factor in the treatment, which aims at first to immobilize the hip joint and later to overcome the twisting of the femur, on the Paci-Lorenz principles, utilizing the action of the muscles to twist the femur back into place.

33. **Bullet Wound of the Spinal Cord.**—Ducuing and Rigaud report a case of bullet wound, the bullet passing through the fourth right interspace and being found at necropsy close to the twelfth dorsal vertebra, the patient succumbing in a few days to intrameningeal hemorrhage. The lesson taught by the case is the liability of the bullet to change its position several times.

34. **Tardy Traumatic Deformity of the Spine.**—Mauclaire and Burnier report two cases of the Kümmell-Verneuil group of symptoms developing from a month to a year after an accident injuring the spine, the pains then returning as severe as at the time of the accident, and radiating to the interspaces, abdomen and legs, and possibly with exaggeration of the reflexes, muscular contractures, and paresis of certain groups of muscles. But the main feature is a large, broad hump which develops at this time. In one case described scoliosis was pronounced while there was no kyphosis. Differentiation of the true nature of the trouble is often difficult, but treatment should be the same as for Pott's disease. It is important in prophylaxis that the patient should stay in bed for some time after any accident to the spine. It is generally possible to correct the kyphosis in part, but orthopedic appliances may have to be worn for months and years. In conclusion ninety-eight other cases from the literature are summarized; the accident was a fall from a step-ladder or on the stairs in most of the cases; in one a soldier took up a heavy weight on his back and felt a severe pain in the lumbar region; he kept in bed for a week and then resumed active duty. Several months later it was noticed that he had developed a hump, but there were no motor disturbances.

### Archives Générales de Médecine, Paris

*March, XCI, No. 3, pp. 197-284*

35 *Light Cauterization of the Nose in Treatment of Asthma. (La muqueuse nasale et les centres pneumostatiques.) P. Bonnier.
36 *Thyroid Treatment of Asthma. (Pathogénie de l'asthme thyroidien et ovarien.) L. Lévi.
37 Pseudo-Effusion Between the Lobes of Tuberculous Lung. (Pseudo-épanchements de l'interlobe et interlobites mixtes chez les tuberculeux.) C. Sabourin.
38 Breathing Exercises in Chronic Disease of the Air Passages. (Exercices de respiration dans les maladies chroniques des voies respiratoires des adultes.) G. Rosenthal.

35. **Light Cauterization of the Nose in Treatment of Asthma.**—Bonnier explains the effect of physical measures, revulsion, cataplasms, etc., by the effect from them on the centers regulating the region which is the seat of the morbid process. All such measures and therapeutics in general, he declares, act essentially on the regulating centers and these in turn act on the disease process. It is like a telephone system; we speak through the telephone to our neighbor across the street, but it is by the intermediation of the central office blocks away and long stretches of wire. The aim in treatment is to stimulate and restore normal conditions in the central office, the regulating centers. He has found that in asthma it is possible to act on the morbid conditions in the air passages by stimulating the bulbar centers governing them, and that an effectual means to stimulate these centers is by mild cauterization of certain points in the nose. He warns that the aim is not to treat the nose, but the asthma, and consequently cauterization

should be restricted to only what is needed. The points to be cauterized he says are known to every child who has ever tried to make another sneeze by tickling his nose with a feather. Tickling these points causes sneezing, coughing or lacrimation. Pressing on the nose just below its bony framework will arrest a sneeze if it is not too far on its way; pressure by the tongue on the inside of the upper jaw will also compress the nerve involved and arrest the sneeze. With the tip of the cautery—the current not turned on—the nose is gently explored until a point is found which can not be touched without the patient's lid quivering or lacrimation. As soon as this point is located, the current is turned on for slight cauterization, very lightly done. The stimulus that causes sneezing is a slight one; a blow with the fist does not make one sneeze. The nerves respond to a slight, gentle stimulus when they remain passive under a powerful attack on them. Bonnier has applied this treatment in 100 cases of asthma and has permanently cured 75 per cent. and possibly some of the others, the ultimate outcome not being known in all cases. In some of the cases the asthma was of forty years' standing and in a number it was of the hay-fever type. One in this latter group had suffered for twenty-two years with recurring hay fever but has had no recurrence since this gentle cauterization in 1908. In some of his cases the patients were cured at the same time of phobias, depressions, vertigo, and respiratory, digestive and genital disturbances, all these evidently sharing the reflex nature of the asthma. One patient was a physician who is stated to have had as sequelæ of cholera twenty-five years before almost uninterrupted mucomembranous enteritis, dyspepsia, asthma and glycosuria amounting to 15 gm. A single cauterization of the points in the nose inducing the reaction in the eyes, was followed by subsidence of all the symptoms of the three affections and there has been no recurrence to date, over four years. The mechanical principles involved are explained in some diagrams.

36. **Thyroid Treatment of Asthma.**—Lévi found that thyroid treatment arrested permanently all tendency to asthma in a number of his patients; in some the asthma was of twelve or fifteen years' standing. He published nine such examples last year, and has since encountered fourteen more. Migraine and other symptoms of the neuro-arthritic diathesis are common in the patients amenable to this treatment, and they yield with the asthma to medication to remedy the defective thyroid functioning.

### Bulletin de l'Académie de Médecine, Paris

*March 19, LXXVI, No. 12, pp. 213-260*

39 *Lice as a Factor in Phlyctenular Conjunctivitis (Etude sur l'étiologie de la conjonctivite phlycténulaire.) De Font-Reaulx and R. Blanchard.
40 *Treatment of Syphilis in Pregnant Women. (Traitement de la syphilis chez les femmes enceintes.) M. Pamard.

39. **Lice and Conjunctivitis.**—De Font-Reaulx found evidences of the presence of lice in 142 of his 167 cases of phlyctenular conjunctivitis observed in 1905 to 1908, and in the other cases there was strong suspicion of phthiriasis. On the other hand, he found evidences of lice only in 31 per cent. of his child patients with other eye affections.

40. Summarized in the Paris Letter in The Journal, April 13, p. 1127.

### Presse Médicale, Paris

*March 23, XX, No. 24, pp. 237-248*

41 The Evolution of Our Knowledge of Tuberculosis. (L'évolution historique de la phtisiologie. Le concept moderne de la bacillo-tuberculose. Les bacillaires, les tuberculeux, les phtisiques.) L. Landouzy.
42 *Valvular Disease of Gouty Origin. (Valvulite uricémique.) M. Chiray and J. Bailleul.

*March 27, No. 25, pp. 249-256*

43 *Toxicity of the Bile. H. Roger.
44 *Tearing Out the Intercostal Nerves in Treatment of Tabetic Gastric Crises. (L'opération de Franke dans un cas de crise gastrique rebelle au cours du tabes.) A. Cade and R. Leriche.

*March 30, No. 26, pp. 257-268*

45 *Operative Treatment of Spastic Paralysis. (Nouvelle opération pour le traitement des paralyses spastiques.) A. Stoffel.
46 *Congenital Dislocation of the Hip-Joint with No Symptoms to Attract Attention for Several Years. (Les luxations congénitales de la hanche à symptomes tardifs.) C. Roederer.
47 *Reeducating Tabetic Joints. (Traitement kinésithérapique des arthropathies tabétiques.) P. Kouindjy

42. **Gouty Valvular Disease.**—Chiray and Bailleul remark that uricemic valvulitis, as they call it, entails the usual murmurs of a valvular defect, but the functional disturbance is minimal, the evolution of the affection extremely slow and rarely entailing a fatal outcome. In a case reported in detail the valvular affection induced periods of arhythmia not influenced by the usual heart tonics. The arhythmia lasted for four months at one time but there was never any fever or other sign of an infectious process. As the arhythmia became less pronounced, a typical mitral murmur was heard and has persisted during the two years to date. The patient was a woman of 62 who had long had numerous tophi and gouty deformity of the fingers but never any symptoms of a true attack of gout. She was of a neuropathic temperament and the urine was loaded with uric and oxalic acid.

43. **Toxicity of Bile.**—Roger did not find that rabbit bile had a toxic action when injected into other rabbits but beef gall proved toxic. The fatal dose varied with the dilution and velocity of the injection.

44. **Tearing Out the Intercostal Nerves in Treatment of Tabetic Gastric Crises.**—Cade and Leriche have applied Franke's method in a case of severe gastric crises in a tabetic woman of 27. The operation put an end at once and permanently during the three months to date to all the gastric symptoms—a brilliant success so far. The aim is to pull out the intercostal nerves and thus realize by a comparatively simple technic results equivalent to those of section of the posterior spinal nerve roots, namely, interrupting the continuity of the fibers of the sympathetic nerve innervating the seat of the pains. The nerve is exposed its entire length under general anesthesia and is lifted on a hook until the traction tears it out from its connection with the spinal cord. They thus pulled out the five nerves on each side, from the sixth to tenth inclusive. There has been no pain since in the region and the patient can eat at will and has gained over twenty-four pounds since the operation.

45. **Partial Resection of Nerve Roots in Treatment of Spastic Paralysis.**—Stoffel here reports nine cases in which he has applied his method, a success in every instance. The aim is to cut certain of the nerve fibers so as to sever some of the innervation of the muscles affected, leaving only enough intact to balance the antagonist muscles. This is supplemented by measures to train the antagonist muscles to increased action. (His previous communication on the subject was summarized in The Journal, Dec. 30, 1911, p. 2168.)

46. **Congenital Dislocation of the Hip Joint with Tardy Symptoms.**—Roederer relates the history of two girls brought to him at the age of 10 and 6½ on account of pain in the joint, no one suspecting the dislocation which yet was congenital. The children limped very little if at all and only irregularly, so that the dislocation escaped detection by the families which included some physicians as near relatives in one instance. The children did not learn to walk before the fourteenth and twentieth months. After correction of the dislocation the older child's gait was no better on removal of the plaster cast than before, and after a few months the dislocation recurred. The younger child has now an apparently normal gait.

47. **Treatment of Tabetic Joint Disease.**—Kouindjy gives a illustrated description of a tabetic patient with a functiona affection of the right ankle twisting the foot over, showing th cure of the trouble under treatment consisting of massage an reeducating the muscles of the region. The muscles that hav lost their tone are systematically massaged, the muscle involved being carefully sought out and treated, avoiding th others. The main trouble in these cases is the differenc between the retracting powers of the various groups of muscle He urges prompt treatment along these lines in all case unless the joint is actually destroyed. Tabetic joint affection in the pre-ataxia stage are generally the precursors of loc motor ataxia, and hence the reeducating exercises are partic larly important. In mild cases the cure may be practicall complete in less than three weeks but otherwise six montl or more may be necessary.

### Revue Mens. de Gyn., d'Obstétrique et de Pédiatrie, Paris

*March, VII, No. 3, pp. 161-224*

8 *Athrepsia in Infants. (Comment faut il comprendre ce terme "athrepsie des nouveau-nés et des prématurés"?) P. Bar.
9 Retrodisplacement of Uterus. (La rétrodéviation utérine.) L. G. Richelot.
0 Radium in Treatment of Membranous Dysmenorrhea. C. Jacobs.
1 *Injection of Air into the Mamma in Treatment of Eclampsia. (Eclampsie chez une malade atteinte de lésions probablement kystiques des reins; influence de l'injection d'air dans le sein.) R. Gilles and Ducuing.
2 Hysterectomy for Uterine Fibromas. (2 cas d'hystérectomie abdominale pour fibromes très volumineux.) G. Deverre.
3 Series of Seven Prematurely Induced Deliveries in a Rachitic Woman. (A propos d'une série heureuse de sept accouchements prématurés artificiels chez la meme femme.) Véron.
4 Sarcoma of Upper Jaw in Infant Under 2. H. L. Rocher.

48. **Athrepsia.**—Bar discusses the various theories that have
en advanced to explain the nutritional disturbances in
ematurely born infants which lead to the clinical picture
lled athrepsia. Modern conceptions have modified the old
ws as to the nature of the trouble; it is now generally
cepted, he says, that it is the result of alien elements in
od. Each cell has its specific properties and alien cells and
ids may act on the cell like a poison. Milk shows the specific
operties of individuals, and cow's milk, being an alien sub-
ance, may act on an infant like an actual poison. Adults
t alien substances, meat, milk, etc., but they are transformed
the digestive ferments before they have a chance to get
sorbed, so that when they are absorbed into the blood they
ve become modified to such an extent that they have lost
eir specific alien properties. The prematurely born infant
es not produce ferments enough to modify the alien elements
cow's milk, and it is absorbed as an alien substance, which
more than liable to act as a poison. The whole question is
ether the child is producing ferments or not. If not, then
alien substances in the milk act like a poison, and each time
little organism is rendered more and more sensitive to the
xic action of the alien substance. It thus becomes sensitized;
phenomena of anaphylaxis result. Sterilizing the milk
es not affect its characteristic of being an alien substance
l hence cannot prevent the toxic action. Besides the species,
re is an individual coefficient which may be sufficiently
ense, in some cases, so that the mother's milk may act like
poison on the infant. In the rare cases of this kind it will
nerally be found that the mother had some long sickness
ring her pregnancy, usually resulting from colon bacillus
ection. Under its influence the mother's organism under-
nt some modification which altered her milk to such a
gree that it acts like a poison for the child.

51. **Injection of Air into the Mammæ in Treatment of
lampsia.**—In the case reported Gilles and Ducuing applied
the usual measures in vain, the convulsions keeping up
er delivery at term. Both kidneys were probably in cystic
generation, a nephrectomy having been contemplated before
onset of the pregnancy. The eclampsia developed suddenly
thout any premonitory symptoms beyond slight albuminuria
ich had persisted through the pregnancy unmodified by
triction to a milk diet, etc. There was no hemorrhage, but
convulsions kept up after delivery of a dead fetus at term,
patient in profound coma in the intervals, the temperature
ng up to 39.5 C., the pulse uncountable. As no relief was
ained from the usual measures, venesection to 1,000 gm.,
ges and lumbar puncture, and the patient had had fifty-five
vulsions in less than twenty-four hours, a trocar was intro-
ed into the breast, and oxygen and air were injected into
submammary cellular tissue. Improvement was evident in
rty minutes; the pulse became stronger and 160 could be
nted, the temperature dropping a little. Four hours later
injection was repeated and the intervals between the
zures grew constantly longer, and the patient gradually
overed. Injection of air in this way is a common procedure
veterinary practice to relieve disturbances accompanying
birth of a calf or colt. Martin has reported the immediate
sation of the convulsions in a severe case of eclampsia in
ich this method was applied. (Its physiologic basis and the
efit in parturition paresis in cows were described in an
torial in THE JOURNAL, April 20, p. 1201.) The inflation
the tissues prevents by its pressure the absorption of the
toxins generated in the mammæ during the modifications attendant on the onset of lactation.

### Revue Pratique d'Obstétrique et de Gynécologie, Paris

*January, XX, No. 1, pp. 1-28*

55 *Minor Pains During Pregnancy. (Sur un syndrome douloureux benin au cours de la grossesse.) L. Pouliot and H. Vignes.
56 Unequal Development of the Mammæ from Standpoint of Lactation. (De l'inégalité de volume des seins pronostic pour l'allaitement.) G. Keim.
57 *Venesection as Prophylactic and Treatment of Eclampsia. (De la saignée dans le traitement des accidents prééclamptiques et des accès éclamptiques.) Potocki.

*February, No. 2, pp. 33-60*

58 Pituitary Extract in Obstetrics. (Emploi de l'extrait de l'hypophyse en obstétrique. Quelques essais.) A. Spire and J. Parisot.
59 *Phlebitis as Complication of Uterine Fibromas. (La phlébite dans l'évolution des fibromes.) J. Duvergey.
60 Pernicious Anemia of Pregnancy. (3 nouveaux cas d'anémie pernicieuse de la grossesse.) Bourret.
61 *Auscultation Sign of Twin Pregnancy. (Le signe d'Arnoux dans la grossesse gemellaire.) Le Lorier.

55. **Minor Pains During Pregnancy.**—Pouliot and Vignes refer to a series of pains of which women complain sometimes during the latter part of pregnancy; they are accompanied by a number of tender points on one or both sides, most prominent on the left. The tender points correspond to the branches of the lumbar plexus and sometimes of the sacral plexus. The knee-jerk is usually exaggerated, generally most pronounced on the side where the pains are most marked. No vasomotor phenomena or disturbance of the general health were observed in any of the twenty-one cases on which the article is based. In one case fatal meningitis developed on the heels of this "syndrome of minor pains," and this with other facts cited suggests that the trouble is the first stage of inflammation from attenuated infection affecting the posterior spinal roots. The infection is not specific but may be tuberculous, syphilitic or due to rheumatism or other germs. The lumbar plexus suffers most as this is in a condition of diminished resistance from the trauma from the gravid uterus; it is not a question of compression but of traction, pulling on the nerve branches as the uterus enlarges. Lumbar puncture was not done in his cases as the symptoms were scarcely serious enough to warrant this, but moist heat and baths, sodium salicylate and a sedative were advised in the mild cases and, in the more severe, wet cups to the lumbar region and refrigeration along the course of the nerves involved, inducing local anesthesia by refrigeration from evaporation of methyl chlorid from a tampon of cotton.

57. **Venesection in Eclampsia.**—Potocki reports twelve cases in which he drew blood from a vein to ward off impending eclampsia or in treatment after the convulsions had begun: He was much impressed with the instantaneous subsidence of the alarming symptoms after the venesection in the two cases of what he calls the stage of pre-eclampsia. It relieves the organism at once of quantities of toxins, reduces the blood-pressure and tides the patient along until the effects of diet and hygiene become manifest. It is important to draw enough blood, 50 gm. at least; the patients say that their headache and ocular disturbances stop at once as the blood is drawn. After convulsions have occurred, from 600 to 1,000 gm. have to be drawn at once before the symptoms show a turn for the better. He was surprised to find that one effect of the venesection was immediate and profuse diuresis. Chirie has reported a mortality of only 4 per cent. among twenty-five eclamptic patients treated by profuse venesection. In Potocki's cases the venesection did not seem to debilitate the women; all the patients left the hospital in good health from the eleventh to the twentieth day after the venesection, including one patient who had had vaginal thrombosis. Lumbar puncture was done in one case and the fluid was found under high pressure but no benefit followed withdrawal of 20 gm. Two of the patients developed puerperal mania, but one promptly recovered.

59. **Phlebitis as Complication of Uterine Fibromas.**—Duvergey knows of four cases of complicating phlebitis among 260 cases of uterine fibromas. His experience emphasizes the necessity for examining for signs of thrombophlebitis whenever a large fibroma is known to be present. Compression

from the tumor is generally responsible for the inflammation in the vein but infection is liable to be in play also. In one of his patients the external iliac vein was compressed by the tumor and the staphylococcus was cultivated from the intra-uterine secretions. There are usually pre-existing varicose enlargements of the veins in the leg. One of his patients applied for relief from the phlebitis, knowing nothing of the existence of the primary fibroma. The source of infection, the fibromatous uterus, should be removed as soon as possible, but the phlebitis in the leg should be cured first, as otherwise mobilization of the tumor is liable to induce embolism. A. Schwartz has reported a case in which an attempt to enucleate the tumor was followed by fatal embolism.

61. **Auscultation Sign of Twin Pregnancy.**—Le Lorier states that it is possible to train one's ear so that with the stethoscope one can distinguish the beat of the fetal heart when there are two fetuses. The sound is like that of a span of horses galloping; sometimes the feet fall together and it sounds as if there was only one horse, then the hoof-beats of both can be heard separately. This irregular double rhythm in the fetal heart beat is pathognomonic of a twin pregnancy. He ascribes the first description of the sign to Arnoux, 1908.

### Semaine Médicale, Paris

*March 27, XXXII, No. 13, pp. 145-156*

62 *Identity of Brill's Disease with Typhus. (La "maladie de Brill" est-elle une entité morbide nouvelle?) L. Cheinisse.

*April 3, No. 14, pp. 157-168*

63 *Formation of an Artificial Vagina from Loop of Intestine. (La réfection du vagin absent au moyen d'une anse intestinale.) R. De Bovis.

62. **Identity of Brill's Disease with Typhus.**—Cheinisse presents and reviews the data that have accumulated on this subject, endorsing the identity of these two diseases in accordance with the conclusions of the editorial in The Journal, Feb. 10, 1912, p. 414.

63. **Formation of Artificial Vagina by Intestinal Implantation.**—De Bovis discusses the various methods of forming a vagina out of a loop of intestine, stating that it has been done in eleven cases and that the functional outcome was satisfactory in all. Dreyfus has recently reported utilizing a hernial sac for the purpose, and Ott and Stoeckel made a vagina out of peritoneum, but the operation was not a success in either instance. (Stoeckel's success with a loop of intestine was recently described in these columns, Feb. 10, 1912, p. 451.)

### Beiträge zur Klinik der Tuberkulose, Würzburg

*XXII, No. 2, pp. 97-264. Last indexed March 9, p. 740*

64 *Cysts at the Roots of Teeth in Origin of Tuberculosis. (Die phthisiogenetische Bedeutung der Zahnwurzelzysten.) J. Zilz.
65 *Comparison of Roentgenoscopic, Physical and Necropsy Findings. (Erfahrungen mit der von Brauer empfohlenen Sektionstechnik der Lungen.) W. A. Gekler.
66 *Emphysema. E. Raither.
67 *Experiences with Induced Pneumothorax. A. Keller.
68 *Induced Pneumothorax in Its Action on the Heart and Circulation. P. G. Carlström.

64. **Cysts at the Roots of Teeth in Origin of Tuberculosis.**—Zilz reports four cases of cysts at the roots of teeth in which bacteriologic investigation revealed the presence of Much's granula, which he defines as the non-acid fast form of the tuberculosis germ. The findings are profusely illustrated and the questions discussed why it is so difficult to detect acid-fast, Gram-staining bacilli in the gangrenous pulpa, and why primary tuberculosis starting in carious teeth is not of more common occurrence. He regards Much's granula as merely ordinary acid-fast tubercle bacilli which have lost their acid-fast properties; hence the organic fluids are able to disintegrate them and the vital centers, the granula, escape into the surrounding medium. When conditions become more favorable to the bacilli, they may become impregnated again with acid-fast substance and the acid-fast form thus develop again, which in turn may break up anew into granula. His plates show the process distinctly, the granula causing no tuberculous changes in the dental cyst. The bacilli probably found their way through the blood into the cyst and while there remained latent but regained their virulence when conveyed farther to lymph-nodes or lungs. Inoculation of animals with the granula always gave positive results.

65. **Comparison of Roentgenoscopic, Physical and Necropsy Findings.**—Gekler gives the stereoscopic views in three cases out of a large number studied by a special technic in making the sections to correspond exactly with the application of the Roentgen rays. Interpretation of the roentgenoscopic findings at the hilus is peculiarly difficult, even for those with considerable experience, as is evidenced by one of the cases.

66. **Emphysema.**—Raither concludes from his clinical, experimental and mechanical research on the origin of emphysema, that it is the result mainly of a reduction in the velocity of expiration rather than in a reduction of the vital capacity. The cause of this retarded outflow of the air must be, he says, increased friction of the air in the air passages, and the cause of this is a functional stenosis of the bronchioles induced by the secretions from chronic bronchiolitis.

67. **Experiences with Induced Pneumothorax.**—Keller's article fills seventy-six pages and gives the details of forty cases in which this method of treatment was applied, for pulmonary tuberculosis in thirty-five, bronchiectasia in three and pulmonary abscess in one. The advantages of the method were plainly evident in many cases, most strikingly in pulmonary processes with a cavity; excluding this focus by squeezing its walls together eliminates this source of toxin production and the patients take at once a remarkable turn for the better. A very favorable influence was also apparent in cases of purely infiltrative processes, even those due exclusively to pneumonia. He advocates the induced pneumothorax as far superior to all other measures at our command in such cases. The sound tissue is not destroyed by the process, its functioning is merely held in abeyance for a time. No unfavorable influence on the heart or vessels was suggested in any of his cases. Good results were obtained also in two of the four cases of bronchiectasia.

68. **Induced Pneumothorax in its Action on the Heart and Circulation.**—Carlström's patient was a young man with extensive right pulmonary tuberculosis of six months' standing, the heart clinically sound. The diseased lung was compressed by artificial pneumothorax, the patient constantly in bed. He succumbed two months later to hemoptysis, the left lung having developed bronchopneumonia and a tuberculous process in the intestines also becoming evident. Necropsy revealed extreme hypertrophy of the right ventricle, and Carlström regards this as the result of the compression of the lung interfering with the local circulation in the region, and thus compelling the right ventricle to do extra work. Either some of the gas had escaped into the other side and compressed the other lung, or else the pneumothorax had pushed the heart so far over that the pulmonary artery became kinked. The necropsy findings were the same in a second similar case, the right ventricle being much hypertrophied and the walls 7 mm. thick.

### Berliner klinische Wochenschrift

*March 25, XLIX, No. 13, pp. 581-628*

69 *Improved Technic for Laryngoscopy. (Ueber Schwebelaryngoskopie.) Killian.
70 Attenuated Criminal Responsibility with Business Capacity and Vice Versa. (Zurechnungsfähigkeit und Geschäftsfähigkeit.) H. Marx.
71 Valve Ileus in Little Boy. (Ventilverschluss durch Abknickung im untersten Teil des Dickdarms im späteren Kindesalter.) F. Göppert.
72 Atypical Proliferation of Epithelium in Syphilis. (Eine hochgradige atypische Epithelwucherung bei Syphilis.) R. Rohrbach.
73 *Epileptiform Seizures After Salvarsan. (Epileptiform Anfälle bei Salvarsan.) F. Lesser.
74 The Wassermann Reaction in Rabbits. (Die Wassermann'sch Reaktion beim Kaninchen.) L. Halberstaedter.
75 *Nail Extension in Treatment of Fractures. (Wie hat sich die Nagelextension in der Frakturbehandlung bewährt? L. Süssenguth.
76 Bone and Cartilage Growth in the Mucosa of the Trachea (Zur Kenntnis der Tracheopathia osteoplastica.) I. Haga

69. **Improved Technic for Laryngoscopy.**—Killian in experimenting on the cadaver was astonished at the way in whic the throat was opened up for visual inspection when the hea was allowed to hang down over the edge of the table, suspende merely by a tongue spatula fastened by an extension to frame attached to the table above. The whole weight of th head is thus borne by the parts against which the spatul presses; the throat yawns and one can see the entire cavit

' the larynx and for some distance into the trachea. He has pplied the method to twenty patients and has found that it nmeasurably facilitated operations on the throat in both ildren and adults. The procedure was borne with remark- le ease and no disturbance except a depression left in the ngue from the groove in the spatula; the spatula now used s no groove. At need the spatula can be fitted with lamps.

73. **Epileptiform Seizures after Salvarsan.**—Lesser reports a se of epileptiform seizures eight weeks after salvarsan eatment. This in connection with seventeen similar cases om the literature, which be tabulates, suggests that in excep- onal conditions the salvarsan becomes transformed in the dy in such a way as to give off toxic products, the nature which we do not know to date or the etiologic factors. seems evident that these toxic products are liable to induce nctional disturbances and even actual tissue changes. cording to the intensity and the point of attack, the dis- rbance may range from the slightest, clinically latent forms, the severest, even directly fatal changes. He says that e epileptiform seizures come under the heading of functional sturbances. Arsenic may be eliminated even months after intravenous injection of salvarsan, and as Frenkel-Heiden, vassart, Ullmann and others have apparently demonstrated at the arsenic preparation is stored up in the liver, toxic tion therefrom may occur even months after the injection. regards the neurorecurrences and Herxheimer reaction in ternal organs as the result of organic changes induced by the xic products which either favor the settling of spirochetes this point, or preexisting syphilitic changes may focus the xic action here.

75. **Nail Extension in Treatment of Fractures.**—Süssenguth s applied Steinmann's method (mentioned in The Journal, 09, liii, p. 422) in twenty cases during the last few years, ving the nails or drills in place not longer than twenty ys as a rule. In sixteen of the eighteen cases in which the thod was given a fair trial the result was ideal in respect the healing and lack of shortening of the limb. In the two ner cases the patients insisted on using the limb too soon, inst his advice, and a secondary shortening resulted. The vantages of the method are the direct action on the bone, lighter weights required, easier fixation, convenience for ssage and exercises and avoidance of eczema and circulatory turbances. Its drawbacks are the pains, risk of infection l of loosening of the nails and of irritation around the nail es. The method is particularly useful in cases of com- nd fracture with extensive injury of the soft parts as the ction can be exerted from a remote point. It may also ve useful in treatment of fractures rebellious to other asures or which are left with deformity. The method thus not destined to supersede others but to take rank beside m for certain special indications. The pains were severe half his cases, three patients (men) pulling out or loosen- the nails the fourth, eleventh or seventeenth day. Three ients did not seem to feel any pain from the procedure in seven others the pain was negligible, but sedatives e required in the severe cases during most of the time the s were in place. There was a phlegmonous swelling around nails in one case and in four the nail holes showed signs of ssure necrosis but healing was complete by the end of the nth in all. He mentions that Schwarz and Körber have each orted a case of fatal sepsis from the nail extension.

## entralblatt für die Grenzgebiete der Med. und Chir., Jena

*XV, No. 3, pp. 59-218. Last indexed March 23, p. 901*

*Study of the Indications for and Ultimate Outcome of Operative Treatment of Cholelithiasis. A. Exner. Critical review of the literature 1907-1911.
*Chronic Pancreatitis. A. Arnstein. Critical review of the literature.
*Prophylaxis of Epidemic Poliomyelitis and Treatment of the Conditions It Leaves. (Prophylaxe der Poliomyelitis acuta und die Behandlung ihrer Folgezustände.) E. Popper. Critical review of the literature.
*Relations Between the Thymus and Exophthalmic Goiter. (Beziehungen der Thymus zur Basedow'schen Krankheit.) E. Melchior. Critical review of the literature.

. **Operative Treatment of Cholelithiasis.**—Exner reviews articles that have been published on this subject during the five years, all seeming to show that the ultimate outcome of operative treatment of gall-stones depends on the recurrence of trouble. Besides stones left behind, adhesions, hernias and strictures of the bile passages are not rare. Actual recurrence of stones is exceptional after removal of the gall-bladder, and all the evidence is in favor of this as the best, although the more dangerous procedure. To avoid the pseudorecurrences, the neighboring organs should be carefully examined to ascertain if there is not some other morbid condition in the vicinity.

78. **Chronic Pancreatitis.**—Arnstein lists the titles of 437 articles that have appeared on this subject in the last five years in international literature. Vomiting and diarrhea, loss of flesh, pains principally in the upper abdomen, and anemia are the main symptoms; a tumor may be palpated in the pancreas region. Jaundice is observed in about 50 per cent. of the cases and disturbances in absorption are common, leading to exaggerated output of fat, nitrogen and creatin. Diabetes seems to occur only in the cases with much involvement of the islands. Functional tests of the pancreas may be instructive but they are not decisive and frequently give negative results. As a rule, the pancreatitis is associated with cholelithiasis and is another argument in favor of prompt operative measures for the latter. When this is not adopted, dietetic measures and possibly treatment for syphilis should be tried. If these fail, an exploratory laparotomy, decapsulation of the pancreas or other operative measure may then be indicated. The mortality from an operation for chronic pancreatitis in the seventy-four cases compiled from the literature was 14 per cent. Fifty-six patients were cured, five more or less improved, and the outcome is not known in three cases.

79. **Epidemic Poliomyelitis.**—Popper discusses the treatment and prophylaxis on the basis of 105 articles from the literature. He says that the name "poliomyelitis," which signifies inflammation of the gray matter of the spinal cord, no longer applies to the disease, as we know now that it may affect the brain, meninges, medulla and nerves, as Medin pointed out. The mortality in the various epidemics on record ranged from 10 to 14 per cent.; complete recovery followed in 13 to 22 per cent. The experiences to date with operative-orthopedic measures are reviewed in detail. Some are very promising.

80. **Relation of the Thymus to Exophthalmic Goiter.**—Melchior's conclusions are based on considerable unpublished experience besides 151 articles in the literature and experimental research. It seems evident that an unduly large thymus accompanies established exophthalmic goiter in fully 80 or 90 per cent. of the cases. There is nothing to show that the large thymus has any special toxic action, but it suggests that the status thymico-lymphaticus represents a special reaction of the tissues to excessive functioning of the thyroid. He regards the so-called "thymus death" as a pure "heart death." The facts are not that an otherwise healthy person suddenly dies and the only pathologic finding is the persistent thymus — the truth is that the person has long suffered from the toxic action from the diseased thyroid, seriously injuring the heart which is liable to fail at any moment. The experiences related confirm the increasing success of operations on the thyroid with exophthalmic goiter when the disease is not too far advanced. The latest statistics show that an increasing percentage of such patients are being improved or entirely cured by an operation merely to reduce the size of the thyroid; the degree of benefit generally corresponds to the amount of the thyroid removed.

## Correspondenz-Blatt für Schweizer Aerzte, Basel

*April 1, XLII, No. 10, pp. 369-400*

81 "Be Cautious with Scopolamin." ("Vorsicht mit dem Skopolamin.") Brüstlein.
82 Histogenesis of Endemic Goiter. (Zur Histogenese des endemischen Kropfes.) C. Wegelin.

## Books Received

Journal Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

## Book Notices

A Handbook of Medical Diagnosis in Four Parts. I. Medical Diagnosis in General. II. The Methods and Their Immediate Results. III. Symptoms and Signs. IV. The Clinical Applications. For the Use of Practitioners and Students. By J. C. Wilson, A.M., M.D., Professor of the Practice of Medicine and Clinical Medicine in the Jefferson Medical College, Philadelphia. Third Edition. Cloth. Price, $6. Pp. 1438, with 418 illustrations. Philadelphia: J. B. Lippincott Co., 1911.

The popularity of this work was shown by the fact that a second edition was required in less than four months after the publication of the first. Fourteen months were allowed to elapse between the publication of the second and third edition, but even in this time a number of important advances have necessitated the rewriting of several articles and many paragraphs, together with a considerable number of minor alterations. The work presents, in a convenient form, the essentials of medical diagnosis, both clinical and laboratory. The work is well supplied with helpful illustrations, but the author very justly states his objection to the suggestion of some junior teachers in regard to the freer use of diagrams and parallel column tables in the differential diagnosis of diseases. As he says, this does not and cannot conform to the varying facts of nature and the parallel columns that do not and cannot be made to indicate the varying departures from types of diseases are pitfalls and snares to the student; the fewer such devices that are brought to the attention of the student the better.

Such a broad view of diagnosis ought to be especially welcome to the general practitioner, who must employ his diagnostic skill in solving the problems presented by atypical cases which are encountered in actual practice.

Nervous and Mental Diseases. Edited by Hugh T. Patrick, M.D., Professor of Neurology in the Chicago Policlinic, and Peter Bassoe, M.D., Assistant Professor of Nervous and Mental Diseases, Rush Medical College. The Practical Medicine Series. Cloth. Price, $1.25. Pp. 245. Chicago: The Year-Book Publishers, 180 North Dearborn Street, 1911.

Skin and Venereal Diseases and Miscellaneous Topics. Edited by W. L. Baum, M.D., and Harold N. Moyer, M.D. The Practical Medicine Series. Cloth. Price, $1.25. Pp. 239. Chicago: The Year-Book Publishers, 180 North Dearborn Street, 1911.

These volumes comprise a record of the literature of these diseases during the year and are up to the former standard of the Year-Book series, the selection of the most interesting and original papers of the year being included. In the volume on nervous and mental diseases is an interesting discussion of the Freudian theory of psycho-analysis and dream analysis, prominent subjects among neurologists and psychiatrists at present. Anxiety neuroses and hysteria are also given considerable space. Among the other subjects discussed is poliomyelitis, which, though now regarded as an infectious disease, is still classed among the nervous diseases.

In the volume on skin and venereal diseases, pellagra and leprosy are discussed as skin diseases. There does not seem to be any more reason for classifying these diseases as skin diseases than in the case of syphilis, and this classification will probably be changed some time. An interesting section of the latter book is the miscellaneous section in which are discussed, among other things, the history of medicine, state insurance and various medicolegal and sociologic questions. Mechanically the volumes are up to the usual standard.

The Orientation of Building or Planning for Sunlight. By William Atkinson. First Edition. Cloth. Price, $2. Pp. 139. New York: John Wiley & Sons, 1912.

Here are reported elaborate studies of astronomic data to ascertain the most desirable position, shape and plan for buildings, with reference to sunlight. For example, if a square building faces south, there will be a portion of its north wall and the ground adjacent on which the sun will not shine at all during the winter. If a square building is placed with its diagonal on the meridian, as is the custom among the mountain dwellers of Switzerland, every side of the house will receive some sunshine. Atkinson analyzes L-shaped buildings and those of more complex arrangement, the placing of windows, the obstruction of the sun by projecting window casements, neighboring buildings, cornices, etc. The work is full of diagrams illustrating every point made and should be of decided help to those concerned in the construction of hospitals, houses and other buildings. The regulations enforced in Paris and in some of the principal cities of the United States and Canada are summarized in appendices. One striking point brought out in the illustrations is the gross infringement on the rights of others caused by cornices and elevated fronts on buildings. In a narrow street lined by high buildings, a cornice can cut off an appreciable amount of sunshine. This point may not be recognized until one makes a diagram of the street and the angles of the sun's rays. A building without the cornice is apt to look odd, but we would soon get used to it as we do to the remarkable styles in women's dress, and the street without its projecting cornices would have much more sunshine. This is merely one suggestion among many in the helpful little volume.

## Association News

### THE ENTERTAINMENTS

*(Concluded from page 1375)*

The program for the ladies' entertainment includes an introduction reception at the Hotel Chalfonte at 2 o'clock, Tuesday afternoon; tea and boat rides at the Ventnor Yacht Club at 2 o'clock Wednesday afternoon; and a reception and tea at the Marlborough-Blenheim at 3 o'clock, Thursday afternoon.

#### ALUMNI REUNIONS

The Journal has received announcements of the following reunions for Tuesday night:

The Society of the Alumni of the Medical Department of the University of Pennsylvania will hold its annual banquet at Atlantic City (instead of Philadelphia) Tuesday, June 4. The university headquarters during the session will be, as before, at Young's Hotel. The banquet will be at the Shelburne at 6 p. m.

### THE GENERAL MEETING

#### Program for the Opening of the Scientific Proceedings of the Session

The General Meeting will be held in the Apollo Theater, o the Boardwalk, between Kentucky and New York Avenue Tuesday, June 4, at 10:30 a. m. This is the formal openin of the scientific sessions of the meeting. It is the only tim the whole convention will assemble in one place. The program is as follows:

Music.
Call to order by President John B. Murphy, Chicago.
Invocation by Cardinal James Gibbons, Baltimore.
Addresses of Welcome:
  Mayor Bacharach, of Atlantic City.
  Governor Woodrow Wilson, of New Jersey.
Introduction and Installation of the President-Elect, Dr
    Abraham Jacobi, New York City.
Address by the President, Dr. Abraham Jacobi.
Adjournment.
Music.

### RAILROAD RATES

#### Announcement of Rates by the Railroads from All Parts o the Country

The Committee on Transportation and Place of Sessio suggests that members consult the local ticket agents in thei home towns for full information regarding rates, time limit extensions and stop-over privileges. Those going to Atlanti City are assured that they are paying as low a price f their tickets as are those going to a convention of any kin and lower than many. This year the railroads are givin better rates to summer resorts than to other points. O rate is at the average of 1½ cents a mile while the rate to other than summer excursion points is 2 cents a mile.

The committee announces the following rates for Atlantic City:

1. The New England Passenger Association announces that lines in this Association (excepting the Bangor and Aroostook R. R., Dominion Atlantic Ry. & S. S. Lines and Eastern Steamship Corporation) have authorized a rate of one and one-half first-class limited fare for the round trip. Tickets to be on sale and good, going, June 1-3, and returning to reach original starting point not later than June 10.

2. The Transcontinental Passenger Association announces a rate from California points to Chicago and return of $72.50, or to St. Louis or New Orleans and return, $70.00. From either of these points, excursion tickets to Atlantic City may be bought. The following stop-overs will be allowed:

At and west of Port Arthur, Ashland, Chicago, Duluth, Peoria, St. Louis, Memphis and New Orleans on going trip within going transit limit and on return trip within final return imit, except that no stop-overs will be allowed in California on going trip on tickets sold in California. East of the Trans-Continental Passenger Association gateways, stop-overs will be subject to the requirements of interested lines. Going ransit limit fifteen days from date of sale; final return limit ctober 31, 1912. Tickets will be good going from starting oint only on date for which sold. East of Transcontinental assenger Association eastern termini, tickets will be limited oing and returning in conformity with regulations prescribed y eastern lines.

3. The Southwestern Passenger Association announces egular summer tourist fares.

4. The Trunk Line Association announces one and one-half rst-class limited fare, with minimum of $2.00, for the round rip, going and returning via same route only; tickets to be old and good, going, June 1-3, and returning to reach original tarting point not later than June 10.

5. The Western and the Central Passenger associations nnounce the same rate. Short limit summer tourist tickets Atlantic City will be sold June 1 to September 30, nclusive. Tickets will bear final return limit to reach original arting point not later than thirty days from date of sale.

Season limit summer tourist tickets to Atlantic City are on le June 1 to September 30 and are good for return to reach iginal starting point not later than Oct. 31, 1912. A higher sis of fares applies, however, for season limit tickets.

We repeat, members should determine the time limit, stop-er privileges and route by conference with the local ticket ent.

### SPECIAL TRAINS

A counterpart of the famous Chicago-New York 18-hour ain, "The Pennsylvania Special," will leave Chicago 3 p. m., nday, June 2, over the Pennsylvania Lines.

It will consist of all-steel equipment, including a cozy Club r, Drawing-Room Sleeping Cars and a Compartment Car th observation parlor and platform. A table d'hote dinner ll be served in two dining cars soon after leaving Chicago, d à la carte breakfast and luncheon will also be served in o dining cars next day.

The special will reach Atlantic City about 2 p. m., Monday, ne 3, running via Ft. Wayne, Pittsburgh and Philadelphia. e train will run into Broad St. Station in the latter city to ommodate passengers desiring to make the trip on New k tickets and enable them to comply with the requirents to deposit them at that station from which the usual fare round-trip tickets between Philadelphia and Atlantic y can be used.

The sale of thirty-day round-trip tickets to New York City ins June 1, so that persons desiring to avail themselves of opportunity to visit the metropolis at reduced fare may chase such tickets. Thirty-day round-trip tickets from cago to New York will be sold daily beginning June 1 at .00. Similar tickets with Atlantic City as the destination l cost $29.25. They can be used on the special as well as on ular trains, and on request will be furnished good via Baltire and Washington, at which cities stop-overs may also be arranged. Atlantic City tickets and New York tickets will also be good for stop-overs at Philadelphia in both directions.

Complete information will be furnished by any representative of the road, or one may address Mr. E. K. Bixby, District Passenger Agent, 175 West Jackson Boulevard, Chicago.

We are advised that special trains from New Orleans, St. Louis and other points are being planned; the details will be announced later.

J. Rawson Pennington, Chairman.

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## THE SECRETARIES-EDITORS BANQUET

### One of the Pleasant and Profitable Functions Arranged for this Session

The sixth annual meeting of the Association of State Secretaries and Editors will be held at 7 o'clock p. m., Monday, June 3, at Marlborough-Blenheim. This organization was formed several years ago to bring these officers into close touch with each other, to encourage acquaintance, and to afford at the annual meeting an opportunity for an exchange of ideas for the betterment of state associations and state journals. All secretaries of state medical associations and all editors of journals published by these societies are members. There are no dues.

Following the banquet, the president, Dr. Melville Black, Denver, will deliver an address and will introduce the following program:

Uniform Regulation of Membership. Thomas McDavitt, St. Paul.
Transfer from the County Societies of One State to Those of Another Without Cost. Holman Taylor, Fort Worth, Texas.
Is Legal Defense Against Malpractice by State Organizations a Success? A. T. McCormack, Bowling Green, Ky.
Report of Chairman of Committee on Secretaries. William C. Lyle, Augusta, Ga.
Report of Chairman of Committee on Editors. A. T. Bristow, New York City.
Election of officers.

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## THE COMMERCIAL EXHIBIT

### Books, Instruments, Surgical Appliances, Foods, Drugs, Furniture, etc., to be Shown at Atlantic City

The commercial exhibit at the Atlantic City session will have commodious quarters in the Atlantic City Exposition Building, corner of Kentucky Avenue and the Boardwalk. The scientific exhibit, the registration department, the postoffice, the information bureau, etc., will all be under the same roof as the commercial exhibit.

Books, surgical instruments, diagnostic and therapeutic appliances, electric and *x*-ray apparatus and many other specialties of practical value for use in the medical art will be found in the Exhibit Hall. Well-known pharmaceutical houses and manufacturers of therapeutic and dietetic specialties will be represented. Several of these are making special arrangements to have exhibits which will not only be unusually attractive but scientific and instructive in character. Among the books—as may be noted from the brief descriptions given below—there are many works on new subjects.

The surgical instrument exhibits, also, will show a distinct advance in practicability, the past year having added many new forms of diagnostic and operative instruments—especially those pertaining to eye, ear, nose and throat work. Important improvements in electro-therapeutic, *x*-ray and other apparatus will be demonstrated. New designs of physicians' office and reception-room furniture and equipment, operating tables, examining chairs, medicine cabinets of general utility, nebulizers, sterilizers, and other appliances are among the many articles to be displayed.

To the average physician there is a great deal of pleasure and information to be secured from looking over the latest products of the publisher's art; from examining scientifically constructed surgical instruments, inquiring into the therapeutic indications of elegant pharmaceutical preparations and dietetic products, etc.

The pulmotor, which has recently become extensively employed in the restoration of suspended pulmonary action, will be demonstrated for the first time at the coming session.

There is every reason to assure visitors to the coming session that the display this year will excel in quality and instructive value that of any previous exposition.

All correspondence with reference to reservations should be sent to Mr. Will C. Braun. Superintendent of Exhibits, 535 Dearborn Avenue, Chicago. Dr. Edward Guion, 34 S. North Carolina Avenue, Atlantic City, N. J., is local chairman. The following firms will be represented at this session:

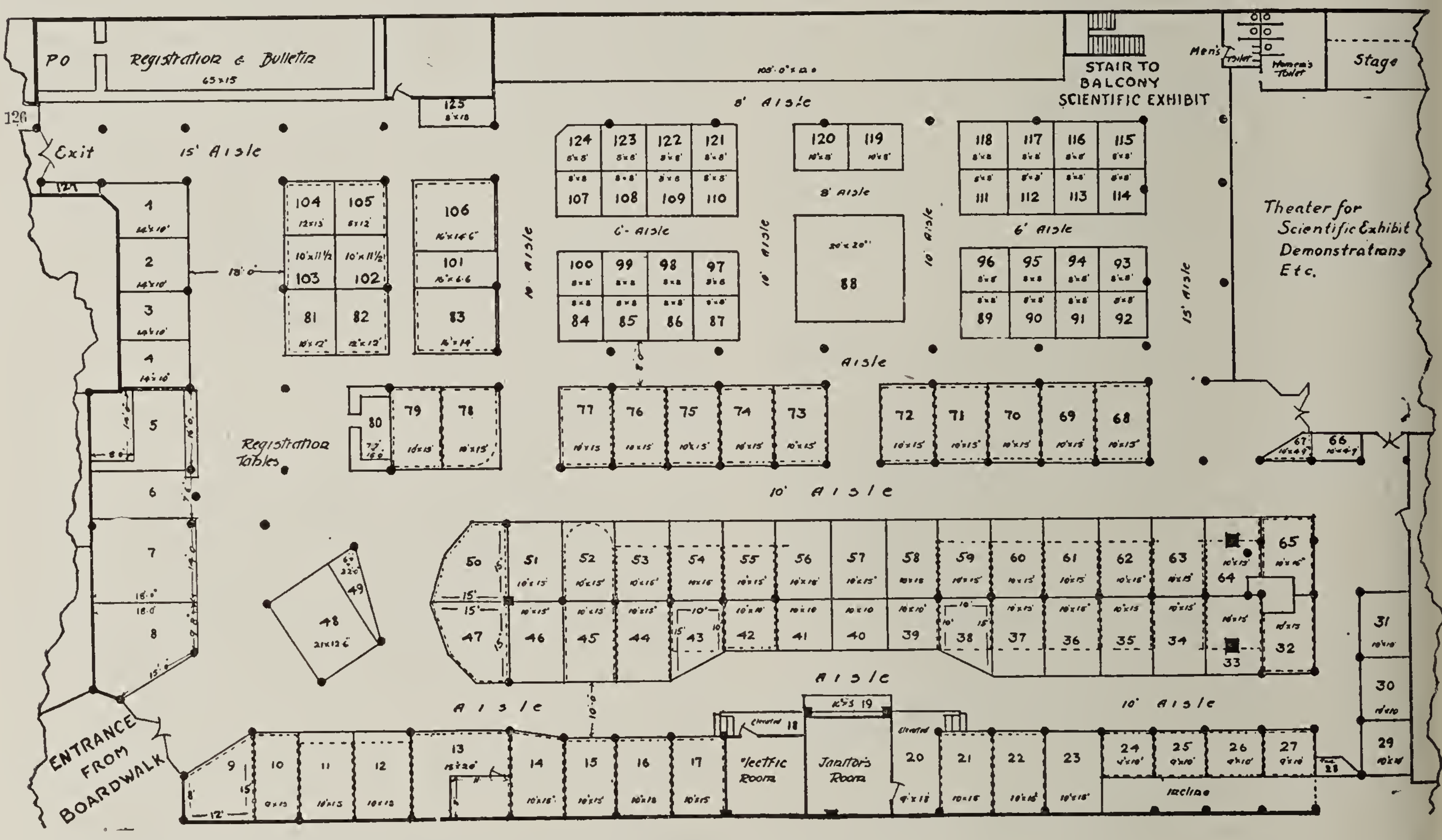
### Publishers and Books

D. Appleton & Company, Space 6.—New medical works as well as new editions of standard books will be shown as follows: Dr. Ramon Guiteras' "Urology," Dr. J. J. Walsh's "Psychotherapy," and St. Clair Thomson's "Diseases of the Nose and Throat" are among the leaders. This firm will especially feature works on the practice of medicine including Osler, Dieulafoy, and Strumpell. The new revisions include Kelley's "Medical Gynecology," Keyes' "Diseases of the Genito-Urinary Organs" and Holt's "Diseases of Infancy and Childhood." They will also show advance proofs of works scheduled for publication later.

Funk & Wagnalls Company, Space 43.—Publishers of the *Literary Digest*. Several new and important volumes on practical medical branches will be exhibited by this firm. Books published under the editorship of Gould, Bland-Sutton, Bosanquet, Bruce, Malcolm Morris, Treves and other well-known authors, will also be shown.

Paul B. Hoeber, Space 35.—Albutt's "System of Medicine," Eulenburg's "Realencyklopædie," Delbet's "Nouveau Traité de Chirurgie," and all important recent books and monographs in English, German and French will be shown at this exhibit. Specialists and those interested in foreign publications, as well as collectors of old editions of the classics should be particularly interested in this exhibit, which will be in charge of Mr. Hoeber himself.

Lea & Febiger, Space 11.—The following new works will be exhibited: Cheyne and Burghard's "Surgical Treatment," to be published in five volumes, Volumes I and II of which are now ready, Hertzler on "Tumors," Adami and McCrae's "Text-Book on Pathology," Browning and McKenzie on "Syphilis," "Modern Treatment," two volumes, edited by Dr. H. A. Hare, Kanavel on "Infections of the Hand," Aaron on "Diseases of the Stomach," Potts' "Electricity," Weeks on the "Eye," Thornton's "Materia Medica," Brown's "Oral Surgery," Taylor's "Digestion and Metabolism," Edelmann's "Meat Hygiene," also the most recent editions of the following standard books: Harrington's "Hygiene," Simon's "Diagnosis," Koplik on "Diseases of Children," Ballenger on the "Nose, Throat and Ear," Adami and Nicholls' "Pathology—Special and General."



The Exposition Building, Kentucky Avenue and Boardwalk, showing the Scientific Exhibit, the Registration Bureau, the branch Post-Office and the Commercial Exhibit, with the spaces occupied by various firms.

P. Blakiston's Son & Company, Space 4.—Among the exhibits of this well-known firm are—New books: Hartmann, "Gynecological Operations;" Citron, "Methods of Immuno-Diagnosis and Immuno-Therapy;" Marshall, "Microbiology;" Honan, "Guide to Medical Europe;" Darier, "Ophthalmic Therapeutics," Kingsley, "The Comparative Anatomy of Vertebrates." New editions: Webster, "Clinical Diagnosis;" Gould and Pyle, "Cyclopedia of Practical Medicine and Surgery," edited by R. J. E. Scott; Montgomery, "Gynecology;" Binnie, "Operative Surgery;" Lovett, "Lateral Curvature of the Spine, and Round Shoulders," etc.

Cleveland Press, Space 80.—Will exhibit an advanced line of practitioner's books. Especially noteworthy are Casey A. Wood's "Complete Ocular Treatment." Würdemann's "Injuries of the Eye," the Chicago Ophthalmological Society's Symposium on "Cataract," the Ochsner and Percy "New Clinical Surgery," the Ochsner and Sturm book on "The Organization, Construction and Management of Hospitals." Croftan's "New Clinical Therapeutics." Patton's "Anesthesia and Anesthetics," etc.

F. A. Davis Company. Space 25.—"The Davis Line of Medical Books" will be exhibited, including the new fifth edition of Sajous' "Internal Secretions and Principles of Medicine," and their latest text-books: Phillips' "Diseases of the Ear, Nose and Throat." Fischer's "Diseases of Infancy and Childhood," Cornell's "Health and Medical Inspection of School Children," Gilliam's "Practical Gynecology," Brooks' "Pathology," etc. A new and important publication hitherto unannounced will also be shown.

J. B. Lippincott Company, Spaces 104-105.—Promise something new in the way of a picture display this year. The profession should also be interested in Volume 2 of Keibel and Mall's "Human Embryology," the work of the two most famous American and foreign embryologists; David Bovaird, Jr.'s, "Internal Medicine," for students and practitioners; and new editions of Lippincott's New Medical Dictionary, Emerson's "Clinical Diagnosis," and "Essentials of Medicine," Cohnheim's "Diseases of the Digestive Canal," Schmidt's "Pain," based on the second German edition, Davis' "Mother and

Child," Noguchi's "Serum Diagnosis of Syphilis," the fifth volume of Pfaundler and Schlossmann, Villiger on "Brain and Spinal Cord," Cushing on "The Pituitary Body," etc.

The C. V. Mosby Medical Book and Publishing Company, Spaces 89 and 96.—This firm will exhibit their standard line of monographs and text-books. Prominent among the new books will be Roberts' "Pellagra," Williams and Williams' "Laboratory Technique," Warfield's "Arteriosclerosis," "A. C. Bernays—A Memoir," Myers' "Life and Letters of Dr. Wm. Beaumont," Pottenger's "Muscle Spasm and Degeneration as An Early Symptom of Inflammation in the Thorax," Marchildon's "Wassermann Test for Syphilis," Portner-Lewis' "Genito-Urinary Diagnosis and Therapy," and plates and advance sheets of Loeb's "Operative Surgery of the Ear, Nose and Throat."

The Oxford University Press, Space 116.—The exhibit will consist almost entirely of monographs. The new "Practitioner's Encyclopedia of Medicine and Surgery," Burghard's "Surgery," "System of Syphilis" and several other new works will be on exhibition.

Rebman Company, Space 27.—Among an assortment of the newest standard authoritative medical literature, will be shown a remarkable ikonographic library comprising a series of illustrated works on diagnosis, dermatology, clinical surgery and ophthalmology by a life-like color-portrayal of every pathological condition delineated. "Typical Operations in Surgery," the second volume of "Surgery of the Brain and Spinal Cord," and new art prints will form a few of the many interesting features of the exhibit.

W. B. Saunders Company, Space 48.—This house will exhibit Murphy's "Surgical Clinics," Kelly's "Cyclopedia of American Medical Biography," Musser and Kelly's "Practical Treatment," Cabot's "Differential Diagnosis," Davis' "Operative Obstetrics," "Papers from the Mayo Clinic," Anders and Boston's "Medical Diagnosis," Niles' "Pellagra," Pilcher's "Practical Cystoscopy," "Fenger Memorial Volumes," Keen's "Surgery," "Dorland's Illustrated Dictionary" [new (6th) edition], Mumford's "Surgery," Crandan and Ehrenfried's "Surgical After-Treatment" [new (2d) edition], also advance sheets of DeLee's "Obstetrics," and Daugherty's "Economic Zoology."

William Wood & Company, Space 2.—A revised edition of Cunningham's "Practical Anatomy" will bear the most critical examination, "An Index of Differential Diagnosis" is a radical departure in handling this topic, Roberts' "Surgery of Deformities of the Face" a most successful book, Stedman's "Medical Dictionary" and Bradford and Lovett's "Orthopedic Surgery" the latest in the field. Special attention is called to Bryant and Buck's "American Practice of Surgery." A hundred other new books for physicians and nurses.

Year Book Publishers, Space 112.—The Practical Medicine Series of Year Books will be on display. Mr. Homer Vanderblue will be in charge.

### Pharmaceuticals and Biologic Products

Arlington Chemical Company, Space 8.—Will be occupied jointly by the Arlington Chemical Co. and the Palisade Manufacturing Co., makers of liquid and dry peptonoids and hemaboloids. These preparations will be displayed together with a number of interesting and instructive food-charts, constituents of the various preparations, etc. Several representatives will be ready to explain the preparations or answer any questions. An interesting and beautiful souvenir will be presented to every physician who visits the exhibit.

Abbott Alkaloidal Company, Space 70.—The special features of the exhibit of this company will be the demonstration of the methods of manufacturing granules of the active-principle and similar remedies by skilled laboratory workers, illustrating the hand methods. In addition this company will present a large line of alkaloidal and active-principle remedies, as they extract them from the drugs and in finished forms. Their interesting line of Council-passed specialties will also be demonstrated.

Armour and Co., Space 103.—The therapeutics of the ductless glands, especially the thyroid and suprarenals, has been investigated thoroughly in recent years. As a result of these investigations, this firm is demonstrating standardized products of these glands for which is claimed uniform therapeutic activity and strength. The organotherapeutic exhibit of this firm will be demonstrated by scientific experts and should be of great interest.

Burroughs Wellcome & Co., Space 78.—The exhibit of this firm will consist of products they manufacture under "Tabloid," "Soloid," "Vaporole," "Wellcome," "Enule," etc., representing "therapeutic weapons of precision:" "Tabloid" brand medical equipments; "Tabloid" brand compressed bandages and dressings: "Tabloid" hypodermic and ophthalmic cases; "Tabloid" hypodermic and ophthalmic products, and other preparations representing the latest advances in scientific pharmacy.

Fairchild Bros. & Foster, Space 7.—Their standardized products of the gastric and pancreas glands, especially prepared for therapeutic use, will be displayed; also hypodermic ampules; surgical solvents; foods for the sick, in dry and fluid forms; concentrated food for colonic alimentation; culture peptone for bacteriologic work; lactic bacillary products of pure cultures of the Bulgarian bacilli.

Hoffmann-LaRoche Chemical Works, Space 31.—This firm will again exhibit its products before the Association and thus afford visitors the opportunity of studying at close range bulk quantities of the high class alkaloids—Homatropin, Eserin, Pilocarpin, Hyoscin, Veratrin, and many others, and of becoming acquainted with their specialties: Digalen, Thiocol, Airol, Thigenol, etc.

The Maltine Company, Space 83.—Will exhibit its well-known line of "Maltine Plain" and combinations, laying particular stress on "Maltine with Olive Oil and Hypophosphites," which is its latest preparation. Liberal samples of the pure olive oil which is used in the manufacture of this preparation will be distributed. This is the very finest oil obtainable in Italy.

H. K. Mulford Co., Space 3.—This exhibit will include a complete line of biologic products, antitoxins, curative serums, bacterins, vaccines, tuberculins and a new form of administering tuberculin for immunization; methods of standardizing ergot and digitalis, etc. Visitors will be well repaid by giving this exhibit a careful study as it will show very forcibly the remarkable progress which has been made in these important branches of therapy.

Pulvola Chemical Co., Space 123.—An odorless, tasteless, dry, white Ichthyol—as combined with Dolomol (magnesium stearate), the neutral, non-absorbent base for this and twenty other medicaments and for Pulvola, "The Doctors' Baby Powder"—will be exhibited. The unique demonstration, "The Tale the Two Tumblers Tell—an eye-opener on toilet powders and dry ointments" may be counted on to attract attention.

Roessler & Hasslacher Chemical Co., Space 26.—An interesting exhibit of a series of their specialties of oxygen-bearing products, peroxids and perborates, as applied in modern oxygen therapy: Sodium perborate powder, to replace hydrogen peroxid; magnesium peroxid, for internal use in place of bismuth salts; zinc peroxid; calcium peroxid, strontium peroxid; peroxid zinc soap; oxone, for convenient instantaneous production of pure oxygen gas; also some handy, modern and practical devices for the generating and safe administration of oxygen.

Dr. G. H. Sherman, Space 52.—Will exhibit his extensive line of bacterial vaccines (Bacterins) which have come to be considered leaders in this particular field. Other features will be a new self-sterilizing pocket hypodermic outfit especially designed for use in vaccine therapy and a second, greatly enlarged, edition (320 pages) of the book "Vaccine Therapy in General Practice."

Schering & Glatz, Space 47.—Pharmaceutical preparations of recent introduction to the profession such as Atophan, Hormonal, Medinal, Brovalol, Hegonon, Arhovin, etc., as well as a number of their well-known older specialties will comprise this exhibit. Representatives of the firm will be on hand to answer questions respecting the therapeutic properties and application of these products. The amount of practical knowledge, which can be learned by an examination of this exhibit, will make it worthy of the careful inspection of every physician.

Schieffelin & Co., Space 14.—An exhibit of the biologic products of the Lederle Antitoxin Laboratories, including diphtheria antitoxin, tetanus antitoxin, antistreptococcic serum, vaccine virus and bacterial vaccines. The method employed in the production of these products will be shown in more or less detail, and will be explained by those in charge of the exhibit. The various containers of the products will also be exhibited.

E. R. Squibb & Sons, Spaces 81 and 82.—Will again make a demonstration of their line of tablets and will have a representative exhibit of their large line of pharmaceuticals and chemicals, together with a unique exhibit of the impurities found commonly in the regular market grades of chemicals, but which are gotten rid of in the Squibb Laboratories by repurification. A visit to the Squibb exhibit should prove of interest to every physician.

Henry K. Wampole & Company, Space 46.—This company will make an exhibit of elegant pharmaceuticals comprising pulverous pills, compressed tablets, fluidextracts, elixirs, effervescent salts, capsules, etc., and directs especial attention to the new things brought out during the past year, and to its ability to produce efficient and elegant products for the physician.

Zemmer Co., Space 38.—An interesting display of their high-class line of tablets, lozenges and other pharmaceutical products. A special feature will be an exhibit of ointments and eye salves; also the demonstration of the solubility and disintegrating qualities of their tablets. Samples of the various products will be given to physicians who visit this booth.

## Apparatus, Instruments and Furniture

W. D. Allison Company, Space 71.—At this booth will be seen several new and attractive styles in automatic examining and treatment tables for office use, instrument cabinets, chairs, etc. Their improved specialist's chair will be one of the principal features also, and these in addition to their well-known standard articles will offer a wide range for selection. The Allison line has been well and favorably known to the profession for many years.

Bausch & Lomb Optical Co., Space 73.—They will show a line of their newest models of microscopes, microtomes, centrifuges and other laboratory apparatus and supplies for physicians' use. The convertible balopticon will be shown, which projects lantern slides, opaque illustrations and objects and microscopic objects; also the new combined drawing and photomicrographic apparatus which is a most serviceable instrument for general laboratory work.

Charles R. Bard, Space 80.—A special line of bougies and other instruments manufactured by J. Eynard, Paris, France, for use in urologic practice, is to be demonstrated.

Frank S. Betz Co., Spaces 90, 91, 92, 93, 94, and 95.—This company will make an exhibition of a general line of surgical instruments, special razor-operating knives manufactured by experienced razor makers, nose and throat instruments imported from Vienna, also *x*-ray coils, electrical outfits for general and diagnostic purposes and a variety of artificial legs. The special feature of the exhibit will be the demonstration of several models of pulmotor, which have just been received from Germany.

D. V. Brown, Space 45.—Wholesale Manufacturing Optician. Demonstrations at this booth will be especially interesting and up-to-date. It will doubtless repay the visiting physicians, who are interested in optical work, to examine this exhibit. Trained experts in the optical manufacturing line will be in attendance to explain all new devices and instruments.

Buzzell-Flanders Company, Space 114.—Specialties for use by the surgeon, such as Flanders' standard catgut ligatures, also clinical thermometers, hypodermic needles, syringes, etc., will be displayed. The demonstration of modern methods of preparing and sterilizing catgut for surgical use will be both interesting and instructive.

Clark & Roberts Company, Space 74.—These manufacturers of surgical furniture will have an interesting exhibit of metal furniture. They will show a new metal table for physicians' office use, which is something unique in this line. They will also exhibit some new steel instrument cabinets for physicians and specialists. These cabinets are of a new design and construction and are very handsome. Also a very attractive Specialist's Outfit will be demonstrated.

DeVilbiss Manufacturing Company, Space 53.—Their complete line of atomizers, nebulizers and powder blowers for prescription purposes and for physicians' office use will be shown. The value of prophylactic measures is probably more fully appreciated to-day than ever before and as the atomizer plays an important part in connection with this work, physicians will no doubt find this display of interest.

DeZeng-Standard Company, Spaces 107 and 124.—A line of eye, ear, nose and throat instruments will be shown. A new electric lens-measuring and axis-finding instrument will be demonstrated for the first time, also a new electric perimeter having true transilluminated spectral colors. New electrical instruments for examining the nose and ear will also be demonstrated. All of these ideas are new and interesting.

Draeger Oxygen Apparatus Co., Space 111.—The pulmotor which has recently been introduced and is constantly being referred to by the press for its exceptional action in the resuscitation of suspended pulmonary action due to gas poisoning, drowning, etc., will be demonstrated. Physicians have been quick to appreciate the great superiority of the automatic pulmotor over mechanical resuscitation and will undoubtedly be interested in seeing its practical demonstration.

F. A. Hardy & Co., Spaces 39 and 58.—A complete line of eye, ear, nose and throat surgical instruments—for the most part specialties manufactured by this firm—as well as a number of ophthalmologic specialties, will be exhibited. All instruments on display will be up-to-date and many are of new design. Illustrations and descriptions of many of these will appear in the special Atlantic City edition of the *Hardy Messenger*, which will be distributed at the exhibit.

W. H. Horn & Bro., Inc., Space 37.—Will exhibit appliances of their own manufacture, consisting of "Hornbro" seamless surgical elastic hosiery, elastic abdominal belts for floating kidney, gastroptosis, abdominal section, relaxation of abdominal muscles, ventral hernia, etc., hard rubber trusses and a line of leather-covered and elastic trusses. The "Trufit" Arch Lift will also be of interest to all practitioners.

Jones of Binghamton, Space 33.—A Bertillon scale, which is especially adapted for physicians' offices, police headquarters, insurance offices, and every place where personal weight is desired, will be demonstrated. It was named after the celebrated originator of the Bertillon system, used in weighing convicts and suspects. Scale is constructed entirely of metal, finished in white enamel, handsomely ornamented; all brass parts heavily nickel plated. It is adapted for all systems of weights and measures.

E. Kirstein Sons Company, Space 75.—An exhibit chiefly devoted to the demonstration and display of their latest model eyeglass mounting consisting of a rigid bridge, rigid guard, finger operating mounting which has all the advantages, in the way of adjustment, possible with hoop spring mountings and none of its drawbacks. They will also show their latest spectacle bridge which has two pads carrying the weight of the lenses. In construction, this bridge is entirely different from the saddle-bridge spectacles.

Ernst Leitz, Space 106.—Of particular interest will be the two new Leitz models of physicians' microscopes and their "dark field" illuminating outfit—so necessary with the Wassermann test. Their new form Edinger apparatus for the drawing and projection of microscopic and lantern slides is of especial scientific value. The large microphotographic apparatus will also be exhibited. There will also be shown stand A equipped with the new Leitz apochromats, for use in scientific research. The Leitz double demonstration eyepiece with pointer will be an added attraction; also various models of microtomes, etc.

Chas. Lentz & Sons, Space 72.—An extensive exhibit of many newly-devised instruments will be completed for the occasion and the great diversity of apparatus shown will make this display of interest to all branches of the profession. Especial attention will be given to the electric exhibit, and the apparatus shown will include those in every-day use as well as those for more advanced electric work.

McIntire, Magee & Brown Co., Space 77.—Will exhibit a complete line of ophthalmologic equipment including some of the latest eye-testing instruments and improved models of popular accessories, such as the Thorington Retinoscope, with fixation letters and the mirror set so as to insure durability of the silvering, also improved models of this firm's Jackson Cross Cylinder and Powell Condenser. The latest improved kindergarten test card, as devised by Dr. W. Reber, will have its initial exhibit.

E. B. Meyrowitz, Inc., Space 50.—A complete line of apparatus and instruments for eye, ear, nose and throat work will be shown. Special reference will be made to the Schiötz tonometer, Marple electric ophthalmoscope, a new trial frame, 1911 model ophthalmometer, Yankauer's eustachian-tube instruments, Mosher's mastoid transilluminator, Coakley's antrum perforator, and Kahler-Bruening bronchoscopic apparatus. In the *x*-ray department, a special tube stand, portable high frequency outfit and plate marking devices will be demonstrated.

V. Mueller & Co., Spaces 119 and 120.—This well-known firm, as in past years, will exhibit a complete line of surgical instruments, cystoscopes, bronchoscopes, esophagoscopes, etc. The instrument department will be especially well represented. A number of new instruments which have been placed on the market during the past year will be shown. In addition the latest European surgical instruments, illuminating apparatus, etc., will be exhibited, making a display which no visitor should fail to see. The exhibit will be in charge of Mr. V. Mueller.

Ohio Chemical and Mfg. Co., Space 54.—The Ohio Monovalve will be exhibited. This is said to be the first instrument designed by which gas pressure is automatically reduced and controlled. After the operation is started, one valve enables the anesthetist to give pure nitrous oxid, nitrous oxid in combination with oxygen or pure oxygen. When closed the flow of gas from the cylinders automatically stops.

Philadelphia Surgical Specialty Co., Space 127.—A practical and unique surgical appliance which has been called the "Simplex Surgeon" will be the feature of this exhibit. This outfit is but ½ inch in diameter and 3 inches long, yet it contains straight and curved vistoury, hemostat, forceps, eye spud, probe applicator, ear spoon, curet, two handles, needles, silk, etc. It is composed entirely of metal, hence easily sterilized.

Physicians' Supply Co., Space 76.—Will exhibit a full line of surgical instruments, including all the latest patterns in nose, throat and general operating; blood-pressure apparatus, cystoscopes and pharyngoscopes and other electric-lighted instruments.

Harvey R. Pierce Co., Space 60.—A representative line of surgical instruments, especially those to be used in bone surgery, will be displayed by this firm. They will also demonstrate the Ohio monovalve anesthesia apparatus for the administration of nitrous oxid alone or in combination with oxygen, ether or chloroform.

Randall-Faichney Co., Space 51.—An extensive display of hypodermic syringe outfits and "Harvard" clinical thermometers will be the interesting features of this exhibit. The various steps in maintaining a higher standard of testing and grading clinical thermometers are to be demonstrated. A line of oil- and grease-guns for automobiles will also be exhibited.

Robertson Mfg. Co., Space 64.—Gold medal spraying and nebulizing outfits are to be the features of this exhibit. It is said that these inexpensive outfits are growing in favor with the profession because they are claimed to do the same work as the larger cumbersome, complicated and expensive machines and require less labor and are less liable to get out of order.

Taylor Instrument Companies, Spaces 40, 41, 56 and 57.—At this exhibit a staff of trained medical men will demonstrate the use of the "Tycos" sphygmomanometer in general practice. The demonstrations will cover the taking of systolic, diastolic and pulse-pressure. New booklets and other literature on the relation of blood-pressure in diagnosis of acute and chronic diseases will be distributed. Besides the "Tycos" sphygmomanometer this exhibit will include a display of "Tycos" fever thermometers.

Teter Manufacturing Co., Space 36.—The well-known improved Teter apparatus for administering nitrous oxid and oxygen and other general anesthetics will be demonstrated. The Teter improved apparatus embodies the scientific principles for making it possible to use nitrous oxid and oxygen as the routine anesthetic in general surgery. These principles are, even flow of gases, rebreathing, positive interpulmonary pressure, and delivery of the gases to the patient warmed to about 90 F.

Michael Woolf, Space 55.—High quality prescription work will be exhibited; also a number of optical specialties such as always have attracted the interest of oculists. They will demonstrate their new skioptometer which eliminates the use of trial frames and the spherical part of the trial case, the particular feature being the extremely low cost of the apparatus.

## Apparatus—Electric

Campbell Electric Company, Space 115.—The leading features claimed for the Campbell coil are simplicity of handling, durability of construction and compactness. The latest model gives the operator the use of eight currents, including a powerful *x*-ray current. Some of the expedients adopted for the protection both of operator and coil are the pilot light, which indicates any passage of current into coil, and the protected spark-gap.

Electro-Surgical Instrument Company, Space 44.—Instruments made by this firm are constructed after the designs and suggestions of eminent physicians based on their practical experience. The complete line of electrically lighted diagnostic and operative instruments which will be exhibited will include among other instruments the Young improved urethroscope, Braasch urethroscope and median bar excisor, Lynch proctosigmoidoscope, Bassler sigmoidoscope, Mosher mastoid transilluminator, Holmes nasopharyngoscope. Controllers and socket cautery transformers will also be shown.

Macalaster-Wiggin Co., Space 108.—Will show a splendid assortment of *x*-ray tubes and accessories in general. This firm was the first to bring out the tungsten target tubes, and they will make a special demonstration of this tube. The tungsten metal has only recently been obtainable, and it has revolutionized *x*-ray tube building, and has been a great step in advance in *x*-ray photography.

McIntosh Battery & Optical Co., Space 15.—The exhibit will consist of improved wall plates with dial current selector, while special stress will be laid on the McIntosh polysine generator, a highly perfected sinusoidal machine. Portable high-frequency coils of great durability will be another feature of this interesting exhibit. The McIntosh No. 4 transformer, an eye, ear, nose and throat specialist's outfit, will interest practitioners working along those lines.

Pittsburgh Electric Specialties Co., Space 23.—Will exhibit the medico lamp, designed for use by physicians and surgeons in major and minor operations and for diagnostic purposes. It consists practically of a point light source, two condensing lenses, one focusing lens, and an iris diaphragm. A clear white field of very high intensity is obtained. The size of the field can be regulated to any size desired.

Scheidel-Western X-Ray Coil Co., Spaces 62 and 63.—Will have a scientific display of advanced therapeutic apparatus for radiographic work of all kinds. They will demonstrate the latest interrupterless machine with which the fastest negatives have been made; also their combination *x*-ray treatment outfits, portable outfits, Wheatstone stereoscope, plate changers, protection tube stand and special combination table. In addition to this complete line of electrotherapeutic appliances, high frequency apparatus, cauteries, diagnostic and treatment lights, vibrators, headlights, etc., which were manufactured by the Sam J. Gorman Company, will also be shown as this company is now consolidated with the Scheidel-Western X-Ray Coil Co.

Victor Electric Co., Spaces 84, 85, 86, 87, 97, 98, 99 and 100.—A complete show-room, with not a single electrode or accessory missing, has been planned for this meeting, and with both direct and alternating currents available the physician will be able to witness a complete demonstration of every product of the Victor factory. Progress in electromedicine and electrodiagnosis is rapid nowadays and the Victor Electric Company, as usual, will undoubtedly be found right up to the minute.

Waite & Bartlett Mfg. Co., Space 29.—Several new devices in electrotherapeutics will be demonstrated. This firm has recently brought to the attention of the profession a silent solace interrupterless coil with self-starting synchronous motor and a patented automatic time switch, which is said to allow perfect control at any distance.

Wappler Electric Mfg. Company, Inc., Spaces 109, 110, 121 and 122.—In their display of electromedical and surgical apparatus, this company will show many new and radical features. All their cystoscopes have the brilliant lens system, showing the correct image picture. Special attention is called to the various combination models of the Brown-Buerger cystoscope, and also their small diagnostic cystoscopes and urethroscopes. The brilliant lens system has been adopted for all their diagnostic instruments. They will exhibit also the King model interrupterless apparatus.

## Food and Milk Preparations

Walter Baker & Co., Space 88.—Cocoa will be served to all members of the Association attending the meeting with the compliments of the firm. The exhibit will include a complete line of their cocoa and chocolate preparations. The booth occupied by this firm is very elaborate, being constructed entirely of plate glass and white enamel wood work.

Bass Islands Vineyards Company, Space 24.—Visitors are cordially invited to look up the exhibit of this company and try their Golden Catawba Grape Juice. This is a clear amber-colored grape juice possessing valuable nutritive properties and original flavor. It is recommended from a medicinal point of view in cases of enfeebled digestive organs on account of the small percentage of tannin. This company also produces dark concord grape juice, and all their products are guaranteed absolutely pure and unadulterated with no added sugar.

Borden's Condensed Milk Company, Spaces 68 and 69.—Will exhibit their Malted Milk and will call attention to its extreme solubility and its freedom from excessive sweetness and the malted milk "tang." They will dwell on its merits as a non-irritating, non-fermenting, easily digested and satisfying food. They will also display their Eagle Brand Condensed Milk, and will present this product as a proof of the excellence of all preparations put up by them.

Horlick's Malted Milk Co., Space 5.—This firm will show Horlick's Malted Milk and urge its use as an easily digested food product in powder form, prepared from pure fresh cow's milk, combined with the extracts of malt, barley and wheat, the starch of which has all been converted by the action of the diastase of the malt, and ready for immediate use by simply dissolving in hot or cold water; uniform and reliable, manufactured under ideal sanitary conditions, with the experience, methods and apparatus evolved through work of over a century in this line.

Mead Johnson & Company, Space 9.—An exhibit of their Dextri-Maltose (pure maltose and dextrin in about equal parts) will be made. This is a nearly white, granulated product, in appearance somewhat resembling cane sugar, and is said to be the only preparation of this kind thus far manufactured in the U. S. It is non-proprietary and is a practical duplicate of the malt-sugar and dextrin preparations made in Germany, where they are largely used by pediatrists, especially those who employ the Finkelstein method of infant feeding. This firm will also exhibit interesting examples of the raw materials from which vegetable ferments are obtained.

Mellin's Food Company, Space 1.—Will exhibit their product and give, this year, especial attention to the much discussed subject, carbohydrates in infant feeding. Representatives of the company will be in readiness to furnish visiting physicians the analysis of Mellin's Food, showing the relative amount of maltose and dextrin in their product, and to offer evidence to substantiate their claim that the carbohydrate content of Mellin's Food answers the requirements for a sugar in infant feeding.

Smith, Kline & French Co., Space 17.—The composition of Eskay's Food in its various stages of manufacture, as well as the finished product, will be displayed. A trained nurse in attendance will prepare and serve Eskay's Food as intended for infant or adult feeding. Test tubes showing the action of gastric juice on the curd of cow's milk and how this curd is modified by the addition of Eskay's Food will be an interesting feature. A souvenir will be given all physicians visiting their booth.

Welch Grape Juice Company, Spaces 32 and 65.—"The National Drink," as this company terms its product, will be served to the attending delegates from a handsome booth, overhung with vines laden with luscious-looking bunches of grapes. It is reported that the lighting of the booth will be a special feature. As heretofore, members of the American Medical Association are invited to make use of their demonstrating store at 1217 Boardwalk, where directories, 'phones, stationery, hotel and railroad guides are for their convenience.

### Artificial Limbs and Supportive Appliances

Ambulatory Pneumatic Splint Mfg. Co., Space 18.—The exhibit will consist of a practical, scientific demonstration of the application and use of the Ambulatory Pneumatic Splint for the reduction, comfortable and successful treatment of all fractures of the lower limbs, including those of the hip, with the patient in bed or walking about. "Ambumatic" washable abdominal supporters and orthopedic braces will be explained and shown for every condition under the direction of Mr. and Mrs. Franklin I. Sæmann.

Anatomik Footwear Company, Space 101.—An exhibit of men's, women's and children's Anatomik shoes for the relief of mild cases of flat foot and for the prevention of foot troubles. Anatomik shoes are made on a special last devised by Dr. Harlan P. Cole of New York, who will be glad to meet physicians and explain the features of the special shoes made by this company for bad cases of flat foot and for various forms of talipes.

Berger Bros., Space 30.—The Spencer Abdominal Supporting Corset will be the interesting feature of this exhibit. Supports for floating kidney, visceral ptoses, after surgical operations, etc., as well as maternity corsets will be shown on lay figures. An experienced fitter will demonstrate the supports and explain to physicians who prefer to have these appliances adjusted under their personal supervision, the simple method of taking measurements.

Carnes Artificial Limb Company, Space 34.—Will have a practical demonstration by men wearing the Carnes arm and will show an artificial bending elbow (for above-elbow amputation) a rotating and flexing wrist and an automatic finger movement which enables them to light a cigar, write and feed themselves. The arm is operated independently from the shoulder.

Franklin Wardrobe Co., Space 10.—An abdominal belt, a surgical corset, a maternity corset and a fashion corset will be the main features of this exhibit. A trained nurse will have charge of the booth and will make practical demonstration, showing the peculiar value of these supports as an aid in the treatment of Glenard's disease and associated conditions of visceral prolapse.

### Mineral Waters

Apollinaris Agency Company, Space 19.—Apollinaris water, which is mildly alkaline and naturally effervescent will be exhibited. It is bottled only at the Apollinaris spring, Neuenahr, Germany, and only with its own natural gas, as stated on the label. The same company will also exhibit "Apenta," the Hungarian natural aperient water, which is noted for its well proportioned content of magnesium sulphate and sodium sulphate.

Condal-Rubinat Company, Space 126.—Will exhibit their purgative water from the Condal springs of Rubinat (Spain). It is said to be a mildly alkaline water containing a large proportion of sodium sulphate and a relatively smaller proportion of magnesium sulphate in solution.

National Water Co., Space 59.—A display will be made of White Rock and Still Rock waters, both of which are daily growing in popularity with the medical profession. Representatives Westveer and Heath will be there to greet the members of the American Medical Association and to demonstrate the superiority of their products.

### Sanatoriums

Mudlavia, Kramer, Ind., Space 67.—For the benefit of physicians who have never visited Mudlavia this company will maintain an exhibit showing in pictorial detail their special therapeutic agent, the Mudlavia Bath. Beginning with a view of the mud deposit in the natural state, the various steps in the process to completion of the bath will be shown; likewise the buildings and grounds with their special equipment for maintaining a high-grade sanatorium.

San Antonio Tent Colony, San Antonio, Tex., Space 118. —Will consist of a rest room, model of cottage used, various photographs of the institution, and demonstration of the equipment and methods of treatment used.

### Miscellaneous

Deimel Linen-Mesh System Co., Space 79.—The well-known Dr. Deimel underwear which was introduced some eighteen years ago by Dr. Henry L. Deimel of California, will be displayed. Sample garments of the different weights as well as the latest styles of summer garments will be exhibited.

Johnson & Johnson, Space 16.—An attempt will be made to show the entire process in the manufacture of ligatures. The steps in the preparation of sheep's intestines, the twisting processes and also process of hardening or chromicizing catgut will be explained in part by the material and in part photographically and diagramatically. Methods of sizing and testing tensile strength of surgical ligatures, its sterilization and bacteriological tests will also be described in detail.

Southern Aseptic Cotton Co., Space 61.—This exhibit will be interesting and instructive. It will show the various steps in the preparation and purification of absorbent cotton under an exclusive German process, and also the purification and absorbent qualities of gauze under the "Rothe Process." From this display physicians will secure many valuable and practical ideas and will be able to apply these useful products more intelligently in routine surgical work.

Miller Rubber Co., Space 42.—This firm will exhibit a complete line of Miller atomizers, the celebrated Miller surgeon's gloves and finger cots and other surgical specialties.

Physicians' Record Co., Space 113.—This company will demonstrate a system for keeping complete accounts and case records. The device exhibited has become a standard in its line. History sheets covering different classes of cases, charts, complete analysis forms, filing devices of various styles, etc., will constitute the display. The complete record system made up by the Physicians' Record Company aims to simplify the recording end of the physician's work.

Weissfeld Bros., Space 66.—Hospital wearing apparel, physicians' coats, surgeons' gowns, duck suits, smoking jackets, bath robes, dressing gowns, etc., will be displayed.

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# PHARYNGEAL INSUFFLATION, A SIMPLE METHOD OF ARTIFICIAL RESPIRATION

## A PRELIMINARY NOTE *

S. J. MELTZER, M.D.
NEW YORK

There are numerous occasions in the practice of surgery and internal medicine, as well as in the occurrences of accidents and intoxication in modern industrial life, n which successful artificial respiration would doubtessly prove life-saving; the development of a simple but efficient method is therefore certainly a crying need. The well-known Sylvester and the Schäfer methods of rtificial respiration are simple enough, but they are ar from being reliably efficient. I shall not discuss here heir merits. The usual method of artificial respiration f the physiologic laboratories is, on the other hand, fficient enough, but it requires tracheotomy and some urgical training to perform it. The method of intraracheal insufflation of Meltzer and Auer requires no urgical procedure and is, as I may emphatically state, bsolutely efficient, but it requires the aid of a medical man, and of one who is already trained in the introducon of the intratracheal tube, and it requires also some ort of apparatus to perform the insufflation safely and uccessfully; it is highly probable that in most of the nergency cases neither will be at hand.

Serving on the Commission on Resuscitation from lectric Shock, appointed by the American Medical ssociation,[1] I became interested in this problem and gan to study its solution experimentally. I now have ason to believe that I have already attained very omising results. Without discussing the question hether the method which I have developed should and ould be recommended by the commission as the one hich promises the best results, it seemed to me advisle to present it early to the medical profession. The ethod was studied and found efficient on four species animals. But its real usefulness will be established ly after standing the test in its application on human ings, and the final judgment will have to come from t physician and not from the experimenter in the boratory.

The method in its simplest form consists in (1) the roduction of a catheter into the pharynx; (2) pulling t of the tongue; (3) pressing the suprahyoid region ainst the roof of the mouth; (4) putting the abdomen der constant pressure, and (5) connecting the catheter h bellows.

When, during a compression of the bellows, air is driven into the pharynx, it can escape through the mouth, the nose, into the stomach and into the lungs. The ready return of the insufflated air through the mouth is restricted in this method by pressing the fleshy part of the tongue against the roof of the mouth. The escape through the nose is somewhat restricted, partly by the pressure against the roof of the mouth which also raises the soft palate, and partly by the presence of the catheter in the pharynx which also assists in raising the soft palate as well as the uvula. The escape into the stomach may occur readily, if the air-pressure within the pharynx caused by the insufflation is considerable and the pressure exerted on the suprahyoid region is so strong as to prevent completely, or restrict excessively, the escape of the surplus air through the mouth. But this escape into the stomach can be entirely prevented, or restricted to a harmless minimum, by putting the abdomen under sufficient external pressure. Under these circumstances the surplus air in the pharynx during each insufflation readily enters into the lungs in a quantity and with a force sufficient to perform an efficient inspiration which, on account of the pressure on the abdomen, consists, in this case, chiefly in distention of the thorax with but little descension of the diaphragm. The heaving of the chest serves, in this case, as an indicator of the extent of inspiration. The latter, as may be pointed out here, is controlled by the degree of pressure exerted on the suprahyoid region, that is, the more pressure is here exerted, which means less escape of air through the mouth, the stronger is the inspiration. The expiration is accomplished during the intermission of the insufflation, as in normal respiration, by the elasticity of the thoracic wall, striving to return to its normal equilibrium.

The method just described, the efficiency of which has been studied by me experimentally, contains nothing which even a layman could not grasp and perform, and it requires of apparatus only such simple contrivances as bellows, a catheter and some load for the abdomen, simple contrivances which could be kept in readiness at places where emergencies under discussion are liable to happen. In another series of experiments, however, I have studied the efficiency of this method, with the addition of another element, namely, a tube introduced into the stomach. Under these conditions no pressure on the abdomen is necessary, because all surplus air which may enter during insufflation through the esophagus alongside the tube into the stomach, escapes readily outside through the stomach-tube. The stomach-tube thus prevents the accumulation of air in the stomach and serves at the same time as a safety-valve for the surplus of air-pressure within the pharynx. The experiments have shown, further, that the rhythmic entrance of air into the stomach, instead of pressing the diaphragm

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* From the Department of Physiology and Pharmacology of the kefeller Institute for Medical Research.

[1] See THE JOURNAL A. M. A., Jan. 27, 1912, p. 282.

headward, pushes the stomach and with it the diaphragm downward and thus assists indirectly in the inspiratory movement. Under this method the air entering the lungs is well capable of pushing the diaphragm downward; the thoracic frame becomes therefore less distended and the heaving of the chest is in this method less noticeable than in the one without the stomach-tube. It must be mentioned that the simultaneous presence of two tubes in the pharynx seems to be the means, in nearly all cases, of completely preventing the escape of the insufflated air through the nose.

The methods have been developed, and sufficiently tested by experimentation on four species of animals: dogs, cats, rabbits and two monkeys. The most extensive series of experiments were carried out on dogs and cats. Since the chief object of this study was to find a method of providing efficient artificial respiration, it was best to study the efficiency of the methods on animals in which the normal respiration was completely abolished, while other functions were but little impaired. The experiments were therefore carried out chiefly on curarized animals, all of which received morphin and some receiving also ether. Without entering on details, I may state here, briefly, that in all animals, without exception, either of the two methods was all sufficient to keep up the lives of completely curarized animals for many hours in a perfectly normal manner. In a good many experiments the thorax was widely opened transversely and the heart freely exposed. No shock was observed in any case. In several instances the artificial respiration was discontinued as long as from six to seven minutes, until the pulse disappeared completely, the ventricles showing only a faint, inefficient beat. Nevertheless, on restoring the connections for artificial respiration, heart and circulation were restored to normal within from one and a half to two minutes. Several animals were kept under the influence of curare for several hours, but were otherwise not operated on; they were permitted to recover from the influence of curare and remained perfectly well. These methods proved to be sufficient to keep up the respiration in cases also in which the medulla oblongata was completely destroyed or after complete abolition of respiration by intramuscular injection of large doses of magnesium sulphate.

It was further established that by means of pharyngeal insufflation animals were brought easily and profoundly under the influence of ether anesthesia. When the profound anesthesia continued for some time, the spontaneous respiration disappeared completely. When now the ether was discontinued, the animal remained, sometimes for half an hour and longer, without any spontaneous respiration; the heart nevertheless continued to beat regularly and improve rapidly in efficiency. Here again the pharyngeal insufflation proved to be an efficient method of artificial respiration and life-saving.

I have made, also, a few experiments on animals which were killed purposely either by etherization or by illuminating gas. In these cases the pharyngeal insufflation was not instituted until all traces of respiration and heart-beats disappeared. So far, only two recoveries can be recorded. No serious attempt, however, has yet been made to study those problems in a proper manner. In the question of resuscitation from these poisonings, other problems are involved, with which we are not concerned for the present.

My experimental studies convinced me that by means of these methods of pharyngeal insufflation, artificial respiration can be kept up efficiently, and animals will be surely resuscitated from a purely respiratory death. Seeing no reason whatsoever why these methods should fail to accomplish similar results in human beings, I submit to physicians and surgeons my request to test the pharyngeal methods, as described here, on human beings wherever there is any need of artificial respiration; the opportunities will not be lacking. There are cases in surgery on the brain, the thorax, or on other parts of the body, in which the respiration gives out, while the heart is still beating. There are cases of respiratory insufficiency also in internal medicine, for instance in postdiphtheritic paralysis, in poliomyelitis, or in some cases of eclampsia or coma. And there are the poisonings by morphin, illuminating gas, etc., or the shocks in accidents. The pharyngeal insufflation, when carried out with care, can certainly do no harm; its execution is very simple, and it ought to be tested in any of these cases. Furthermore, I can see no objection to its being tested immediately after death from any cause whatsoever. There is always the possibility that the actual cause of death might be, in one case or another, especially in acute cases, only of a temporary nature, so that efficient artificial respiration might assist in temporizing and thus prove occasionally life-saving indeed. Such possibilities, though they may be realized only once in a thousand times, justify the making of such an attempt in each and every instance of death. It is thus that the efficiency of pharyngeal insufflation, as a means of artificial respiration in human beings, could be tested early and reliably. It is hardly necessary to point out that it would not be a fair test of the method to try it after rigor mortis had set in.

To facilitate the application of the method. I shall try to describe concisely, here, the manner of its application as I believe it ought to be used in human beings. The tube to be inserted into the pharynx should be a 15 American (or 22 French) catheter. If there is no catheter at hand, any tube of a similar diameter will serve the purpose, but it ought to possess sufficient resistance and should have at least one fair-sized lateral opening near its end. The catheter should be introduced into the pharynx about 5½ inches from the teeth. The tongue should be pulled out and held by a tongue-forceps, the continuation of which is, however, not indispensable, since the bandage will later keep the tongue in proper position. Then a pad, about 1 inch long and 1 inch thick, made of gauze, cotton or any other material, should be placed under the chin on the suprahyoid region and pressed upward by means of a bandage or a folded handkerchief tied at first only moderately firmly over the head. By the suprahyoid region is meant the part of the submental region which is nearest to the hyoid region; pressure on this part presses the middle part of the tongue against the posterior part of the hard palate. The bandage over the head should be tied about over the posterior part of the parietal bones.

Now some weight should be placed on the abdomen. In unconscious individuals the abdominal wall offers no resistance and a load of from 12 to 13 pounds will be sufficient to exert the necessary pressure. A weight of from 6 to 7 pounds was sufficient for fairly large dogs. The pressure on the abdomen offers the further advantage that it drives the blood from the abdominal viscera to the heart and to the brain and the medulla where it can do greater service.

The bellows, which need not be of very large size, are now connected with the catheter and the manipulation may begin. Care should be taken that at the beginning the compression should not be made too forcibly and rapidly and not oftener than ten to twelve times per minute. If each compression causes only a slight heaving of the chest the bandage over the head should be tightened and if the heaving appears to be too strong the bandage should be loosened correspondingly. Here, as in the method of intratracheal insufflation, too much pressure and careless handling may do harm. The compression should never be made so tight as to make the escape of air through the mouth impossible or very difficult.

The handling of the bellows is often fatiguing; but the effort can be greatly reduced by fastening one handle by means of a screw-clamp to a table and making the other handle several feet long; the working of the bellows is then very easy.

The introduction of a tube into the stomach permits the handling of the insufflation with greater force, more fficiency, and even greater safety. In some cases the se of the stomach-tube might be even indispensable, hen, for one reason or another, no weight can be laced on the abdomen. The stomach-tube should not e too small in diameter, should have two lateral openngs near its end and should be introduced at least sixeen inches from the teeth. It should be introduced efore the pharyngeal tube. There is no objection to aving both devices together—the stomach-tube and the eight on the stomach.

I shall add that in my experiments the insufflation as just as efficient when the animal was lying on the tomach with the head hanging downward. Under these ircumstances it is, however, necessary to make a proision for keeping the tubes in place; otherwise they ight slip out.

In the foregoing the bellows were relied on as a source f pressure for the insufflation. It is evident, however, at any other source of interrupted or continuous presre could be employed. It is especially worth while to ention here that in the absence of bellows an oxygen nk could be used for this purpose. It is necessary only insert a T tube in the connection between the oxygen nk and the catheter. An attendant should then close d open the vertical, open branch of that tube about elve times per minute; the closing will cause an spiration and the opening an expiration. The closure ould last about two and the opening about three conds. In order to prevent too much pressure it is visable to introduce another T tube which should be nnected with a safety valve. The latter is prepared the easiest and simplest manner by having mercury a double-necked bottle or a bottle closed with a pper having two perforations. Through one of these enings a graded tube is introduced and submerged out 15 to 20 mm. under the surface of the mercury. at means that the oxygen will never enter the pharynx th a pressure higher than 15 or 20 mm. mercury.

Finally, it is evident that the pharyngeal insufflation ght to be capable of rendering good service in the phyxia of the new-born. After introducing propered catheters into the stomach and the pharynx and ter applying properly a bandage around chin and ad, the pharyngeal catheter should be connected simply th a rubber bulb of an atomizer and the artificial piration can be started. This simple arrangement ll probaby be sufficient also for the resuscitation of bies 1 or 2 years old.

13 West One Hundred and Twenty-First Street.

## THE PATHOGENESIS OF PLACENTAL SYPHILIS

### A PRELIMINARY REPORT *

MARTIN F. ENGMAN, M.D.
ST. LOUIS

Through the Wassermann reaction, the discovery of the *Spirochæta pallida*, the Levaditi impregnation method of staining, and the introduction of the dark-stage illumination, the whole question relative to the pathogenesis of inherited syphilis has received new light.

As McIntosh and Fildes remark, on anatomic grounds it is improbable that the father could directly infect the fetus *in utero*. The strongest evidence in favor of the view that the ova can be infected was the finding of spirochetes in the ova of congenital syphilitic infants, by Levaditi, Sauvage, McIntosh, Hoffman and Wolters.

In forming a true valuation of this observation, one must remember that the spirochetes are found in almost every tissue, in children dead from syphilis, on account of these organisms being very numerous.

Neisser finds the testicle a harbor for the spirochetes in animals, but all his inoculations with human semen were negative. On the other hand, Finger and Landsteiner succeeded twice in inoculating animals with human syphilitic semen. One of the men from whom the semen was obtained was suffering from an orchitis; in the other case, it is highly probable that the semen may have picked up the spirochetes from a patch on the penis, in the urethra or in some other accidental way. Unless there be syphilitic disease of the testicle, which is rare, or unless the semen picks up spirochetes *en route*, I do not see how it can contain them, although Uhlenhuth and Mulzer have lately had success in demonstrating them in semen by the inoculation of rabbit's testicle.

If the semen happens to contain the organism, it is not probable that it would enter the spermatozoa on account of its size and motility. Metchnikoff dismisses the subject by remarking that there is no reason to suppose that this microbe infects the spermatozoa; it is more probable that it is found free in the surrounding fluid. It is to the serologist that we owe the final solution of the whole question. The literature on this subject, as in all other branches of modern medicine, is accumulating very rapidly, through numerous and enthusiastic investigators.

It is not necessary here to give a summary of this work, as several most excellent reviews of the subject have already appeared.[1] The whole solution of the problem lies in the fact that all these investigators find that the large majority of mothers, apparently healthy, who give birth to syphilitic children, show a continuous possitive Wassermann reaction.

It has been claimed that the Wassermann body could pass from the fetus to the mother, and thus produce in her a positive reaction; but this point is untenable because in the large majority of such cases, the reaction remains positive long after delivery, giving sufficient time for the disappearance of this body were not spirochetes present in the mother. We must admit, from these convincing investigations, that the mother has syphilis; but how did she receive her inoculation? From the embryo, or through epithelial inoculation—the usual route?

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* From the Barnard Free Skin and Cancer Hospital.

* Read before the St. Louis Medical Society, Feb. 24, 1912.

[1] Ehrenfest: Interstate Med. Jour., 1910, xvii, 690; Stein: Post-Graduate, 1911, xxvi, 963.

We have seen that the findings, in favor of the paternal inoculation of the embryo, do not at present seem probable; yet we cannot dogmatically dismiss the theory, for we know that the semen does, in some instances, contain spirochetes. Hence we await, with eagerness, confirmation of Uhlenhuth and Mulzer's work.

Undoubtedly, under certain circumstances, the spirochetes can live in a host without causing much interference; therefore it is not impossible that they may live in the growing embryo in an innocuous state. Rous' experiments with his filtrate of hen sarcoma, which he injects into eggs and hatches a sarcoma chick, is suggestive.

If the embryo, thus inoculated with syphilis, grows, it could, of course, infect the mother through the uteroplacental circulation.

Subcutaneous and intravenous inoculations of syphilis have been uniformly unsuccessful. Neisser tried subcutaneous inoculations fifty-one times, and intravenous fifteen times, without success; but, in congenital syphilis, we have an exception to the curious rule remarked by all investigators in clinical and experimental syphilis—namely, that the organisms seem to need an epithelial entrance, or epithelial culture for a short time, until they are ready to penetrate or invade the deeper tissue, and the general economy.

It seems to me that we must await further investigation before we can decide that the mother was not inoculated through her syphilitic child; though, in my opinion, it does not seem probable that this occurs. I cannot believe, with Trinchese, that the spirochetes enter the uterus with the semen and penetrate the endometrium, as I have remarked that this is contrary to experimental inoculation experience.

A few words in relation to Profeta's class of cases. We now know that a large percentage of macerated fetuses are syphilitic. Baisch found that 80 per cent. contained spirochetes, which is about the average finding of other investigators.

Habitual abortions are due to syphilis in a large percentage of cases. We must admit that some children are born of syphilitic mothers and escape the disease; this may be due to the fact that no organisms happen to enter the circulation and land in the placenta during conception. But this is still a mooted point, and should not be decided dogmatically, as such children must be watched for years—probably until puberty—before one can say that they are free.

A mother may be mildly syphilitic, may have a localized syphilis, or the microorganisms may be isolated in the bone-marrow or lymph-nodes, and not in the circulation; therefore the organisms are not in a position to infect the placental tissues. On the other hand, children may be latently syphilitic, and still present a negative Wassermann reaction.

Some of these healthy children at first produce a positive Wassermann, since the Wassermann body may cross the placenta, to the child, as pointed out by Boas and others.

Again, an antibody may also cross and be sufficient to hold the spirochetes from causing active symptoms in the child for some time, which seems to explain why, in the majority of cases, the symptoms of syphilis are delayed for some days or weeks after the child's birth.

Many of these investigations seem conflicting in detail; hence, to understand them properly, one must look at syphilis in the broadest possible way, and not be hampered by set clinical ideas that have been handed down to us through the ages. Modern science is always branching out into new channels of enlightenment; and at the present time of great laboratories, hospitals and thousands of investigators, one must keep one's mind ever open, and be broad enough to heed the results of new investigations.

Syphilis, from my own clinical observations covering eighteen years, and from the investigations of others, appears to me in the following way: The spirochete enters the animal body (man, for instance) as any other similar organism of its kind would enter an animal body; and, finally, through growth and adaptation, reaches the circulation and is thus carried to all organs in metastatic groups.

In some tissues, where the chemical conditions are suited for it, it proliferates more or less rapidly, depending on the chemical and physical environment; and probably causes a lesion, from which clinical symptoms may or may not be produced. Where it does not find proper chemical affinities it ceases to propagate and dies.

The resulting chain of symptoms from a certain infection largely depends on the chemotropism of that particular strain of spirochete and its source. If it is a strain with neurotropic affinities, then nervous phenomena are more apt to result than if the strain had tropic affinities for the skin, bone or other tissues. In most instances, the human system has learned, through the course of several hundred years, to overcome the pathogenic action of the organism, just as other animals—rats, fowl, deer and mice — have learned to change certain spirochetes into normal or harmless parasites.

Such organisms are often found in the blood and lymph-nodes of perfectly healthy lower animals. Now and then these organisms become pathogenic to an animal of this group; and such a spirochete, when conveyed to a virgin race of animals, may kill many generations, until the virgin races become themselves immune through cell-education and heredity. In the main details, syphilis thus appears to me.

All will admit that in the majority of cases, after the first two florid stages, the symptoms of syphilis disappear from the surface with or without treatment. A few of the infected may subsequently die of aortitis, tabes, paresis, gumma of liver, brain gumma, etc., but comparatively few come to this stage, the large majority remaining well throughout life. Nevertheless they are syphilitic, and probably will always be syphilitic, as the spirochetes remain in their bodies, hidden either in the bone-marrow or in the lymph-nodes, whence they may wander into the circulation at certain times. Those who have syphilis may have spirochetes free in their blood-stream at any time. I admit that the organisms are difficult to find in the blood, but successful inoculations from it have been made by Hoffman and others. The organisms may enter the blood-stream at any time, and unless they happen to find a nidus for pathogenic action, no disturbance will likely ensue, and, therefore, not enough Wassermann substance will be formed to cause a reaction.

Preliminary vascular disturbance is necessary in the late or latent stage of syphilis before a syphilitic lesion can be formed. How else can one explain simple abrasions of the leg or elbow, for instance, which become typical syphilitic ulcers? Were the organisms at that point before the abrasion occurred? More probably they were brought there by the blood-stream as an incident in the normal course of events. The vessels having been changed by the trauma, a purely physicochemical occurrence takes place; the spirochetes lodge there, and find chemical conditions propitious for their growth in the natural disturbance of the normal equilibrium between the tissue and themselves.

Some preliminary non-syphilitic changes are necessary in the formation of all late lesions of syphilis. The seborrheic syphilid, the palmar syphilids, the syphilids of the mouth, may be taken as illustrations of this observation.

Syphilis is a blood-borne disease; how else could one explain the secondary lesions? There are many theories explanatory of late syphilitic lesions—Levaditi's disturbance of local immunity, Neisser's *Umstimmung*, anaphylaxis, etc.

But how do the spirochetes reach the areas of tertiary disturbance? They must be carried by the blood, and through mechanical or chemical influences stop at a certain point, proliferate, and thus cause a lesion of more or less extent. So it is with the pathogenesis of congenital syphilis. The woman is, in all probability, latently syphilitic; she has in her general circulation, at times, live, free spirochetes which are only occasionally pathogenic to her organism. She may have syphilitic scars in her vessels, or possibly a struggling colony in her aorta. The free spirochetes are carried by the circulation into the growing or forming placenta, the vessels of which being numerous or possibly abnormal present areas for them to lodge and propagate. At any rate, there is growing tissue possibly with less resistance but more vascularity. They seek mechanically the sides of the vessels; a colony is formed, and this is most frequently found on the embryonic side.

In talking this theory over with Dr. Leo Loeb, he suggested to me the following explanation: Two factors may possibly be suggested as responsible for the greater iability of the placenta to show syphilitic lesions. In he first place the placenta, being a mixed organ, partly of maternal, partly of embryonal origin, is probably only o a less extent under the influence of those substances originating in the infected mother, which cause at least a partial immunity of the maternal lesions. Secondly, it s possible that certain tissues in process of active proliferation differ in their cell-metabolism to such an extent hat they do not respond to certain stimuli as effectively s do normally functionating quiescent tissues.

It is extremely rare to find spirochetes in the decidua, ut they are frequently found on the embryonic side. The various pathologic conditions of the placenta depend n the location of the colonies. The organisms find in he placenta, as elsewhere, the best media for growth bout the vessels.

If an early vigorous strain from a fresh syphilis in he parent is planted, an early death of the fetus will enerally occur; as the strain becomes more attenuated nder the influences of the immunizing bodies of the arent (an older syphilis), syphilitic children or latent yphilitic children may be born; or the infection of he fetus may be from so mild a strain that it may be ntirely stamped out by the hereditary immunizing nfluences of the child.

It is a clinical rule of long standing that the older he syphilis in the parent, the less likelihood there is or infection of the child, which is due to the fact that uch a host contains less spirochetes, and that those she oes harbor are less virulent. We must mention, howver, that Neisser has shown that experimental inoculaons from tertiary lesions run the same course in a impanzee as from an earlier lesion; while others have own that inoculations from retrograding secondary sions give variable and uncertain results. These two facts only illustrate the difference in the virility of the organisms *in situ*.

Mercury causes the spirochetes to disappear from the blood, and is therefore the greatest safeguard against maternal infection. Whether it attacks the organism in the marrow or lymph, where they are no doubt harbored in latent syphilis, is doubtful.

To me the theory that the latent syphilitic mother is a spirochete-carrier of organisms which in such cases appear, now and then, in the blood-stream, and are likely to settle at points of physiologic or pathologic disturbance, explains many, if not all the phenomena of parental syphilis and also tertiary syphilis. Together with this must go the recognition of the fact that the spirochete is an organism which can inhabit a host for years, without causing disturbance. It is interesting in this connection to note the results of the observations of Gaylord and Tyzzer in spirochetes in relation to cancer, that in mice and rats harboring spirochetes, when a new growth occurs in them, it is frequently filled with the organisms.

Now that Noguchi has developed a proper culture method for the spirochete, it will probably be much easier to demonstrate it in suspected fluids and tissues.

The testicle of the rabbit has heretofore been the cheapest and best medium for such demonstration, as higher animals are too expensive.

The spirochetes are very difficult to find in the placenta; writers report many failures, but cultural methods will be of great assistance in clearing up many pathologic placental conditions. It is highly possible that many appearances in the placenta, attributed to syphilis, are not this disease. Pregnant women may be carriers in this way of other organisms besides the spirochete.

There are spirochete-carriers in whom the organism is innocuous, just as there are typhoid meningococcus and diphtheria carriers. Clinical observations and many experimental investigations along other lines seem, at least, partially to confirm this fact.

412 Humboldt Building.

# THE STUDY OF MIND IN MEDICAL EDUCATION *

WILLIAM A. WHITE, M.D.
WASHINGTON, D. C.

It is a truism that it is frequently the most obvious thing, the thing nearest at hand, that is overlooked and not seen. For generations the physician has been practicing his art, and only here and there has one arisen who has given any considerable thought to the plain fact that man is a thinking, feeling organism. And while in a practical way the good physician undoubtedly learns empirically to deal with his patients as thinking organisms, still in all the process of medical education there is little effort made to inculcate this fact into the mind of the student, much less to endeavor to teach him about the organization of the mind, its functions, and the way in which it reacts to disease as he is taught these things about every organ in the body.

The reason for this lack of appreciation of the mental in life is not altogether easy to arrive at. My conception of the reason is that the tremendous complexity of the human organism, which has baffled man's reason for so many generations to understand, is only beginning to be sufficiently fathomed so that a comprehensive grasp of the entire problem has loomed up on the horizon as an imminent possibility and it is only when such a comprehensive grasp is possible that the phenomena of mind fall into place for consideration at all, for they deal primarily with the organism as a whole and therefore it is only after its separate parts in their interrelations and interdependencies have been understood that the problem of the whole can be approached.

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* Read at a meeting of the Manhattan Medical Society of New York City, March 22, 1912

It is not my object at this time to enter into that much-worn discussion of the relations subsisting between body and mind. I will merely call attention to the fact that in the past the interests of the physician have been centered on the body and that he has looked at the individual purely from the standpoint of physical ailment.

Let us for a moment, however, take the other point of view and let us look at the situation from the mental rather than from the physical angle. Why does a patient who is suffering from the pain and inconvenience of a sore finger, for instance, consult the physician? It will be said that it is because his finger is sore. I say no, that is not the reason. It is because he is mentally ill at ease. The reason is a mental one and not a physical one. But, it will be said, the man has pain in his finger and that is a physical thing and that is the reason he consults his physician. Again I say no, that is not so. The pain does not reside in the finger; pain is not a physical but a mental fact. While the pain is directly due to the physical condition of the finger, the pain itself is purely a mental experience. If the man had no mind he could have no pain. And again I say that the reason he consults the physician is that he is mentally ill at ease. What does the physician do for him? The usual answer will be that he cures the physical ailment. This is true; but in doing so he is only employing a means to the end of putting the patient's mind at rest. After the individual's mind is satisfied then he is well; he no longer suffers pain; he no longer suffers from the knowledge that there is a disagreeable-looking place on his body, and he is at peace — because, it is true, the physical cause of his suffering has been removed.

Some say that this result is accomplished by dealing with the finger. I admit that by doing certain things to the finger one produces this result, but I insist that the ultimate results produced, so far as the comfort and well-being of the patient are concerned, are mental results and that the changes that are wrought in the finger are only to the end of bringing about such a mental condition. I will admit that I have taken as an example an extreme instance in order that I might illustrate the point of view from the mental angle, but let us proceed a little further and examine, with the aid of the crucial test of all matters medical, a case that came under my observation some time since.

It was the case of a sore finger, and it is for that reason that I introduce it here. A young man had slightly wounded one of his fingers, and it was infected. There was perhaps a single drop of pus inclosed in the infected territory, and there was a slight rise of temperature, as I recall it, about 99 F.; but the young man was in bed, and delirious. What now becomes of the sore finger and its problem in this general situation? The finger as a finger is sunk into insignificance, except as an index to point the way to the much larger, much more important, problem of the individual. The infection is but a barometer that measures the resistance of the patient's mentality, and with one drop of pus, a temperature of 99 F. and delirium, one can see how seriously unstable his mentality must be, so that after all, although my original illustration might have been supposed to be academic, it is not such a far cry from the sore finger to the actual, practical, clinical problem of the disordered mind.

It will be seen from the above simple example how close, how intimate, are the relations existing between the so-called mental and the so-called physical, and how easily when one is affected the other may become involved. This, I take it, all are willing to admit. Let us see where it leads us. Only a short time ago a man came into my office, who represents a type that I am afraid is only too common. He complained of depression, an inability to work, drowsiness and lack of ambition, and such indefinite symptoms. He had rested and he had exercised; he had been to the mountains and to the seashore; he had tried to solve the problem himself, and he had had the advice of physicians; he had been through the hands of the genito-urinary specialist with no results; he was convinced that he was suffering from some kind of auto-intoxication, and he had been through the hands of a gastro-intestinal specialist, who sent him to me. This man had been able to find, after an exhaustive examination, only the slightest kind of an apparent deficiency in the digestion of starches in the intestines. The patient looked to be physically in the pink of condition. He had been to many doctors and none of them had been able to find anything the matter with him whatever, and they all seemed to be obsessed with the necessity of elaborating some kind of hypothesis to explain his symptoms without any of them ever supposing that they were mental. An hour's talk with this man enabled me to make a perfectly clear diagnosis. He was a typical example of one of those mild manic-depressive psychoses that we know by the name of cyclothymia. It is true that he had certain physical symptoms. He was troubled somewhat with constipation for example, and as I recall it, that was about the only physical symptom of any consequence that he did have. He had found out that by taking good brisk cathartics occasionally he felt better, and on such a flimsy basis a theory of auto-intoxication had been erected in his mind. And so we have here a case that is absolutely a mental case, in all its features, mistaken for a physical condition and treated as such in spite of the inability to find any real tangible physical thing to take hold of.

Then we have a class of cases that develop all sorts of gastro-intestinal disturbances after very slight errors of diet, or after efforts involving moderate fatigue, or without any apparent cause we have a certain physical upset that is focalized in the gastro-intestinal system, and these patients are treated in one way or another, by dieting, by rest, and lo and behold! by the end of two or three years we find we have developing on our hands a case of dementia præcox, and we learn by such cases that such symptoms not infrequently precede the frank outbreak of the psychosis, and so again we find back of what on the surface are physical symptoms a mental condition far more serious and usually overlooked.

Then we have a whole host of neurasthenic invalids who have some trouble with them: a cyst of the ovary, prolapse of the uterus, a chronic appendicitis, a floating kidney, and all sorts of other conditions, and as the days go by and the months drag themselves out into years these patients develop a reaction toward their physical malady which is out of all proportion to the degree of the malady itself. They are building a tremendous structure of disordered mind on a small foundation of physical ailment, and although they do have something the matter with them physically still the physical thing has long since ceased to be the important feature in the case, and if the physician attempts to work a miracle and cure these people over night by taking out an old appendix or performing a ventro-suspension or a nephropexy, he will have one of his serious professional disappointments and ultimately not only will he retire from the battle-field beaten and chagrined, but he will also fail most hopelessly. What is more, the patient instead of being better will be worse, for throughout the years they have builded on this physical thing a certain structure of hope and the attitude of the physician may have made them believe that when it was removed they would be well; when all of this fails to come to pass they are plunged deeper into the intricacies of their mental tangle. And here again we see the importance of the mental element. And so I might go on interminably with illustration after illustration.

I have said nothing about hysteria, which, I may mention in passing, is a pure psychosis. I have only intimated the existence of the tremendous field of the psychoneuroses, and I have not mentioned that very large group of the so-called symptomatic psychoses, the mental conditions that accompany bodily disease and infections. Not only are all these various groups of mental cases important from the standpoint of medicine in the large, but it is extremely important that attention be addressed to them, because they, as it were, fall midway between the fields of operation of the internist and the psychiatrist. They do not come within the purview of the psychiatrist, at least in their earlier manifestations, while the internist pays little heed to them because he is not interested, and so a field of medicine, a study of which could not fail to be enlightening, is neglected purely because of this practical situation.

In reviewing the various groups of mental cases to which I have but casually directed attention, I think one cannot fail to see that it comprises no small number. While I am not prepared to subscribe to the statement of one of my friends at a recent medical meeting that one of these neuroses alone is the most common disease n all medicine, still I think that if the matter be given careful thought it will be conceded that it is at least debatable as to whether or not this group of diseases does not produce as much, or perhaps more, real suffering in he community than the physical diseases and injuries. So, without entering into more detail I make bold to elieve that my point is clear.

With all these truths before us I return to the original tatement that during the period of medical education o attention, or at least no systematic attention, is ddressed to the mind in anything like the same degree f thoroughness that is devoted to the consideration of ny one of the bodily organs, even the brain itself, and ask, if these things that I have been mentioning represent an important group of cases, and I believe they o, why is not the time now ripe for such consideration n the medical curriculum?

Let us go a step further, and just glance at some of he problems that are usually considered to be social and e what bearing mental medicine has on them. To the reat group of the insane I need not call attention. is quite evident that they belong within the domain mental medicine. I wonder, however, if we ever stop think of the immense economic importance of their roblem. There are over 180,000 insane being taken re of in the public institutions of this country at resent. Think what that means in dollars and cents, remembering that the actual cost of the maintenance of the single individual is probably the smallest portion of his real cost to the community, especially if he be a wage-earner and the head of a family.

The next great class that has to be considered in this connection consists of the idiots and imbeciles — individuals again whose inefficiency is plainly the result of mental disease and defect. Then comes a considerable class of deaf-mutes, many of whom are mentally deficient; while the epileptics we know are generally so. Aside from these classes that are generally conceded to belong to the field of mental medicine there are the paupers, who are not generally supposed to belong in this class; but what, after all, is pauperism but an inability to get along in the world, and what, after all, is an inability to get along in the world but a mental inability, with the exception, of course, of the relatively few cases of physical disablement?

Then, again, any one who has had any considerable experience with the criminal classes knows that practically the entire problem of the criminal is a mental problem, while such social questions as prostitution again group themselves under the same general category. I could give example on example of all of these statements, but in the limited space of such a paper as this it is quite impossible. The recent work with the juvenile delinquent, however, has emphasized all of these points over and over again.

Fortunately this work has also shown that many apparently mentally defective children are so only because of removable physical defects. Here is a boy, for example, who is apparently mentally defective; all he needs is an adenoid operation. Here is another who is tremendously irritable, and really it would seem as if he might be a murderer when he grows up. The whole difficulty is a myopia which is readily correctible.

On the other hand, here is a defective girl, four or five years behind psychologically. There is a girl who will become a prostitute or a criminal, or both. Now is the time to tackle the problem of whether she will or not.

The problems of criminality and of prostitution have been social problems as far back as the history of man goes, and the attempt has always been made to solve them by dealing with the finished product, but one can no more make an impression on these problems by waiting until that time than one can change the center of gravity of the earth. Man has been trying to do it for thousands of years, and he is just where he started. What is the use of waiting until this girl, for example, shall have become a prostitute, and shall have infected innumerable young men, perhaps brilliant and promising, with syphilis, to their everlasting ruin. It is too late when that has occurred. The time is now, when she is a child, and so I might go on indefinitely, for after all, the ramifications and the tremendous importance for the well-being of the state of such problems as these make a lot of the sanitary activities of general medicine look a good deal like a joke beside them in seriousness.

One may be wondering now, perhaps, what I advocate in the way of the study of mental conditions in the medical college — whether I advocate a course of systematic and laboratory psychology and the like. I shall not discuss what ought and what ought not to be taught in the way of psychology — whether we shall investigate the problems of perception and make the student go through a series of laboratory experiences with the tachistoscope, or whether we shall give him a lot of association experiments to puzzle his brains. These are matters of detail. The main thing is to acknowledge the necessity of at least as much knowledge of the structure and workings of the mind as is insisted on with reference to any one organ of the body, and I think the same kind of knowledge is of the most fundamental importance. I would have the student who leaves his medical college to enter on the practice of medicine realize that his patients are all of them thinking, feeling beings, and that the human mind comports itself much like any of the organs of the body, much like a living organism. I would have him know how it is built up, somewhat of its structure and its mechanisms, sufficiently so that he may appreciate its phenomena as he will see them manifested in the sick-room, and I would have him understand the operation of the more important mechanisms and processes that are the result of disease.

I think I have said enough to demonstrate the necessity of some form of psychologic teaching in connection with medical education; I might add some systematic form. Just what the details should be I am not going to suggest. I merely want to draw attention to certain broad general principles. A great deal that is now taught as psychology is really nothing more nor less than physiology and could be taught in connection with the course in physiology. Such things, for example, as the physiology of the sense organs, color perception, fields of vision, hearing and smell, differentiation of taste and haptic sensations, etc. — all these might be added to the course in physiology.

The main thing that I want to combat is the old-fashioned, time-honored and widely accepted delusion that it is necessary to have a full understanding of the so-called normal human mind before the study of the diseased human mind is entered on. This delusion is based on two gross fallacies. The first is the fallacy that there is any such thing as a normal human mind, or at least that any such thing has been differentiated so that we may know what it is. The psychologists certainly have never told us what the normal mind consisted of, and what possible advantage it can be to select out of the kaleidoscopic combinations of mental elements one certain particular arrangement and label it normal and maintain that none of the other arrangements may be investigated until that one is thoroughly understood is beyond my comprehension. Secondly, why should the thesis be maintained that in order to understand certain mechanisms we should select for study the most complex machine in which these mechanisms are represented, at a time when that machine is working at its highest degree of efficiency and perfection, for purposes of study? As a matter of fact, is it not a more reasonable attitude of mind to take either a simpler machine or a machine that has been made simpler by being put out of order? Is not disease the great laboratory experiment of Nature that tears apart complex structures for us and brings certain things into prominence that otherwise would have been hidden in the mass of undifferentiated mediocrity? We would not have known anything about physiology comparable to what we do know if it was not for disease. Are not all our laboratory experiments the production of artificial pathologic conditions? What would we have known about the problem of language had it not been for the aphasias? Could we ever have presumed that there was a cortical localization of function without disease naturally or artificially produced? The psychology of the medical school should give a comprehensive idea of the human mind in the large and it is not necessary to confine itself to so-called normal psychology in order to do that, nor, on the other hand, to confine itself to abnormal psychology in order to do it. It may take its illustrations from any field of mental activity. It should, however, be prominently humanistic in its trends and be primarily a psychology of motives rather than of reaction times. I do not say that a psychology of reaction times has no place. It has, but it is a refinement of the psychology which is of advantage to the medical student and not a precondition for such a psychology.

The last few years of psychiatry, which I like to call the Renaissance period, have brought about the necessity for the kind of psychology I advocate — a psychology of human beings and human motives, and very much of it might readily be called a common-sense psychology which does not require the learning or erudition of the laboratory investigator to understand its general principles. If the human mind is looked on as a reacting organism developing reactions of defense and compensation precisely as the body develops compensations and defenses to disease, many of the otherwise obscure manifestations of the disordered mind can be explained. The patient with hip disease develops a compensatory curve of the spine so that his center of gravity is not disturbed. The patient with diphtheria develops antibodies to antagonize the invading toxins, and so the patient with mental disease presents to us a series of reactions that are defensive and compensatory in character. There are two patients to-day in the Government Hospital for the Insane who have committed murder. Both of them have developed the delusion that the person they killed is not in fact dead. It does not require any recondite psychology to understand how the development of such a delusion enables them to live in comparative peace of mind. The delusion defends them from the reality; their psychosis offers them a compensation for the "slings and arrows of outrageous fortune."

Psychiatry is beginning to-day to look on the psychosis not as a disease, but as an expression of the type of reaction of the individual to inimical conditions. The delusion is not the disease; the delusion is the outward expression of the repair process — the process that is endeavoring to bring about harmony and balance in the patient's mental make-up so that he may live at peace with himself. The psychosis, not infrequently, at least, is the resort of the individual from a world of reality in which he cannot live. The patient builds up, by means of his delusional system, an artificial world to which it is possible to adapt himself — in which he can live.

This, which I have briefly illustrated, is the kind of psychology with which the college student should enter on his life-work. He should be able to see the operation of motives in his patients, to understand the mechanisms by which their wishes and desires express themselves, and to place himself, therefore, in a position of understanding with reference to their attitudes. This is vastly more important than even to have worked at great length over the association experiments. If he knows this he is able to have a comprehensive grasp of the human mind and realize how it works as a whole, to take care of the human mechanism in its endeavor to bring about an adjustment to the environment, and to mold that environment to suit its desires. He will then be in a position if he so chooses to go further on the path, to make special investigations of special phenomena and to apply in detail the laboratory methods of refined science.

In the short space at my disposal it is not possible, nor have I tried, to outline the kind of instruction that I think would be best adapted to these ends. I only desire to emphasize the necessity for the study of mind as a preparation for the practice of medicine: I only aim at creating a recognition of this necessity. The details can be approached at any time; they are a secondary consideration to the general principle and are after all only details. And finally, it must not be forgotten that the vogue of a great deal of pseudomedicine, the "patent" remedies, the half-baked pathies, the hosts of charlatans and mountebanks are thriving in a department of medicine that the legitimate practitioner has simply and plainly neglected, and they are thriving to no small extent because of that neglect. The good results that they obtain — and no one can deny that they do obtain good results sometimes — are obtained by the effect of their practices on the minds of their patients, and all this is going on while the general practitioner refuses to busy himself with such matters as psychotherapy and the medical schools neglect to teach the structure and functions of the mind. Here is a field in which medicine has neither availed itself of its opportunities nor measured up to its responsibilities, and until it does both of these it can ill afford to throw stones.

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# THE RELATION OF CHRONIC GONORRHEA AND OTHER INFECTIONS IN THE URINARY TRACT TO JOINT DISEASE *

F. KREISSL, M.D.
CHICAGO

As a rule gonorrhea is a local disease, but in a small percentage of cases the germ or its toxins escape through he circulation and the lymphatics, and a systemic ondition ensues. Metastatic gonorrheal inflammation ttacks, among many other structures, the joints in perhaps 2 or 3 per cent. of all cases of systemic infection. The condition is sometimes due to the invasion of the oints by the gonococcus alone, sometimes to a so-called mixed infection with pyogenic bacteria or their products.

Gonorrheal arthritis is more common in men than in omen, the latter seeming to be almost immune to this omplication, which is supposed to be due to the fact hat the vagina and not the urethra is the usual seat of onorrhea in the female. This, however, is only a supsition. We find the initial infection at least as often n the female urethra as in the vagina.

I believe the cause of this apparent immunity is to be ound in the difference of the structures of the female rogenital tract and, secondly, to the lesser chance of aumatic injury to the urethra and vagina in the course f treatment of a gonorrhea. In the light of our present nowledge of the etiology of gonorrheal metastasis, it quires either local retention with a subsequent trauma some sort or an abrasion of the protecting epithelium order to allow the escape of the bacteria or their xins into the blood-vessels or the lymphatics. Such a auma may be a mechanical one, but a sexual excitement or a congestion from any source may serve the me purpose. Epithelial lesions may be produced by strumentation, but the invasion of the deep urethra the vesical neck and the trigone by the gonorrheal ocess leading to more or less congestion and bleeding sufficient to expose smaller blood-vessels and offer an cape of the bacteria and their toxins. Neither endoethral instrumentation nor the invasion of the posrior urethra and the trigone usually occurs in the earliest stage of the disease and, therefore, metastatic arthritis is rarely observed at this stage.

At first glance it would seem that, in the few cases in which metastasis in the joint has taken place in the first week of the gonorrheal urethritis, a personal idiosyncrasy has existed and in support of this theory cases are quoted in which certain individuals have remained well between gonorrheal attacks, but had new attacks whenever a supposedly new urethral infection was acquired. I have repeatedly observed such cases, but I am not able to accept the theory of idiosyncrasy, since close investigation proved conclusively that the patient in question had the same case of gonorrhea from the first attacks of urethritis to the last one. True, they had it in a more or less latent condition, interrupted by an acute or subacute flaring up, which latter when appearing after a sexual intercourse was considered as evidence of a new infection.

The very few cases recorded in the literature in which gonococcus pyemia appeared within a few days after a first infection could be classified as due to an idiosyncrasy, but is it not possible that lesions like those mentioned above might have opened the gate for the systemic invasion? I have particular reference to lesions caused by irrigation under pressure. Otherwise we could hardly understand why there is such a small percentage of it, considering the large number of gonorrheal infection, and particularly so very few cases occurring in the early stage of the disease.

More recently the idea is gaining ground that the source of infection of the joints in the male adult is chiefly to be found in retention foci of the urogenital tract from the anterior urethra up into the renal pelvis. Such foci are established in the follicular apparatus of the anterior urethra, in the glandular tissue of the prostate, in the Cowper gland and in the seminal vesicles.

While gradually the necessity of an examination of the prostate in an unduly prolonged urethritis and its complications became recognized, very few have yet appreciated the importance of the seminal vesicles as a contributing factor, and only occasionally even the specialist thinks of palpating the Cowper glands in these cases. And just the retention of septic material in the seminal vesicles is responsible for a very large proportion of chronic ever-recurring urethral discharges, relapse of epididymitis and cystitis and metastasis in the joints and other tissues.

In some of these cases there is a persistent but scant urethral discharge which increases on provocation of some kind and decreases rapidly with or without treatment. In others the discharge ceases entirely under local treatment, but reappears within a few days after treatment is discontinued.

Again, in others there is no visible discharge, but the urine at times contains shreds of different size and shape; at other times there are no shreds present; on very close inspection a few minute flocculi are seen floating in the otherwise clear urine. The shreds very shortly drop to the bottom of the glass, which indicates pus and permits the conclusion of the presence of pyogenic germs. The comma-shaped shreds originate in the prostatic follicles and the seminal ducts from which they are expelled by the terminal contractions of the circular muscle-fibers.

In some cases a more or less severe cystitis or epididymitis of short duration, but repeatedly recurring, is observed.

If an articular swelling should occur in the absence of a visible urethral discharge, perhaps months or years after a urethritis was apparently cured and had long

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* Read at the meeting of the North Central Branch of the Amer-n Urological Association, St. Louis, Feb. 6, 1912.

been forgotten, if the examination should be superficial and the urine at that time incidentally be found free from shreds the metastatic character of the lesion may be easily overlooked. The more recent term "cryptogenetic" sepsis owes its origin largely to these retention foci in the seminal vesicles, and the other appendages of the urogenital tract.

Yet in all the previously mentioned types, palpation of the seminal vesicles and of the ampulla will demonstrate tender or infiltrated areas and massage will bring out some pathologic debris into the urethra, whence it may be procured by irrigation with sterile water. Sometimes the first massage might not mobilize the septic material sufficiently to make it macroscopically visible in the washings of the urethra, but these washings when being chemically tested will give a positive albumin test which may be accepted as corroborative evidence of a diseased condition in the suspected parts. On repeating the massage, shreds and eventually pus, the former often being a perfect cast of the seminal tubules, will be eliminated. The absence of the visible pathogenic particles in the first massage is due to the peculiar arrangement of the interior of the seminal vesicles, to the favorite selection of the lowest points by the bacteria, and the tendency of these pockets to be closed up for a longer or shorter period. Picker, who has done very excellent and instructive work along this line, found five different types of seminal vesicles.

1. Those with simple, straight tubules.
2. Those with large and tortuous tubules.
3. Thin and tortuous tubules with or without diverticula.
4. Those with a short main duct and large branch-like side ducts.
5. Those with a straight or tortuous main duct leading into large grape-like diverticula.

The terminal side ducts show an alveolar type. This anatomic consideration readily explains the clinical picture and the pathology of infections in this tract.

There are cases in which Nature succeeds in building a wall around these foci by a perivesiculitis, enclosing the alveolar terminus so affected and the bacteria die off. In others the retention is but temporary, a sexual excess, a physical exertion or simply a flaring up of the virulence of the germs increases the secretion in these "retention cysts," which finally breaks through the sealed ducts appearing either as shreds in the urine or if copious as a discharge in the urethra. Again, in others the septic material becomes absorbed by the lymph-channels, and we have then the various pictures of general malaise, of grip-like attacks, of neuralgia or rheumatism, eventually swelling of the joints, gonococcus pyemia and septicemia.

As a rule the diagnosis is not difficult to make, if a discharge and the history of the case are pointing to the urogenital tract, as the focus of the infection and as the cause of the more or less acute symptoms at the site of the affected joint or joints. But the etiology is likely to remain unrecognized in the absence of a urethral discharge and also during pregnancy and in the puerperium; yet just these latter conditions are favorable for the development of metastatic joint disease. In doubtful cases it is advisable to introduce — under strictest aseptic precautions — an aspirating needle into the cavity of the joint and to withdraw some fluid for examination. The germs in a pure gonococcus metastasis, however, are short-lived and might not be found in this fluid, or the exudate might have been produced by toxins from the beginning. The aspiration is, furthermore, applicable only in serous effusions.

The real nature of the disease is also likely to be overlooked in that type of metastasis which is characterized by persistent pain in the joints without any visible or palpable structural change. The trouble is usually attributed to rheumatism, uric acid diathesis, neuralgia, auto-intoxication, faulty metabolism, defective assimilation. Inefficiency of the remedies generally successfully employed for these ailments, the gradual subsidence of the pain and its return, which often coincides with the reappearance or increase of the urethral discharge, should be helpful in locating the focus of the trouble.

Other features distinguishing the typical cases of metastasis from ordinary articular rheumatism, are: the involvement of but one joint, or if polyarticular, the invasion of one joint after the other in longer intervals, no sweats, rarity of cardiac complications, and lower degree of fever.

A number of years ago I was asked how I was treating gonorrheal rheumatism, to which question I replied: "By treating the gonorrheal focus." And this, to my mind, is the only logical procedure. If the joint disease is found to be due to an infectious urethritis, it will subside as soon as the latter is suitably managed and checked. If the urethritis be due to retention foci, injections, irrigations, dilatations and topical applications will fail until the septic material be mobilized and removed from these retention pockets. And this can be accomplished only by massage.

For years it has been almost a dogma that massage of the prostate and vesicles should not be done oftener than once in four to five days, and that a single treatment should last from three to five minutes. While this mode of massaging might be suitable and indicated for ordinary chronic inflammatory conditions and for the removal of infiltrations, it is absolutely inefficient for the removal of septic material from retention foci. Here the massage has to be repeated daily, but should not take up more than one-half to one minute.

Chills and fever following the earlier treatments and lasting from several hours to one or two days are a positive evidence of the presence of septic material of its successful mobilization and elimination, and, therefore, may be accepted as a favorable sign. The massage, however, should not be resumed in less than twenty-four hours after these reactive symptoms have subsided.

This treatment should be kept up until no more septic material appears in the washings for at least two weeks and even then it should be discontinued by gradually increasing the intervals between massaging.

The Cowper glands, if diseased, are easily located on both sides of the median line about 1 cm. below the apex of the prostate. They are readily massaged by counter-pressure exerted by the fingers of the free hand from the perineum. The follicles and crypts of the anterior urethra should be massaged over a medium-sized, short, straight metal sound introduced in the canal.

Ordinarily the seminal vesicles can be palpated and massaged in the same position as is assumed for the treatment of the prostate. Counter-pressure over the symphysis exerted by the free hand is helpful to steady them. Where the perineum is very deep we let the patient assume a squatting position with the upper part of the body inclined forward, or as I may express it, the patient is sitting down on the finger of the physician.

Other methods which may be of assistance in dealing with metastatic joint disease are immobilization, Bier's artificial hyperemia, hot air, the constriction of the affected joint, and the bacterin treatment. In the acute stage the constriction is very efficient as a symptomatic measure, reducing the swelling and checking the pain very promptly, but in order to do so it has to be applied for at least eighteen hours at a time. Heat is beneficial in the chronic stage. The bacterins are of value if given in conjunction with the local measures at the focus of infection. That a purulent exudate in a joint has to be opened, the cavity drained and such other surgical procedures instituted as the individual case might require, goes without saying.

1510 Kesner Building.

# THE PRESENT NON-MEDICAL TREATMENT OF TUBERCULOSIS NOT NEW

RICHARD COLE NEWTON, M.D.
Consulting Physician to the Mountainside Hospital
MONTCLAIR, N. J.

It grates on our vanity somewhat to have to acknowledge that the modern conception of the non-medical treatment of tuberculosis contains little that is really new. So far as concerns the management and prevention of this disease, a short study, mainly of English medical literature of the seventeenth and eighteenth enturies, will convince the most skeptical that these writers knew as much of the proper regimen for con-umptives as is known to-day. Why it is that so much and such valuable teaching was for a generation or two, t least, lost sight of, we cannot now stop to inquire. cannot forbear to begin our study by quoting from 'elsus, who wrote in the first century of the Christian ra:

> Soon as a man finds himself spitting and hacking on rising n the morning, he should immediately take possession of a ow and go high up into the mountains and live on the fruit f that cow. . . . Neither can it be doubted that scarcely nyone falls ill, who has not disregarded these means[1] [abstinence from food, wine, etc., and a proper care of the body]. If rength permit, there is a necessity of long voyages (for the nsumptive) with change of climate, so that he may search r a more dense atmosphere than the one he departs from . . at that time, all business and mental solicitude must ve place to tranquillity of mind, he must indulge in sleep . . milk also . . . may be given beneficially in thisis as well as in all chronic and obstinate fevers.[2]

After enumerating various medicines for the amelioraon of the consumptive's condition, including that ble remedy of our own and our grandmother's day, rehound, he says:

> But the principal of all these are diet, carriage exercise, iling and gruel. When a patient begins to grow a little *tter* [italics mine.—R. C. N.] he ought to increase his exeres, friction, and food, afterward to rub himself, *meantime aining his breath* [italics mine; this is, by the way, a most luable means of practicing deep breathing.—R. C. N.], and t abstain a long time from wine, the bath and venery.

We now take a long jump to Thomas Sydenham 624-1629), who says:[3]

> But of all the remedies for phthisis, long-continued journeys horseback bear the bell, in respect to which it must be ed that if the patient be past the prime of life, more exere of the sort in question must be taken, than if he were a ith or boy . . . By the above method, I have cured many . . . I have not known that long and persistent riding in good air . . . hath ever failed, and though riding hath done well in hypochondriacal and other distempers, yet it does better in phthisis . . . In his journeys, he (the patient) need observe no diet, but may eat and drink what best agrees with his appetite; only let him take care that the linen in which he lies be dry, for the dampness of it will quickly bring back all the mischief. . . . I am sure that if any physician had a remedy for the curing of phthisis of equal force with this of riding, he might easily get what wealth he pleased. . . . I can truly say that I have missed the cure of very few.

After insisting again that the patient must be unremitting in his horseback exercise, Sydenham commands him also "to go into new places: for the change of air and diet do as considerably add to the cure as the exercise itself. . . . Women, or very weak men, that cannot ride on horseback, may ride in a coach, and yet obtain the same end, as I have seen by often experience."[4]

> Riding . . . has cured patients when many medicines would have benefited as much as so many words, and no more. This not only in many cases of cough and weakness, but after wasting night-sweats and colliquative diarrhea having signified the approach of death, *ultima linea rerum*. Indeed, deadly as phthisis is (killing two-thirds of those who die of chronical diseases) it has a specific in riding, as truly as ague has in bark, or the venereal diseases in mercury, provided only that the journeys are long enough, and the beds at night are well aired.[5]

An interesting account is given[6] of a patient who had "fallen into hypochondriasis (not improbably some form of tuberculosis) which had lasted for seven years; finally, the colliquative diarrhea supervened. He consulted Sydenham, who, seeing that there was "no room for medicines", which "had been tried too long and too much in vain", recommended horseback riding, "first in short rides, such as his health would allow". Sydenham interpolates sententiously: "Had he been a man of less acute judgment, he never would have been induced to try it." He did try it, however, and persisted in it until he had ridden over 1,000 miles, taking "no care of regular meals, nor yet of the weather" and was finally restored to "perfect health and vigor."

Mr. Lawrence, Dr. Sydenham's nephew, "after a fever, fell into a cough and other signs of an incipient phthisis (the morbific matter having violently translated in on his lungs)"[7] and at length the diarrhea colliquativa came on; then the doctor sent him into the country on horseback (though he was so weak he could hardly walk) and ordered him to ride 6 or 7 miles the first day and to "daily increase his journey as he should be able, until he had ridden 150 miles. When he had traveled half that way, his diarrhea stopped." The young man, contrary to the doctor's orders, intermitted his journey too soon; "for if they stay before they are recovered, this spoils all again." He resumed his riding, however, and in four or five days "came up to London, perfectly cured."

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[1] Celsus: Alexander Lee's Edition, London, 1831, Cap. iii, . iii, 150.

[2] Celsus: Cap. xxii, p. 222.

[3] The works of Thomas Sydenham, transl. by R. G. Latham, don, 1850, ii, 206, 331.

[4] The instance of Dr. Bowditch's forebears, who were cured of consumption by a wagon journey through New England, is too well known to need comment. Also the history of Dio Lewis's wife, who spent much of her life out of doors, walking, sawing wood, etc., from 1853-1858, and is alleged to have been thereby cured of consumption. Dr. Thomas L. Stedman informs me that it was the custom in Denmark, long before Koch's time, for men in the early stages of consumption to seek employment as rural letter carriers, and that by this means their health was restored. Fifteenth Ann. Rep. Loomis Sanatorium, Liberty, N. Y., p. 33, says: "Carefully supervised graduated exercise remains one of the chief factors of treatment of all divisions of the Loomis Sanatorium."

[5] Sydenham's Works, p. 107, Par. 118.

[6] Sydenham's Works, p. 107, Par. 117.

[7] Sydenham's Works, ii, 334.

Dr. Brady,[8] a correspondent of Dr. Sydenham's, animadverting on the hygienic treatment of disease, says in a letter to Sydenham:

> No physician hitherto has attentively considered the force and influence of the atmosphere on human bodies; nor yet has he sufficiently ascertained the part it plays in prolonging human life.

William Buchan[9] said, about 150 years ago:

> Consumption prevails more in England than in any other part of the world, owing, perhaps, to the great use of animal food and malt liquors,[10] the general application to sedentary employments, and the great quantity of pit coal which is there burnt, to which we may add the perpetual changes in the atmosphere or variableness of the weather.

He lays down for consumptives the following regimen:[11]

> On the first appearance of consumption, if the patient lives in a large town, or any place where the air is confined, he ought immediately to quit it, and to make choice of a situation in the country where the air is pure and free. Here he must not remain inactive, but take every day as much exercise as he can bear. . . . The best method of taking exercise is to ride on horseback, as this gives the body a great deal of motion, without much fatigue. Such as cannot bear this kind of exercise must make use of a carriage.
>
> It is a pity that those who attend the sick seldom recommend riding in this disease till the patient is either unable to bear it, or the malady has become incurable. Patients are apt to trifle with everything that is in their own power. They cannot see how one of the common actions of life should prove a remedy in an obstinate disease, and therefore they reject it while they greedily hunt after relief from medicine, merely because they do not understand it.[12]
>
> Next to proper air and exercise we would recommend a due attention to diet. The patient should eat nothing that is either heating or hard of digestion . . . for this purpose, he must keep chiefly to the use of vegetables and milk. Milk alone is of more value in this disease than the whole *materia medica*.[13,14]

Buchan continues:[15]

> I have known very extraordinary effects from asses' milk in obstinate coughs, which threatened a consumption of the lungs, and do verily believe, if used in this period, that it would seldom fail. . . . It ought to be drunk, if possible, in its natural warmth and by a grown person in the quantity of half an English pint at a time, to be drunk three or four times a day.
>
> Some extraordinary cures in consumptive cases have been performed by women's milk. Could this be obtained in sufficient quantity, we would recommend it in preference to any other. It is better if the patient can suck it from the breast, than to drink it afterward.[16]
>
> I knew a man who was reduced to such a degree of weakness in consumption as not to be able to turn himself in bed. His wife was at that time giving suck and, the child happening to die, he sucked her breasts; not with a view to reap any advantage from the milk, but to make her easy. Finding himself greatly benefited by it, he continued to suck her until he became perfectly well, and is at present a strong and healthy man. . . . Some prefer buttermilk, and it is indeed a very valuable medicine, if the stomach be able to bear it. Cow's milk is most readily obtained of any, and though not so easily digested, as that of asses or mares, it may be rendered lighter by adding to it an equal quantity of barley water, or allowing it to stand for some hours and afterward taking off the cream.

Buchan recommends:

> Flesh diet and strong liquors, which have been so long used by those who fall into consumption, must not be too suddenly given up, but gradually replaced with a diet consisting chiefly of milk and vegetables,[17] which the sooner that it can be brought to bear, the better. . . . Rice and milk, or barley and milk, boiled with a little sugar, is very proper food. . . . Ripe fruits, roasted, baked or boiled are likewise proper. The jellies, conserves and preserves, etc., of ripe subacid fruits ought to be eaten plentifully. . . . Wholesome air, proper exercise, and a diet consisting chiefly of these and other vegetables, with milk, is the only course that can be depended on in a beginning consumption. . . . If the patient has strength and sufficient resolution to persist in this course, he will seldom be disappointed of a cure. . . .
>
> In a populous town in England where consumptions are very common, I have frequently seen consumptive patients,[18] who had been sent into the country with orders to ride and live on milk and vegetables, return in a few months quite plump and free from any complaint. . . . This indeed was not always the case, especially when the disease was hereditary, or far advanced; but it was the only method in which success was to be expected; where it failed, I never knew medicine to succeed. . . . All the food and drink ought, however, to be taken in small quantities, lest an overcharge of fresh chyle should oppress the lungs and accelerate the circulation of the blood. . . .
>
> The patient's mind ought to be kept as easy and cheerful as possible. Consumptions are often occasioned and always aggravated by a melancholy cast of mind, for which reason music, cheerful company and everything that inspires mirth, are highly beneficial. . . . The patient ought seldom to be left alone, as brooding over his calamities is sure to render them worse. . . .
>
> Though the cure of this disease depends chiefly on regimen, and the patient's own endeavors, yet we shall mention a few things which may be of service in relieving some of the more violent symptoms. . . . It is common in this stage of the disease to load the patient's stomach with oily and balsamic medicines. These, instead of removing the cause of the disease, tend rather to increase it. . . . Whatever is used for removing the cough besides riding and other proper regimen, ought to be medicines of a sharp and cleansing nature. . . . Acids[19] seem to have a peculiarly good effect in this disease. The vegetable acids, apples, oranges, lemons, etc., appear to be the most proper.[20] Before we quit this subject, we would earnestly recommend to all as they wish to avoid consumptions, to take as much exercise without doors as they can, to avoid unwholesome air and to study sobriety. . . .
>
> Consumptions owe their present increase, not a little to the fashion of sitting up late, eating hot suppers and spending every evening over a bowl of hot punch or other strong liquors. These liquors, when too freely used, not only hurt the digestion and spoil the appetite, but heat and influence the blood, and set the whole constitution on fire.

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[8] Sydenham's Works, ii, 3.

[9] Buchan, William: Domestic Medicine, or a Treatise on the Prevention and Cure of Diseases, London, 1784.

[10] Many writers of the present day agree with Buchan in regarding an excessive meat diet as a cause of tuberculosis, and there can be no question that the general use of alcoholic beverages is a principal cause of this disease.

[11] Buchan: p. 196.

[12] Buchan: p. 197.

[13] Buchan: p. 198.

[14] This dictum of Buchan's was strongly endorsed in the writer's experience in 1908, when to a *questionnaire* sent to a number of sanatoria in this country and abroad, regarding the proper treatment and regimen to be observed for the cure of phthisis, answers were received from thirty-four of these institutions, and the opinion was strongly expressed that milk is superior to every other article of diet in the treatment of consumption, and is an invaluable aid to the treatment. A Scotch physician (name unknown) wrote in 1747 to his London colleagues, on the incontestible evidence of the results he had obtained that "hygiene and diet are the most important means of cure (in consumption)" and that "climate and medicine are but more or less precious adjuvants."—Human Consumption and Civilization, p. 46. In the summing up of the information elicited by the *questionnaire* alluded to above, the following statement is laid down as axiomatic. "They (the methods now in vogue to cure tuberculosis) all point to the great truth that the means which are curative in this disease will surely prevent it if employed early enough."

[15] Buchan: p. 198.

[16] Buchan: p. 200.

[17] Buchan: p. 201.

[18] Buchan: p. 202.

[19] Buchan: p. 203.

[20] Buchan: p. 208.

Beddoes said,[21] in 1799:

> The recoveries (from phthisis), however few, that have taken place, whether from sea voyages or rare accidental combinations, show that the cure of consumption is no physical impossibility. And that a remedy should not sooner have been discovered for this than for some other disorders is, perhaps, less owing to its essential nature, than to those events which brought the European world acquainted at a certain era with Peruvian bark, quicksilver, and other powerful articles of the materia medica.

This observation, to my mind, touches on one of the most pregnant facts in medical history. The great discoveries that quinin would cure malarial fever and mercury would cure syphilis have led, apparently, to the adoption of the still prevalent doctrine that a specific remedy for every disease can be found by sufficient search. It seems to have led to the drug worship of the past century and to have caused the average medical man to spend his energies in searching for the specific remedy for each complaint to the exclusion of the study of pathology, not to mention hygiene and physiology.

Now that the wave of drug worship is receding, there is danger that we shall go too far in condemning these useful bridges that unquestionably help us over many otherwise impassable paths from disease to health.

That the treatment of tuberculosis is almost entirely hygienic, and that drugs have done more harm than good in its management, is now well enough understood. The number of human lives which have been sacrificed in the search for a specific cure for it can never be omputed.

To return, however, to Beddoes; after showing in a note that consumption was unknown among the fishermen and women[22] who worked very hard out of doors, e lays down the following general rules as essential exemption from the development of phthisis:[23]

> Much exercise in the open air, especially during the early ears of life, such clothing as preserves temperate warmth, utritious diet, into which animal food largely enters. . . . Thus may constitutions, moderately good, be prevented from teration for the worse. . . . The puny may be rendered ore robust on the same plan, but the execution demands me management. . . . The following rules do not make an entire system, but if their spirit be seized, an analogy ill readily supply the omissions: Let the antiphthisical regimen begin early. Children cannot too soon after birth be moved into the country. . . . Animal food[24] should form considerable part of the diet where no positive indisposition ists.[25]

After speaking of the undesirability of living like a tcher or a fish-wife for the sake of becoming strong d avoiding consumption, Beddoes adds sententiously:[26]

> There seems to be no reason for alarm on this score, a habit f body) little susceptible of pulmonary consumption has no ecessary) connection with grossness or vice. These (habits) d to excesses which induce different, but equally fatal dis-lers.

This is a dictum proved by modern vital statistics, ich show a great increase in the mortality from lney and heart diseases (the diseases of indolence, gluttony and intemperance) while there is a diminution in the mortality from tuberculosis.

Proceeding with his rules for preventing consumption, Beddoes says:[27] "Dress should be such as to keep up a temperate feeling of warmth." He thinks flannels (the supposed sheet anchor of the antiphthisical dress) not always indicated, and often injurious. "Immersion in the atmosphere of heated rooms for many hours together, during the whole winter season, is to be particularly avoided."

Beddoes continues:

> The ingenious improvements in fire-places by Count Rumford are, I fear, likely to be abused in this country, and by rendering our apartments still hotter and closer, to add to the frequency of consumption. In lowering the temperature of our habitations, it is only necessary to guard the extremities, and particularly the feet against the impression of cold.[28] . . . The weakly should never be exposed to *considerable or continued chill*. In the application of this rule, the difference of age will make a great difference. Infants, on whom the impression is less dangerous, should be inured to cold by immersion in water, but as the infant is more weakly, the water should be at a higher temperature (65 to 70 degrees) . . .
>
> *The consequences of a sedentary life are extremely to be apprehended for the puny members of phthisical families.* Education should be regulated accordingly.[29] . . . Imprisonment in grammar- and boarding-schools must be death to multitudes. As the public is evidently coming more toward reason in the subject of education, which our seminaries, where the barbarous monkish discipline which our schools have retained so long after the abolition of monasteric institutions, should be relinquished, and instruction through the senses, exercise and *æration* be the leading objects, now meet with sufficient encouragement. . . . It is also to be wished that parents could be induced to place *health* in the balance against *wealth.*

Speaking of the hesitancy of young people to consult the medical man for slight indisposition, Beddoes adds:[30]

> Much less should we wait until they declare themselves invalids. In this, as in other things, there is a manner known to the French by the term *savoir faire*, by which the head of a family may maintain an acquaintance with the moral and physical situation of its members. This all parents will find their account in cultivating.

Beddoes also plainly saw the possible advantages of changes of climate. It has long been an ackowledged fact in modern climatology that a change from one locality to another is often beneficial to an invalid, even when the patient goes from a healthful climate to one less salubrious. Beddoes says:[31]

> The prevalence of consumption in any climate does not demonstratively prove that it is not better than their own for invalids from colder latitudes. Transportation from Herefordshire to Normandy, or to France, might cure cankered apple trees, although the climate of France should not preserve its indigenous apple trees from the canker. In general,[32] however, the difference between the sexes, the consideration of the exempted classes, and the lowered tone of health, induce me to look to robustness of temperament as the grand preservative. . . .
>
> That so many important questions relating to so universal and *so terrible* a malady should remain unsettled to the present hour, and, that in order to provoke the truth, a writer should be under the necessity of hazarding conjectures, seems to demonstrate how little men attend to what the most concerns them. For it is not from any natural necessity that opinion upon these points continues vague.[33]

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1: Beddoes, Thomas: Essay on the Causes, Early Signs and Pre- tion of Pulmonary Consumption, London, 1799, p. 285.

2. Beddoes: p. 49 and note to p. 311 et seq.

3. Beddoes: p. 313.

4. Beddoes: p. 314.

5 A medical practitioner who has seen 70,000 patients belong- to the navy informs me (Beddoes) that he believes Irish seamen e subject to scrofula than British. Let the reader compare this h what was said above on diet.

6. Beddoes: p. 312.

27. Beddoes: p. 315.

28. Beddoes: p. 317.

29. Beddoes: p. 318.

30. Beddoes: p. 320.

31. Beddoes: p. 328.

32. Beddoes: p. 33

33. Beddoes: p. 33

In speaking of the benefit alleged to accrue to the consumptive from breathing the air of cow stables, this acute observer questions (note to p. 340) whether the benefit might not come from the temperature *alone,* and whether the proximity of the animals themselves is of any value. He gives a great preference to digitalis in treating consumption, but we must excuse some error in a work so sensible and so broad, and, I might add, so ahead of the average medical opinion of his time or our own. He argues also (page 337) strongly for the formation of a society to study, and if possible determine the causes of, tuberculosis as well as the means of prevention.

Barry said, in his treatise on consumption, published in 1726:[34] "Ulcers in the lungs, when narrowly viewed with microscopes, are covered with several insects," and from thence concludes:

> They take their first origin from such animalcules which, being inspired, with the air, fix their situation on the lungs and erode and ulcerate the vessels; and from the same irregular way of reasoning, these animalcules have been, by others, supposed to be the cause of several distempers, and particularly such as are contagious.

This reads like an inspired prophecy of the present science of bacteriology. Barry continues:[35]

> The body in the disease must be kept as much as possible in a state of rest, even speaking is improper while the wound is fresh, as the lungs are particularly agitated by that muscular motion. A milk diet, carefully directed is preferable in this case to any other, as it is of a cooling, soft, nourishing nature, requires scarce any digestion . . . it is not only balsamic and restrains too quick a circulation, but seems specifically to correct that acrimony so peculiar to consumptive fluids.[36] . . . If cow's milk be apt to render them costive, it may conveniently be mixed with a small proportion of honey, or exchanged for asses' milk, which is more light and opening, and less apt to curdle. Breast-milk is more natural, and in every respect preferable to any other, especially if the nurse be of a healthy constitution, and feeds on a proper, cooling diet.[37] . . . If this method be timely and carefully continued, and suited to the strength and constitution of the patient, many may be thereby recovered, that will otherwise unavoidably perish. For if bleeding to a sufficient quantity be deferred for a few days, till the ulcer be formed, it afterward proves of no service, but does rather hasten their death; and nothing more certainly contributes to this, and is more fatal in the consequence, than any error in the medicine or diet in the beginning. . . .[38]
>
> When this regimen has been continued for the space of two months, or till all remains of the cough and other symptoms are carried off, gentle exercise, and particularly riding in a fine, dry air must be used, when the stomach is most empty, in the morning and afternoon, that the vessels of the lungs may thereby be strengthened. A greater latitude in diet is to be admitted by careful degrees.

Barry also speaks of an excessive meat diet as a cause of consumption.[39]

Speaking of the contagiousness of consumption, he says: "Some authors are of the opinion that this *distemper* is *contagious.*"[40] He thinks, however, that it can be communicated from one person to another only when the consumptive is in the last stages of the disease, and the recipient has a peculiar predisposition to the malady. "But," he adds, "when these circumstances concur with sufficient force, it is most certain from undeniable instances that the infection may be easily communicated." Barry also utters the following indisputable dictum, the truth of which we must fain acknowledge, although it is undeniable that our perspective in medicine is, at present, somewhat dimmed by the mass of detail in the shape of microscopes and microtomes, and the thousand and one elaborate theories and learned deductions from them, with which we are surrounded:

> Since it appears that whatever enfeebles the frame or deteriorates the constitution predisposes to the diseases in question, How shall we avert this predisposition? The answer is apparent. We must do everything in our power to invigorate and fortify the tender frame, to bring all its functions into a healthy state and, by all means, to endeavor to keep them so.

Baron,[41] in describing the treatment of a case of phthisis, says (1822) that he "confined him [the patient] to a strictly vegetable diet." He also says:[42] "There probably is a period in the most formidable of all the tuberculous diseases when its course may be stayed and the cause of subsequent evil eradicated from the system." This writer, however, relies more on medicine in the fight against tuberculosis, than diet or regimen, and evidently shows the tendency toward the intense worship of drugs which characterized the nineteenth century. This method of treatment, no doubt, led to the hopelessness with which the outcome of the disease came to be looked on during the first three-quarters of the nineteenth century. As Baron says:

> The treatment of the deplorable malady, when it is fully established, affords nothing on which the mind of the physician can dwell with any satisfaction. The most powerful resources of his art fail and he sees his patients pining in wretchedness, bereft even of the power of affording them temporary relief.

In 1849, Addison said: "No one can meddle with a view to adjust any of the many links of life, without attention to diet, air and climate."

We have, in the quotations just cited, mentioned practically everything that is to-day considered essential in the treatment and prevention of consumption. These vital truths have been gathered from the writings of physicians living more than 100 years ago. Their truth is now proved. Verily we should not disdain the teachings of the wise and good men who have preceded us in medicine; and this leads me to ask: Is it not high time that a chair of medical history were founded in every medical school in America? Are we not often painfully and slowly going over the ground of treatment and regimen in many diseases which we might have learned a great deal about in a few hours by reading attentively the masters of physic, like Sydenham? Truly, "the new things in medicine are the things which have been forgotten." A proper course in medical history would not only be an act of justice to our predecessors, but it would be an enormous saving of our own time, and might prevent many a mistake and incidentally might, as in the matter of the treatment of tuberculosis at least, have saved a few thousand, or rather a few million lives. The awful condition of the rich consumptive of the nineteenth century may well excite our pity with his windows battened down, his bed piled with blankets and quilts, the bed-curtains tightly drawn for fear a draught might strike the patient, cod-liver oil, whisky, creosote and many other nauseous and hurtful substances forced on the poor sufferer; while fresh air, the God-given remedy for the disease, was sedulously excluded, with the result that the patient's death was only a question of time, and the contagion was frequently spread from his bed-side to the innocent members of his family. It is presumable that Sydenham and other authors I have quoted have been occasionally read by the drug-worshiping practitioners of the nineteenth century; yet, their words must have sounded like idle tales, the vagaries of an ancient and forgotten régime. The average medical teaching of the past century reminds one of the absurd systems of modern ventilation, which take no heed of the fact that air may be chemically pure, and yet be "dead." These expensive systems of supplying pure, yet nevertheless more or less worthless air, depend for their efficiency on the windows being kept closed, so that God's air, the outer air, the moving, live air, is carefully excluded.

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[34] Barry, Edward: A Treatise on Consumption of the Lungs, Dublin, 1726, p. 273.

[35] Barry: p. 235.

[36] Barry: p. 236.

[37] Barry: p. 237.

[38] Barry: p. 238.

[39] Barry: p. 257.

[40] Barry: p. 127.

[41] Baron, John: Illustrations of the Enquiry Respecting Tuberculous Diseases, London, 1822, p. 227.

[42] Baron: p. 229

It would seem that the medical world has largely been taught the dry and valueless assumptions of the theory-makers in medicine; while the vital facts of the *experience* of such a man as Sydenham have been as carefully kept from our medical students as vital air has been kept from our school children.

42 Church Street.

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# A NEW AND EFFICIENT METHOD OF CULTIVATING BACILLUS LEPRÆ FROM THE TISSUES

## WITH OBSERVATIONS ON THE DIFFERENT STRAINS OF ACID-FAST BACILLI FOUND IN LEPROUS LESIONS *

CHARLES W. DUVAL, M.D.
AND
CREIGHTON WELLMAN, M.D.
NEW ORLEANS

In a previous communication[1] one of us (Duval) tated that the initial multiplication *in vitro* of the bacillus found in leprosy lesions is attended with coniderable difficulty unless bits of the infected tissue are ransferred to the culture-medium and special methods mployed for the breaking down of the tissue protein. n other words, the removed tissue particles must be ydrolyzed before the contained acid-fast bacilli will multiply.

The difficulty in continuing the multiplication in subultures occurs as soon as the digested tissue material as been exhausted. Therefore it is absolutely essential o substitute at some period in the process a medium hich contains split products of protein digestion, such s the amino-acids, until the culture has accustomed self to more or less saprophytic conditions.

Early in the work on the cultivation of acid-fast acilli from leprous lesions it was noted that, in the emoved tissue bits which had become contaminated with utrefactive bacteria, the contained Hansen bacillus mulpled in great profusion whenever the extraneous germs igested or softened the tissue. Under these conditions ultiplication occurred regardless of the character of the edium employed and within a wide range of temrature.

This observation led to a study of the rôle played by ich extraneous bacteria which established the fact that e multiplication *in vitro* of the acid-fasts was the sult of a hydrolytic action on the protein with the attendant appearance of dissociate products. These products of tryptic digestion supplied the necessary nutrient for the lepra bacillus.

Undoubtedly this digestive action on tissue by extraneous bacteria explains the success attained by Clegg[2] in cultivating an acid-fast organism from leprous material which he seeded with amebas and their symbions, the bacteria and not the amebas playing the important rôle. Consequently the deliberate addition of various amino-acids to culture-media was resorted to.

Many of the necessary amino-acids, however, are often difficult to obtain and to prepare into suitable mediums. In view of this fact various nutrients have been experimented with in the hope of finding an efficient medium which would be practicable for this purpose and readily accessible to all laboratories.

Whereas the "hydrolizing method" is thoroughly efficient in establishing the initial growth and is possibly to be preferred where the specific organism is very scarce in the lesions, yet it entails the subsequent use of a special medium in order to obtain pure the Hansen culture. Therefore a medium which will recover the culture directly is certainly to be preferred under ordinary circumstances. Trypsinized egg-medium which was formerly employed for this purpose is of value, but not as certain in all cases as some of the other methods.

In the summer of 1911 one of us (Wellman) suggested the use of mammalian placental tissue extract as a nutrient that might be suitable for the purpose of cultivating *B. lepræ* and allied species which apparently require the dissociate products of tryptic digestion, since the tissue named has been found to be rich in the amino-acids.[3]

We therefore set about the preparation of a medium containing the untreated juice from human placenta in varying proportions and combinations and tested its value in the isolation and cultivation not only of *B. lepræ*, but of various highly specialized parasitic micro-organisms. So far the fluid extract of placenta alone or combined with glycerin-agar has served, in our hands, as an admirable culture-medium for the isolation of *B. lepræ, B. tuberculosis* and the acid-fast organism of rat leprosy.

The medium is prepared as follows: The fresh human placenta is thoroughly macerated and ground up in a meat-chopper, after the blood is washed out by sterile saline run through the attached vessels. To every pound of placental tissue there is added 0.5 liter of sterile salt solution. This mixture is now allowed to infuse for forty-eight hours at refrigerator temperature, when it is filtered through a previously tested No. N Berkefeld filter for purposes of sterilization. To facilitate the filtration the cylinder of the Berkefeld filter is filled with clean, fine sterile sand until the candle is completely submerged. The clear amber-colored filtrate is then tubed or added to a 2 per cent. sterile agar which has been previously melted and cooled to about 41 C. The placental juice and the agar are then thoroughly mixed and the mixture sloped. The addition of 3 per cent. glycerin possibly enhances its nutritive value.

With placental extract either in the form of a liquid medium or of glycerinated agar the acid-fast bacilli in the removed and macerated tissue bits from human or rat leprosy multiply to such an extent that in from five to seven days the growth is distinctly visible to the naked eye.

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* From the Laboratory of Pathology and from the Laboratory of opical Medicine and Hygiene (Study No. 15), Medical Departnt, Tulane University.

[1] Duval: Jour. Exper. Med., 1911, xiii, 365.

[2] Clegg: Philippine Jour. Sc., 1909, iv, 403.

[3] Wellman: Jour. Biol. Chem., July, 1911, ix, 471; Zentralbl. f. Physiol., xxv, No. 6, p. 267; No. 13, p. 514; No. 20, p. 963.

Not only the initial culture, but subsequent transplants, in the case of *B. lepræ,* flourish on this medium. The growth is profuse and moist and without pigment in some cultures, while others are distinctly chromogenic. The chromogens subsequently will grow on the ordinary laboratory media while the non-pigment-producers refuse to multiply on anything but enriched special media.

It is not the purpose of this paper to discuss or attempt to prove which of these types of cultures are or are not the causal agent in leprosy. Suffice it to say that the acid-fast bacilli seen in the human and rat leprous lesion can in all cases be cultivated where the special method above outlined is employed.

It is, however, of interest in this connection to point out what may be designated as a period of absolute parasitism which seems to persist for some strains of acid-fast cultures recovered from leprous lesions. We have cultures which do not, thus far, exercise saprophytic growth function, although many generations removed from the parent stem. On the other hand, there are among our cultures strains which at first grow slowly and only on special media, but which become more or less saprophytic after repeated subculturing over a period of months.

This decided difference in biologic features inevitably brings up the questions of their relationship to one another and of their etiologic significance. Do we encounter in the leprous lesion two or more distinct species or does the apparent difference merely represent separate stages in the life-cycle of an extremely pleomorphic organism? Again, it may be asked, are not the subsequent rapid growers extraneous saprophytes while the cultures which conform more to our ideas of a pathogenic species (by growing *in vitro* only under special conditions) represent the real etiologic factor in no way related to the first-mentioned form?

On account of the unreliability of serologic tests for the group of bacteria possessing a fatty or lipoid body (which holds for all the known species in this group) and to the difficulty in producing experimental lesions with the particular organisms under discussion, this problem is rendered difficult of solution.

In the hope of throwing further light on this important question we have undertaken a careful biologic study of representatives of the two types of leprosy organisms above mentioned. The results of this study will form the subject of a subsequent communication.

4514 Prytania Street.

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**Duty of Teaching Hygiene in Colleges.**—It is a platitude that the fraudulent, worthless or harmless drugs, "remedies" and "treatments" are introduced to and used by a very wide public because of their very wide advertising in the newspapers, says A. W. C. Menzies in *Science.* There are, indeed, a few newspapers which will not print such advertisements, but these are honorable exceptions to the general rule. The government and medical association laboratories, whose analyses expose the nature of these drugs, do not similarly advertise their exposures in the public press, nor do they by their own publications reach a wide public. Under these circumstances has not the college, as a public institution, a duty to fulfil in spreading the truth? For all our colleges must be regarded as public institutions—state-aided colleges and universities most obviously of all. The colleges, therefore, are in duty bound, in partial return for public moneys expended on them, to contribute, by educating their students in hygiene, toward that most important factor of the public welfare, the public health

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# CONTRIBUTION TO THE SURGERY OF BONES, JOINTS AND TENDONS

JOHN B. MURPHY, A.M., M.D., LL.D.
President of the American Medical Association
CHICAGO

(Continued from page 1265)

*Shoulder.*—The technic which was described in my article in 1902 is still adhered to. The skin and deltoid are split and its fascia is separated along its anterior margin for a distance of 4 inches, and elevated so as to expose the bony union between the glenoid and the head of the humerus. A curved chisel is then used to separate these and an additional excavation on the surface of the glenoid is made. An incision is then made at right angles to the original incision across the chest, over the middle of the pectoralis major muscle; a flap of fat, aponeurosis and pectoralis major muscle is then made, 4½ inches long and 3½ wide, with its pedicle left attached to the humerus. It is swung upward and interposed between the head of the humerus and glenoid, completely covering the bony surfaces. In lieu of this simple procedure, the following may be adopted, as described by Coville: He made a 4-inch incision, starting below the clavicle and passing external to the coracoid process, down along the arm, following the fibers of the deltoid muscle. This muscle is incised just outside of the deltopectoral groove, when the shoulder-joint will be found to be exposed freely. Coville then extracted the head of the humerus and divided it from the remainder of the bone, at the level of the anatomic neck. The long strip of deltoid muscle was cut transversely, the superior portion being left adherent. A piece 4 inches wide was taken from the transverse section and interposed between the head of the bone and the glenoid cavity.

Coville perforated the capsule with a probe so as to prevent wounding the musculospiral nerve, and made a counter-incision at the same level, passing a thread through this opening. This thread surrounded the extremity of the muscular strip in the form of a loop, and by tightening this loop the strip of muscle is applied to the articular cavity.

Besides using a muscle-flap in the manner described above, one may substitute and use as an interposing flap the anterior portion of the deltoid, inserting it anterior to the coracobrachialis and short head of the biceps. The result in Coville's case was an excellent one. Three days after the operation passive motion was instituted and eventually the patient, a woman, was able to sew, although abduction was limited.

*The Elbow-Joint.*—After the usual preparation of the field of operation, an Esmarch constrictor is applied high up on the arm. Formerly I made a vertical incision on the posterior surface of the arm, directly over the olecranon. I have since abandoned that procedure because of the fact that the contraction of the scar often interfered with free motion in the joint. I now prefer to make two lateral incisions, one on either side of the olecranon — although only one such incision may be necessary, depending on whether or not it is possible to work freely through an external incision without injuring the ulnar nerve.

If there is any danger of inflicting injury on this nerve, the second or inner lateral incision should be made. I always insist on finding the nerve, freeing it from adhesions, and retracting it out of the field of operation.

The length of this lateral incision will depend on how much of an area one wishes to expose. As a rule, an incision about 6 inches in length is sufficient, although there is no reason why it should not be made longer if necessary. The incisions are made about one-half inch to either side of the olecranon, and extend through the skin and superficial fascia. The edges of the wound are then retracted widely so as to give easy access to the joint.

The interposing flap in these cases is taken from the aponeurosis of the supinator longus and from the fascia and fat on the inner side of the joint. The bases of these flaps are directed upward. The flaps are made sufficiently wide so as to cover the freshened surfaces of bone, and long enough so as to reach across from one side of the joint to the other.

### ANKYLOSIS OF ELBOW

CASE 28.—*Patient.*—Miss L. H. S., aged 29, was admitted to Mercy Hospital Nov. 27, 1908. Family history was negative. She had had bilious attacks, occasional attacks of indigestion and chills and fever during childhood. In the fall of 1905 she had a nervous break-down and was sent west to recuperate. This attack she says had been coming on gradually, but was precipitated rather suddenly by an intranasal operation consisting, she thinks, of the removal of bone.

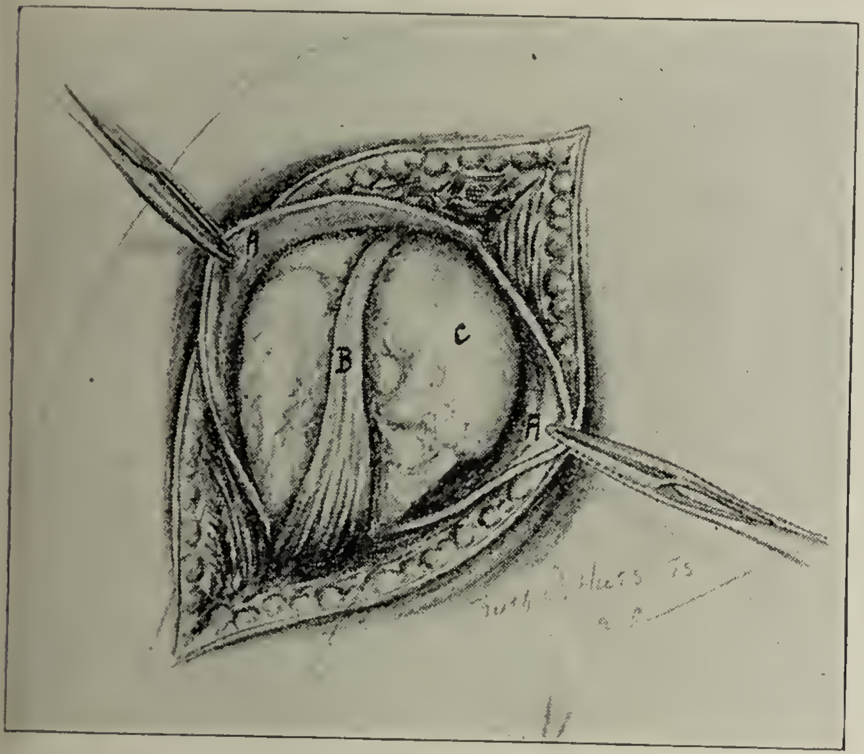

Fig. 123.—Author's operation for recurring luxation of the shoulder-joint. Incision anterior to bicipital groove, through deltoid muscle, exposing the joint. A. Capsule split open. B. biceps tendon in bicipital groove. C. head of humerus.

*Present Trouble.*—In March, 1906, she suddenly developed high temperature and had a sharp pain in left arm which kept her from sleeping. A physician was sent for at once and diagnosed the case as one of articular rheumatism. She was sent to the hospital two days later and an incision was made on the back of the arm just below the elbow on the tenth day. Serum only was evacuated. In about ten days the bone was scraped and the wound was kept open with drainage for six weeks, during which time it continued to discharge serum. That condition continued from March until June, during which time she was in bed, and when she recovered, her arm was absolutely rigid and slightly bent. After about a year, an attempt was made to flex the arm under anesthesia, and after that she could use the fingers and wrist, but the elbow remained stiff.

*Examination.*—There existed a bony ankylosis of the ulna and humerus and of the radius and humerus.

*Treatment.*—First operation was done in November, 1908. A typical arthroplasty of the elbow was done, dividing the olecranon from the shaft. A long fascial flap was taken from both of the triceps muscles and inserted between the ends of the bone. Then the olecranon was wired back in place with phosphor-bronze wire. Passive motion was instituted at the end of two weeks to stretch the wire and permit of separation of the approximated surfaces of the olecranon. This allowed the acute angulation of the olecranon to the ulna, and made a cup-shaped trochlea. The tip of the olecranon and coronoid limited motion. There was no return of the bony ankylosis. At the second operation, May, 1909, the tip of the olecranon was removed and also the tip of the coronoid process, so as to make the normal curve of the trochlea. Primary union occurred. Since that time she has been able to flex and extend her arm fully and painlessly. She does not know, except from a very slight limitation of pronation and supination that she has ever had any trouble in the elbow.

*Result.*—It is a perfect functional result (Figs. 114-117).

The ankylosis in the case of the elbow usually exists between the olecranon process of the ulna and the humerus. This is carefully divided by means of a curved chisel, twisted laterally, until free mobility of the joint is secured. In our earlier work I thought it advisable to separate the olecronon with its muscle attachment and retract it upward so as to expose the interior of the joint. I no longer find this to be necessary, except in unusual cases.

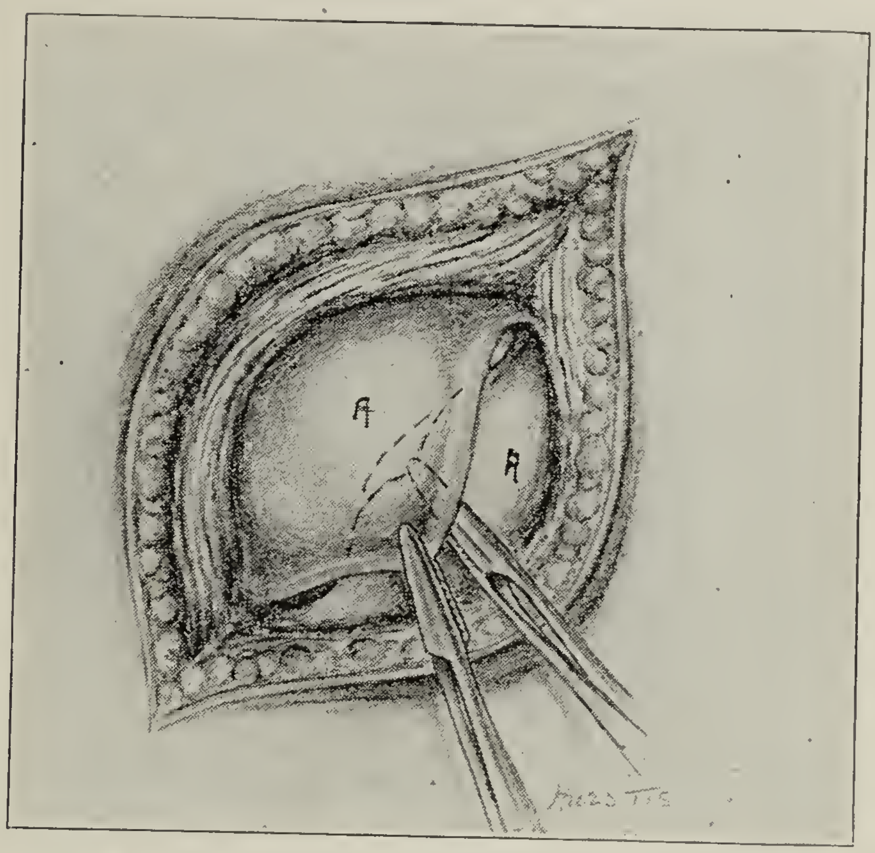

Fig. 124.—Overlapping or imbrication of capsule so as to reduce capsular tissue to desired amount, thus increasing retentive power, so as to prevent luxation of humerus.

Sometimes there is a bony ankylosis between the head of the radius and the lesser sigmoid cavity. When this exists it also is chiseled free, the bony deposit is removed, all exostoses are cut away and absolute freedom of motion is secured. If necessary, the olecranon fossa may be deepened, so that the extension of the arm may be complete. Ample bone should be removed from the humerus and radius to permit of free flexion and extension *without force*, and the anterior capsule of the joint fully and completely divided.

Having secured the desired mobility of the joint and having freshened all bony surfaces, the next step in the operation is to place and secure the interposing flaps. As stated before, these flaps are drawn into the joint and secured on all sides with interrupted phosphor-bronze wire and chromicized catgut sutures. The ulnar nerve which was exposed at the commencement of the operation, so as to protect it from injury, is now replaced in its groove and surrounded by fat. The remainder of the operation consists of the steps already described, such as closing the wound and applying the powder and dressings.

The elbow is immobilized at an angle of about 30 to 40 degrees, and a posterior and lateral three-fifths plaster-of-Paris cast applied. At the end of from five to seven days the cast is taken off twice a day and passive motion is instituted. At the end of ten days the cast can be removed permanently and the arm carried in a sling. The patient is encouraged to make active and passive motion, and, if necessary, is ordered to carry sand-bags or other weights for the purpose of securing as much extension of the arm as is possible. Massage may now be of service in increasing the function of the joint. It should never be severely painful or prolonged.

*Wrist.*—In the case of wrist-joint ankylosis, which exists between the radius and the semilunar and scaphoid bones of the carpus, a straight incision is made over the posterior surface of the head of the radius, extending from an inch to an inch and a half above and below. The length of the incision will depend on the ease with which the seat of the ankylosis may be brought into view. This primary incision extends through the skin and superficial fascia, as is usual in these arthroplasty operations. The flap is taken from the deep fascia and the joint capsule. It is U-shaped, with the base directed upward, and after the ankylosis has been freed by means of the chisel, and the natural conformation of the parts has been restored, this flap is pushed down between the carpal bones and the head of the radius, after one has satisfied himself that the motion in the joint has been restored.

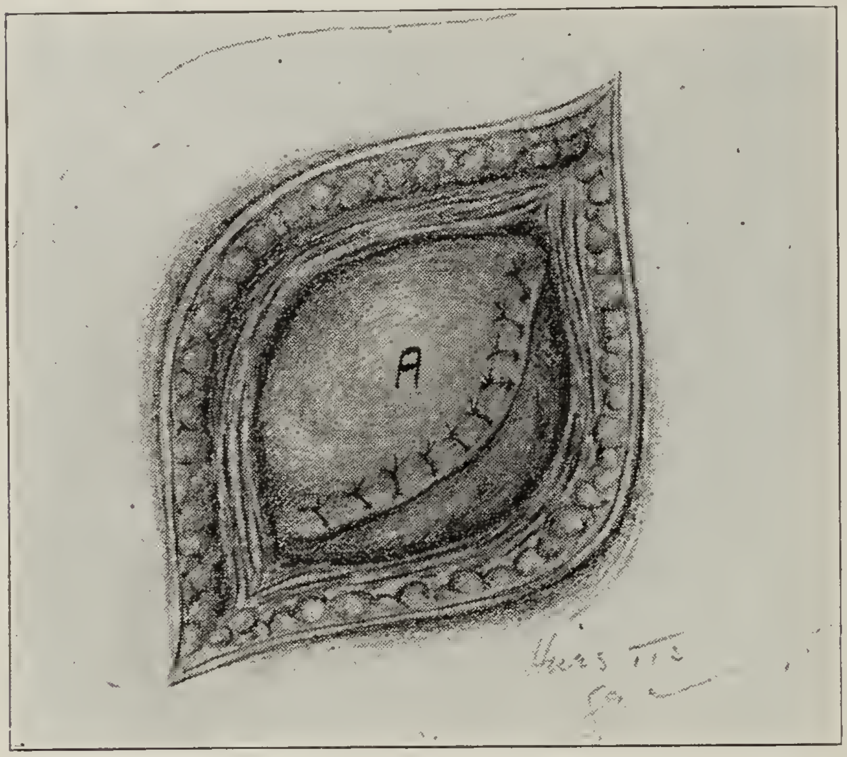

Fig. 125.—Capsule sutured, to be followed by usual closure of wound.

ANKYLOSIS OF WRIST

Case 29.—*Patient.*—Mrs. R. C. B., aged 48, was admitted Sept. 29, 1911. Family history was negative. She had had mumps eight years ago and pneumonia when a child.

*Present Trouble.*—In July, 1910, she felt indisposed during the day, and at night had a slight chill, accompanied by vomiting and fever. The next morning she felt stiff and sore and remained in bed. She had no definite pain. That evening her joints began to swell, the left elbow, wrist and phalanges; then right wrist and phalanges. They were red, tender and painful. The next day the right ankle, then the left, both knees and right shoulder gave trouble. The left shoulder and elbow were not affected. She was in bed for two months with high temperature, and was unable to move. Resolution followed in all the joints except the right shoulder, wrist and fingers of the right hand. The right forearm and shoulder were put in a cast for a month. The fingers and wrist were much swollen and edematous for seven months. The shoulder became stiff. The adhesions were broken up under anesthesia, and there has been no further trouble in that joint. The fingers and wrist became stiff after seven months and have remained so.

*Examination.*—There was ankylosis between the radius and scaphoid bone. Blocking of the latter prevents flexion. The scaphoid appeared to be free.

*Treatment.*—An incision was made over the end of the radius on the back of the arm and a flap of superficial fascia and fat was elevated. The union between the radius and scaphoid was exposed, separated with a chisel and ⅓ of an inch of bone removed. The fascial flap was interposed between the radius and the scaphoid in such a way as to produce a complete separation. It was fixed by suturing the base of the flap across the line to the upper surface of the fibrous capsular attachment of the scaphoid. Primary union resulted. There was considerable pain when motion was attempted. After the stitches were removed motion gradually increased and there was no return of the ankylosis (Figs. 118-120).

As a rule, it is not necessary to expose the anterior surface of the joint for the purpose of suturing the flap in place, but if this cannot be accomplished satisfactorily, the anterior incision should be made. When only the posterior incision is made, the flap is tucked down to the depth of the wound and is sutured with phosphor-bronze wire to the posterior layers of the anterior capsule of the joint, and laterally to the periosteum of the bone. The capsule of the joint is then closed in the usual manner and likewise the external incision.

The bismuth subiodid powder and a collodion dressing are then applied, and over this a moist 5 per cent. phenol gauze dressing is placed, and outside of this the dry dressing. The application of a three-fifths dorsal plaster cast, extending to the tip of the fingers, completes the operation.

The cast is removed temporarily in from five to seven days, and passive motion of the joint is instituted. After the lapse of ten or twelve days the cast may be left off, so that the patient can follow the usual instructions with reference to the use of this joint.

I wish again to emphasize at this juncture the value of the trochanteric fascia as an interposing flap, in the performance of an arthroplasty on any joint. I have shown in my work, and it has also been shown by others, that the transplantation of free flaps of fascia is not only possible, but productive of the very best results. I favor the trochanteric fascia, or what I have referred to several times as the fascia lata, with the trochanteric bursa. It serves a most useful purpose when it is impossible to secure efficient tissue elsewhere in the vicinity of the joint, to supply as an interposing flap, and if this is borne in mind the arthroplasty cannot fail to be entirely satisfactory. Ankylosis will not recur if sufficient tissue is interposed between the ends of the bones; and if this cannot be obtained from the adjoining tissues, it may be taken from elsewhere, and especially from the fascia lata.

These autogenous flaps are applicable not only in the case of very thin patients who possess little subcutaneous fat, but also in that large class of cases where previous disease, infection and drainage have left practically no free tissue in the vicinity of the joint to be operated.

This is especially true of ankylosis following tuberculosis of the hip, knee and ankle, complicated with mixed infections.

*The Jaw.*—This is a particularly advantageous flap for mandibular ankylosis because it may be placed in any position and it is practically impossible to secure a flap in that region.

By making an anteroposterior, bow-shaped incision, with the convexity downward on one side, at the point where the neck begins to spread out into the broad angle, and a transverse bow-shaped division of the other side, with the convexity directed downward, the articulations are prevented from becoming displaced laterally subsequently, and no risk is run in dividing the bone or of injuring (a) the facial nerve or (b) the temporal bone. The incision should be made from the posterior margin of the ascending ramus, displacing the facial nerve and parotid gland. It is quite difficult to make this arthroplasty with the temporomuscular flap, and particularly so in cases of ankylosis existing from infancy or early childhood, with aphasia of the mandible.

In 1898 I operated in a case of this kind in Mercy Hospital, and found the technic exceedingly trying. The patient was a young man about 24 years of age, in whose case the ankylosis had resulted from a fall on the chin when he was three years old. There was considerable aphasia of the bone.

### ANKYLOSIS DUE TO CAPSULAR CONTRACTION OR FIXATION

This will be taken up under heading of tenoplasty, capsulotomy and muscular and cutaneous plasty about joints.

### PROGNOSIS OF ARTHROPLASTY

1. Perfectly movable, normally functionating joints with sliding and rotary motion of the normal type, can be reproduced.
2. A new synovialoid membrane is produced with fluid not synovial, but resembling synovial fluid, and lining cells identical with those lining the hygromata, and closely resembling the endothelial cells of normal synovial membrane.
3. These joints support full weight and traction.
4. They are painless once the process of repair is complete.
5. They are not subject to the hematogenous metastatic arthritides of normal joints.
6. A fibrocartilage-like structure develops from the end of the bone, and the latitude of motion increases with time up to the full anatomic limitations in the uncomplicated cases. The production of new joints is not difficult technically, nor is it associated with great danger to life. The many details in the interposition of the flaps are essential, and must be systematically carried out to achieve the best results. Asepsis is absolutely necessary and essential.

### DISLOCATION OF LEFT INTERNAL SEMILUNAR CARTILAGE

Case 31.—*Patient.*—R. B., aged 24, was admitted to Mercy Hospital March 21, 1911. Family history was negative. The patient had ordinary diseases of childhood, including scarlet fever and diphtheria; malaria six years ago.

*Present Trouble.*—Aug. 1, 1910, during a ball game, while attempting to catch a high ball, he fell, throwing his weight on left leg. The leg and foot turned out; he experienced severe pain in the left knee-joint, which was increased on exercise or motion. On August 31, while attempting to throw a ball, placing his weight on the left knee, he fell and suffered pain in the joint. For ten or fifteen minutes he could not bend his knee or straighten out the leg. He was soon able to walk, but a sidewise movement or exercise gave him a kink or lock in his joint. Oct. 8, 1910, he again had severe pain in the joint and it locked for ten or fifteen minutes and since then he had had pain in the knee off and on. There had been some swelling of the joint. March 11, 1911, the same thing occurred and other attacks followed since this time.

*Treatment.*—The knee-joint was injected with 20 c.c. of a 2 per cent. dilution of liquor formaldehydi in glycerin and a 20-pound Buck's extension applied afterward. This was done for the purpose of producing a chemical synovitis preparatory to opening the joint. This synovitis cofferdammed the lymph-spaces very materially, thus lessening the possibility of infection occurring and, above all, preventing effusion after the arthrotomy. Seven days later the knee-joint was opened and the semilunar cartilage removed through an L-shaped incision. The joint was not touched with sponge or instruments. The cartilage was fractured in an oblique direction from within outward and backward. It was removed. The capsule was sutured accurately. A Buck's extension with 20 pounds weight was applied.

*Results.*—There was no effusion following the operation; no pain; primary union. Examination made toward the end of February, 1912, showed that there was perfect motion in the joint, no pain or inconvenience. The patient has resumed his occupation of baseball player, for which he was totally incapacitated by the original luxation. (Figs. 104-106.)

### FRACTURED SEMILUNAR CARTILAGE

Case 32.—*Patient.*—C. D. W., Danville, Ill., farmer, aged 39, was admitted to Mercy Hospital Nov. 22, 1910. Family and personal history were negative.

*Present Trouble.*—Eight years ago he twisted his right knee while stepping from a street-car. He had no pain at the time. Three hours later the knee was a little sore and four days after the injury the knee began to swell rapidly so that the patient was unable to use the leg. There was much pain. He used crutches for four weeks and then a light plaster cast was applied and left on for eight weeks. The pain and swelling disappeared. When the cast was removed he used the limb but says that fluid soon began to accumulate again. Eight months after the removal of the cast a considerable quantity of clear fluid was removed from the joint by aspiration. In six months it was aspirated again, and again a year later. After the third aspiration the joint was injected with a 3 per cent. phenol solution and six months later another injection was made with 5 per cent. phenol. The fluid in the joint accumulated less rapidly after these injections but always reappeared in time. Seven years afterward the joint was injected by me with formaldehyd and glycerin and since then there has not been any reaccumulation of fluid. He occasionally has severe pain in the joint lasting for a few minutes, the result of sudden shakes or twists.

He has had recurrent attacks of pain of the locking type, even after the effusion had ceased to form. It was decided, therefore, to remove both the external and internal cartilages.

*Treatment.*—The knee-joint was opened as in the previous case and the internal semilunar cartilage was split from within forward and outward and lifted out. A fringe on the cartilage extended well into the joint. The external semilunar cartilage had its periphery thickened. This was probably because of the general thickening, the plastic synovitis, that was present throughout the joint. The cartilages were removed. Primary union.

*Results.*—Examination made on April 4, 1912, showed a perfect joint, full motion, no pain at any time since the operation.

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**No Closed Verdicts in Medicine.**—There is no such thing in medicine as a *chose jugée;* no single verdict ever found but is open to revision if the evidence is satisfactory.—H. G. G. Mackenzie in "Medicine and the Church."

# TENDON TRANSPLANTATION AND SILK INSERTS

JAMES WARREN SEVER, M.D.
Junior Assistant Surgeon to the Children's Hospital
BOSTON

To-day there are two distinct operative procedures in replacing tendons to restore function and prevent or correct deformity following an attack of infantile paralysis. These two procedures are:

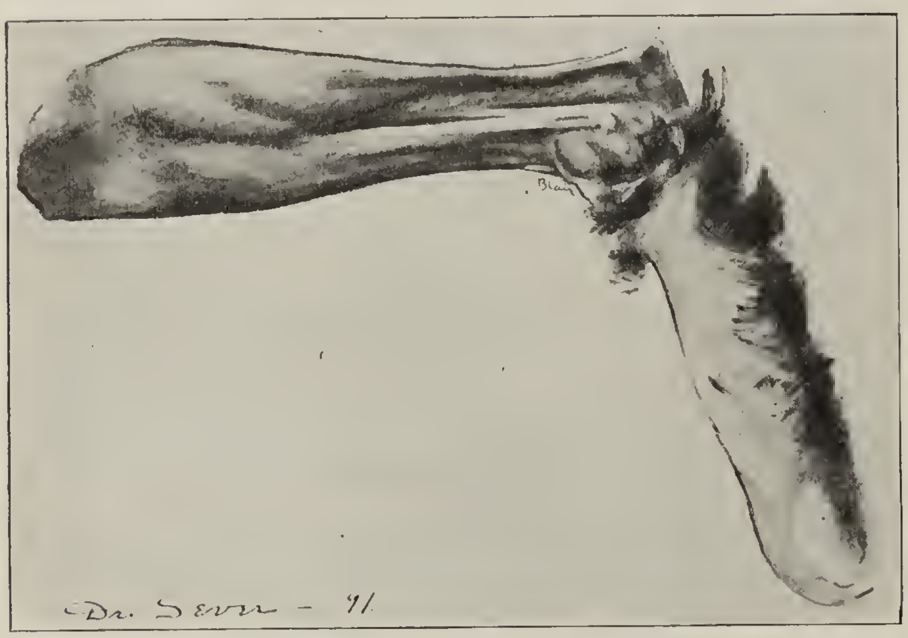

Fig. 1.—Experiment 3. Drawing of gross specimen. Skin not adherent to underlying tissues. Note complete regeneration along line of Pagenstecher of a new "tendon" apparently as large as normal. This "tendon" functionated perfectly. Time, four and one-half months.

1. Tendon transplantation *per se,* that is, the transplantation of a normal tendon from its usual position to the place of the paralyzed one. It is of course understood that this operation is not of use when all the muscles of a part are paralyzed, and any severe coexisting deformity must be corrected first before any tendon transplanting is undertaken. This latter procedure is the so-called preliminary *redressement.*

2. Tendon regeneration—the method in which silk strands are inserted to supply the loss of the paralyzed muscles, to lengthen normal tendons for the purposes of using them in transplanting, and to reinforce joints as artificial ligaments, in place of arthrodesis.

Before taking up the question of silk inserts I will review the history of tendon transplantation, so that the distinction and differences between the two procedures may be clearly seen.

The operation of tendon transplantation originated with Nicoladoni, in 1880, who sutured the distal ends of the peronii to the insertion of the tendo Achillis. Soon afterward the operation was done in this country at the Children's Hospital, Boston.

There are two methods of operation, the Nicoladoni method, in which the healthy or functioning tendon is sutured to the paralyzed or non-functioning tendon, and the Lange method, which was originated by Drobnik and enlarged on by Lange, in which the healthy tendon is sutured to the point of insertion of the paralyzed tendon by stripping off the periosteum at that point or at a point near by. In this way one may not only get a choice of insertion to increase mechanical efficiency, but one also secures a more permanent and a stronger attachment.

Vulpius and Lange agree that the descending type of transplantation is the better one to use, that is, separating the functioning muscle or tendon from its fellows and pulling it down to its point of insertion. Vulpius, however, states that he does not believe in periosteal insertions, and advises sewing directly to the paralyzed tendon, the distal end of which he claims does not stretch and which soon regains its normal strength, giving quite as strong an attachment as periosteal insertions. This, however, has not been found to be the case. He does not believe in lengthening tendons with silk if it is possible in any way to avoid its use, for he states that there is left in the wound a large foreign body which tends to cause sepsis and adhesions.

Experiments on a cadaver of a child have shown that tendons attached to tendons broke under a pull of from 2 to 3 kg., whereas tendons attached subperiosteally required a breaking force of from 14 to 15 kg.

There are several modifications of the periosteal insertion. Müller, for instance, bores a hole in the bone and anchors the end of the tendon there. Wolff makes a groove in the bone under the periosteum, sutures the tendon in it, and then closes the periosteum over it. Sherman, of San Francisco, has tried suturing the tendons with silver wire to the bone, and then passing the wire through the plaster-of-Paris bandage until union has become firm. McCurdy, of Pittsburgh, who has experimented with this method, has found that it is not necessary, as union generally takes place readily without slipping provided the sutures are well placed and carefully tied. This method seems rather clumsy.

In transplanting tendons the whole tendon is generally used, but a tendon may be split longitudinally and the slips thus made used for different purposes.

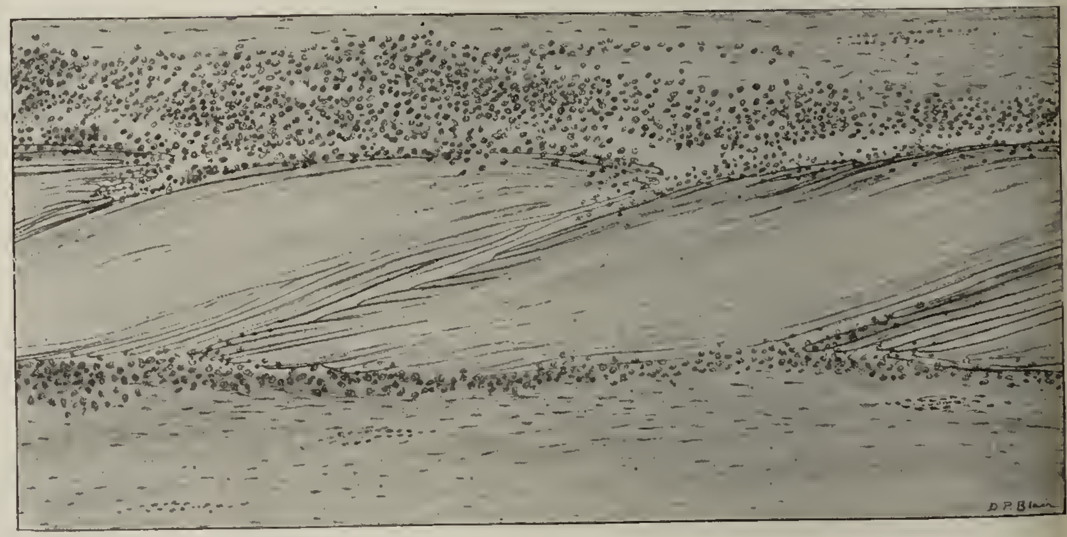

Fig. 2.—Experiment 3. Low power. A longitudinal section of the regenerated tissue, the twisted Pagenstecher strands in the middle, with the proliferation at its outer edges, partially invading the Pagenstecher. The proliferation comes from the tendon sheath and probably from the peritendineum, and is composed of dense fibrous tissue externally and of endothelial leukocytes adjacent to the Pagenstecher.

Lange states that the tibialis anticus tendon is the only one which can be successfully treated in this way, but this has not held true, for, as an example, slips from either side of the tendo Achillis have been brought forward and inserted into the cuboid and the scaphoid with good results, in this way making two flexors. As a general rule, however, it is better in transplanting to use muscles or tendons which have the same function as the paralyzed muscle, but when this is not possible flexors may be attached to extensors and vice versa.

In suturing tendons to tendons a slit is made in the paralyzed tendon, and the other passed through this opening and sutured, or if the tendons are adjacent they may be laid together and stitched, without dividing the paralyzed tendon. The distal end of the non-functioning tendon may be sutured to the functioning tendon also by an end-to-end anastomosis. In this and in the subperiosteal method, however, the limb must be in the corrected or slightly overcorrected position, and the transplanted tendon must be on a stretch, to insure a good functional result. It is well to avoid turning corners, as this decreases the mechanical force, and one should make a new channel for the tendon, using as direct a line as possible.

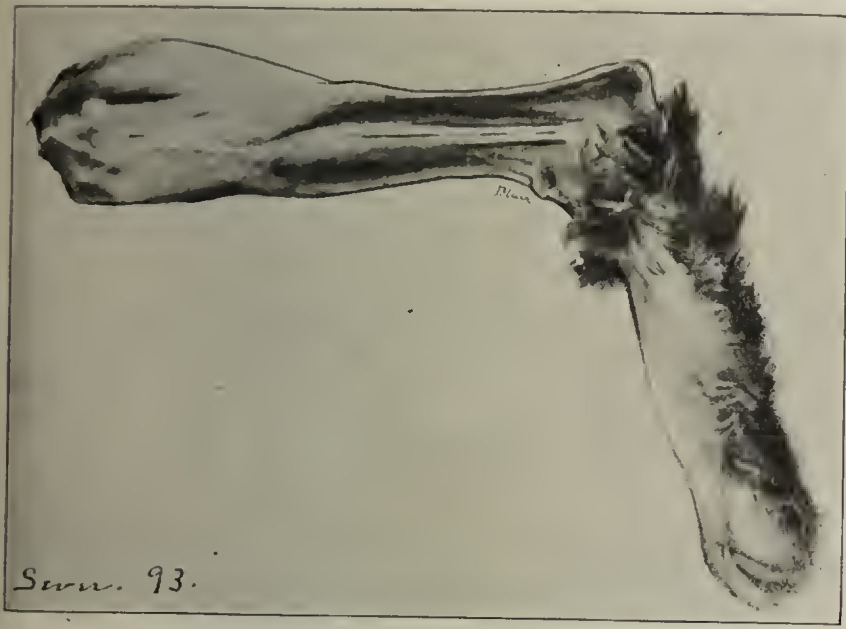

Fig. 3.—Experiment 4. Side view of regenerated process. Time, four and one-half months.

SILK INSERTS

The method of using artificial tendons was first carried out in 1875, by Auger, who used a piece of silk to supply the loss of a tendon. Gluek, in Berlin, was the first to repair deficiencies in tendons with catgut, but found that the material absorbed too soon to insure good results.

Lange, in 1899, introduced a silk tendon in an operation for the transplantation of the quadriceps. Since then it has been used in many cases by many men, not only for lengthening tendons, but for purposes of fixation of a part or joint in place of arthrodesis, and to insure stability.

The tendon sheaths should be sewed up if possible, for their preservation is of the greatest importance. Lange drains his wounds for forty-eight hours with gauze or silk thread which has been soaked in a 1-to-1,000 corrosive sublimate solution. He ties a thread to the end of the wick, which is then carried outside under the plaster, so that by pulling on this thread after the expiration of forty-eight hours he can remove the wick without cutting the plaster. It is important that too great tension is not put on the skin sutures, for in doing this sloughs may result.

Vulpius sews his wounds up tight without a drain, and states that in this way he has obtained better results.

Care must be taken in using silk that too great tension is not used in lengthening tendons, as the silk may cut through the skin and impair the result. In preparation the silk should be boiled in 1-to-1,000 corrosive sublimate solution instead of in water as usual. Lange now dips the silk in boiling paraffin just previous to using, which gives it a smooth coating.

The new tendon forms along this silk, the paraffin becoming absorbed and replaced with connective tissue. The greater the hemorrhage and the more frequent the occurrence of sepsis the more delay is there in the healing process, and the new tendon is more fibrous than would otherwise be the case.

Wadehake, of Bonn, has used for buried sutures a silver-rubber-silk suture, which is very strong, does not absorb watery fluids and is absolutely sterilized in the making. The foundation is silk, which is soaked in a 1 per cent. silver solution and then in a solution of rubber in chloroform, after which it is boiled in a 1-to-1,000 corrosive sublimate solution for one hour. This suture has all the good qualities of silk and silver wire, with none of their drawbacks.

The limb must be put in plaster in an overcorrected position and kept that way for eight to ten weeks, when a retentive apparatus is to be worn for several months, followed by exercise and massage.

CAUSES OF FAILURE

There are several causes of failure:

1. The improper selection of cases in which the greatest possible improvement has not been obtained by other measures, that is, in cases of premature operation.

2. The cases in which the existent deformity has not been overcorrected a sufficient length of time to allow the actual condition of the muscles to appear.

3. In errors in planning and executing the operation, such as inexact determination of the extent of the paralysis, insufficient attachment of the implanted tendon, insufficient tension, and the formation of postoperative adhesions.

TENDON REGENERATION

The pathology of tendon regeneration along silk had never been studied, for few cases came to autopsy, and many asserted that the silk inserted in these cases was eventually absorbed.

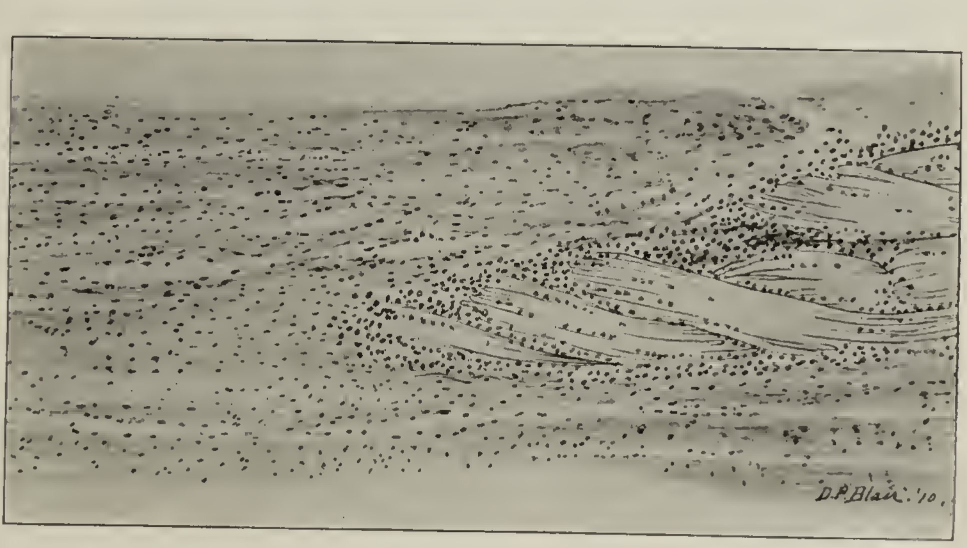

Fig. 4.—Experiment 4. Low-power longitudinal section. Infiltration of silk with fibroblasts from new-formed connective tissue about the silk.

Lange, in 1902, reported the findings in one case of a man, two and a half years after operation, in which the quadriceps tendon had been lengthened by silk strands, which were inserted into the tibia. He stated that he found a "tendon" as thick as a lead-pencil running in the subcutaneous fatty tissue, surrounded by a layer of loose movable connective tissue. There was no true "tendon" sheath present. The newly formed "tendon" was a tough, bluish, round string, about the color of the joint capsule. The silk threads were not destroyed, but had become infiltrated by the new growth.

Lange stated that microscopic examination showed in the central portion of the new "tendon," closely applied to the silk threads, a layer of tissue apparently identical with that of normal tendon, i. e., connective-tissue fibers were arranged parallel to each other, while elastic fibers and blood-vessels were almost wholly absent. In the peripheral portion of the "tendon" there were cells and fibers like those of true tendon, but, in addition, blood-vessels and fat-cells were found here and there. The silk fibers, 12 cm. long, lay in a mass consisting of tendinous tissue, whose wall was from 2 mm. to 3 mm. thick, and whose lower end ran into the periosteum of the tibia. This finding was of great interest, but his histologic description was not sufficiently accurate to settle whether or not the new tissue forming along such silk strands is true tendinous tissue or is merely fibrous connective tissue taking up the function of tendon. It is probable that no true tendon sheath is regenerated around one of these tendons formed where it has been destroyed or where no sheath originally existed.

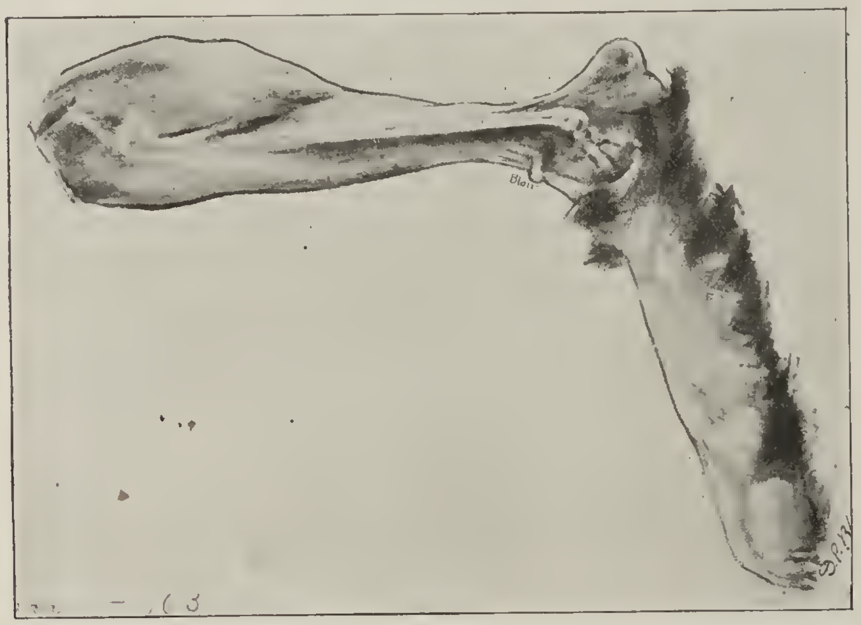

Fig. 5.—Experiment 6. Result at end of two months, following resection of tendo Achillis. Note gap between belly of gastrocnemius and os calcis. There was no regeneration of the tendo Achillis. Sections showed nothing of importance. In this case nothing was used to bridge the gap in the resected tendon. The sheath was left flat and open. This shows the importance of the presence of the sheath and peritendineum in regenerative processes, for in this case there was no regeneration of the tendo Achillis.

Besides Lange, Borst, Seggle, Rydgier and Vulpius have done animal experiments on the use of silk in tendon suture, and Vulpius and Lange, from secondary operations, have been able to see the gross results of their primary efforts.

An attempt was made to create a new tendon sheath by Ritter, who, in 1908, working in Payer's clinic in Greifswald, used veins taken from animals. He enclosed a stump of the tendon in the ends of the vein, and so formed a new artificial sheath, along which the new tendon could grow. In Lange's case, however, a condition was found in which only connective-tissue regeneration took place, which led to the formation of a kind of a tendon mass through and along which the silk slides as a working tendon.

Seggle, who has done some interesting research work on tendon regeneration, states that the new tendon is developed after tenotomies by a process of organization of the blood which is poured out from the cut sheath and divided tendon.

Following tenotomies the healing process is as follows: According to Seggle, on the tenth day the inner layers of the tendon sheath consist of long slender spindle-cells, with marked fibrillations. By the thirty-eighth day the regeneration extends to the whole cross-section, and by the fiftieth day the climax of the regenerative process has been reached.

Mencière, in 1906, working in an experimental research on the creation of artificial tendons and its application to the human being, used silk thread, folded on itself like a skein, and attached by single threads of this skein at each end to the ends of the resected tendon. He obtained a normally functioning muscle attached to the new muscle in about two months after the tendon operation.

Six months after the operation he killed the animal he used for the experiment, and, in examining the new tendon, found that it was much larger than a large lead-pencil and very much larger than the corresponding normal Achilles tendon of the opposite leg. In gross appearance it was normal, i. e., looked like tendinous tissue, "but there was no tendon sheath present."

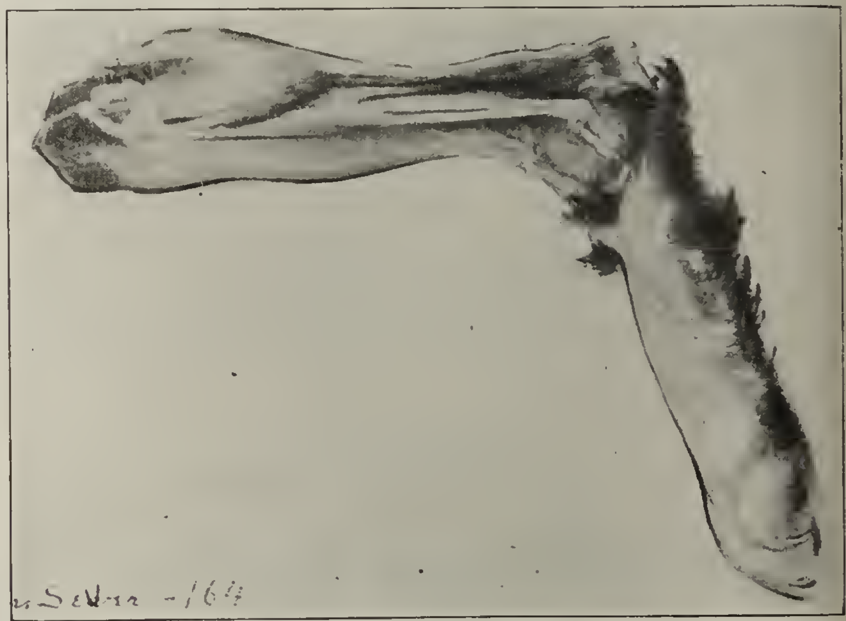

Fig. 6.—Experiment 7. Tendo Achillis excised for 1½ inches. Tendon sheath closed. Skin sewed with continuous Pagenstecher. Cat killed at end of two months. Sections showed normal tendon regeneration. Nothing was inserted in this case to take the place of the resected tendon, but the sheath was closed. For contrast see Figure 5. Note spindle shape of tendon similar to bone callus.

He stated that the silk thread had become "penetrated, absorbed and replaced by a formation of fibrous tissue, and in place of an artificial tendon of silk there was found a living tendon of fibrous tissue." His statement that the silk is absorbed, of course, does not seem possible in view of the findings of all other investigators, for it is well known that silk is not absorbed by any tissue, but may become thoroughly permeated by new fibrous or tendinous tissue to such an extent that it is well hidden. Mencière had made no microscopic sections, and, if he had, would unquestionably have found the silk imbedded in the new growth.

Anzilotti (Pisa) reported at the Italian Surgical Society in September, 1906, the results of some of his experiments. He found that the sheath played an important part in the integrity and regeneration following tenotomies.

Vulpius uses silk at times for lengthening tendons, but does not think that it should be considered a normal proceeding. He does not think that a foreign body such as silk should be introduced except in cases of absolute necessity. In only rare cases is an artificial tendon absolutely indispensable.

Froelich believes that the use of an artificial tendon gives no satisfaction. He believes that they become infected, either immediately or late, and often cut through the skin on account of muscular contractions. It is the exception when they are successful, and that they form an unusual experience without any practical value.

Alexandro Gnaccero, in a communication before the Italian Orthopedic Association at Rome in October, 1908, described a number of experiments which he did on rabbits with a view to showing the normal processes of repair at different stages following tenotomies. In some cases he also inserted silk to take the place of the resected tendon. He stated that in some cases after ninety days the silk was "absorbed"; also that when the sheath was removed the regeneration was fibrous and along the line of the silk. This finding in regard to the absorption of silk is, of course, erroneous. A careful preparation of his microscopic sections, combined with an intelligent study of them, unquestionably would have shown the silk present.

Muller, in Philadelphia (1906), reported the result of some observations on dogs in which he replaced the tendon by a silk cord, and found that the tendon was replaced by a fibrous band, which allowed good function.

These are the opinions of those who have used this procedure early, that is, before the technic was perfected, and before experience had shown the method to be of great value, and of general use in many cases.

The details of normal tendon repair I will cite briefly, so that the reader may be familiar with the process.[1]

> "The process of repair of a tendon that is simply cut without breaking the continuity of the tendon sheath is as follows: Hemorrhage into the interval between the ends of the cut tendon, which is followed in due time by an inflammatory exudate. This exudate infiltrates the surrounding tissue, including the tendon, for a considerable distance about the wound. This exudate, which consists of leukocytes, serum and fibrin, organizes, that is, it is replaced by granulation tissue which arises by proliferation of the cells of the peritendineum, the septa and the inner layer of the tendon sheath, and practically not at all from the inner part of the tendon. The granulation tissue which arises from the peritendineum, the septa and the sheath cannot in the early stages be distinguished from the ordinary granulation tissue which arises from any unspecialized connective tissue, but it has one important difference, namely, it tends to form a dense and but slightly elastic connective tissue, closely resembling normal tendon.
>
> "The blood-vessels which are found in this mass of granulation tissue arise in part from the blood-vessels of the tendon sheath. The mass of granulation tissue thus produced is much larger than the diameter of the original tendon, and forms a fusiform mass surrounding the cut ends. As the process goes on, the cells become spindle-shaped, and a very large amount of intercellular material is formed. The blood-vessels begin to disappear early, and in small tendons they are almost wanting at the end of two weeks. With this disappearance of the blood-vessels, the size of the original mass of granulation tissue diminishes."

In order to establish a definite pathology of tendon regeneration about silk certain experiments[2] were undertaken on cats for the purpose of studying the gross and microscopic appearances at various intervals after operation.

### EXPERIMENTS

In all there were performed thirteen operations on as many cats, eleven of which turned out satisfactorily, but two could not be used for this purpose, on account of the animals dying too soon after the operation for purposes of useful study.

The first cat was killed at the end of a week, the second at the end of two weeks and the third was kept in a plaster cast for four months. Then he was allowed to run about without the cast for four weeks more before being killed, so as to permit active use of the muscles and tendons. The fourth cat was kept in a plaster cast, applied only to the leg operated on, for four months, and then killed. The fifth was killed at the end of fourteen weeks, after having had the leg in a plaster cast, but being allowed to run about, as, in fact, all the cats were while in and out of the casts. The sixth was killed at the end of eight weeks and the seventh at the end of a similar period. The last four were all killed at about three weeks after operation for purposes of control study to the work which we had previously carried out.

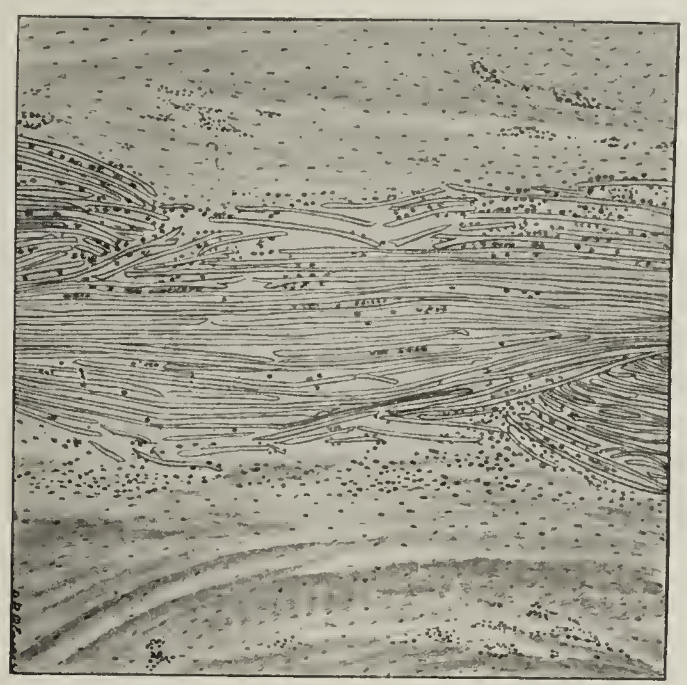

Fig. 7.—Section (low power) 14. Shows a low-power drawing of a piece of silk thread surrounded by apparently normal tendon. The silk, it should be noted, is not greatly infiltrated by the tissue, although there are a few cells among the fibers, presumably old ones, left from the original inflammatory reaction at the time of insertion. The tissue about the silk is the fascia lata and the condition is very similar to the one shown by Lange's sections, where the site of the operation was practically the same. The silk was slightly adherent to the surrounding tissue. This silk had been *in situ* about two and a half years, showing that there is very little probability of its becoming absorbed.

A study of the gross and microscopic specimens from these experiments shows a number of very interesting facts, some of which have already been mentioned. It is perfectly evident that although the inserted silk serves as a matrix, around which dense fibrous tissue forms, it also acts as a more or less inert foreign body. Contrary to the usual belief, the silk does not become infiltrated to any great extent with the new growth surrounding it, but acts as a guide to the regenerative process, whether that process is tendinous or fibrous. Some of these sections (Fig. 7) show silk which has been in the tissues for two and a half years without any marked signs of infiltration or absorption. The gross specimen from which these sections were made showed the silk apparently as large and strong as at the time of insertion, and quite distinct from the new tissue about it. If silk were ever absorbed, one would suppose that it would be so at the end of two and a half years. The silk in the gross specimen was adherent to the dense fibrous tissue about it and moved with it.

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[1] Richardson, F. L.: Tendon Suture, Boston Med. and Surg. Jour., May 25, 1911.

[2] Laboratory of Surgical Pathology, Harvard Medical School. Dr. E. H. Nichols, Director.

It should be noted that the proliferation of new "tendon," i. e., true tendon tissue, comes wholly from the peritendineum, which is the all-important structure. The importance of the presence of this structure can be observed by noting the contrast between Figures 5 and 6.

### CONCLUSIONS

1. Tendon transplantation *per se* is at times useful.
2. Tendons lengthened or reinforced with silk are better in that they are not only stronger, but also can be used to greater mechanical advantage.
3. Silk or linen thread is an excellent material to use to lengthen tendons in suitable cases.
4. The growth of new tissue will penetrate and permeate the silk only slightly (in some cases not at all), and does not absorb it.
5. When the peritendineum and tendon sheath have been removed, some foreign body is essential for regeneration, to serve as a director for the new growth.
6. With the sheath and the peritendineum present and sutured, no foreign body need be inserted. In this case the new growth is true tendon tissue.
7. Without the presence of the sheath and the peritendineum, no true tendon tissue can be regenerated. Such tissue is merely fibrous tissue, lacking elasticity and subject to stretching.
8. The new "tendons" are apt to be larger and stronger than the resected ones, especially when silk has been used to replace the resected portion.
9. Provided the sheath and peritendineum are preserved and function allowed early, adhesions may not occur. Without the sheath, adhesions may and do occur much more frequently.

234 Marlborough Street.

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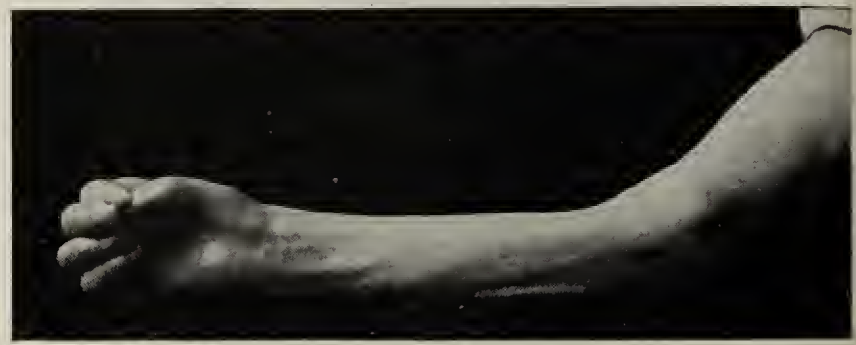
# FURTHER ACCOUNT OF A PREVIOUSLY REPORTED CASE OF THE ISCHEMIC PARALYSIS AND CONTRACTURE OF VOLKMANN

CHARLES A. POWERS, M.D.
Professor of Clinical Surgery in the University of Colorado
DENVER

At the 1906 meeting of the American Medical Association, held in Boston, it was my privilege to present a communication on the ischemic paralysis and contracture of Volkmann, reporting at length a typical case which had come under my observation some twenty-two months previously. The history of this case[1] will not be repeated here. The patient remained in the Denver City and County Hospital for some six months, being under the neurologic care of Drs. Edward Delehanty and S. D. Hopkins. I saw him frequently. In December, 1906, sixteen months after he was first seen by me, he reentered the hospital in the service of one of my colleagues. At this time the median and ulnar nerves were freed[2] at the upper part of the forearm. At a later day the flexor tendons were lengthened at the front of the wrist. According to recent, carefully obtained statements from the patient, these operations did not improve his condition. The forearm and hand became hard, fibrous, atrophied; the fingers and hand came down into a useless claw.

This patient consulted me again in my office Jan. 2, 1912. He said that during the last three or four years the limb had become more and more painful, the fingers and thumb more and more fixed. He desired advice regarding the removal of the hand, saying that it seemed to him to be a painful, useless, hopeless member.

*Examination.*—The right forearm and hand were markedly atrophied. The circumference of the affected forearm at its middle was 5⅝ inches; at the same point at the opposite side the circumference was 9 inches. The interosseous tissues of the hand and forearm seemed to form a hard, fibrous mass. The skin of the forearm and hand was of a bluish-red color; that of the opposite side was normal. The forearm and hand were cold to the touch: the opposite side was warm. Flexion and extension at the elbow were complete. The forearm bones were fixed in nearly extreme pronation; they could not be rotated. There was a trace of motion at the wrist, but there was no motion whatever of the fingers or thumb; these were fixed in extreme flexion, the thumb being doubled under the fingers (see illustration). The end of the thumb touched the skin of the hand and the thumb-nail was turned in and under. There was a chronic, trophic ulcer of the little finger. The middle finger was dark, bluish-black, this condition having appeared within a day or two previously.



Condition of limb Jan. 2, 1912. This picture may be contrasted with that in the author's original paper (see Note 1).

*Amputation.*—Dr. George B. Packard, professor of orthopedic surgery in the University of Colorado, and Dr. Howell T. Pershing, professor of neurology in the same institution, were asked to see the patient in consultation. Both agreed that amputation of the limb was necessary and salutary. The limb was therefore amputated at a point a little above the middle of the forearm (St. Luke's Hospital), Jan. 3, 1912. No tourniquet was used. The skin on division retracted but little. All tissues between the skin and the bones were fused into a hard, shrunken, fibrous mass; these tissues failed to contract in the slightest on division. The radial and ulnar arteries squirted moderately and were easily picked up and ligated. The interosseous artery bled slightly. With no inconsiderable difficulty these fibrous tissues were pushed up from the bones and the bones divided, leaving ample covering. It was impossible to recognize any nerve-tissue in the face of the stump. Ordinary suture without drainage. Smooth healing. There was moderate pain in the stump after operation; this disappeared at the end of a week. At this date (March 24, 1912) the stump is sound and in all ways excellent.

I was in doubt as to whether a good stump could be obtained where the division was made, but it was obtained and I am gratified that it was possible to preserve the upper part of the forearm.

The amputated portion was handed to Dr. Ross C. Whitman, professor of pathology in the University of Colorado, whose report is as follows:

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[1] The Journal A. M. A., March 2, 1907, p. 759.

[2] See later report made on this same case by L. Freeman, Tr. Am. Surg. Assn., 1907, p. 288. Case report No. 11. Notation made to avoid duplication. A procedure apparently first advised by Hildebrand (Deutsch. med. Wchnschr., 1905. Lexer-Bevan, General Surgery, p. 565). In my original paper I believe that I was myself in error in giving the impression that improvement had followed operation.

### REPORT OF PATHOLOGIST

*Gross Appearance of Specimen.*—A right hand from an adult; amputated 6 or 7 cm. above the carpus. There is a linear trophic ulcer on the palmar surface of the distal phalanx of the little finger, 1.2 by 0.2 cm. The hand is in a rigid posture, which cannot be overcome by any reasonable force, with all the fingers flexed at all joints, but most at the metacarpophalangeal joint.

*Dissection.*—The radial and ulnar nerves cannot be found. The radial artery is found without difficulty. It appears to be slightly smaller than normal, but the walls are not thickened. The tendons and synovia at the wrist are apparently normal. They can be moved freely over the joint by alternate traction above and below the joint. Obstruction to motion does not lie in either the superficial or the deep tendons crossing the wrist. When the palmar fascia is divided the contracture persists. All the superficial muscles of the hand are apparently markedly degenerated. The color is pale, translucent, brownish-yellow, the consistency soft, pasty. Dissection of these muscles is begun at the little finger. A piece of muscle tissue is removed from the hypothenar eminence and ulnar edge of the hand for examination. In this muscle fibers cannot be distinguished with the naked eye. The long flexor tendons of the little finger are then liberated in their entire ength, but without releasing the contracture. Disarticulation of the finger at the carpometacarpal joint equally fails to elease the contracture. Further dissection of the soft parts n the anterior surface of the fingers uncovers tissue which is edder and firmer than the other muscles. A portion removed or examination appears to consist of muscle tissue mixed vith dense, resistant fibrous tissue. Division of this tissue artly, but not completely, releases the contracture. Division f all the soft tissues on the anterior surface of the finger, own to the bone, results in complete relaxation. The red issue is probably not muscle, no muscle being normally found t this point.

Division of the long tendons and palmar fascia of the ring nger also fails to release the contracture. The knife is then serted under the skin on the anterior aspect of the proximal halanx and the soft tissue divided to the bone. The conracture then freely relaxes.

The superficial muscles of the thenar eminence form a pale, ulpy, translucent mass about the size of a lead-pencil, but naller at the center than near the bony attachments. There hardly a trace of color. A portion is removed for examination. Division of this muscle does not affect the posture of ie thumb. Beneath is found, as in the little finger, a small ass of redder firmer tissue, the flexor brevis pollicis, tense d apparently firmly contracted. When this is divided the ntracture relaxes. Finally, the knife blade, turned on the t, is inserted close to the bone on the anterior aspect of e proximal phalanx of the middle finger. The soft tissues e then slit away from the bone. The contracture relaxes sily and completely.

*Microscopic Examination.*—The vessels are everywhere noral. No nerves are found at the wrist or elsewhere which can clearly recognized as such. In a number of sections (stained th hematoxylin and eosin) are found bundles of connective sue surrounded by a sheath, suggesting a nerve in crosstion, but no axis cylinders or myelin can be made out. The l tissue from the deep tissue of the thumb and little finger nsists of dense fibrous connective tissue, with fully devel- ed collagen fibrils and considerable fat, but the vessels are ll rather large and thin walled. The muscle removed from rious areas, as already indicated, shows a varying amount connective-tissue increase. In certain areas the connective sue is fully developed, with few vessels, in every respect ntical with fully developed scar tissue. In other areas the ocess of connective tissue proliferation is still in active ogress. In these areas the nuclei are of fibroblast type, ng in a delicate stroma devoid of collagen, and with abunt large thin-walled capillaries which branch and anastomose every direction, and frequently show "vessel tents." In tain areas the connective tissue seems to be made up almost lusively of these capillaries. The muscle fibers themselves everywhere degenerated, but most markedly so where the connective-tissue increase is most marked. The fibers are shrunken, usually present a wavy outline, and for the most part are devoid of cross-striations. Longitudinal striation, when present at all, seems to be exaggerated. The fibers are frequently broken up into rather coarse granules. In the areas where the connective tissue is least advanced, the muscle fibers are similarly more normal in structure, the cross-striation being at times intact, or at times extending across the fiber, but with a break in the line, recalling a geologic "fault." This appearance is particularly striking in sections stained with Mallory's phosphotungstic acid hematoxylin. When the striæ disappear they do so first at the periphery of the fiber. The tissues from the ulnar side of the hand show in general a more advanced degeneration of the muscle fibers, which are here scanty and separated by broad areas of connective tissue. Even here, however, a very few cells show traces of cross-striation. Their outline is wavy, and the fibrils run in a variety of directions, sometimes even crossing one another at right angles.

Dr. Whitman further says:

> From the histologic study of this amputated limb it would seem probable that in this particular instance the changes were due to the combined effect of the anemia on the muscles and nerves. Whether this is so in the average case of the so-called Volkmann's ischemic paralysis and contracture can only be determined by the study of a considerable number of cases.

I do not know whether it is my unenviable fortune to be the only one who has amputated for this condition. I do not seem to find record of other amputations, although surgeons who have contributed to the literature of this subject say that in given instances amputation may become necessary. Of this I do feel certain: that in this particular case I know of no way in which the condition of the patient could have been improved. I believe that the original injury irreparably damaged the muscles, and, perhaps, the nerves. I may be mistaken in this, but on careful review of the course of this patient for nearly seven years this is my belief. I am conversant with the orthopedic, non-operative measures which have been thoughtfully and carefully set forth by Robert Jones, Reginald Sayre and others. In general I believe that such orthopedic management is the best which we at this time possess, but I venture the thought that this would have been without avail in the particular instance which forms the subject of this communication.

Fourteenth and Stout Streets.

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# MENINGEAL CARCINOMATOSIS

W. F. BEERMAN, M.D.
SAN FRANCISCO

During the lifetime of the patient the presence of carcinoma was not suspected, either in the meninges or in other organs, and after death the unaided eye could not discern it. It was revealed only by microscopic examination.

### REPORT OF CASE

*History.*—Mrs. G., aged 62, widow, had been ailing on and off for several years with gout. For ten years she suffered with flatulency, but had never been seriously ill. Six weeks previous to Dr. W. W. Kerr's first visit, the patient began to suffer from headaches; these were at first slight, then gradually increased in severity and constancy until on October 31 her sufferings became so intense that she was unable to leave her bed. For seven or ten days previous to taking to bed, she complained of intense pain in both lumbar regions, which was greatly relieved by the use of a hot iron. The headaches during these six weeks were described as general and were unassociated with vomiting or disturbances of vision. At no time during her illness had she any stiffness of the muscles of the neck or back. Oct. 31, 1910, when she was first seen by Dr. W. W. Kerr, she had several paroxysms of severe pain on the upper left side of the head; the pain was felt in the scalp. The mere brushing of her hair was sufficient to provoke a paroxysm of severe pain. This peculiarity of her headaches—their superficial location—remained constant. The pain was so severe that morphin was often given with but slight, if any, relief. November 14 it was first noted that the patient could not walk straight, and that her headaches were most severe behind the right eye and in the left occipital region. Her daughter now noted that the patient's mind was confused. November 17 she complained of severe pain in the lower-spine after sneezing. The patient became irrational and her speech incoherent. At times she did not recognize her daughters. November 21 she began to have hallucinations of sight; she saw cats and babies in her bed and about her.

*Examination.*—November 21 by Dr. Leo Newmark. The patient was well developed. She answered all questions promptly and correctly. The symptoms of mental aberration as described by her daughter were never noted at this or at the several other examinations. On the contrary, the patient took quite an interest in the various tests made. The whole scalp was tender, but the right parietal region was most sensitive to pressure. The pupils, disks, reflexes, visual fields, stereognostic sense and every other function of the nervous system were carefully, minutely and frequently tested, and at no time was any abnormal condition detected. There was no suggestion of aphasia of any kind, nor was there at any time any evidence of a meningeal affection. Percussion of the skull over the right parietal region elicited a tympanitic note. Examination of the chest and abdomen was negative. The breasts were normal. The urine was normal. The Wassermann reaction in the blood-serum was negative. From this date on the hallucinations of sight became more frequent, and at one time the patient forced her son to crawl under the bed and dispose of a group of monkeys.

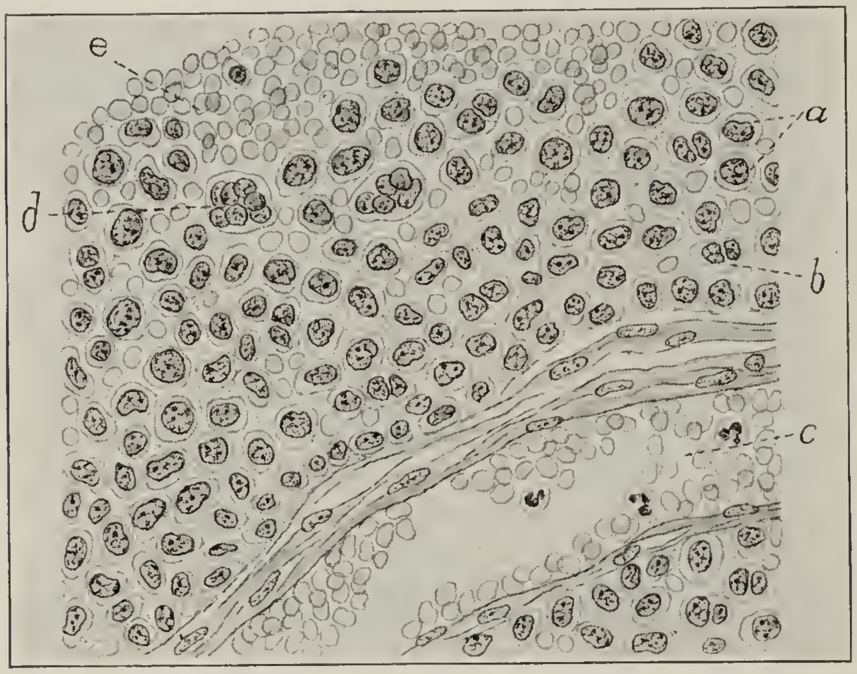

Fig. 1.—Here and there in the preparations a diffuse arrangement of the neoplasmic cells is found with no tendency to assume the gland-like structures which are so common in most of the areas invaded by the new growth. Where this condition exists most of the cells have a pale protoplasmic element with single, large, round or oval nuclei rich in chromatin. Such cells are shown in the illustration at *a*. Aside from these numerous cells are found in various stages of mitosis—one variety with double nuclei is seen at *b*, while another containing several nuclei is shown at *d*. A blood-vessel is indicated at *c* and a diffuse hemorrhage at *e*.

*Course.*—The patient was sleepless, with the exception of some sleep obtained by chloral, bromids, etc. She was in a constant state of restlessness. December 4 her daughter on approaching her from the left side with a feeding-cup would be pushed away, as patient remarked that she could feed herself. If, however, she approached the patient from the right, her approach was not recognized. Tests with the finger, however, failed to elicit hemianopsia or hemiamblyopia. The severe headaches continued up to this date. December 5 the patient became actively delirious, continually trying to get out of bed. With this was associated muscular twitchings of the right shoulder, while with the right hand she constantly beat the bed-clothes. December 6 the patient passed into a semicomatose state from which she could be aroused. This state alternated with active delirium until December 9, when she sank into a deep coma. The temperature, which had been normal during the whole course of her illness, now rose to 100 and 102 F. Death occurred on December 12.

*Post-Mortem Examination.*—Dr. M. B. Lennon found on removing the brain that the left hemisphere was larger than the right. Otherwise the brain and its membranes appeared normal. The arteries were not thickened. The several transverse and longitudinal incisions made revealed no abnormalities of the cerebral substance. Everywhere the gray and white matter appeared normal. After the brain had been hardened in formaldehyd solution it was seen that the pia mater was slightly thickened and opaque. A piece of the left frontal lobe was first examined, and it became at once evident that we were dealing with a malignant process involving the pia-arachnoid. These membranes were everywhere thickened and infiltrated with numerous large round, irregular and oval cells. The nuclei stained darkly; in isolated instances they were pale and vesicular. Most of the cells were rich in protoplasm. Their distribution was perivascular. These abnormal cells dipped down into the pia of the sulci, and here they were in many places arranged in long rows. Large cells were occasionally seen with several nuclei—three to five or more. Diffuse hemorrhages were seen throughout the membranes. The cells infiltrating the pia-arachnoid covering the frontal and parietal lobes, the cerebellum, pons and the pia from the neighborhood of the great transverse fissure were gathered together in a diffuse manner, and in these areas mitotic figures were most commonly seen. In the pia covering the occipital and temporal lobes, and the upper and lower medulla, the cells were arranged in gland-like structures. Here the cells were placed in a single layer and were of the low columnar variety. Again, proliferation occurred and the cells occupied much of the cavity. Nowhere was there any evidence of an infiltration of the cerebral substance. Some sections from the anterior horns of the lateral ventricles were examined and the ependyma was found normal. The sections were submitted to Dr. Ophüls for examination, who reported "carcinomatosis of the pia-arachnoid."

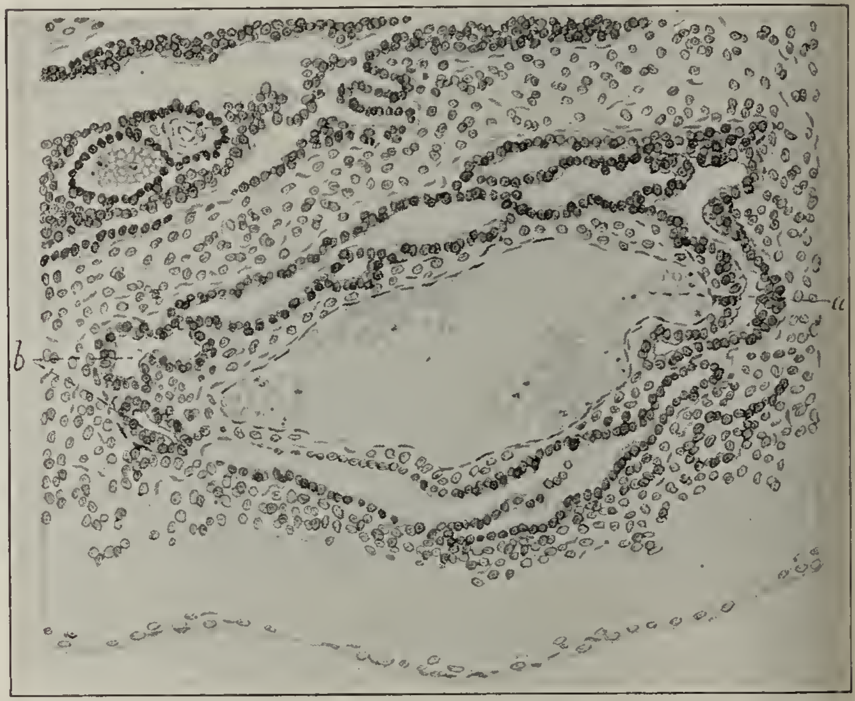

Fig. 2.—The typical glandular arrangement of the neoplasmic cells is shown in this illustration at *b* and their position corresponds to the perivascular lymph-spaces of the blood-vessel *a*.

The various factors which render this case important and possibly unique, are as follows:

1. The absence of opisthotonos, Kernig's sign and other signs and symptoms commonly associated with

meningitis. Lumbar puncture was not performed. It is possible that cells such as were found in the pia-arachnoid might have been observed during life in the cerebrospinal fluid.

2. Despite an illness of three months or over, there had not been any loss of weight. Emaciation is quite constant in this condition.

We had so little suspicion that we were dealing with a cancerous affection that no investigation for the purpose of finding a primary growth was made during life, and the same state of ignorance made us omit the search even after death. And furthermore, the brain itself after its removal seemed to promise so little result that its microscopic examination was deferred for several months.

3. The degree of involvement of the pia-arachnoid, which was everywhere infiltrated with cancer cells, so

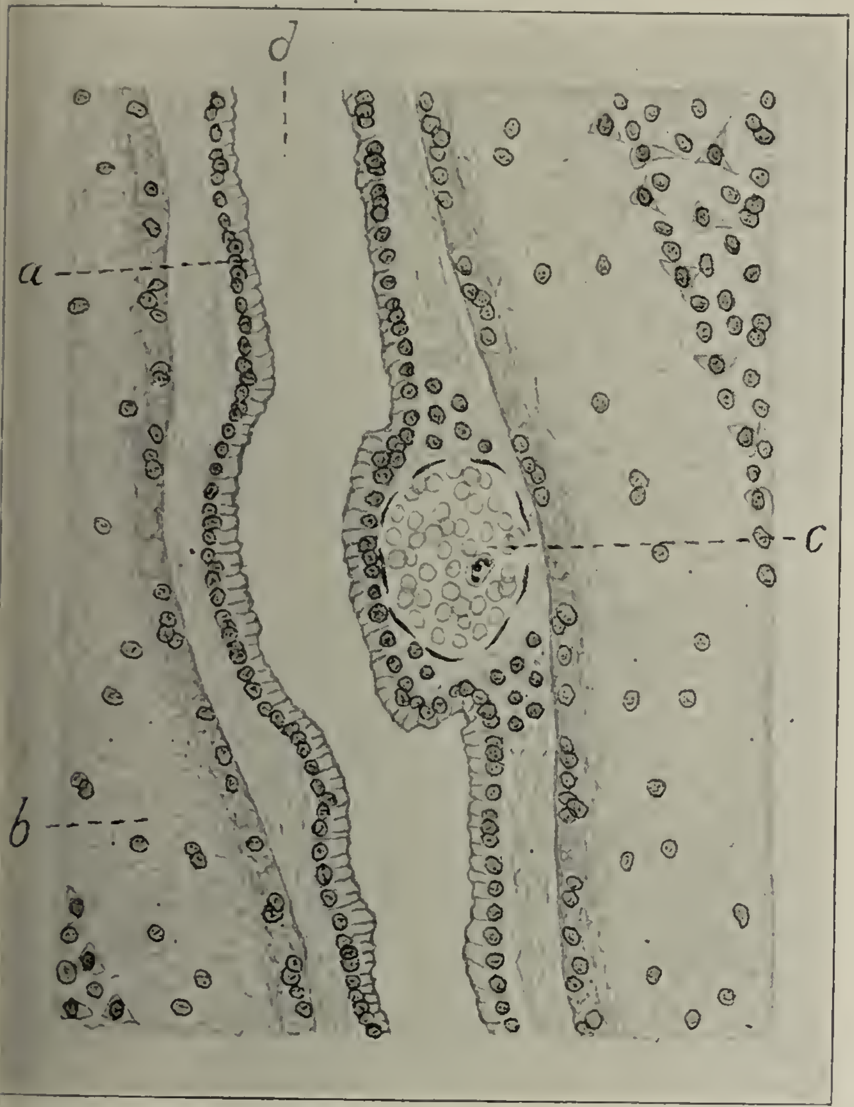

Fig. 3.—This illustration serves to point out the fact that the eoplasm confined itself to an intimate relation with the pia-rachnoid of the brain and did not in any place invade the paren-yma of that viscus. *a*, neoplasmic cells; *b*, cerebral tissue; *c*, ood-vessel; *d*, sulcus.

at it may be said that the entire brain was ensheathed cancer.

4. The marked gland-like arrangement of the cells. but few of the cases reported was this formation resent.

Diffuse microscopic meningeal carcinomatosis of this ind is rare. I have been able to find in the literature cords of only eleven cases similar to the one here ported. Of these eleven cases, nine were secondary to ncer of the stomach, two to cancer of the lung.

The clinical diagnosis of this condition is most diffi-lt. When meningeal symptoms occur in cases in hich the presence of the primary growth is known, our picions would readily be aroused; but the diagnosis often impossible because the primary lesion is not detected. If cancer cells be found in the spinal fluid, the diagnosis would be certain. In three cases reported, in which, however, definite signs of a meningitis were present, a clinical diagnosis was made by finding in the spinal fluid large round cells which resembled those found later on microscopic examination of the pia. In the cases of Eberth, Lilienfeld and Benda and Nonne, hysteria was diagnosed, and not until within a few days of the death of the patients, when signs of a focal lesion appeared, was an organic lesion assumed. Marchand and Saenger have reported cases in which a clinical diagnosis of brain tumor had been made. Symptoms of cerebral derangement are common in cancer. Oppenheim first drew attention to various symptoms of cerebral derangement in patients suffering from cancer of various organs, in which, macroscopically, no disease of the brain was observed. These symptoms he regarded as toxic. Some authors dispute as to whether the rather bizarre nervous symptoms which may occur in the course of carcinoma are of toxic origin. Saenger and Spiller believe that definite organic changes cause the so-called toxic symptoms, while others believe that gastric intoxications are the cause. The literature contains the histories of numerous cases in which a metastatic growth seemed the probable diagnosis, but at autopsy no macroscopic lesion was present.

The symptoms of carcinomatous meningitis may be as protean as the symptoms found in hysteria and syphilis. It is well known that in cancers, variously situated, cerebral symptoms, focal or general, are often present without macroscopic changes to account for them; but it may be possible that microscopic lesions may have been the cause of the hemiplegias, with or without aphasia, aphasia alone, convulsions, either general or jacksonian, cranial nerve palsies, bulbar phenomena, apathy, delirium, coma, psychoses, etc., which have been observed.

My case shows that a marked hallucinatory and agitative state in an apparently well-nourished patient with excruciating headaches and marked tenderness of the scalp, with no suspicion of malignancy, may be due to an almost generalized, microscopic cancerous involvement of the pia-arachnoid.

It should be emphasized that in the majority of instances of the so-called toxic symptoms of cancer, where macroscopically no demonstrable lesions are present, careful and extensive histologic studies of the brain and its membranes will in nearly all cases show structural changes marked enough to account for all symptoms.

I wish to thank Dr. W. W. Kerr and Dr. Leo Newmark for permitting me to report this case.

800 Butler Building.

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**Ophthalmia Neonatorum.**—Laws for the prevention of the blindness of new-born infants are making progress slowly. Many of the states have recognized the need of measures to prevent the disease. Some states have issued instructions regarding the proper methods of prophylaxis and some also furnish packets containing preparations of silver salts for use in the eyes of the new-born. The records for institutions for the blind show that from 23 to 35 per cent. of the inmates have become blind as a result of ophthalmia neonatorum. Among the states in which the disease is notifiable are Connecticut, Massachusetts, Minnesota, Nebraska, New York, Oregon, South Carolina, Utah, Vermont and Wisconsin. In some states a nurse, midwife or parent is required to report the disease. In most cases, at least, the disease can be prevented and where it exists proper treatment will, in many instances, prevent loss of vision.—*Pub. Health Rep.*

# ARTHRODESIS OF SOME OF THE SMALLER JOINTS IN THE TREATMENT OF PARALYTIC AND ACQUIRED DEFORMITIES *

ROBERT E. SOULE, A.B., M.D.
Clinical Instructor in Surgery and Surgeon to the Dispensary, Department of Orthopedics, Cornell University Medical College
NEW YORK

By arthrodesis is meant the making of a synarthrosis of a joint, transforming a movable into an immovable articulation by ankylosing the contiguous bones after removing the articulating surfaces lying between them with the least possible loss of bone-structure, the object of the arthrodesis being to make a more stable and serviceable limb, changing a flail, deformed or painful joint into a rigid stable one, thus restoring contour and usefulness.

In many instances in which other means such as tendon-grafting or muscle transplanting have failed or would fail, and where braces are insufficient or out of the question, resort can be had to changing the articulating bony framework sufficiently to give a very serviceable limb. This condition applies particularly to the lower extremities on which weight-bearing and locomotion are to be considered. The larger joints are successfully ankylosed and by the exercise of proper technic equally successful results can be obtained in many of the smaller joints. There are, however, certain conditions which must be borne in mind in considering an arthrodesis of a joint and in performing the operation, viz., the age — the patient should not be under 8 years —and the securing of exact apposition of cut bony surfaces and the maintenance of such apposition throughout the period of ankylosing. I have found arthrodesis of service in correction of certain deformities arising from infantile paralysis, hammer-toe, flat-foot and wrist-drop.

In infantile paralysis the extent of the paralysis producing the deformed condition must be determined, whether due to an actual loss of power in the affected muscles or simply to a weakening, overstretching or overtire in the muscle-balance. If induced by a feeble response of muscle contractility, shown by the current, to transplant the peroneals to take the place of a paralyzed calf, without examining the muscle-bodies of the peroneals themselves, a mistake is made and a disappointing result occurs.

Also, if resort is had to arthrodesis in a case of loss of muscle-balance with deformity without sufficient lapse of time since the date of the infection, or without sufficient investigation to determine whether there will be any further recovery of muscle-power, or whether the apparent loss of power is due chiefly to an unbalanced condition of opposing muscle-action, it will be found at a later period after the arthrodesis has been performed that the supposed paralyzed muscles have regained their tone, in great measure owing to the regeneration of motor-cells or to the relief of muscle overstrain, demonstrating the mistake of having deprived the patient of a serviceable joint.

### INFANTILE PARALYSIS

It will be found on careful examination, in many cases of either varus or valgus deformities arising from infantile paralysis, that the deformity does not include the astragalus. This bone remains, in many instances, secure in its normal position, unchanged in its relation to the tibia and fibula, the varus or valgus occurring at the astragaloscaphoid, calcaneo-astragaloid, or at both of these articulations.

With the astragalus thus furnishing a secure anchorage it is a comparatively easy matter to rectify the varus or valgus deformity by first overcoming any resistance to overcorrection of the foot and then performing an arthrodesis of the astragaloscaphoid, calcaneo-astragaloid, or of both of these articulations, thus furnishing a secure restoration of the foot without appreciable loss of function, as we have the normal astragalotibia articulation remaining, permitting full flexion and extension of the foot. This normal relation of the astragalus to the tibia and fibula is a very important point, offering an admirable point of anchorage.

We do not find the astragalus taking part with the other bones of the foot in a resulting deformity because of its secure position between the maleoli, its broad articulating surface with the tibia, its short, strong tibiofibula, astragaloid ligaments, its freedom from lateral strain due to so short a leverage made on it and to its freedom from muscular attachments; whereas the smaller articulation of the astragalus and scaphoid, the astragalus and oscalcis, their articulation not being horizontal to weight-bearing, the ligaments holding the bones together being not so strong, and the leverage brought to bear on these joints being far greater than at the tibio-astragaloid articulation, these also having added pull from the muscle attachments, all contribute elements of weakness.

Where the tibio-astragaloid articulation is relaxed it seems to me that Whitman's operation of removing the astragalus and advancing the weight-bearing nearer the longitudinal center is superior to ankylosing the tibio-astragaloid articulation because the flexion, extension and contour of the foot are better preserved.

I have operated in five infantile cases at the astragaloscaphoid articulation to correct varus or valgus deformity, in all of which the astragalus was found firm in its normal relation with the tibia and fibula. In the last case of this series the history was as follows:

Case 5.—*Patient.*—M. S., aged 7 years 6 months, referred to me July 27, 1911, at St. Barnabas Hospital, Newark, N. J., had had infantile paralysis when 13 months old, and had undergone treatment of electricity, massage, plaster-of-Paris and brace. Examination showed loss of power in flexors of the left thigh, subluxation of knee with shortened flexors of the leg, preventing extension beyond 135 degrees, contracted calf, with flexion of foot on the leg limited to 125 degrees, apparent loss of power of peroneal muscles, foot in marked equinovarus, astragalus in firm position with tibia and fibula, the varus occurring at mediotarsal joint, left leg showed shortening of 1 inch.

*Operation*—Aug. 7, 1911, under ether the subluxed knee was reduced by stretching and forcible extension and the equinus overcome by forcible flexion of foot to a right angle. Arthrodesis was performed between the astragalus and scaphoid and the foot and leg were put in slightly overcorrected position in plaster-of-Paris dressing reaching to the groin. The child was in the hospital three weeks.

*Course.*—Oct. 12, 1911: A metal leg-support, stiff at knee with limited motion at ankle to prevent recurrence of equinus, was attached to shoe, the shoe also having added to it a ¾-inch cork-sole.

Nov. 7, 1911: An *x*-ray of the foot was taken.

Nov. 9, 1911: Examination showed common extensors of the toes improved in power, anterior tibial muscle strong, peroneals regaining in tone, leg straight, knee restored to normal position, foot at right angle with some power of flexion and extension. Union of astragalus and scaphoid seemed secure from manipulation and from *x*-ray. Stop preventing flexion of foot on leg removed but stop preventing extension of foot to remain. Patient walks well in brace.

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* Read at the meeting of the Interurban Orthopedic Club, New York, Nov. 10, 1911.

### HAMMER-TOE

The correction of hammer-toe, a deformity of comparative frequency, has been attempted by quite a diversity of methods, resulting in more or less maiming of the toe or foot, as for instance, tenotomy of the shortened flexor tendons and stretching, with fixation until healing takes place, often results in a recurrence of the contracture at a later period; also excision of the joint with skin incision on the dorsum of the toe, thus shortening the toe to accommodate its length to the shortened flexors, often results in a sensitive scar as well as in a shortened toe, and sometimes the toe is amputated, the final result being very often a troublesome foot.

I have obtained satisfactory results from an arthrodesis of the flexed joint, done through the plantar surface, entering to one side of the flexor tendons, the success of the arthrodesis being doubly assured by holding the cut bone-ends together by making use of the shortened flexor tendons as a splint and holding the toe straight and hyperextended at the metatarsophalangeal articulation by a plaster-of-Paris dressing throughout the process of healing. By this means the offending joint is destroyed, the toe is only perceptibly shortened, no troublesome scar remains, no recontracture takes place and the toe remains straight and serviceable.

### FLAT-FOOT

In connection with the condition of flat-foot, it is of ourse hardly necessary to state that I do not advocate he use of arthrodesis as a universal procedure in the ure of flat-foot, but I merely wish to present the report f three cases in which I did an arthrodesis of the stragaloscaphoid joint in the cure of painful pronated lat-foot.

A rigid foot with prominent scaphoid, despite correcion by stretchings and plaster-of-Paris treatment folowed by plates, often remains refractory. By an arthroesis of the astragaloscaphoid articulation a strong bony rch is formed in place of a weak mediotarsal joint.

In Case 1 only one foot was operated on, which foot as much worse than its fellow, being moderately proated and painful with the scaphoid unduly prominent.

Case 1.—Boy aged 15, was operated on in July, 1907. The peration resulted in a firm ankylosis, restored the contour of he foot and relieved all symptoms, as patient reported in 910.

Case 2.—Boy, aged 17, with rigid, painful pronated flatot with scaphoid prominent, as result of having foot caught wheel and twisted two or three years previously. Arthrodesis the astragaloscaphoid articulation was performed after oroughly overcoming resistence to full adduction December, 909. He was a bell-boy in a hotel all summer, 1911, and ports that he suffered no inconvenience whatever.

Case 3.—Girl, aged 20, had a very relaxed and painful foot. peration, June, 1910. In this case, however, I have not felt rfectly well satisfied with the result, for, although the foot in a much better position, she says that when she has to and for a long time at her work, she finds the foot still nsitive, so she wears a metal support. She has not a secure ion of the astragalus and scaphoid, due, it is believed, to t having sufficient contiguous bone-surfaces together, as it as found on operating that there was much old scar-tissue the result of a fractured scaphoid.

### WRIST-DROP

The position of flexion assumed by the hand as a result of paralysis of the extensors renders the hand useless on account of its position, as any one may demonstrate for one's self by attempting to grasp an object while the hand, being in the effort of grasping, is held in the flexed position on the forearm. It is thus seen how this position of flexion of the hand, by shortening the unparalyzed flexor muscles, renders the hand almost powerless. Now if it is found that we cannot hope for enough regeneration of nerve-impulses to the extensors of the wrist to maintain the hand in sufficient extension to allow the flexors to act, so as to grasp and hold an object, we must resort to some means to secure that position before we can relieve the situation.

In certain selected cases in which the flexors could be brought into use when the hand was held in extension on a plane with the forearm, it occurred to me that by fixing the wrist in some way, to prevent its dropping to its useless flexed position, the patient could be given a useful hand, and although the wrist furnished many disadvantages for arthrodesis there seemed no reason why it should not be attempted.

Below are the histories of two cases, both spastic hemiplegia of a moderate degree, in which, on account of the deformity, the patients were unable to grasp things and hold them in the affected hand.

Case 1.—A boy, aged 8, had a contracture of the calf on the affected side, as well as wrist-drop. Did a tendo-achillis lengthening at the same sitting as the arthrodesis between the scaphoid semilunar and the radius. This attempt was a failure as no bony union was secured, consequently no correction or strengthening of the hand, due to the fact that the scaphoid and the semilunar were so small and insufficiently ossified.

Case 2.—This case was more successful, as the hand is now placed in excellent position and it is developing, as time goes on, into a very useful member. The patient can grasp things and help himself in eating, both of which he was totally unable to do before. The patient, D. G., a boy aged 16, was operated on Jan. 30, 1911. He had spastic paralysis of the left arm and leg. In this case I denuded not only the articulating surfaces of the radius, scaphoid and semilunar, but in addition bridged across these contiguous bones with strong silk fastened into the periosteum at both ends, to aid in apposition of bony surfaces. The hand and arm to above the elbow was put up in plaster-of-Paris dressing lined with flannel, the hand in hyperextension and the elbow flexed to a right angle. Since the removal of the dressing the patient has worn a palmar splint of metal holding the hand in hyperextension Since July, 1911, he has not worn a splint and he is constantly improving the control of his hand.

### SUMMARY

Some facts to be borne in mind in doing an arthrodesis:

1. The operator should be sure that the deformity is a permanent one, not due to temporarily paralyzed muscles or to muscle overstrain or tire.
2. The patient should be old enough — not under 8.
3. All resistance to correcting the deformity should be previously overcome.
4. The operator should strive to cause as little mutilation of the contiguous bones as possible. He should not use a curet. The exaggerated idea of removing a V-shaped piece of bone is overemphasized. Success depends on ability to make a flush joint, as a carpenter would say, and thereby correct the deformity, and also depends on ability to apply a fixing dressing which allows of the least separation of the opposed denuded bony surfaces.

122 East Thirty-Fourth Street.

# POSSIBLE DANGERS OF THE VERTICAL RECTUS INCISION

MILES F. PORTER, M.D.
Surgeon to Hope Hospital; Professor of Surgery in the Indiana University School of Medicine
FORT WAYNE, IND.

I have on numerous occasions in my clinic called attention to the annoying and possibly dangerous proximity of the epigastric vessels to the wound in the vertical rectus incision, especially when made below the umbilicus. I have never been partial to the incision for the reasons suggested, but have used it rather frequently. In the future I shall employ it only in cases in which its advantages as compared with other incisions are very considerable, and in septic cases I shall use it in very exceptional ones only.

This decision is the result of the fact that, within the last month, I have had two cases of alarming secondary hemorrhage from the epigastric artery, one very nearly fatal. In both cases there was infection. In neither case was the artery injured at the time of the operation, so far as is known. The patients, both males, were aged respectively 36 and 8 years. In one case the hemorrhage occurred on the thirteenth day after the operation, and in the other on the tenth day. In both cases the hemorrhage was stopped by clamping the artery with a hemostat. The hemostats were removed after forty-eight hours. In neither case could the hemorrhage be attributed to pressure by the drain, for in the one case no drainage was used until after the hemorrhage occurred, and in the other there was one soft rubber tube placed well to the outside of the vessels through an ample opening, and the tube had been removed seven days before the hemorrhage occurred. In both cases there was considerable fascial sloughing. Both these accidents might have been avoided had the incisions been made well away from the vessels.

I have on more than one occasion tied the epigastric vessels, on account of hemorrhage, during an operation for the removal of the appendix through a vertical incision through the rectus, and have seen it done in other clinics. I believe also that the vertical incision through the rectus entails more danger from thrombosis and embolism than do incisions made outside of or between the recti. For this belief, however, I have no specific proof. I have not looked up the literature on the subject, nor have I made inquiry of other operators concerning the matter, but, because of personal experience and observation, I feel that this word of warning should be uttered.

207 W. Wayne Street.

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# A CASE OF RUDIMENTARY CLAVICLES

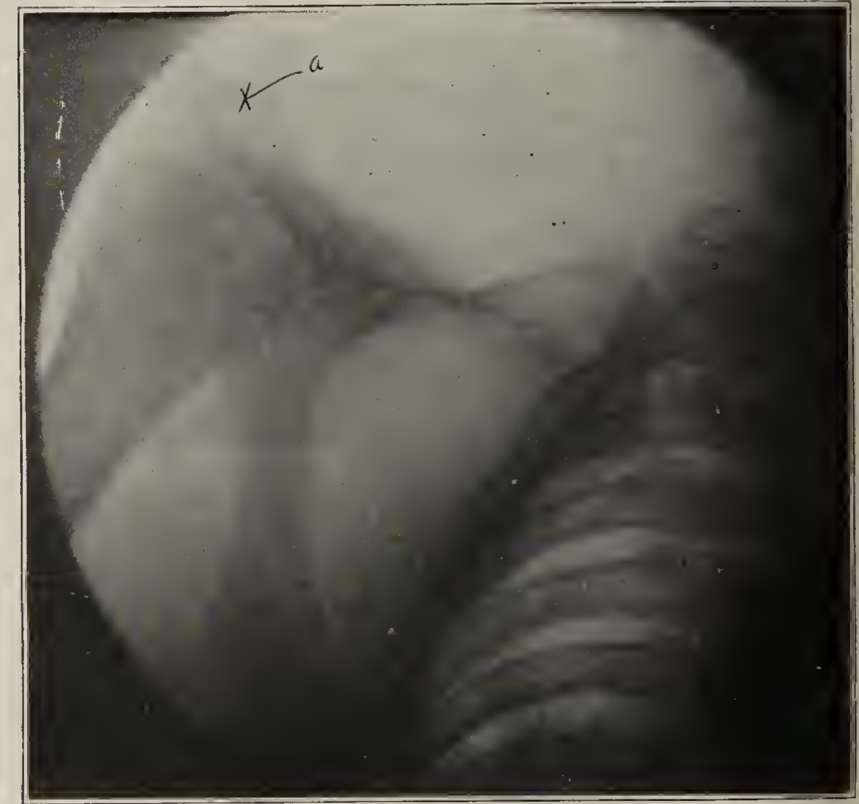
Micajah Boland, M.A., M.D., Dallas, Tex.
P. A. Surgeon, U. S. Navy

To the naval medical officer on recruiting duty there come men with numerous physical defects, but rarely does it happen that a maldevelopment of real interest comes under his observation.

Recently there came to the navy recruiting station here a youth, aged 22, desiring to enlist in the navy as apprentice seaman, who, before removing his clothing, showed nothing abnormal; and even when he presented himself nude for the physical examination, the only abnormality noticed was a slight prominence of the clavicles about one-third way from the sternal end. On palpation it was discovered that the clavicles were rudimentary and extended only a short way from the sternum. There was apparently a slight ligamentous connection between the ends of the clavicles and the acromion process, but the fingers could be inserted behind the ends of the clavicles and they could be drawn forward without discomfort to the subject.

*History.*—The young man's father was living, aged 55, in good health. Mother died in 1900, from phlegmasia alba dolens, aged 33. There were ten children, four boys, six girls; all brothers are living and healthy; two sisters dead; age and cause unknown; four living and healthy; none of his brothers or sisters has any abnormality or maldevelopment. The subject was born in Nacogdoches County, Tex.; as far as known, birth was normal and at full term. Development was rapid; the boy was walking earlier than children usually do; attended school irregularly but made good progress with his studies. He was raised on a farm and could do as much hard work as his brothers. He had mumps at 11; intermittent fever at 14; otherwise healthy all his life; knew of his maldevelopment and was an object of curiosity and envy among his companions.

*Physical Examination.*—Height 68 inches; weight 133 pounds; mean chest measurement 34 inches; expansion 4 inches; vision 20/20 each eye; hearing 15/15 each ear; palate V-shaped; other stigmata of degeneration present; his muscular system was well-developed; the shoulders did not drop down and except on close observation nothing abnormal could be noticed.



Skiagraph showing rudimentary clavicles in a man aged 22; a, acromion process.

On palpation it was found that the clavicles were only about 3 inches long; the fingers could be passed around the outer ends and after getting behind them they could be drawn forward through an arc of about 60 degrees without any discomfort whatever. The other bones were fully developed but small; heart, lungs and other organs were negative.

The young man has an excellent grip and can maintain the horizontal position of his shoulders notwithstanding heavy pressure on them. The shoulders can be thrown far back and can also be drawn much farther forward than normal shoulders. The arms can be raised laterally over his head.

The accompanying skiagraph shows the condition well. It was taken from the front and the absence of the clavicle is well demonstrated; a small cartilage is attached to the acromion process but does not show in the skiagraph.

I am indebted to Professor J. M. Martin of Baylor University Medical School for the skiagraph.

The subject, being of a roaming disposition, unfortunately, left the city before a photograph of his shoulders could be obtained and it has not been possible to locate him.

## A NEW BLOOD-PRESSURE MANOMETER

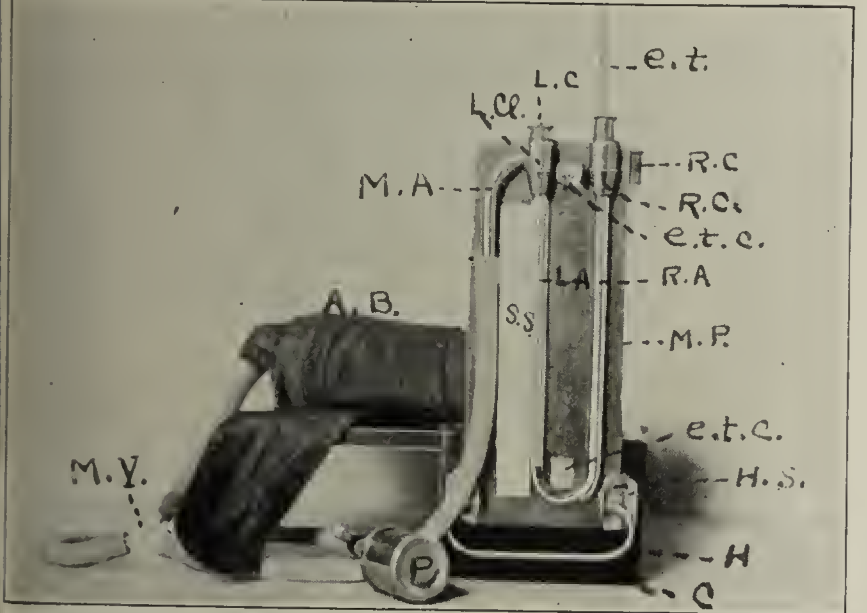
Carl H. Davis, M.D., Milwaukee, Wis.

Mercury sphygmomanometers are generally recognized as being more desirable than the spring or diaphragm type. Most of them, however, are too large to be carried in the ordinary bag, and the other instruments are either inaccurate, or easily broken. Owing to the demand for a more portable blood-pressure manometer, I have attempted to devise one which can be easily carried and operated. The one herewith described I have found accurate and it should prove to be durable.

The case consists of a neat cherry box 9 inches long. The handle serves a double purpose in that it may be used for carrying the instrument when closed, and maintaining the manometer in a vertical position when in use.

The manometer consists of a U-shaped tube, with a detachable extension for the right arm; the connection being made by carefully fitted metal parts. Flint glass is used because of the action of mercury on the ordinary glass. The U is fastened to a metal plate, as seen in the illustration, by means of the steel cylinder at the top of either arm. The glass tubing has no other attachment and should therefore be less liable to break from sudden jars, than in instruments where it is held more rigidly. The extension tube, when not in use, is held between the arms of the U by means of metal clips. The manometer is packed in the bottom of the case, the back of the metal plate forming a false bottom so that neither the pump nor arm-band can come in contact with the glass.

The arm to the left, or short arm, has a metal top consisting of a cylinder threaded for a gasket, with a screw-cap and an arm. The gasket screws down on a washer of felt and prevents the escape of mercury when the manometer is in the case. The screw-cap closes the cylinder and may be used to llow a slow escape of the air. The metal arm connects with he pump and arm-band.



*A.B.*, arm-band; *C.*, case; *c.t.*, extension tube; *e.t.c.*, extension ube clip; *H.*, handle; *H.S.*, handle slot; *L.A.*, left arm of U tube; .*Cl.*, left cylinder; *L.C.*, left cap; *M.A.*, metal arm; *M.P.*, metal late; *M.Y.*, metal Y; *P.*, pump; *R.A.*, right arm of U tube; *R.Cl.*, ight cylinder; *R.C.*, right cap; *S.S.*, sliding scale.

The other arm of the U has a metal cap which is threaded o connect with the extension tube. The detachable tube has metal part threaded, but with a shoulder which insures a roper and easy connection. Between the ends of the glass a hin, carefully prepared gasket is fitted to prevent chipping of he glass and insure a tight connection. A screw-cap is also rovided to close this arm of the U when carrying it in the ase. While the instrument is in use, this cap is held to one ide by a simple device and in such a way that the manometer annot be placed in the case until it is replaced.

A sliding scale is provided, and attached so that the readgs are made downward on the short arm of the manometer. his is a new feature and, I think, will be found quite satisactory. The zero should be adjusted before the cuff is attached, as afterward a slight pressure is apt to be present in the closed pneumatic system.

A cloth cuff with four thin but stiff metal strips to prevent any tendency to narrow with the high pressure has been found satisfactory. I prefer this type of cuff to the clumsy leather ones. The tubes from pump, arm-band and manometer are connected by means of a metal Y. The Y should be detached from the manometer tube when packing in the case.

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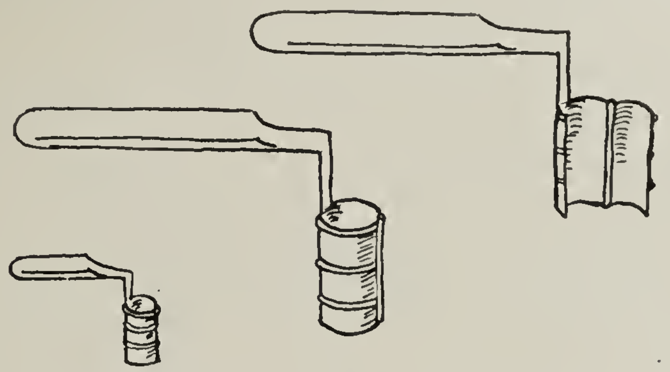
## A MODIFICATION OF THE CRILE TRANSFUSION CUFF

R. C. Bryan, M.D., and F. R. Ruff, Richmond, Va.

This device is based on and modeled after Crile's idea of arteriovenous anastomosis in cases of direct blood transfusion. Crile's technic is not changed, but our devise has the following features which would seem to commend themselves along mechanical lines.



Cuff for blood transfusion, being a modification of Crile's device.

1. Being made on a larger scale and with a longer and larger handle, the instrument is more easily manipulated.
2. The cuff, being split and opening on a smooth hinge, can be put around the artery and then closed, thus doing away with the tedious feature of threading or pulling the artery through the cuff.

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## SUPERNUMERARY AXILLARY MAMMARY GLAND

Frank J. Hirschboeck, M.D., Buhl, Minn.

Dr. J. Cantwell reported in The Journal March 16, 1912, (p. 747) an unusual case of supernumerary axillary mammary glands symmetrically developed. The following is a case of equal interest to anyone seeking data on these rare anomalies.

*History.*—The patient was a primipara, aged 22, who was delivered of a normal child in February, 1912. No one in her family ever had any similar formation and she herself never noted any anatomic alteration until she reached the age of 14, when a "swelling" formed "under her arm" which proved annoying when the arm in question (the right one) was employed in active exercise. No physician was consulted at that time.

On the third day of an otherwise uneventful puerperium the patient complained of pain under the right arm with an accompanying discharge of a milky secretion. On examination I found, just posterior to the pectoralis major, a small swelling about as large as a walnut, partly covered with hair. It was soft to the touch and closer inspection revealed a very small nipple, not much larger than a pinhead with a proportionately small areola around it. The discharge altered in appearance with that of the larger breast, becoming whiter until four or five days elapsed when the secretion gradually ceased leaving a non-secreting but a well-formed miniature gland. No gland was found on the left side nor any evidence of anomalous secretion.

The secretion while present was almost constant and caused the patient great annoyance. There was no tenderness on palpation and the swelling was freely movable. This case is especially interesting on account of the gland being unilateral, perfectly normal in appearance, and because of its advent with puberty, remaining for a long time unrecognized as such until lactation was stimulated.

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## RECENT PROGRESS IN MEDICAL EDUCATION IN THE UNITED STATES

In his last annual report[1] President Pritchett of the Carnegie Foundation reviews the great progress which has been made in medical education in recent years and refers particularly to the changes following the foundation's report on medical education, which was published about two years ago. It will be interesting to note the incidents leading up to this progress, with which the work of the Carnegie Foundation has had considerable to do.

All concerned with medical education can readily believe that more progress has been made in the last eight years than in all previous years since the American Medical Association was organized, although the improvement of medical education was one of its main objects. From its beginning, in 1846, such action as was taken toward raising educational standards was through temporary committees, some of which were made up of very able men who gave the subject much thought and presented drastic reports condemning the tendency toward commercialism and low standards. In spite of such reports, however, conditions continued to grow worse and the number of schools conducted for profit continued to increase until 1904, when the maximum number—166 colleges—was reached. In that year also only three colleges required preliminary education exceeding a high-school course, while the majority admitted practically every student who applied.

But a decided change was destined to take place. In 1904, at the annual meeting of the American Medical Association, the last of the temporary committees brought in the usual report denouncing the bad conditions in medical education, but this report differed in one chief respect from those of previous committees. It recommended the creation of a permanent council with a salaried secretary and with sufficient funds to carry on the work. The report of the committee was adopted and the present Council on Medical Education was created. Active work began at once and in the spring of 1905 there was held in Chicago the first of a series of annual conferences on medical education attended by university presidents, prominent medical educators and delegates from state medical licensing boards, college associations and other organizations interested in medical education. Particular emphasis at these conferences was laid on the need of better entrance standards, and it was urged that mergers be made in the various cities where two or more medical colleges were existing so that in each instance one stronger, better-equipped institution might result. From that time improvements in medical education have been very marked. There began at once a rapid decrease in the number of medical colleges until at present there are only 120. On the other hand, the number of colleges adhering to higher standards of preliminary education began to increase; there are now forty-seven which require one or more years of collegiate work for admission.

The chief object of the annual conferences, however, was to secure a cordial cooperation of the other agencies which were working toward the advancement of medical education, and it is doubtless through the unanimity of effort thus secured that so much progress has been possible. There began an earnest cooperation of the Council on Medical Education, representing the American Medical Association; the Association of American Medical Colleges, representing the progressive medical colleges, and the State Boards of Medical Examiners, representing the legal forces at work; with all these forces working in harmony toward the same end, results were bound to come. Finally, at the request and with the cooperation of the Council on Medical Education, the Carnegie Foundation for the Advancement of Teaching made an extensive investigation and published its epoch-making report which has had such a powerful influence toward further advancement.

Early in the work it was recognized by the Council that permanent improvements in medical education and licensure could be best secured by obtaining a wide publicity of the facts regarding conditions actually existing. Medical publications and the more progressive newspapers readily gave generous mention of the Council's work and reports, but a much wider publicity was needed. This could be best secured through an independent educational agency such as the Carnegie Foundation — an agency in regard to whose reports the worn-out claims of "sectarian bias" could not be successfully made. That organization had already presented one or two reports in regard to universities and incidentally to a few university medical departments, but to get at actual conditions an investigation of independent as well as of university medical schools was necessary. During the winter of 1908-09 and 1909-10, therefore, Mr. Abraham Flexner, representing the foundation, made his inspection of all the medical schools in the United States and Canada. His report, sent out by the foundation, was received by the press of the country in a most gratifying manner, and without question did more to inform the laity in regard to the actual conditions of medical education in this country than any other one influence. The wide publicity given to the report has undoubtedly done a great deal toward developing public opinion in favor of intelligent legislation governing the practice of medicine; it has likewise done much toward securing better facilities, better laboratories and better teachers in medical colleges.

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[1] The Carnegie Foundation for the Advancement of Teaching, Sixth Annual Report of the President and Treasurer, New York, 1911.

The Carnegie Foundation's report strengthened and confirmed the classification of medical colleges reported about the same time by the Council on Medical Education following its second tour of inspection. The Council's classification was published and has since come to be recognized by state boards and others interested in medical education as a means of judging medical schools. As stated in the Council's report, the classification was based on an extremely lenient marking and it was very essential that the work of inspecting and classifying medical schools in this country should be continued. A third tour of inspection will soon be completed; then the Council will be neglecting a positive duty if it does not make a careful revision of its ratings and publish a classification of medical colleges which is more in accordance with the conditions actually existing in the various schools. Progress has undoubtedly been made in the last eight years, but much remains to be done. The campaign for improvement should be continued until every medical college in this country is in position to give its students a thorough training in medicine in accordance with present-day standards, and that means, as a minimum for each student, a four-year high-school education; at least one year's training in physics, chemistry and biology; a thorough, four-year medical course and a year spent as an intern in a hospital.

## THE NATURE OF NARCOSIS

Narcosis is of supreme interest, not only because of its beneficent effects, but also because it influences so profoundly the basal processes in living matter. Meyer and Overton have shown that narcotics act the more strongly the more soluble they are in fats and lipoids, thus paving the way for experiments that eventually might afford an explanation of the mechanism of narcosis.

Discussing the theories of narcosis in a Harvey lecture in New York, Verworn, the physiologist, points out[1] that narcosis is a condition of depression with diminished irritability to and conductivity of external stimuli. Similar conditions arise as the result of various forms of toxic action, of suffocation, of fatigue, of extreme heat and cold — all conditions in which there is failure of the oxidative processes. When oxygen is excluded there is failure in the production of energy by the cells and gradual depression of cellular functions. Whatever catabolic processes occur proceed in a non-oxidative manner. In experiments with narcotics Verworn and others have found that when narcotized the spinal cord and the sciatic nerve of frogs are unable to make use of oxygen even when offered freely. Neither do amebas take up oxygen when narcotized. The result of narcosis differs in one way from the effect of exclusion of oxygen, namely, in respect to the rapidity with which the cellular activities are suspended: In narcosis, depression of nervous irritability reaches in a few minutes the degree reached only after two to three hours in an atmosphere of free nitrogen. This is explained as due to the inability of the narcotized tissue to make use of the oxygen present in itself (molecular oxygen). The effect of narcosis, consequently, is that of an acute asphyxia.

How do narcotics prevent living matter from carrying on oxidative processes? A most probable hypothesis in explanation of this question is offered by Verworn, namely, that narcotics, so to speak, paralyze the oxygen-carriers in the living tissues. It might be assumed still further that the oxygen-carriers are lipoidal in nature, which would bring this hypothesis in full harmony with the law of Meyer and Overton. As the cells of the cerebral cortex are the first to lose their functional powers in narcosis, they may be regarded as the most sensitive of the cells to interferences with oxidation. In view of this circumstance it becomes of obvious importance to induce narcosis only to such degree that consciousness and conscious sensation are suppressed. Furthermore, the preferable anesthetic would be one that is eliminated rapidly.

Graham has found that the hemorrhagic diseases of the new-born may be duplicated in animals by the use of chloroform,[2] and he emphasizes the fact that the lesions in these diseases—the fatty changes, the hemorrhages, etc.—are like those caused by lack of oxygen; hence deficiency of oxygen, local, general and selective may be an underlying cause of the hemorrhagic diseases, and it seems likely that in human beings in many instances such deficiency may be chargeable to chloroform. We should remember that the deeper our narcosis the more the oxidative processes are interfered with.

Verworn's interesting discussion and Graham's experiments are of great practical value in that they point out one great danger of narcosis and also the way to avoid it. No doubt further experimentation will determine better than is now known just how narcotics interfere with the oxidation processes and also the more precise nature of the mechanisms of these processes.

## HOUSE-FLIES AND BACTERIA

The ubiquitous house-fly stands convicted as a disseminator of pathogenic bacteria and a carrier of contagion. Ever since the investigation of the spread of typhoid fever in the United States military camps during the Spanish War of 1898, the evidence has been accumulating, until to-day there is no escape from the charges against this tantalizing insect. Every far-reaching probe into sanitary problems is liable to disclose conditions hitherto quite unsuspected; and the indictments already brought against the house-fly during the past few years charge responsibility for a long category of infections, including cholera and various forms of dysentery, diphtheria, erysipelas, contagious ophthalmia, cerebrospinal meningitis, anthrax and possibly small-pox, in addition to typhoid fever.[1]

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[1] Verworn: Bull. Johns Hopkins Hosp., 1912, xxiii, 97.

[2] Graham: Jour. Exper. Med., 1912, xv, 307.

Whether all of these charges will stand in the light of scientific investigation remains to be seen. It is important, not so much in justice to the accused insect as because of the hygienic and prophylactic measures which are dependent thereon, that the questions here raised be authoritatively settled. In the case of the infections of fecal origin, particularly typhoid, the evidence appears to be quite complete.[2] But are we not in danger of distracting attention from much more important factors by blindly encouraging a hyperenthusiasm for a single sanitary propaganda and fixing our hygienic viewpoint at a single center? This type of hysteria is by no means unknown in the history of public questions. It is constantly cropping out in the management of profound political and social problems. Perhaps it was with an appreciation of such tendencies that Dr. Torrey, of the Loomis Laboratory in New York City recently wrote:

"Although the guilt of the house-fly has been clearly established in certain instances as a typhoid-spreader, the relative importance of this vehicle of transmission as compared with the other well-known methods of transfer has been by no means clearly established. What is, perhaps, a timely warning of the danger, as regards the popular mind, of overemphasis being laid on this mode of transmission has recently been voiced by Chapin. He believes that unwarranted faith in the iniquity of these insects may lead to the neglect of the far more serious danger of contact infection, and that a failure of a decrease in the death-rate from typhoid after an enthusiastic antifly campaign would tend to bring discredit on the well-grounded warnings of health officers. 'It is probable,' he concludes, 'that under certain conditions, as in military and civil camps, and in filthy communities without sewerage, insects, especially flies, may be an important factor in the spread of fecal-borne diseases, but there is no evidence that in the average city the house-fly is a factor of great moment in the dissemination of disease.' "[3]

Here, then, is a demand for facts which Dr. Torrey has attempted to supply in some measure. He has examined the bacterial flora of flies caught in the densely populated parts of New York City during a series of months and over a range of weather conditions which might be expected to give suggestive data. Both the bacteria occurring in the intestine and those from the surface of the insects were investigated. The flies examined in April and early in June "were free from fecal bacteria and carried a homogeneous flora of coccal forms." As the summer season advanced high bacterial counts began to appear and also an abrupt change in the character of the bacteria, the cocci giving place in large measure to the bacilli characteristic of fecal matter. The record counts came at the end of the two weeks of excessive heat in July.

Some concrete idea of the number of organisms that a single insect may carry is indicated by the figures 570 to 4,400,000 for the surface contamination, and 16,000 to 28,000,000 for the intestinal bacterial content. Further facts of interest given by Torrey regarding the prevailing types of bacteria indicate that organisms such as the *Streptococcus equinus, fecalis* and *salivarius* group are found in the breeding and feeding places of the house-fly. There were none of the *pyogenes* types. The most important isolations were three cultures of *B. paratyphosus.* Since this is pathogenic for man, the findings cannot be overlooked with indifference. The house-fly is an "undesirable citizen" in any event, so that the war of extermination already begun against it in many quarters deserves encouragement and support.

## THE PRACTICAL EFFICIENCY OF MILK PASTEURIZATION

The pasteurization of milk and cream has come to be one of the routine requisites of certain departments of the food industries. Bacteriologic investigation has furnished an abundance of data to show the efficiency of the process in destroying some of our most dangerous organisms when the necessary temperature conditions are adequately fulfilled. There is no doubt in the minds of laboratory workers regarding the thermal death-point of some of the well-known microorganisms. If milk is heated to 140 F. and held at that temperature for twenty minutes, tubercle, typhoid and diphtheria bacilli will be killed. This statement rests on an established basis.

The safety of the milk consumer depends, not on a reasonably efficient method of bacterial elimination from the product, but on the destruction of every pathogenic organism present. A pasteurizing process may result in a very marked reduction in the total number of bacteria present. The keeping properties of the milk may be enhanced and other advantages gained; but as long as a single pathogenic organism remains to spread infection the foremost purpose of the operation will not be accomplished. Commercial pasteurization is necessarily a technical rather than a laboratory procedure. The question arises whether, under the exigencies of actual practice in dairy plants and creameries it is customary or even possible, with the outfits in current use, to attain the degree of success in the destruction of pathogenic microorganisms which the hygienic considerations demand.

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[1] Purdy: Jour. Roy. San. Inst., 1909, xxx, 496. Hewitt: Quart. Jour. Micr. Sc., 1909, liv, 347.

[2] Chapin: The Sources and Modes of Infection, New York, 1910.

[3] Torrey, J. C.: Numbers and Types of Bacteria Carried by City Flies, Jour. Infect. Dis., 1912, x, 166.

Under the auspices of the Milk and Baby Hygiene Association of Boston, Schorer and Rosenau[1] of the Department of Preventive Medicine and Hygiene at Harvard have addressed themselves to the problems in practical sanitation here involved. They point out that although it is a comparatively simple matter to produce satisfactory pasteurization in a flask or test-tube, physical difficulties arise where it becomes necessary to heat a large volume of milk to a definite temperature and hold it at that temperature for a given period of time. "The difficulties are increased in practice by the fact that milk is a viscid fluid, and by the fact that the milk to be pasteurized varies in temperature as it flows to the heater. When milk is heated rapidly, as seems necessary under commercial conditions, the devices for regulating the temperature are neither sensitive enough nor quick enough to ensure the heating of all the milk to the desired temperature."

There are several methods of pasteurization in current use. The flash method consists in heating the milk to approximately 170 F. by allowing it to flow in a film over heated metal pipes or coils and then chilling it at once. The home pasteurization of milk for infant-feeding is ordinarily accomplished by the bottle method, the containers being immersed in a water-bath and the heating process carried out in that fashion. There are obvious advantages in pasteurizing in the final container, whereby the danger of subsequent contamination is eliminated; but this method is not usually applied on a commercial scale. In practice the holding method prevails. The milk is heated to a temperature between 140 and 155 F., and then placed in a receptacle where it is held at this temperature for from twenty minutes to an hour.

Schorer and Rosenau have made special tests of the holding method under the conditions existing in a large dairy plant. They have ascertained to what extent the emperatures desired are actually attained in the factory manipulation of large volumes of milk; for this is obviously the fundamental consideration for the effective destruction of microorganisms. If the milk is unevenly heated some of the organisms may escape, despite the act that the percentage reduction of the bacteria may be ery large. Their careful temperature measurements nly confirmed the non-uniform heating in the commercial pasteurizers where the heating surface is too imited, the flow too rapid and the holding tanks too mall or too few. In other words the temperatures ttempted are not always actually attained. There were ariations of as much as 40 F.

The results of the investigation deserve study on the art of all interested in pasteurizing milk on a large ale. They show that an automatically controlled pas-urizer may not heat the milk uniformly until it has een running for some time. Where the process is interrupted frequently, therefore, the first runs should always be reheated to prevent the dangers of the earlier irregularities. Schorer and Rosenau believe that the process of pasteurization should not be hurried and that a temperature of 145 F. held for thirty to forty-five minutes would provide a liberal factor of safety; but care should be taken that the temperature does not go above 148 F., in order that the cream line may not be destroyed.

When all is said and done, there remains a human factor which must always be reckoned with. We recall the excusable consternation of the superintendent of a large up-to-date milk bottling establishment on the occasion of an inspection by prominent patrons. In the midst of every modern device for model dairying, a "green" employee was observed placidly shifting a series of bottles of purest milk by inserting his finger into the spotless containers and lifting them one by one by the neck. Despite most elaborate precautions it is not always easy to render every part of a commercial plant fool-proof. Indeed, the limit of successful operation in more than one line of endeavor depends ultimately on the relative availability of human intelligence and the individual conscience.

## THE AMERICAN MEDICAL DIRECTORY

As the third edition of the American Medical Directory has just come from the press, a word regarding it and the reasons for its publication may not be out of place.

In 1901 The Journal commenced gathering and publishing facts and statistics regarding medical colleges and medical graduates in the United States. Later the results of state examining and licensing boards were obtained and published. It was but a step further to secure the names of and other data regarding the graduates and the licensees. This was done and, in a word, was the beginning — the foundation — of one of the important and far-reaching activities of the American Medical Association. When the Council on Medical Education was established in 1905, with a paid executive secretary, this work was thoroughly systematized and continued.

Now, through the cooperation of the various licensing boards, the Council obtains the names of those who pass the examinations and are licensed in the various states. With or without similar cooperation on the part of the medical colleges, a list of those graduating from the various schools of the country is obtained each year. Further, at not a little expense and persistent effort, the Directory Department, in connection with the Educational Department, has obtained a list of the graduates of practically all the schools either now existent or defunct. There have also been secured from the official records the names of those licensed in every state and territory since 1880. In each instance all essential data regarding the graduate or licensee were secured as far as possible. Based on all this information, four systems of card indexing have been worked out: (1) an index of licensees, the cards arranged alphabetically under states; (2) an index of graduates, arranged alphabetically; (3) a geographical index, including practically all the names on the two preceding lists, arranged under states and cities, as they appear in the directory; and (4) the most important of all — a biographical index containing all the basic information on the other three sets of cards, together with other data regarding positions, society affiliations, etc. The collection of this mass of original data has been a gigantic task and its value — especially for the future—cannot be appreciated without personal observation of what it means. Now that these data are practically complete, they can and will be easily kept up to date.

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[1] Schorer and Rosenau: Tests of the Efficiency of Pasteurization of Milk Under Practical Conditions, Jour. Med. Research, 12, xxvi, 127.

In order that all these data might be made available and placed where the information would do the most good; one more step was necessary: the publication of the American Medical Directory, the third edition of which,[1] as already mentioned, has just been issued. It contains official and reliable information regarding over 147.000 physicians in the United States, its dependencies and Canada. The items regarding each physician include, besides the school, date of graduation and whether or not the physician is licensed, with the date of licensure, the following information, when obtainable: year of birth, preliminary education, membership in county, state, national and special societies, teaching and other positions. All this is given regarding non-subscribers to the Directory, as well as subscribers; all are treated alike.

One of the new features is a list of physicians whose present addresses are unknown. It is known, for instance, that a certain man was in practice at a given place. He is no longer there; no record of his death has reached us; he is "lost" so far as the Association's information bureau is concerned. The names of such men as these are placed on the list of physicians with unknown addresses.

From the moment that the first part of the Directory went to press until the last forms were printed, a large number of changes and deaths occurred. These are included at the end of the book in the form of addenda, thus bringing the matter up to almost the last moment.

Those interested in medical education will appreciate the complete historical account of medical colleges now existing, or that have existed, in the United States and Canada.

Another new feature that will be appreciated is a list of members, classified according to specialties, of the important special medical societies of the country. This list is arranged alphabetically by specialties and by states, thus giving the opportunity of looking up those following a special line in any particular locality. Under each state are found medical practice acts, licensing, examining and health boards, officers of state and county medical societies, city and county health officers, state institutions, hospitals, sanatoriums and homes, with other information relating to medicine in its broadest meaning.

In preparing the present issue, more than twenty thousand names, including those of recent graduates, have been added. More than thirty thousand membership changes have been noted; duplication has been avoided by a system of cross-references; "not in practice" indicates graduate physicians who have retired, whether to engage in teaching, in special research, or in business. The designation "dentist," "druggist," etc., after a name indicates a medical graduate who practices the profession named.

To reduce the size of the volume and make it more convenient to handle, a superior quality of light-weight imported paper has been used. We believe that the book will be regarded as a credit to the American Medical Association from every point of view. It is unnecessary to say that it is not a commercial enterprise; it is merely one piece of work which the Association is doing for the uplift of the medical profession and medicine in general in the United States.

Our thanks and appreciation are due to the officers of the various medical examining and licensing boards, of medical colleges, of the state and county medical societies and to others whose cooperation has made it possible to issue such a creditable register of the medical profession of this country.

## THE PATHWAYS OF INHALED DUST

To the untutored individual the hygienic aspects of the dust problem present themselves primarily as dangers from the microorganisms which are carried in the air. He rarely considers, if indeed he even suspects, the other equally subtle ways in which an atmosphere laden with minute suspended particles may become inimical to health.

There are many industries and occupations attended with the necessity of breathing air more or less contaminated with dust, so that the respiratory problems suggested by this fact belong to the important considerations of modern industrial hygiene. The actual noxious significance of dust varies with its character. Bacterial dust obviously may act by inducing infectious processes such as the conjunctivitis or catarrhal inflammations observed in rag-sorters. Other types of dust may assume a purely irritant rôle because of the physical form and texture of the particles; while others again may exert a toxic effect by virtue of their chemical qualities. Particularly injurious are those forms of dust in which the particles are irregular and pointed in form. Yet it i impossible to explain well-known peculiarities in th relative harmfulness of different kinds of dust on thi

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1. See advertising page 52

basis alone. It is said, for instance, that the atmosphere about working places where sandstone is being dressed is decidedly more harmful than that in the vicinity of marble and granite shops or lime workers. Among the forms of chemical toxicity, industrial poisonings due to inhalations of dust laden with lead, arsenic, zinc, phosphorus or mercury are familiar. Organic compounds like anilin may also serve as the dangerous contamination of the atmosphere. Indeed, it is not commonly recognized that many familiar substances, such as the salt derived from ocean spray, may be carried long distances in the air.

Naturally enough the respiratory tract is taken to be the chief path of invasion for the dust we breathe in. The pathology of the inhalation diseases — anthracosis, siderosis, chalicosis — bears testimony to the burdens which may thus be put on the lungs. In considering palliative measures and preventive devices to be applied in industrial work it has become necessary to learn something more exact regarding the travels of inhaled dust in the organism as well as the actual quantities which represent dangerous or insanitary limits. Investigations which the Würzburg hygienist, Professor K. B. Lehmann,[1] has conducted along these lines with his pupils have furnished some unexpected facts. They have demonstrated that the great bulk of the inspired dust finds its way into the stomach, not into the lungs as has been confidently assumed. Obviously the dust is regularly caught by the nasal and pharyngeal mucosa and the dust laden secretion then swallowed. All of the inhaled dust was retained by the oral or nasal passage, yet less than a quarter of it entered the lungs at the est.

In the case of insoluble particles the gastro-intestinal ath may furnish a most satisfactory channel for the ubsequent elimination of the dust from the body; but oluble dust finds a peculiarly favorable chance for bsorption along the same route, and the opportunity or chronic intoxications is thus easily established. In ny event, the lungs escape the major part of the initial rritation.

In view of the current discussion of the rôle of finely ivided fluid particles in the respired atmosphere it may e noted that such "sprays" were found to be completely etained or absorbed in the respiratory tract. Chemical ompounds introduced in this way disappeared entirely ithin the organism, not a trace being returned with the orresponding expired air. The only barrier to a comlete retention of fluid or solid particles is found in the ndency to sneeze under the irritation of foreign parcles; yet this reflex is soon lost with a continuance of e inhalation.

# Current Comment

## CAN THE SPERMATOZOON DEVELOP OUTSIDE THE EGG?

The well-known investigations of Jacques Loeb on artificial parthenogenesis have demonstrated that eggs which cannot develop naturally without sperm can, by various artificial procedures, be caused to develop without being fertilized. His experiments have given rise to many interesting speculations, some bordering on the fanciful, regarding the nature of the fertilization process. The problem is, of course, one of fundamental importance. We need only recall the questions of heredity here at issue. But what of the spermatozoon? Can this in turn be made to "develop" without the egg, or is it necessary for the male element to come into contact with the egg in order to undergo the first phases of its normal evolution? Professor Loeb and Dr. Bancroft[1] have followed this inquiry on the fowl sperm removed aseptically from the lower portion of the vas deferens. Histologic changes of characteristic type were noted when cultures, so to speak, were made in yolk and egg-white. The spermatozoon undergoes a transformation into a nucleus. Whether it can undergo mitosis outside of the ovum remains to be seen.

## SALT AIR, SUNSHINE AND CLIMATE

The significance of climate as a factor of therapeutic importance is generally conceded. Medical climatology cannot be said, however, as yet to rest on anything more than a crude empirical basis. Altitude, sunshine, salt air, ocean breezes and forest hills are expressions with which the practitioner now and then attempts to conjure his jaded patients. Not infrequently the spell is effective, bringing with it a renewal of vigor and restoration of health. Can objective causes for climatic influences be discovered? Are there detectable changes in physiologic activities which will explain the frequently observed beneficial effects of an ocean voyage, or a stay at the seaside? Professors Zuntz of Berlin and Durig of Vienna—both well-known European experts in the physiology of respiration and metabolism, who have devoted much energy to the study of the effects of high altitudes on man—have given some consideration to these questions.[2] In the course of an ocean voyage from Germany to the Canary Islands and return they made careful observations on various functions, such as pulse-rate, body temperature, respiratory exchange, etc. Despite the invigorating nature of the trip, these fundamental bodily features were not found altered in any detectable uniform degree. This corresponds with what has been observed in comparable investigations at seaside resorts[3] where the travel factor is excluded but the atmospheric conditions are similar in many ways. Neither such conditions, nor the tropics, nor yet polar climates effect any markedly detectable alteration in these physiologic functions. It is thus apparent that the organism strives tenaciously in the midst of the most varied climatic conditions to maintain unaltered those processes on which the vital nutritive exchanges hinge. In any event it has been impossible to demonstrate changes that might be considered indicative of a stimulating effect of ocean climates. A similar outcome has attended the careful experimental investigation of the effect of insolation. An abundance of direct sunlight, especially in some of the popular health resorts, has always claimed a due share of the credit ascribed to the invigorating climate. We read of the days of balmy sunshine. Careful scientific observations have not disclosed any palpable reactions indicative of heightened metabolism.[3] Notwithstanding all of these negative findings, however, no clinical observer can deny the therapeutic usefulness of a change of climate, despite the obscurity surrounding the secret of its influence on the individual.

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[1] Saito: Exper. Untersuchungen über die quantitative Absorpon von Staub durch Tiere bei genau bekanntem Staubgehalt der uft, Arch. f. Hyg., 1912, lxxv, 134; Lehmann, Saito and Gfrörer: eber die quantitative Absorption von Staub aus der Luft durch den enschen, ibid, p. 152; Lehmann, Saito and Majima: Ueber die antitative Absorption von Flüssigkeitstropfen als Grundlage von r Lehre der Tröpfchenintoxikation, ibid., p. 160.

[1] Loeb, J., and Bancroft, F. W.: Can the Spermatozoon Develop Outside the Egg? Jour. Exper. Zool., 1912, xi, 381.

[1] Durig, A., and Zuntz, N.: Zur physiologische Wirkung des Seeklimas, Biochem. Zeitschr., 1912, xxxix, 422.

[2] Loewy, Müller, Cronheim and Bornstein: Einfluss des Seeklimas auf den Menschen, Ztschr. f. exper. Pathol. u. Therap., 1910, vii, Heft 3.

## HABITINA PROMOTERS RECEIVE WELL-DESERVED PUNISHMENT

About two years ago,[1] the attention of our readers was called to the product Habitina. Sold by the Delta Chemical Company, St. Louis, Habitina was advertised as a cure for the morphin habit. Any man, woman or child who wrote for it was sent a sample of Habitina containing eight grains of morphin sulphate and four grains of heroin hydrochlorid. Commenting on this matter, THE JOURNAL said:[2]

> "There is not a reputable drug-store in the United States that would dare to give a layman eight grains of morphin on no other authority than his simple request. Yet the human vultures that carry on this body- and mind-destroying traffic in 'drug cures' are permitted under our present laws—or lack of laws—to put into the hands of the ignorant or the criminal, for the mere asking, the most dangerous and treacherous of poisons."

No longer does this criticism apply. R. C. Prewitt, M.D., and Ryland C. Bruce, who constitute the Delta Chemical Company, were on April 30, 1912, each fined $2,000 and sentenced to five years' imprisonment at hard labor in the United States Penitentiary at Leavenworth, Kan., having been found guilty of sending poison through the mails and of using the mails for fraudulent purposes. The details of the villainous business in which Bruce and Prewitt were engaged are of such interest and importance to the public and to the medical profession that THE JOURNAL will, in an early issue, quote some of the testimony that was given at the trial. For the present, it is sufficient to record the punishment meted out to Bruce and Prewitt and to express appreciation of the splendid work done by Assistant United States Attorney Charles H. Daues and Post-Office Inspector F. W. Reuter in preparing and presenting the case to the courts, and to congratulate the public that it has in United States Judge D. P. Dyer a jurist who, by imposing the maximum penalty on Bruce and Prewitt, has done much to safeguard the public health and to inspire confidence in the court's protective powers.

## MEN AND RELIGION—AND SANITATION

Enlightened public opinion is the most potent force toward better public health and sanitation. Physicians will succeed in their campaign for prevention of disease in proportion to the understanding of the value of health measures by the public and its cooperation to secure them. We recently commented[1] on the desirability of more cooperation between physicians and churches in public health education. The Men and Religion Forward Movement, which has caused a nation-wide sensation, has not restricted its activities to purely religious matters. Various social problems have been attacked; for example, a careful analysis of conditions in various cities has resulted in recommendations for improved sewerage and quarantine systems, protection of milk-supply, organization of health departments, better opportunities for harmless recreation, improved garbage collection, etc. In many cities excellent results followed the work. The fundamental basis was a survey of actual conditions, that is, the tabulation of all the ascertainable facts in the case before taking action. We are merely touching on the medical phases of this movement. Its chief work, of course, was religious, but the movement seemed to attack the human problem in all its ramifications — spiritual, social, physical — and to recommend improvements wherever it was thought wise. It is evident that the leaven of public education on health conditions is working. Great improvements in the sanitation and hygiene of the American people are due in short order as soon as the public is awakened to the possibilities.

## INTERNATIONAL CONGRESS ON HYGIENE AND DEMOGRAPHY

Forty-two states and twenty-seven foreign governments have accepted the invitation to participate in the International Congress on Hygiene and Demography which meets in Washington next September. In calling attention to the interesting program, the committee mentions the extreme importance of the congress to our country, in that among the subjects discussed will be the extension of our system of reporting vital statistics, the prevention of infant mortality, the sanitary control of food-supplies, school and industrial hygiene, typhoid and hookworm, the cure and prevention of tropical diseases, and federal, state and municipal organization for the preservation of public health. This is the first congress of the kind to be held in the United States and attention is directed to at least one distinctive and beneficial result to the country in which each of the previous congresses was held. Important reforms in hospital sanitation followed the third congress, held in Paris in 1878. This was the chief subject of discussion at that congress. From the fourth congress, which met at Turin, dates the introduction of municipal hygienic measures into Italy, and the decline in the death-rate of Italian cities. The foundation of the federal bureau of health of Switzerland followed the fifth congress, held in Geneva in 1882. Hygienic reforms were inaugurated in the Dutch colonies following the sixth congress, held at The

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[3] Durig, A., Schrötter, H. v., and Zuntz, N.: Ueber die Wirkung intensiver Belichtung auf den Gaswechsel und die Atemmechanik. Biochem. Ztschr., 1912, xxxix, 496.

[1] THE JOURNAL A. M. A., March 12, 1910, p. 880; see also p. 869.

[2] March 12, 1910, p. 889

[1] THE JOURNAL, Queries and Minor Notes, "Church Dispensary," March 16, 1912, p. 804.

Hague in 1884. The complete transformation of hygiene and housing in the tenement districts of Vienna followed the seventh congress, held in that city in 1887. The ninth congress, held in London in 1891, was the starting-point for legislation for the health of wage-earners in England, in which respect England still leads other countries. The fifteenth congress comes at a time when public interest in all hygienic and sanitary matters is more wide-spread than ever, and with more definite ideas to work on concerning the origin and transmission of diseases, it cannot fail to have most far-reaching and important results in furthering all matters of public health. Previous congresses have been partially supported by the governments under whose auspices they met, and by private subscriptions and memberships. The Congress of the United States appropriated $20,000 for the preliminary work and has now provided $40,000 additional; $25,000 has already been raised by private subscription, but the committee now appeals for an additional sum of $50,000 to be raised from this source. The unfortunate failure of the United States to participate in the highly important hygienic exhibition at Dresden in 1911 should spur the authorities and citizens of the United States to provide amply for the complete success of the fifteenth congress and its accompanying exhibit.

## HAVE YOU WRITTEN TO YOUR SENATOR?

We print this week[1] an extract from the *Congressional Record,* showing the desperate efforts being made by the opponents of health legislation to confuse the real issue and to create an impression, in the senatorial mind, of intense popular opposition to the Owen bill. All the usual political devices have been used. The appeal to religious and sectarian prejudices, the hint of awful conspiracies against the people, the garbled quotation, the playing on the ignorance of the public, the twisting of definitions, the resort to popular catchwords, the use of the present feeling against "trusts," the parrot-like repetition of disproved and discredited charges — all these tricks of the political manipulator have been used. A considerable number of well-meaning but uninformed persons have been deceived by all this clamor, and have yielded to the common American instinct to sign any petition which may be presented to them. As Senator Owen says, the inspired character of such "appeals" is well known to all who have followed the fight for health egislation in the past two years. Yet to the average ongressman such communications are not without effect; specially when not counteracted by expressions of conrary opinion. These carefully prepared and planned "petitions," instigated by the organization which has led he opposition, should be nullified. Quality and not uantity, however, should be the aim. If every reader of THE JOURNAL will write his senator, setting forth his iews on the Owen bill, and will secure similar action on he part of the ministers, lawyers, school teachers, club women and business men of his city, the effect on the enatorial mind cannot fail to be illuminating. Copies f the report of the senate committee containing the text f the bill can be obtained by writing to the American Medical Association. The present battle is one between intelligence and ignorance. Will you see that the influence of the educated, intelligent people of your town is exerted on the side of progress and health?

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[1] Medical Economics, page 1467.

# *Medical News*

### CONNECTICUT

**Dispensary Needs.**—The Hartford Dispensary announces a deficit of $900 and makes an urgent plea for subscriptions to wipe out this indebtedness.

**Hospital Dedicated.**—The Cyril and Julia C. Johnson Memorial Hospital, Stafford Springs, has been formally dedicated. The hospital has cost $75,000 and will accommodate thirty-five patients. It has also an endowment fund of $200,000.

**Library for Medical Society.**—The Hartford Medical Society has practically decided on plans for a $10,000 addition to the Hunt Memorial Building, to be used for library purposes. Plans have also been outlined for an amphitheater, to cost about $15,000.

### ILLINOIS

**New Officers.**—Central Illinois Medical Society, at Pana, April 30: president, Dr. S. E. Munson, Springfield; secretary, Dr. Walter Burgess, Pana.

**St. John's an Open Hospital.**—On April 29, St. John's Hospital, Springfield, ceased to have a regular medical staff, but became an open hospital, at which all regular practitioners will be admitted. The medical staff of the hospital voluntarily resigned, April 27, in order to bring about this new condition of affairs.

**Personal.**—Dr. W. S. Howell, Winnebago, has suffered a nervous breakdown and is under treatment in a sanatorium at Rockford.——Dr. W. H. Smith, Godfrey, who has been seriously ill with septicemia due to an operation wound, is reported to be securely convalescent.——Dr. John H. Rice, Quincy, has returned from Europe.

**For Epileptic Home.**—The board of county commissioners of Cook County has appointed a committee, which includes Dr. George F. Butler, county physician, and Dr. Stephen R. Pietrowicz, superintendent of the Dunning Institutions, to confer with the officials of Chicago, with a view of obtaining their cooperation in the construction and maintenance of an institution for epileptic children of the city and county.

**Work of the Coroner's Office.**—The coroner of Cook County has recently issued two circular letters to physicians. The first deals with criminal abortion, in which the doctor is asked to notify the coroner's office while the patient is still conscious, but when death is impending, or, when on account of the patient's condition this notification is inexpedient, to secure a needed ante-mortem declaration on the form prescribed; or if in doubt as to what action to pursue, to advise with the chairman of the Criminal Abortion Committee of the Chicago Medical Society, who will safeguard the interests of the physician inquiring. A second circular letter deals with the desirability of preventing the development of tetanus by the use of antitetanic serum. The records of the office show that from 1906 to 1911, inclusive, 157 verdicts of death from lockjaw were returned from the coroner's juries; two-thirds of these persons were treated in hospitals and one-third of them suffered from contused and lacerated wounds. The coroner urges the early and free use of antitetanic serum, to the end that mortality from tetanus may be reduced.

### Chicago

**Restraining Order Issued.**—The scheduled opening of the Municipal Tuberculosis Sanatorium on West Twenty-Second Street has been postponed on account of an issuance of an injunction by Judge McDonald, April 30, restraining the opening and operation of the hospital.

**Personal.**—Dr. George J. Spencer, city physician, is ill with pneumonia in St. Ann's Hospital.——Dr. Liston H. Montgomery was elected secretary of the Ohio Society of Chicago at its meeting, May 4.——Dr. D. A. Horovitz sailed for Europe, April 30.——Dr. Jacob Frank has returned from a tour of South America.

**New Site for Crerar Library.**—The John Crerar Library has purchased land at the northwest corner of North Michigan Avenue and East Randolph Street, to be used as a site for its new home. The new building will be delayed until the expiration or cancelation of leases of portions of the building now on the site. The property has a frontage of 135 feet on Michigan Avenue and 130 feet on Randolph Street.

**Discipline Prevents Panic.**—The practice of nurses, interns and orderlies in fire-drills kept more than two hundred patients at the Wesley Hospital from panic, May 3. The fire broke out on the upper floor of the institution. The nurses, as is provided in the fire drill, went directly to the beds, the orderlies followed to assist, while the interns went to the seat of the fire and used the hospital's apparatus to keep the flames under control until the firemen arrived.

## INDIANA

**Antituberculosis Association Organized.**—At a meeting in Brazil, April 25, presided over by Dr. Henry Moore, Indianapolis, a Clay County Auxiliary Association of the Indiana Association for the Study and Prevention of Tuberculosis was organized and county and township officials were elected.

**Board Must Authorize Practice Under Changed Name.**—The State Board of Medical Registration and Examination, at its meeting April 24, passed resolutions providing that a woman physician in Indiana who has been licensed under her maiden name may not legally practice under the name of her husband until after taking the matter up with the board and having the original license modified to correspond with the new name.

**Personal.**—Dr. John W. Sluss, Indianapolis, candidate for a position on the City Board of Health, has announced the withdrawal of his name.——Dr. A. P. Buchman, Fort Wayne, will retire and move to Des Moines, Ia., and make his home with his daughter.——Drs. J. H. Ford and Moses Thorner have been appointed members of the Indianapolis Board of Health, vice Drs. Thomas B. Noble and Edmund D. Clark, resigned.——Dr. F. T. O'Leary, Logansport, sailed for Europe, May 8.——Dr. H. H. Elliott, Glenwood, has sold his home and announces his intention of retiring from practice.

## MASSACHUSETTS

**Operating Room Opened.**—The new operating room for the Free Hospital for Women, Brookline, was formally opened May 2. Addresses were made by President Lowell of Harvard, Drs. William H. Baker, Charles M. Green and Maurice H. Richardson, all of Boston.

**Cutter Lecture.**—The second Cutter Lecture on Preventive Medicine was given at the Harvard Medical School, May 9, by Surgeon John F. Anderson, U. S. P. H. and M.-H. Service, Director of the Hygienic Laboratory, on "Some Recent Advances in Our Knowledge of Certain Infectious Diseases."

**To Check Infant Mortality.**—The health board and mayor of Boston have formulated plans for conducting a systematic crusade to check infant mortality in Boston. Three nurses have been transferred from the contagious disease work to join with two other nurses in visiting the homes of infants, to instruct and advise mothers regarding bottle feeding.

**Personal.**—Drs. Henry A. Christian and Thomas F. Leen, Boston, and Dr. George F. O'Day, Worcester, sailed for Europe, April 30.——Dr. Samuel A. Green, formerly mayor of Boston, who was knocked down by a horse about a month ago, is reported to be critically ill in the City Hospital.——Dr. Francis J. Keany has been reappointed a trustee of the Boston City Hospital.

**New Officers.**—Berkshire District Medical Society, at Pittsfield, April 25: president, Dr. I. S. F. Dodd; secretary, Dr. O. L. Bartlett.——Worcester North District Medical Society, at Fitchburg, April 23: president, Dr. Edward J. Tully; secretary, Dr. Curtis H. Jennings, both of Fitchburg.——Brockton Medical Society, April 11: president, Dr. R. A. Elliott, Avon; secretary, Dr. Harrison A. Chase, Brockton.——Springfield Academy of Medicine, April 9: president, Dr. Ralph H. Seelye; secretary, Dr. John M. Birnie.

## MINNESOTA

**Scarlet Fever in Rochester.**—About sixty cases of scarlet fever are said to have been reported at Rochester, and it is said that three or four times that number exist, but have not been reported. The disease is of a mild type. Dr. Charles H. Mayo has been appointed health officer of the city, vice Dr. A. O. Adams, resigned.

**To Investigate Diseases of Indians.**—Dr. Taliaferro Clark, U. S. P. H. and M.-H. Service, has been detailed to go to Minnesota to cooperate with the state health officials in their investigations into the prevalence of trachoma and other communicable diseases among the Indians on state reservations, and to study the means of preventing the spread of these diseases to white settlements.

**Personal.**—Dr. H. A. Buell has resigned from the staff of the Shipman Hospital, Ely, to locate at International Falls.——Major Thomas C. Clark, Stillwater, for many years a member of the Medical Corps, N. G., Minn., has resigned.——Dr. W. L. Beebe, St. Cloud, has been appointed a member of the state board of veterinary examiners.——Dr. John Butler, Jr., Minneapolis, has returned from Europe.

**Sanatorium Transferred.**—The St. Paul Antituberculosis Society at its annual meeting, April 15, voted to offer the Cuenca Tuberculosis Sanatorium, Bass Lake, to the county board of control, on condition that it be maintained. At a special meeting of the board of commissioners of Ramsey County, April 29, the offer was accepted and the institution came under the management of the city and county board of control, May 1. The property is valued at $17,000 and was formerly supported from the funds of the Wilder charity.

## MISSOURI

**New Medical Society.**—At a meeting held at the Baptist Hospital, Kansas City, recently, the East Side Medical Association was organized.

**Memorial Hospital Planned.**—Plans are being formulated for the establishment of a hospital for Mexico and Audrain County, in memory of the late Dr. E. S. Cave, Mexico.

**Honors Former Dean.**—The Boone County Medical Society gave a dinner in Columbia, April 25, in honor of Dr. Andrew Walker McAlester, formerly professor of surgery and dean of the School of Medicine in the University of Missouri.

**Staff for New Sanatorium.**—At a meeting of the board of trustees of the Ozark Sanatorium Association, Springfield, the following staff appointments were announced: surgeon-in-chief, Dr. Benjamin F. Fortner; assistant surgeon and pathologist, Dr. George B. Lemmon; internal medicine, Dr. Frank B. Fuson. Other appointments will follow.

**The Noyes Bequest.**—A meeting of physicians, clergymen and others interested in the proposed bond issue to erect a city hospital for St. Joseph was held at the office of Dr. Charles G. Geiger recently, to consider the project as affected by the Charles W. Noyes bequest. According to the will, $275,000 is placed in trust to build, equip and maintain a hospital in St. Joseph for the benefit of the deserving poor. In the opinion of some, this will take the place of a city hospital.

**Personal.**—Dr. T. A. Coffelt has been elected president of the board of directors of the Springfield Hospital Association, vice Dr. N. F. Terry, deceased, and Dr. C. E. Fulton was appointed Dr. Terry's successor as chief surgeon.——Dr. George M. Boteler has been appointed city physician of St. Joseph.——Dr. J. J. Bansbach has been appointed a member of the Board of Health of St. Joseph, vice Dr. S. F. Kessler, deceased.——Dr. T. N. Bogart, Excelsior Springs, will sail for Europe, June 6.——Dr. C. F. Shumate, Urbana, fractured his left leg in a runaway accident near Cotulla, Tex., April 13.——Dr. W. F. Smith, Springfield, has been appointed division surgeon of the Iron Mountain System of Arkansas, vice Dr. S. S. Stewart, Little Rock, Ark., resigned.——Dr. W. P. Rowland and family, Bevier, have started for Europe.

### St. Louis

**Hospital Addition.**—A permit has been applied for to build an addition to the new Barnes Hospital, three stories in height, 158 by 44 feet, to cost $80,000 and to be used for private patients.

**Appointments to Hospital Board.**—Drs. H. Wheeler Bond and Martin F. Engman have been appointed and Drs. W John Harris and J. B. Shapleigh reappointed members of the Hospital Board.

**War on Mosquitoes.**—Health Commissioner Starkloff estimates that to make an effective beginning in a campaign t exterminate mosquitoes, an expenditure of $25,000 or $30,00 for disinfecting material will be necessary.

## NEW YORK

**Offers Hospital to Methodists.**—Dr. T. L. Deavor and othe physicians have offered to build, equip and maintain a larg hospital in Syracuse, to cost $100,000, and to turn it ove without cost to the Women's Home Missionary Society of th Methodist Episcopal Church.

**Society to Select Health Officers.**—The Schenectady Count Medical Society at its meeting, April 22, heartily concurre with the proposal of the mayor to name a health officer to succeed Dr. William P. Faust, recently resigned, from a list of five to be submitted by the society.

**Personal.**—Dr. John M. Griffin of Warrensburg sailed for Europe on April 24.——Dr. E. J. Kibbe, Saranac Lake, has been appointed physician in charge of the Vermont Sanitarium for Incipient Tuberculosis, Pittsford.——Dr. John A. Lane is reported to be critically ill at his home in Syracuse.

**To Announce Fees in Advance.**—At the semi-annual meeting of the Suffolk County Medical Society at Southampton, a resolution offered by Dr. Frank Overton, Patchogue, setting forth that the society recommend that, in every case of consultation or operation, the family physician shall agree with the consultant or surgeon as to the amount of money to be charged and shall state the charge to the patient before arranging for the consultation or operation, was discussed and will be held over until the next meeting.

**Spends Millions for Charity.**—The New York State Board of Charities has issued a statement showing that the public and private charities in the state which are subject to the visitation of the board cost the state $24,000,000 annually and that this cost is increasing at the rate of $1,000,000 each year. Approximately 2 per cent. of the state's population receives institutional support, which another 2 per cent. is given outdoor relief. There are about 30,000 feeble-minded persons in the state, 4,000 of whom are sequestered a part of the time, while 26,000 are at liberty.

**New York's Plans for Hygiene Congress.**—The State of New York is preparing to participate to the fullest extent in the Fifteenth International Congress on Hygiene and Demography next fall. Governor Dix has extended the President's invitation to some fifty cities which are all expected to send official delegates. In addition, the following were appointed by the governor as a committee to assist in planning the state's participation: Dr. Henry L. K. Shaw, Albany, Chairman; Dr. Joseph D. Bryant, New York City; Mr. Edward T. Devine, New York City; Dr. Eugene H. Porter, Albany; Dr. Luther H. Gulick, New York City. The sum of $10,000 was appropriated by the legislature to enable this committee properly to collect exhibits from the state under the charge of Mr. Charles F. Storey. It is expected, also, that many of the prominent institutions of learning and research in the state, including Columbia University, University of New York, College of the City of New York, Rockefeller Institute for Medical Research, Russell Sage Foundation and the National Civic Federation, will be represented at the congress. The American Association for Labor Legislation is preparing an interesting and comprehensive exhibit on occupational diseases.

### New York City

**Personal.**—Dr. W. Martin, Dr. and Mrs. Anton Mayer and Dr. E. B. Bronson sailed for Europe on April 27.——Dr. Henry W. Frauenthal, his bride, and his brother were among the survivors of the *Titanic* disaster who were brought to New York on the *Carpathia*.

**To Enlarge Hospital.**—The Missionary Sisters of the Sacred Heart who for twenty years have maintained the Columbus Hospital on East Twentieth Street need a new and larger building. The hospital will not move but will repair its present building and add a new wing.

**Memorial for Titanic's Doctor.**—A committee has been appointed to take charge of a proposed memorial to Dr. William Francis Norman O'Loughlin, ship's surgeon on the *Titanic*. This memorial will take the form of an endowment for the pathologic laboratory at St. Vincent's Hospital.

**New Hospital Building.**—The Beth Israel Hospital Associa-ion has filed plans for a new hospital building which will e built on the northwest corner of Lexington Avenue and ne Hundred and Thirteenth Street. It will be eight stories n height and have a frontage of 60.11 feet on the avenue and 3.10 feet on the street.

**Polyclinic has New Ambulance District.**—The Polyclinic lospital which moved into its new building May 1 has been iven a new ambulance district bounded by Forty-Second treet, Sixth Avenue, Ninty-Second Street and North River. wo new gasoline automobile ambulances will cover the disrict and a third has been ordered.

**Trachoma Pupils Segregated.**—Children with infectious eye iseases are to be segregated in special classes in Public chool 97. These children have been excluded from the chools, but it is found that they are continually on the treets growing up without any training and are at the same ime a menace to other children.

**Name Hospital Ward for Titanic Victim.**—The directors of the Home of the Daughters of Jacob have named the hospital ward the Mrs. Ida Straus ward, in memory of Mrs. Straus, who preferred to go down with the *Titanic* rather than to be separated from her husband.

**Maternity Hospital for the Bronx.**—A movement is on foot to establish a free maternity for the Bronx in the congested tenement district as the present dispensary maintained by the Jewish Maternity Hospital is entirely inadequate for present needs. Several large donations have been announced and a committee has been appointed to canvass the Bronx for donations.

**Resolution Regarding Gathering Ashes and Garbage.**—Dr. Linsly R. Williams, at a stated meeting of the Medical Society of the County of New York, held April 22, presented a resolution from the Public Health Committee, setting forth that as the present method of gathering ashes and garbage is unsanitary and obsolete, the society recommends to the proper municipal authorities that a proper study be made by them to ascertain a more sanitary method for the removal of ashes and garbage.

**Saturday and Sunday Hospital Fund.**—The Hospital Saturday and Sunday Association had apportioned $95,000, the largest collection yet made by the association, among forty-four non-municipal hospitals. The division was based on the number of days of free treatment given the poor regardless of race or creed for which the hospital had received no payment either from the city or the patient. Some of the larger apportionments were: Mount Sinai, $7,789; St. Luke's, $6,821; German, $4,677; Roosevelt, $3,863; Post-Graduate, $3,376; Lincoln, $3,181; Lebanon, $3,045; Beth Israel, $2,597; New York Orthopedic, $5,787; Ruptured and Crippled, $3,589; St. Mary's Free, $3,757; Misericordia, $2,927; Lying-In, $2,585; Montefiore Home, $9,500; Home for Incurables, $2,518; Flower, $2,000. A number of other institutions received sums of $1,000 or less.

## NORTH DAKOTA

**Medical Inspection Started.**—Medical inspection of rural schools has been commenced in the southern half of Morton County.

**Personal.**—Dr. A. A. Westeen has been elected health officer of Grand Forks.——Dr. J. W. Stribling, New England, has been appointed physician of Billings County.

**State Society Meeting.**—The North Dakota State Medical Association will hold its annual meeting in Valley City, May 14-15, under the presidency of Dr. C. E. Spicer, Litchville.

**State Sanatorium.**—The work of construction of the North Dakota State Tuberculosis Sanatorium at Dunseith has been commenced and the institution will be ready to receive patients in the early fall.

## OKLAHOMA

**New Officers.**—Clinical Society of St. Anthony's Hospital, Oklahoma City; president, Dr. J. F. Kuhn; secretary-treasurer, Dr. L. J. Moorman.

**Personal.**—Dr. F. G. Wilkiemeyer has been appointed assistant city physician of Muskogee, vice Dr. R. R. Smith, resigned.——Dr. George B. Colby, Gracemont, was thrown from his buggy in a runaway accident, April 15, seriously injuring his spine.——Dr. T. A. Buchanan, Oklahoma City, while cranking his automobile, fractured his arm.

## PENNSYLVANIA

**Change in State Hospital.**—During the coming year a sewage disposal plant and an incinerating plant capable of handling all garbage waste will be installed at the State Hospital for the Insane, North Warren.

**County Society Periodical.**—The Chester County Medical Society has commenced the publication of a bi-monthly journal, known as *The Medical Report*. Dr. William T. Sharpless, West Chester, is editor-in-chief.

**Tuberculosis Car.**—For the protection of passengers riding on the Cumberland Valley Railroad, a tuberculosis car has been attached to the noon train, which carries consumptive patients to the State Sanatorium at Mount Alto. After each journey the car is returned to the shops at Chambersburg and thoroughly disinfected.

**Personal.**—Dr. W. F. Morris, Scranton, is seriously ill as the result of an infected wound of the jaw.——Dr. C. M. Rosenberger, professor of bacteriology and hygiene in Jefferson Medical College, was the guest of honor at a banquet given by the Blair County Alumni of that institution at Altoona, April 23. A tentative county alumni association was formed.

**Report of State Railroad Commission.**—The report of the State Railroad Commission for the months of January, February and March show that 285 persons, including 135 employees, 3 passengers, 116 trespassers and 31 others were killed on the steam railroads of the state. This shows an increase of 17 over the number killed in the same period of 1911. The number injured reached 2,577, including 2,174 employees, 229 passengers, 107 trespassers and 67 others. The number injured shows an increase of 710.

**New Societies.**—A number of physicians of Pittsburgh, who have been meeting from time to time for two years past informally as a neurologic club, have formally organized a society for the study of nervous and mental diseases, known as the Pittsburgh Neurologic Society, which will meet five times each year. The society has a charter membership of nine. Dr. Samuel Ayres has been elected president and Dr. E. E. Mayer secretary.——The Medical Club of Harrisburg was organized, April 26, with an initial membership of twenty-one. Dr. Samuel Z. Sope was elected president and Dr. J. Harvey Miller, secretary.

**Abington Hospital Assured.**—The project to erect a hospital on the old York Road, in Abington Township, has received such support that the institution is assured. George W. Elkins, owner of Folly Farms, an estate in Abington, has given a site and the grandchildren of the late Mrs. William L. Elkins will give $10,000 as a memorial to her. The site comprises nearly two acres, is part of the Folly Farms estate and is worth over $7,500. Two directors will be selected from each suburban town which the institution will benefit: Abington, Glenside, Willow Grove, Hatboro, Jenkintown, Wyncote, Oak Lane and Noble.——It is possible that Cheltenham Township may have a hospital erected as a memorial to George D. Widener, one of the *Titanic* victims; such a movement is under consideration.

### Philadelphia

**Personal.**—Dr. H. A. Steckel has been appointed a member of the staff of the State Hospital for the Insane, Mount Pleasant, Ia.——A reception was given April 14 to Dr. Z. M. Diodati, honor man of the last graduating class of Johns Hopkins University, Baltimore.

**Changes at Jefferson.**—At the meeting of the trustees of Jefferson Medical College, April 30, the resignations of Dr. James W. Holland as dean and professor of chemistry and toxicology and of Dr. Orville Horwitz as professor of genito-urinary surgery, were considered. Dr. Holland was reelected dean without a dissenting vote and both he and Dr. Horwitz were made professors emeritus.

**Musser Memorial Fund.**—Physicians of Philadelphia have been invited to join in honoring the memory of Dr. John Herr Musser by subscribing to the memorial fund to be used to endow the social service department of the University Hospital, Philadelphia, of which he was the founder and president. This movement was one in which Dr. Musser was deeply intrested and one of his last acts was to authorize a letter of appeal for aid for the service to be sent out in his name.

## SOUTH DAKOTA

**State Board of Health Changes.**—At a meeting for the reorganization of the State Board of Health, May 1, Dr. O. N. Hoyt, Pierre, was elected president and Dr. W. L. Vercoe, Lead, secretary.——Dr. Hampton R. Kenaston, Bonesteel, has been appointed a member of the State Board of Health, vice Dr. William H. Lane, Miller, term expired.

## VIRGINIA

**Barbour-Page Lectures.**—Dr. William H. Welch, Baltimore, delivered the annual lectures on the Barbour-Page foundation at Madison Hall, Charlottesville, April 17, 18 and 19.

**Entrance Requirements Raised.**—The executive committee of the State Board of Medical Examiners, at a meeting held in Richmond, April 26, revised the rules for medical examinations so as to conform with the law passed by the last legislature. These changes raised the entrance requirements of applicants for examination.

**New Officers.**—South Piedmont Medical Society, at South Boston, April 16: president, Dr. H. Singleton Belt, South Boston; vice-presidents, Drs. W. Macon Smiley, Houston; George P. Hamner, Lynchburg; I. C. Harrison, Danville, and C. H. Gibbs, Charlotte Court House; secretary-treasurer, Dr. George A. Stover, South Boston.

**Personal.**—Dr. George B. Lawson, Roanoke, has been appointed a member of the State Board of Health, vice Dr. Rawley W. Martin, Lynchburg, deceased.——Dr. M. P. DeBoe, Bedford City, who was operated on recently at the Jefferson Hospital, is convalescent.——Dr. Lonsdale J. Roper, Port Norfolk, has been appointed physician to the Norfolk County Jail, vice Dr. David F. Earnest, Port Norfolk, deceased.

## WASHINGTON

**New Officers.**—Stevens County Medical Association: president, Dr. Winfred Mighell; secretary, Dr. I. S. Clark, both of Colville.

**Hospital News.**—A fifty-two-room hospital is to be built at Wenatchee, to cost $35,000.——The Prosser Sanatorium, which was destroyed by fire several months ago, is to be rebuilt this spring.

**County Society Indorses Newspaper.**—The Spokane County Medical Society has indorsed the policy of the Spokane *Chronicle* in refusing to accept medical advertisements of an objectionable nature.

**To Trace Drift of Rodents.**—In order to follow the migration of the rats of Seattle, the health department liberated twenty-five rats which had been dyed in brilliant colors for purposes of identification, and offered $2 for each of these rats, dead or alive, returned to the Department of Health. The department hoped by this means to be able to trace the migration of the animals from one section of the city to the other.

**Personal.**—Dr. E. B. Nelson, Spokane, who was bitten by a rabid dog, April 1, has completed the course of Pasteur treatment.——Dr. W. W. Ballaine, health officer of Bellingham, has been seriously ill with influenza.——Dr. J. E. Crichton, health commissioner of Seattle, has started on a two months' trip to Eastern cities to study tuberculosis and isolation hospitals.——The Spokane County Medical Society has appointed the following five physicians to supervise the medical work on the new tuberculosis sanatorium: Drs. Henry Power, Frank Hinman, A. C. Johnson, A. P. Tilmont and Alexander R. Lundgren.——Prof. E. J. McCaustland, Seattle, has been appointed a member of the State Board of Health, vice James R. T. Yocum, Tacoma, term expired.

## WISCONSIN

**New Officers.**—Milwaukee North Side Physicians' Club: president, Dr. Arnold H. Drexel; secretary, Dr. William G. Weideman.

**Clinical Department of University.**—The University of Wisconsin promises to have a clinical department of the highest grade for the care of the health of the students. The department was established three years ago and since that time no epidemics have occurred among the students. A new building is planned, which, besides containing ten offices on the first floor, will have special treatment rooms, sterilization rooms and other special equipment.

**Personal.**—Dr. and Mrs. F. M. McGauley, Fond du Lac, have sailed for the Mediterranean.——Dr. L. E. Spencer, Wausau, has resigned as a member of the State Board of Health to accept the position of state sanitary inspector.——Dr. Gerhard A. Bading has been elected mayor of Milwaukee.——Dr. Cornelius A. Harper, Madison, has been elected chairman; Dr. T. L. Harrington, Milwaukee, treasurer, and Mrs. Julia Kurtz, Milwaukee, secretary of the committee appointed by the governor to prepare and assemble the Wisconsin exhibit for the International Congress on Hygiene and Demography. The other members of the committee are James D. Beck of the Wisconsin Industrial Commission, and Dr. Hugo C. Reich, Sheboygan.——Dr. G. L. Bellis, Antigo, has been appointed medical assistant at the State Tuberculosis Sanatorium, Wales.——Dr. J. N. Aubin, Peshtigo, who has been ill in a sanatorium near Chicago, has recovered and resumed practice.——Dr. Hugo F. Mehl has been appointed examining surgeon of the Milwaukee Pension Board, vice Dr. Gerhard A. Bading, resigned.

**The Work Against Tuberculosis.**—A free tuberculosis dispensary was opened in Racine, May 1, under the auspices of the local Antituberculosis Association.——Manitowoc is conducting an organized campaign against the spread of tuberculosis and the county will build a sanatorium, to cost $15,000.——Eau Claire County has decided to spend $16,000 for a county tuberculosis sanatorium, the site being furnished by the Eau Claire Antituberculosis Society.——La Crosse County, by a majority of 1,300 votes, has decided against the proposition to establish a tuberculosis sanatorium.——The Greenfield Tuberculosis Sanatorium has been placed under the supervision of the Milwaukee County tuberculosis trustees. Both free and pay patients will be admitted.——The tuberculosis sanatorium for Douglas County at Parkland, Superior, opened in February, reports that in the first month the men's ward was completely filled.——Racine County has a site for its sanatorium and $16,000 is available. This is sufficient to build, but not to equip the institution, and an endeavor is being made to have citizens of Racine furnish the thirty-six rooms.——The matter of the erection of a tuberculosis sanatorium in Dane County will be presented to the county board at its June session.

## GENERAL

**Army Medical Corps Openings.**—For appointment of first lieutenants in the Army Medical Corps, examinations will be held July 15 and September 3. Full information can be procured from the Surgeon-General, U. S. Army, Washington, D. C.

**Congress on School Hygiene.**—The general committee of arrangements for the Fourth International Congress on School Hygiene, to be held in Buffalo next year, has selected Dr. Roswell Park, Buffalo, as chairman. Twelve subcommittees have already been appointed and the chairman of each with the officers of the general committee will make up the executive committee which has charge of all the local arrangements.

**Convention for Sex Hygiene.**—The second annual meeting of the American Federation for Sex Hygiene will be held in Atlantic City, N. J., June 3. There will be sessions in the morning, afternoon and possibly in the evening. The afternoon session will be devoted to a public meeting, at which former Attorney-General Charles J. Bonaparte, Dr. Edward Jackson, Denver; Rev. Mr. Goddard, St. Louis, and probably Mr. Jacob Riis of New York City will speak. The meetings will be held in the assembly room of Haddon Hall, under the presidency of Dr. Prince A. Morrow, New York City.

**Personal.**—Major Thomas L. Rhoads, M. C., U. S. Army, has been selected as the military aide by the president, vice Major Archibald W. Butt, who went down with the *Titanic*.——Dr. A. E. Campbell, Chicago, has been placed in charge of a department of health recently established by the Illinois Central Railroad. The purpose of this department is not only to educate the employees of the road, but the traveling public as well, as regards sanitation and right living.——Dr. John R. McDill, Manila, who has been in the Philippine Islands since 1898 and has recently been chief surgeon of the Government Hospital, has resigned and returned to the United States.

**Additional Atlantic City Details.**—The May 4 issue of THE JOURNAL was the Atlantic City Number, containing various details concerning the next session of the American Medical Association, June 3-7, 1912. There was an illustrated article on Atlantic City, the preliminary programs of the fourteen sections, lists of hotels, meeting places, railroad rates, entertainments, etc. A new feature at the Atlantic City meeting is the series of clinics to be carried out under the auspices of the Association. The program for the Monday clinics was given. Following are additional announcements: Women physicians of the American Medical Association have decided to give a banquet at the Hotel Dennis, Tuesday evening, June 4, at 7:30. The price will be $2.00 a plate. Remittances can be made to Dr. Clara K. Bartlett, 11 N. Caroline Ave., Atlantic City.——The General Alumni Association of the Medico-Chirurgical College of Philadelphia will hold a smoker at Atlantic City on the night of June 4. Communications relative to the smoker may be sent to Dr. A. C. Morgan, 3118 Diamond Street, Philadelphia.

**Bequests and Donations.**—The following bequests and donations have recently been announced:

Hospital for the Women of Maryland, Baltimore, $15,000, by the late Dr. Andrew H. Whitridge, payable on the death of his widow.

Tuberculosis Preventorium for Children, Farmingdale, N. J., $5,000, from J. Pierpont Morgan.

Presbyterian Hospital, Philadelphia, $125,356, by the will of Mitchell Valentine.

Seton Hospital, Philadelphia, $10,000, by the will of Mary H. Lawrence.

Presbyterian Hospital, Philadelphia, $15,000, to establish three free beds as the Dr. Reuben S. Carpenter Memorial, by the will of Cornelia Eaton, the residue of the estate to go to St. Vincent's Hospital.

Oswego (N. Y.) Hospital, $5,000, from Mrs. Charles W. Pardee, Buffalo, to endow a ward bed as a memorial to her husband.

Presbyterian and Mount Sinai hospitals, Philadelphia, $5,000 each, by the will of Admiral G. W. Melville.

Rush Hospital for Consumptives, Philadelphia, $1,000, by the will of the late Walter B. Lebranz.

Free Home for Consumptives, Dorchester, Boston, $2,000, by the will of Anna M. Healy.

Collis P. Huntington Memorial Hospital, Boston, an anonymous gift of $5,000, to establish the Lawrence-Carteret Fenno Memorial free bed.

Presbyterian Hospital, Philadelphia, a contingent bequest of $10,000, by the will of the late Caroline A. Burgin.

Pennsylvania and German hospitals, Philadelphia, $1,000 each, by the will of the late Louis Hillebrand.

Philadelphia Home for Incurables, $5,000, by the will of the late Harriet S. Evans.

## FOREIGN

**International Congress for Medical Electrology and Radiology.**—The sixth international gathering on the above subjects will be held at Prague, July 26 to 31. The general secretary is Dr. K. Hynek, Hôpital général, Prague II, Bohemia.

**Again that Fake Italian Scientific Academy.**—O. Hammarsten of Upsala publishes in the current *Hygiea* a warning against the Accademia fisico-chimica at Palermo, Italy, stating plaintively that he was taken in by it a few years ago, as he saw the names of a number of prominent scientists in its lists of members and consented to have his name inscribed "for the usual payment of five dollars merely for the clerical work involved." Since then he has learned of the non-scientific character of the institution, his eyes possibly having been opened by the disclosures in THE JOURNAL Oct. 21, 1911, p. 1380, and he wrote to the Accademia to have his name dropped from the list of members. Not only have the promoters of the Accademia not done this, but he has again recently received a flattering follow-up letter from them informing him that he had "just been elected to membership," etc., when the accompanying list of old members already contained his name.

## LONDON LETTER

*(From Our Regular Correspondent)*

LONDON, April 27, 1912.

### The Deaf and Dumb Under the Workmen's Compensation Act

The Workmen's Compensation Act, which was passed by Parliament a few years ago, was a great extension of an older act termed the Employers' Liability Act, and was drawn up to benefit the workman in every possible way, regardless of the interests of the employer or of the community. Like other philanthropic work done without due regard for economic principles, it has in some ways proved injurious to the very class it was designed to protect. The employer is rendered liable for every accident which arises "out of and in the course of" the employment even though the accident be due to the negligence of the workman, and, as is shown in previous letters to THE JOURNAL, the word "accident" is interpreted by the courts in the widest possible manner. The employers insure their workmen against accident claims. It often happens that a man is suffering from some slight physical defect which in no way interferes with his efficiency as a workman but renders him more liable to accident. Naturally, the insurance companies decline to take the risk and the man is prevented from obtaining work which he is perfectly fit to do. A deputation representing societies interested in the welfare of the deaf and dumb has been received by the government. The object was to point out the hardship to these afflicted persons, owing to the increased difficulty in obtaining work in consequence of the refusal of insurance companies to accept them under the Workmen's Compensation Act, contracting not being permitted. Some employers are willing to engage the deaf and dumb provided they bear the cost of an extra insurance rate incurred through their condition. But this causes a collision with the trades unions, as the proposal is held to be tantamount to paying less than the standard wage. The consequence is that the deaf and dumb in increasing numbers swell the ranks of the unemployed. The minister who received the deputation made a very belated reply. He began with the totally irrelevant observation that it was impossible either by sympathy or legislation to put the deaf and dumb on the same level as the rest of the population. The complaint was that legislation had made the position consequent on their infirmity much worse. He stated, however, that the government contemplated appointing a committee to consider possible amendments of the compensation act.

### The Lowest Birth- and Death-Rates on Record

Once more the declining birth-rate is shown by lowest recorded birth-rate. The fifty-seventh annual report of the Registrar-General for Scotland has just been issued. In 1911, the births numbered 121,811, or 2,189 fewer than in the previous year. The rate was 25.65 per thousand of the population and was 2.72 less than the average for the preceding ten years. From 1855 to 1893 the birth-rate was constantly over 30 per thousand; from 1894 to 1904 it was over 29; from 1905 to 1909 it varied between 27.33 and 28.62; in 1910 it fell for the first time below 27 and last year below 26. The death-rate in 1911 was 15.1, which was also the lowest ever recorded in Scotland. In regard to vaccination, the report states that the proportion of vaccinated children has fallen to 67.6 per cent. This is the result of the act of 1907 which makes a conscientious objection to vaccination on the part of the parents a legal excuse for exemption. Similar facts in England have been described in previous letters to The Journal and the grave danger of an epidemic of small-pox in consequence of the neglect of vaccination pointed out.

### Infectious Diseases in 1911

For the first time it has been possible to collect in one report a statement of all the cases of each notifiable infectious disease occurring in every sanitary district of England and Wales. The records for the year 1911 show that typhus has become nearly extinct (only sixty-five cases in the year). Of small-pox, only 265 cases occurred, while 13,730 cases of typhoid, 47,747 of diphtheria and 104,617 of scarlet fever were reported. Puerperal fever was responsible for 2,029 cases. No case of cholera occurred. Of pulmonary tuberculosis 35,107 were reported, but complete returns for this disease will not be available until the end of 1912. For each sanitary district rates per thousand of population are given for each infections disease. Thus the student of epidemiology and the health officer can determine the "storm centers" and the places in which increased attention to preventive measures are required in the 1,800 sanitary districts into which the country is divided.

### The Problem of Sleeping-Sickness

The problem of the prevention of sleeping-sickness continues to exercise the authorities responsible for the administration of our African colonies. In the House of Commons the colonial secretary, Mr. L. Harcourt, has announced that Drs. Kinghorne and Yorke of the British South African Commission, working in the Luangwa Valley, northern Rhodesia, have shown that *Glossina morsitans* transmits, in nature as well as in laboratory experiments, the human trypanosomes of that region, and that certainly wild animals are naturally infected. It follows that every effort must be made in Nyassaland and Rhodesia to destroy, where possible, and elsewhere to avoid, this species of tsetse fly. The commission examined ninety-eight wild animals, of which seventy-seven were antelopes and eight were pigs. In seven antelopes and one pig human trypanosomes were found. It has been shown that in other parts of Africa cattle and other domestic animals may harbor human trypanosomes without detriment to health. Consequently, it is possible that domestic animals, subject to the bites of *Glossina morsitans* also harbor the human trypanosome in Rhodesia and Nyassaland. If this should prove true it will greatly complicate the problem because it is out of the question to decree the destruction of all the domestic animals in Nyassaland. Similarly, it follows that the destruction of all or the greater number of the wild animals, as has been advocated, would be useless. Moreover, it is possible that if this were done the tsetse fly, unable to obtain the blood of these animals, would attack man and the domestic animals to a greater extent.

### Disease and Compensation for "Accidents"

The workmen's compensation act entitles a workman to compensation for any accident "arising out of and in the course of his employment." Endless litigation occurs as to what constitutes an accident. This has been interpreted in the widest possible manner by judges. Thus, the widow of a workman who died from rupture of an aneurysm while tightening the nut of a screw has been granted compensation, though the effort involved was only trifling and ordinary. A case has just been decided in which the porter of a fever hospital claimed compensation because he became ill with scarlet fever, and as a result suffered from nephritis. Judgment was given in his favor but was reversed in the court of appeal. The presiding judge, the Master of the Rolls, said that there was no evidence to support the finding that the infection was an accident arising out of and in the course of the workman's employment. He pointed out that the award could not be upheld without implying that, whenever a nurse or an attendant in a hospital for infectious diseases contracted such a disease, it was an accident entitling to compensation. The act related to personal injury by accident and it did not follow that every injury arising in the course of the employment was an accident. The principles to be followed were contained in two cases in which it had been decided that a workman could not recover compensation unless he could prove the particular time, place and circumstances in which the alleged "accident" occurred. In the first case mentioned, a man engaged on sewer work contracted enteritis and the court of appeal decided against his claim because there was no evidence as to when, where and how he became infected. There are certain industrial diseases, such as lead poisoning, which have been specially scheduled as arising from dangerous occupations and for these a workman is entitled to compensation, but enteritis is not among them.

### The London Milk-Supply

The public health committee of the London county council has reported that further legislation is urgently required in order to safeguard effectively the milk-supply of the metropolis. In 1909 more than 10,000 deaths occurred in England and Wales from forms of tuberculosis, other than pulmonary, in children under the age of 15. Of this number 2,806 in children under the age of 5 were attributed to tuberculosis of the digestive system. With these facts in mind the committee felt that although an impure milk-supply was only one of various sources of tuberculosis, every cause should, where possible, be removed. Examination of samples of milk obtained in London showed that a large proportion gave evidence of undesirable methods of production and handling. Dung, as well as a pinkish tinge, owing to admixture with blood, had been observed in milk. The bacteriologic examination of 7,896 samples of milk showed that 850 (10.8 per cent.) were tuberculous. Of 44,307 cows examined, 574 (1.3 per cent.) were found to have tuberculosis of the udder. The council has power to prevent the sale of milk of cows suffering from tuberculosis of the udder only. The committee considers that this power should be extended to include all cows suffering from tuberculosis with emaciation or giving tuberculous milk. The council has power to exclude from London milk from a farm on which tuberculosis has been proved, but it has no power to require the slaughter or prevent the removal of the animal giving such milk. Consequently, if the animal is moved all traces of it may be lost and its milk sold for human consumption until again detected. Further, the council has no power to deal with milk which, on examination, is deemed so filthy as to be unfit for human food. The committee recommends (1) legislation to make it possible to deal with a cow suffering from any form of tuberculosis and to prohibit the sale of its milk; (2) further powers of supervision of buildings where cows are kept or of milk exposed for sale; (3) powers to take samples in any place from the time the milk leaves the cow to the time it reaches the consumer; (4) adequate penalties; (5) the more complete supervision of the import trade with a view to providing that imported milk, equally with home-produced, shall be subject to proper control.

### Anthrax Investigation

At Bradford, which is in the center of the woolen industry and in the district around it where most of the cases of anthrax in this country occur, a board for the investigation of anthrax has existed for six years. During this period seventy-one cases have occurred, of which twenty-four were fatal. Of the fatal cases, fifteen were of the internal and nine of the external type. During the last year, eight fatal cases occurred but in only one was medical advice promptly sought. Internal anthrax is so rapid that prompt treatment is necessary to give the patient a chance. The symptoms may be delusive, mere malaise being sometimes the prelude of death in twenty-four hours. In the report just issued by the board, Sclavo's serum is spoken of hopefully. In two of the cases of recovery the result is attributed to its intravenous injection. In another case, in which the nostril was affected 80 c.c. were injected subcutaneously with good effect. In one of the cases of intravenous injection 80 c.c were used. The board regards it as proved that blood is the carrier of the anthrax spore and thinks that all danger would vanish if it could be excluded from the raw material used. A case of anthrax occurred in a Persian wool-worker and in the remaining bales were found ninety-nine samples of blood-stained wool, of which ten were infected with anthrax spores. In one they were so numerous that it was considered certain that anthrax would have occurred during their manipulation. It is during the "carding" process, when the wool is torn apart by high-speed machinery, which shoots particles and short fibers into the air, that most cases of anthrax infection occur. It is suggested that receptacles for blood-stained fibers be provided and regularly emptied and cleansed, and that workers, encouraged by premiums paid for its discovery, should be trained to search for dangerous material. No special danger appears to attach to searchers who handle the blood-contaminated wool. Apparently it is not until the dried clot is diffused by haphazard handling or disintegrating machinery that risk arises. To assist the workers to recognize the blood-contaminated material, Dr. Eurich, bacteriologist to the board, has given demonstrations at the factories and exhibits of blood-stained samples are to be placed in the public museums and factories of the district. No reliable germicide has been found. Cyllin and formic aldehyd alter the outer layer of the blood-clot, which prevents penetration to the spores in the interior.

## PARIS LETTER

*(From Our Regular Correspondent)*

Paris, April 26, 1912.

### Death of Professor Lande

Dr. Lande, professor of legal medicine at the Faculté de médecine de Bordeaux and president of the Association générale des médecins de France, has just died, aged 69, during the annual session of the association. He had just delivered the presidential address when he fell stricken with cerebral apoplexy. Dr. Lande had acquired a great reputation as a medicolegal expert, and was also much interested in all professional questions. He founded, with Dr. Cezilly, the Caisse des pensions de retraite du Corps médical français in 1901, and was vice-president of the Council of the Association générale des médecins de France. Last year he was president, succeeding Lannelongue, Brouardel and Lereboullet.

### Honor to Professor Grasset

On the thirtieth anniversary of his professorship, the colleagues, pupils and friends of Dr. Grasset, professor of the medical clinic at the Faculté de médecine de Montpellier, presented him in an informal session held in the festival hall of the *Palais Universitaire* of Montpellier, his own bust and medal, both executed by the sculptor Injalbert, the medal bearing on one side a portrait of himself and on the other a representation of the edifice of the Faculté de medicine de Montpellier. Speeches were delivered by M. Benoist, rector of the university, and Professor Rauzier, one of Grasset's favorite pupils.

### Transverse Ecchymosis at the Bend of the Elbow as a Sign of Fracture of the Extremity of the Humerus

On April 23, Dr. Kirmisson, professor of the surgical clinic of children's diseases at the Faculté de médecine de Paris read before the Académie de médecine an interesting paper on fractures of the elbow, which are of great importance in surgery of children because of their frequency and the difficulty of diagnosis. In addition to the classical differential signs between these fractures and backward luxations of the elbow, Kirmisson attaches great value to the transverse ecchymosis existing at the bend of the elbow in supracondylar fractures of the humerus with forward displacement of the superior fragment. This ecchymosis is produced by the sharp edge of the superior fragment, which causes contusions from within outward of the tissues underlying the skin. Observed a short time after the accident this ecchymosis is transverse and sharply defined as if it had been produced by a blow applied on the anterior surface of the elbow by a sharp straight edge. Later it becomes diffuse and its appearance is less well defined. Its manner of production explains the fact that it is not found with the same clearness in luxations of the elbow, in which the bloody effusion is much more diffused.

### A New Professional Organization

The Association amicale de médecine et de chirurgie, which was founded a few months ago, has just held its second general session. It consists of physicians who have the same ethical deas and who have agreed to abstain from exploiting the patient, from secret fee-splitting and, generally speaking, rom every practice which is not in the exclusive interest of he patient.

### Assistance to Mothers

The Municipal Council of Paris has just decided that from anuary 1 next every pregnant woman domiciled in Paris not ess than two years whose household has not an annual income f over $360 (1,800 francs) has a right to assistance. In rder to be benefited by this right, she must declare her pregancy at the *mairie* of the arrondissement in which she is omiciled before the seventh month. She will then be placed n the list of the Mutualité maternelle and will receive its benet . A woman whose husband is in military service will be llowed benefits, though she may not have lived in Paris for wo years.

### Care of Children with Favus

The minister of the interior has just called the attention f the prefects of the departments of France to the necessity f isolating and treating those affected with favus. A serice for treatment by *x*-rays is now in practice at the Saint Louis Hospital in Paris. The minister believes that it would be desirable to have children with favus sent there from other parts of France. There are, indeed, in certain provincial hospitals favus services, which are the most neglected in the hospitals. Children remain there for years, almost always insufficiently treated. They go out at the age of maturity, without instruction and without trades, and often even not cured. Of course, during this period they have been prevented from infecting other children, which is something; but their long stay in the hospital has been a heavy expense. To send such children to a service like that of the Saint Louis Hospital, from which they would be discharged cured in a few weeks would be most advantageous for these unfortunate children and also a wise financial measure. On the advice of the superior council of the Public Charities (Assistance Publique) of Paris and of the municipal council the Saint Louis Hospital has been authorized to receive these young patients for a daily charge of 60 cents (3 francs) instead of the usual charge of 94 cents (4.70 francs).

### Twenty-Second Congress of Alienists and Neurologists

The twenty-second Congrès des médecins aliénistes et neurologistes de France et des pays de langue française was held at Tunis April 1 to 7 under the presidency of Dr. Mabille, physician-in-chief of the asylum of Rochelle. Because of the special nature of the subjects discussed, the departments of the interior, the colonies, war and the navy took official part in the congress through delegates. Three interesting questions were discussed:

#### NERVOUS AND MENTAL COMPLICATIONS OF MALARIA

Dr. Chavigny, *agrégé* professor at the Ecole d'application de médecine et de pharmacie militaires du Val-de-Grâce, emphasized especially the difficulty of defining exactly the symptoms of the complications of malaria so as not to risk confusing intercurrent diseases with it. Neither bacteriology nor therapeutic action offers a sufficiently distinctive criterion. If, for instance, one were to include all cases in which quinin has been efficacious, there would be many that were not malarial. Among the nervous complications, an attempt has been made to describe separately the early and the late complications. Dr. Chavigny believes that the distinction is often theoretical rather than clinical. It would seem simpler to divide them, in accordance with the organs attacked, into peripheral, medullary and central affections and affections of the sense organs. Among complications bearing on the peripheral and nervous system, one finds neuralgia of the trigeminal nerve most frequent and the most clearly defined; then, in the order of the frequency, sciatic, occipital, intercostal and ovarian neuralgia and coccygodynia, but it is important to recall that in all climates quinin is a sedative for even the most ordinary neuralgia. There is, therefore, nothing astonishing in the fact that in foreign countries neuralgic affections are considered malarial even though they have nothing to do with malaria. Some still unpublished experiments of Dr. Dopter tend to show the existence of malarial toxins and a relationship between malarial and alcoholic forms of neuritis. Since malaria does not protect subjects from syphilis or alcoholism, it is sometimes difficult to ascertain the true pathogenesis of certain myelites in patients who are both malarial and alcoholic or both malarial and syphilitic. In all cases of frankly malarial medullary affections, the prognosis is extremely variable and everything depends on the action of the quinin. In recent cases when malaria is really in question, quinin acts rapidly and the cure is prompt and complete. In other cases, the prognosis remains what it has habitually been, that is, generally grave. In complications affecting the nervous centers, large numbers of cases of aphasia have been observed, sometimes transitory and sometimes lasting, hemiplegia and various paralyses, etc. The mental complications of malaria include neuroses, psychoneuroses and psychoses. The number of women presenting these complications is higher than that of men. Since women are more frequently affected with malaria than men, the large proportion of mental troubles in women is an argument in favor of the theory that they are due in large part to predisposition, and against the theory that alcoholism is always a common basis of malarial delirium. Malaria is an undeniable etiologic factor and frequently the cause of neurasthenia. This is easily explained by the organic break-down of malaria. In regard to malarial psychoses, there are two well-defined opinions: one, that of Professor Regis of Bordeaux who thinks that there are psychoses that really originated from acute or chronic malaria; the other is the classic opinion that a malarial psychosis no more exists than does a typhoid or puerperal psychosis, and that malaria is only a favoring cause which brings to light the morbid predispositions of the subject. Dr. Chavigny thinks that it is not impossible to reconcile the two theories by admitting the necessity of individual predisposition.

In the discussion Professor Regis emphasized the reality of malarial mental troubles. He recognized, however, the difficulty involved in a poly-intoxication in which too often alcohol is a factor; but chronic malaria creates a condition of physical and mental inefficiency with a failure of memory to a degree rarely found in alcoholism even at the period of breakdown. Dr. Vigouroux of Paris gave the history of a malarial patient who after twenty years of good health had intermittent periods of mental confusion lasting several days and followed by a complete remission during two or three weeks. In the fourth attack the patient died in coma. An anatomic and pathologic examination showed the existence of cirrhotic liver and malarial spleen and very intense cellular lesions in the brain.

### INSTINCTIVE PERVERSIONS

According to Dr. Dupré, physician of the hospitals of Paris, instinctive perversion appears as a form of psychic debility and a disequilibration which always complicate various pathologic associations, especially anomalies of intelligence, character, humor and activity and which express themselves particularly by the most various antisocial acts. Being constitutional, the perversion of instincts in its serious forms is refractory to all therapeutic means. In its ordinary, light and partial forms it is susceptible to improvement by education, example and moral culture like the other phenomena, equally constitutional, which are associated with it. It would be well to found special establishments midway between asylums and prisons—"asylums of safety"—for dangerous abnormal subjects, vicious psychopaths, moral imbeciles, etc., and for persons affected with instinctive perversions. Dr. Anglade of Bordeaux does not share the pessimism of Dr. Dupré but believes that good surroundings, good examples and return to the soil are better than residence and education in penitentiary colonies. Professor Regis also believes from an extensive experience in the benefit of the well-directed mental orthopedics for these perverts. He believes it well to imitate the example of the Americans who have erected reformatories in which unmoral children are subject to the oversight of the alienist and to education by special teachers. Dr. Vigouroux also cites several establishments in which the results are encouraging. He mentions the injurious influence of puberty in which one sometimes sees the appearance of some of these perversions but he remarked that finally an amelioration may occur, permitting these perverts to resume normal life. Dr. Claparède of Geneva likewise emphasizes the good results obtained in special conditions by mildness and patience. Dr. Ley of Brussels reported personal observations showing good results of education among young perverts. Dr. Voisin of Paris remarked that that there was at Salpêtrière a reform school receiving girls of every class from the psychic point of view. In ten years out of 200 girls, only five were sent to insane asylums. The others, having received elementary instruction and having been improved by intensive work on them, have been returned to outside life and no bad reports have been received in regard to them. Professor Gilbert Ballet of Paris said that he shared in Dr. Dupré's pessimism in regard to the moral amelioration of the pervert.

### THE INSANE IN THE COLONIES

Following a paper presented by Professor Regis and Dr. Reboul, a resolution was adopted that the transportation of the indigent insane into the asylums of continental France should cease entirely within three years, since the insane should be treated, as far as possible, in their own country, their expatriation having very bad influence on their mental trouble. It is, therefore, necessary and important to make suitable provision for the insane in the colonies. Morever, to prevent insanity in the colonies a selection of the Europeans sent there should be carried out with regard to mental qualifications; and alcoholism especially, an important factor in psychoses, ought to be combated immediately by most energetic measures instead of being favored as often as it is to-day.

### Personal

The following professors have retired: Dr. Armand Gautier, professor of organic and mineral chemistry at the Faculté de médecine de Paris; Dr. Coyne, professor of pathologic anatomy, and Dr. Demons, professor of clinical surgery of the Faculté de médecine de Bordeaux; Dr. Maurel, professor of experimental pathology, and Dr. Frébault, professor of chemistry and toxicology, of the Faculté de médecine de Toulouse.

The Société de géographie in Paris has awarded its large gold medal to Dr. Charcot for two explorations in the Arctic regions.

### Antityphoid Vaccination in the Navy

On favorable decision from the Superior Council of Hygiene the minister of the marine has authorized the application in the navy of antityphoid vaccination.

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, April 18, 1912.

### Personal

Prof. R. Frommel, formerly director of the university gynecologic clinic at Erlangen, died early in April at the age of 57. He began his career as assistant of the noted gynecologist Professor Schröder of Berlin, joined the faculty at Munich in 1882 and was made a regular professor at Erlangen in 1887. Some years ago he was obliged to resign his position on account of sickness.

Professor Angerer of Munich has been elected president of the German surgical society (Gesellschaft für Chirurgie).

Professor Menzer of Halle has been elected director of the department of internal medicine in the Augusta hospital at Bochum.

Professor Vossius of Giessen celebrated his twenty-fifth year jubilee as professor April 12.

### The Proposed Frankfort University

The plan for founding a university at Frankfurt a. M. has again made a step forward. The municipal authorities are said to have agreed to the final arrangements between the founders of the university and the Prussian government, and from what has become known of the business, it may be assumed that the Frankforters have determined to accept the conditions imposed by the Prussian government. The expenses of the entire support of the university are to be borne by ten founders, among which the city itself, the well known Senckenberg natural science society (Naturforschende Gesellschaft), the Stern medical institute, Speyer's fund for research, etc., are included. The management of the university is to be placed in the hands of a governing and an executive board, the Grosser Rat and the Kuratorium. The mayor of the city is to be the president of both boards. The following faculties are contemplated: jurisprudence, medicine, philosophy, natural science and social and economic science. According to a statement by the city government, there are already available for the medical school, auditoriums and lecture rooms in the different clinics and institutes with 630 places.

### Treatment of Industrial Electric Accidents

The Prussian minister of trade (Handelsminister), at the instigation of the German association of electrical workers, has called the attention of the officials under him to the fact that blunders are often made in attempts at resuscitation of persons who have been stunned by the electric current. Among other things it is emphasized that attempts at resuscitation are often begun too late. It is particularly unfortunate that miners believe that the injured man in the mine must be brought to the daylight. Valuable time is lost by this so that the injured often succumbs in transit. Moreover attempts at resuscitation are often not continued long enough. Repeated experiences have shown that success is attained many times after a continuation of the attempts at resuscitation for hours. As an example he cited the cases of three soldiers who were struck by lightning, of whom one was restored to life after two hours of efforts for resuscitation and a second not until after four hours.

### Protest Against the Instruction of Laymen in Orthopedic Curative Gymnastics

At the recent congress for orthopedic surgery, held at Berlin, the following resolution was adopted: The association for orthopedic surgery (Gesellschaft für orthopädische Chirurgie) holds the systematic instruction of the laity in general orthopedic curative gymnastics by medical institutes to be very objectionable because, owing to the progress of science, for this work specialist skill has become more and more necessary. For medical institutes to train laymen in such work with the special purpose of employing it later as an independent means of livelihood, seems to be particularly objectionable on account of the serious injury to patients which may arise from it.

### Congress for the Investigation of Families, Heredity and Eugenics

April 11 the Kongress für Familienforschung, Vererbung und Regenerationslehre met for the first time in Giessen. Its originator is Professor Sommer, director of the psychiatric clinic at Giessen, who has rendered great service by his research on the subject of heredity for clinical purposes and who has induced concerted action by scientists in different lines for the collecting of correct genealogies. Professor Sommer and his assistant Professor Dannemann treated in two extensive papers the four essential categories for all questions of heredity: the normal; the highly gifted (geniuses); the defective (pathologic) and the criminal. Sommer spoke of the importance of the congenital development forces (*Anlage*); he proceeded from the fundamental conception of the soul as an indivisible whole (Cartesius) which about a hundred years ago was replaced by the recognition of the multiple character of the individual intellectual faculties, and mentioned the theory of localization of these faculties and its originator, Gall, and then called attention in detail to the importance of experimental psychology for the investigation of the congenital developmental forces. As in all four categories the same problems appear, the same methods of examination may serve as a rule for the investigation and to a certain extent for the measurements of the inherited anlage. He effectively illustrated his address by tables, in which, for instance, the reaction time of the average man, of the scientist, of the criminal and of the feeble-minded were placed side by side; among the special points emphasized were the quickness of the reaction and the constancy of performance on repeated trials.

After a description of the Mendelian laws of heredity and their relation to consanguineous marriages, Sommer described extensively the important mathematical formula which he had obtained regarding the number of common ancestors of those who had married relatives, in other words, the sum total of the common germinal plasma. This conception is of fundamental importance, both in good cases (the establishment of the racial strain with respect to its desirable qualities), as well as in a bad direction (the taint with injurious pathologic stigmata from both sides). In conclusion he discussed the inheritance of disease. Congenital imbecility is often an ndogenous variation, that is, it is born with one, although t may not manifest itself until after the completion of growth, but its congenital nature should not be overlooked. Still, however, the exogenous causes must be studied because they some-imes may be summated before it is possible for the tendency o become manifest. In order to determine whether an organ has the predisposition to a definite disease, new methods of xamination are needed, such as have been in late years devised or mental affections. Only in this way is it possible to secure n place of the mystic conception of "inherited predisposition," lear and measurable values. The psychoses have been most xtensively studied along these lines, then eye diseases, skin iseases and ear diseases.

Dannemann discussed the still wide-spread opinion in the minds of the laity that all individuals with an inherited aint are unconditionally endangered. This idea came from he false methods of former investigators. In a surprisingly arge proportion (about 59 per cent.), healthy people were ound to have some insane among their families, so that he dogma is thoroughly refuted. Only by identical convergng inheritance, that is, from the father and mother equally, the danger really great.

He denied the claim that civilized man is undergoing a rogressive degeneration, saying that the favorite argument the increased numbers of inmates in our insane asylums ses its force when we reflect that in modern times we ually compel the insane to be removed from their families nd placed in special institutions.

Sometimes a psychic defect shows itself later, after the conction, during the performance of the sentence, and carries its arer from the prison into the insane asylum. Our judges ould be trained to recognize the mentally unsound at an rly stage so that they may call in the aid of a psychiatrist the proper time.

Further development of prophylactic education is demanded, rticularly an extensive application of the principle of conmed legal minority for every one who does not conduct himlf rationally in human society. Naturally there is here no ea of private guardianship but of a state guardianship, th effective permanent control of the person in question. liberate transmission of venereal disease should be treated cording to the method of the Austrian criminal law, and alcohol as a cause of crime should be combated by the compulsory treatment of drinkers in asylums and a limitation of the drinking customs.

## VIENNA LETTER

*(From Our Regular Correspondent)*

VIENNA, April 15, 1912.

### Another Generous Bequest for a Children's Hospital

While at times our rich men are apt to forget the needs of their poorer brethren, this year several substantial sums have been donated for hospital purposes, as mentioned in previous letters. Now again, a sum of 2,500,000 kronen ($500,000) has been left, by the will of an eccentric personage, to the Jewish Board of Guardians in Vienna for a children's hospital to which patients of all creeds are to be admitted, according to the terms of the will. The man who bequeathed this large sum of money to charity was known to live on dry bread and water. He never had a fire in the stove of his very small room, and never smoked or drank alcohol during the 87 years of his life. Ever since his thirtieth year he was thought to be a hungry, miserable beggar. He hungered for the sake of charity, and he died in a hospital managed by the Jewish board mentioned above. The surprise when his will was opened was really extraordinary. The amount of this bequest, with some other funds recently left to charity, makes a sum of over $1,200.000 (6 million kronen) available for a children's hospital, and this will soon, it is hoped, be opened for the benefit of the poor children.

### The "Lupusheim" in Vienna

There exists in Vienna a special hospital for lupus, under the well-known surgeon-dermatologist, Professor Lang. At present it is only in its temporary home, so that its activity is rather cramped by the scanty accommodation it can offer to its patients. Nevertheless, in 1911, more than 1,580 patients from all parts of the Austro-Hungarian empire received treatment. Surgical removal of lupus, Finsen light, *x*-ray, radium, uviol and quartz lamps are the chief methods of treatment. The plastic operations necessitated by lupus are most interesting. These were brought near to perfection in the Vienna institution. The new lupus hospital will be ready for use in a few months, and, as it will cooperate with a large general hospital (the Wilhelminen Spital) of this city, it will be able to render help to a much larger proportion of patients of this class than any other similar institution in the world. Numerous surgeons from foreign countries come here to see the work done in the Lupusheim, and patients from Asia, Australia and Africa have been treated here.

### Regulations for the Sale of Potent Drugs and Patent Medicines

Owing to the large number of "patent medicines" thrown on the world's market—some of the very potent drugs are among them, too—the Austrian Board of Health (Oberste Sanitätsrath) has revised a number of regulations pertaining to this matter. Before any remedy can be offered to the public, it must be examined by the authorities, who decide whether it may be placed on the market without any restriction, or whether it may be sold only by the apothecaries. In the latter case, a written prescription, signed by a doctor of medicine, must be produced by the purchaser. All remedies containing any alkaloid, hypnotic or any other substance with a toxic effect are excluded from unrestricted sale in a most rigid fashion. In fact, it is impossible in this country to get a grain, or a fraction of one, of cocain, morphin, arsenic, strychnin or atropin without a prescription. The medical profession has for a long time tried to prevent the repeated use of a prescription for one of these habit-forming substances, but in vain; on the other hand, the pharmacist entitled to sell these drugs is controlled by a very effective method of supervision of this business. So far the conditions prevailing in this country are satisfactory from the point of view of the doctor and the public, for much is done to protect the latter against the pilfering of unscrupulous "patent-medicine" fakers. The importation of ready-made medicines manufactured outside of Austria is regulated on the same lines as mentioned above, and the importing firm in this country is regarded as an agent of the manufacturer and held responsible for the product it imports. Therefore the firms, mostly consisting of chemists, are alert to avoid the heavy fines imposed on a violation of the law. Similarly, the sale of "patent medicines" containing alcohol is under a very strict supervision, for the state would not care to miss the high tax imposed on all imported or home-made alcohol. It is therefore readily understood that "patent medicines" are not a very important item in the business of chemists.

## Marriages

Edward Stanley Berry, M.D., Shippensburg, Pa., to Miss Margaret Irene Smith of New Cumberland, Pa., in Philadelphia, April 16.

William Surbur Porter, M.D., Oakland, Cal., to Miss Dorothy K. Deering of Philadelphia, at Santa Cruz, Cal., April 20.

Charles Parmenas Henry, M.D., Basking Ridge, N. J., to Miss Adelaide Louise Ermentrout of Reading, Pa., April 23.

John Ellsworth Taylor, M.D., Leopold, Ind., to Miss Katherine Burke of Booneville, Ind., April 17.

Joseph Francis Walch, M.D., Lawrence, Mass., to Miss Mary I. Lyons of Haverhill, Mass., April 24.

James Dennis V. Sheehan, M.D., to Miss Florence MacDonald, both of Syracuse, N. Y., April 23.

James Wilson McMurray, M.D., to Mrs. Alice C. O'Connor, both of Marion, Ohio, April 2.

Bennett F. Bussey, M.D., Texas, Md., to Miss Katherine M. Craig, at Baltimore, April 25.

Earl Jesse Thomas, M.D., to Miss Mary Gail Tritch, both of Findlay, O., April 24.

## Deaths

**Augustus Peck Clarke, M.D.,** Harvard Medical School, 1862; of Cambridge, Mass.; third vice-president of the American Medical Association in 1895-1896 and chairman of the Section on Dietetics in 1897; professor of gynecology and abdominal surgery from 1893 to 1900 and dean of the College of Physicians and Surgeons, Boston, from 1894 to 1900, died at his home in Cambridge, Mass., April 22, aged 78. Immediately on his graduation, Dr. Clarke entered the military service as surgeon of the Sixth New York Volunteer Infantry and afterward served as chief surgeon of brigade and division, and was brevetted lieutenant-colonel for conspicuous courage and fidelity. He was a member and councilor of the Massachusetts Medical Society; a member of the American Academy of Medicine and the American Association of Obstetricians and Gynecologists; was president in 1891-1892 of the Gynecological Society of Boston and honorary president of the Section on Gynecology at the Twelfth International Medical Congress. He was one of the founders of the Cambridge Society for Medical Improvements and served as a member of the common council for four years.

**James Brickell Murfree, M.D.** Jefferson Medical College, 1869; a member of the American Medical Association; professor of principles and practice of surgery in the University of the South, Sewanee; local surgeon at Murfreesboro for the Nashville, Chattanooga and St. Louis Railway; formerly president of the Tennessee State Medical Association; Middle Tennessee Medical Association; Rutherford County Medical Society; Tri-State Medical Society of Tennessee, Alabama and Georgia, and Southern Surgical and Gynecological Association; for four years a surgeon in the Confederate service during the Civil War; died at his home, April 24, from nephritis, aged 76.

**Francis Bacon, M.D.** Yale University, New Haven, Conn., 1853; who did good service during the yellow fever outbreak in Galveston in 1852; served as surgeon of the Second Connecticut Volunteer Infantry and medical director of the Army of the Potomac and Department of the Gulf during the Civil War; professor of surgery in his alma mater until 1887 and since 1899 lecturer on medical jurisprudence; eminent as a surgeon and alienist; died at his home in New Haven, April 26, from senile debility, aged 80.

**Lindsey T. Lowder, M.D.** Medical College of Indiana, Indianapolis, 1874; formerly a member of the American Medical Association and president of the Monroe County (Ind.) Medical Society; a trustee of the Central College of Physicians of Indianapolis; a veteran of the Civil War; formerly local surgeon of the Monon System at Bloomington; died at his home in that city, April 20, from cerebral hemorrhage, aged 65.

**Franklin K. Cosgrove, M.D.** Medical College of Ohio, Cincinnati, 1849; a veteran of both the Mexican and Civil wars, and until his retirement a practitioner of Maysville, Ind.; died at the home of his son near North Vernon, Ind., April 12, from senile debility, aged 85.

**Edwin Rosenthal, M.D.** Jefferson Medical College, 1880; a member of the American Medical Association and Mississippi Valley Medical Association and prominent as a specialist on diseases of children; physician in chief to Mount Sinai Hospital, Philadelphia; corresponding secretary and director of the Pennsylvania Hospital for Contagious Diseases; died at his home, April 21, from cerebral hemorrhage, aged 53.

**Daniel McLaren Miller, M.D.** College of Physicians and Surgeons, New York City, 1856; a member of the American Medical Association and International Association of Railway Surgeons; surgeon of the Twenty-Eighth Wisconsin Volunteer Infantry during the Civil War; local surgeon of the St. Paul System at Oconomowoc, Wis.; died at his home in that city, April 25, aged 75.

**Thomas P. Shields, M.D.** University of Pennsylvania, Philadelphia, 1846; surgeon in the Confederate service during the Civil War and after its close a practitioner of Watkins, Ohio; formerly a member and once president of the Ohio Live Stock Commission; died at his home near Watkins, April 10, from senile debility, aged 86.

**Charles W. Nichols, M.D.** Albany (N. Y.) Medical College, 1889; a member of the American Medical Association; a veteran of the Civil War; for several years health officer of Fairfield, N. Y., and physician of Herkimer County; died at his home in Whitesboro, April 23, from cerebral hemorrhage, aged 62.

**Hermann Westphal, M.D.** College of Physicians and Surgeons, Baltimore, 1898; formerly assistant city physician of Butte, Mont.; at one time physician on the Yakima Indian Reservation, Fort Simcoe; died suddenly in the Emergency Hospital, Butte, April 15, from pneumonia, aged 43.

**John Neilson Beekman, M.D.** College of Physicians and Surgeons, New York City, 1868; a member of the Medical Society of the State of New York; at one time a member of the staff of the New York Hospital; died at his home in that city, April 26, from heart disease, aged 68.

**William Reider Mood, M.D.** Vanderbilt University, Nashville, Tenn., 1888; a member of the American Medical Association; local surgeon of the Northwestern Railroad of South Carolina; died suddenly at his home in Summerton, S. C., April 21, from heart disease, aged 47.

**Horace Preston Gilstrap, M.D.** Kansas City (Mo.) Homeopathic Medical College, 1896; Kansas City (Mo.) Hahnemann Medical College, 1906; professor of surgery in the latter institution; died at his home in Kansas City, Mo., April 5, from heart disease, aged 42.

**Milton Tiffany Reeder, M.D.** Bellevue Hospital Medical College, 1880; a member of the Medical Society of the State of Pennsylvania; vice-president of the Millersville National Bank; died at his home in that place, April 24, from disease of the throat, aged 65.

**Thomas Harris Stewart, M.D.** University of Michigan, Ann Arbor, 1868; for forty-two years a practitioner of Churchill Ohio; a member of the State Legislature from 1886 to 1890 died at the home of his daughter in Salem, Ohio, April 22 aged 71.

**Arnatt Reading Gulick, M.D.** Bellevue Hospital Medica College, 1888; formerly of New York City, but recently practitioner of Perth Amboy, N. J.; died at St. Peter's Hospital, New Brunswick, N. J., April 25, from pneumonia aged 47.

**Horatio Nathaniel Greene, M.D.** Jenner Medical Colleg 1905; of Chicago; died in the Washington Park Hospital i that city, April 11, from the effects of a knife wound of th throat, self-inflicted, it is believed with suicidal inten aged 49.

**Edgar Calhoun Addison, M.D.** Medical College of the Stat of South Carolina, Charleston, 1904; died at his office in Fai fax, S. C., April 14, from the effects of gunshot wounds, sel inflicted, it is believed, with suicidal intent, while desponden aged 29.

**John Shreffler Kennelley, M.D.** College of Physicians ar Surgeons, Keokuk, Ia., 1880; formerly a practitioner of Easto Ill., but for the last two years a resident of Longmont, Colo died at his home in that place, April 23, from cancer, aged 5

**George H. Reynolds, M.D.** Albany (N. Y.) Medical Colleg 1891; formerly a member of the American Medical Associ tion and a practitioner of Delhi, N. Y.; died at his home Niwot, Colo., March 21, from tuberculosis, aged 46.

**James D. Marsh, M.D.** Jefferson Medical College, 1882; di at his home in North Bethlehem, Pa., April 11, from cerebr hemorrhage, aged 59.

**Mary Irene Adams, M.D.** New York Medical College and Hospital for Women, New York City, 1907; of New York City; died at the home of her parents in Pasadena, Cal., March 15, from pulmonary tuberculosis, aged 30.

**William Amyr Fallas, M.D.** University of Michigan, Ann Arbor, 1865; for twelve years a teacher in the public schools and later a practitioner of Coopersville and Horton, Mich.; died at his home in Horton, April 6, aged 69.

**Samuel Josephus McCurry, M.D.** Atlanta (Ga.) Medical College, 1881; a member of the Medical Association of Georgia and vice-president of the Calhoun County Medical Society; died at his home in Anniston, April 13.

**Edward Morgan, M.D.,** University of Florida, Tallahassee and Jackson, 1884; a member of the Michigan State Medical Society; a veteran of the Civil War; died at his home in Manton, March 15, from paralysis, aged 70.

**Hugh L. Blanton, M.D.** University of Pennsylvania, Philadelphia, 1855; for many years a practitioner of Cumberland County,Va.; died at his home near Browns Church, Farmsville, Va., April 5, aged 79.

**Jefferson Green Page,** a practitioner since 1866 of West Tennessee and Doniphan, Mo.; died at the home of his son in Little Rock, Ark., February 23, from valvular heart disease, aged 75.

**George T. Acers, M.D.** Rush Medical College, 1870; a retired practitioner of Baker County, Ore.; died at his home near Halfway, Ore., February 26, from cerebral hemorrhage, aged 55.

**Levi E. Horton, M.D.,** Eclectic Medical College of the City of New York, 1891; a veteran of the Civil War; died at his home in Avoca, N. Y., April 22, from heart disease, aged 67.

**Robert H. Truesdale** (license, Kansas, 1901); a practitioner of Pardee, Doniphan and Kirwin since 1862; died at a hospital in Downs, April 8, from disease of the kidney, aged about 70.

**David L. McNees, M.D.** Kansas City Hospital College of Medicine, Kansas City, Mo., 1885; of Memphis, Tenn.; died at the home of his daughter in that city, April 14, aged 57.

**William Lord Kelsey, M.D.** Jefferson Medical College, 1876; medical examiner of Old Saybrook, Conn.; died at his home in that place, April 12, from cerebral hemorrhage, aged 65.

**Jacob Franklin Hudson, M.D.,** Western Reserve University, Cleveland, 1882; a member of the American Medical Association; died at his home in Canton, Ohio, April 24, aged 59.

**James Harmer Casey, M.D.,** College of Physicians and Surgeons, New York City, 1855; formerly an oculist of Kansas City; died at his home in Liberty, Mo., April 16, aged 68.

**Jay Jennings Snider, M.D.,** Bennett Medical College, Chicago, 1886; formerly of Salt Lake City; died at his old home in Day-on, Ohio, April 7, from cerebral hemorrhage, aged 48.

**James L. Finley, M.D.,** University of Louisville, Ky., 1896; member of the Illinois State Medical Society; died at his ome in Collison, Ill., April 29, from typhoid, aged 45.

**Harry N. Freiman, M.D.** Illinois Medical College, Chicago, 898; of Cambria, Cal.; was shot and killed in that place, April 11, during an altercation over a bill, aged 35.

**William Hoskins, M.D.** Medical College of Virginia, Rich-ond, 1898; formerly of Newport News, Va.; died at King nd Queen Courthouse, Va., April 12, aged 38.

**William Burr Hunkapillar, M.D.** Vanderbilt University, ashville, Tenn., 1892; died at his home in New Hope, Ala., pril 14, from bronchopneumonia, aged 40.

**Albert Woodside, M.D.,** Medical School, Brunswick, 1874; member of the American Medical Association; died at his ome in Rockland, Maine, April 6, aged 65.

**J. Everett Luscombe, M.D.** Boston University School of ledicine, 1885; of Fitchburg, Mass.; died recently and was uried at Fitchburg, April 12, aged 66.

**T. R. Luter** (license, Tenn., 1889); of Big Sandy; died in e Western Hospital for the Insane, Bolivar, Tenn., February 7, from senile debility, aged 74.

**John W. Peck, M.D.** Bellevue Hospital Medical College, 1865; f Amoret, Mo.; died at the home of his son in Kansas City, pril 9, from nephritis, aged 70.

**Richard H. Dixon, M.D.** University of Pennsylvania, Phila-lphia, 1851; died at his home in Cambridge, Md., April 15, om senile debility, aged 83.

**Harriet Pierson Van Kirk, M.D.,** Eclectic Medical College of e City of New York, 1870; died at her home in Oakland, l., April 6, aged 83.

**Royal McShea** (license, Kansas, 1901); for thirty-five years practitioner; died at his home in Chapman, April 7, aged 73.

# *The Propaganda for Reform*

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

## PANTOPON DETOXICATED

A remarkable feat of pharmacologic exorcism has lately been performed in Germany on the recently introduced proprietary purified extract of opium called Pantopon, and the result is something like the play of Hamlet with Hamlet left out. Pantopon, we are told, is obtained from opium by expelling the dross and the impurity leaving a collection of the pure alkaloids in the form of hydrochlorids. Naturally as Pantopon contains 50 per cent. of morphin it has the disadvantages of morphin, although this fact seems to have been largely overlooked by its enthusiastic supporters. It was said that the presence of the other alkaloids of opium would somehow or other render Pantopon a harmless substance. H. Winternitz,[1] however, found that this was not true. In a case of tabetic crisis he found that the morphin in Pantopon produced the same dangerous depression of the respiration as morphin when it was not in Pantopon. Winternitz therefore determined to cast out the devil from Pantopon and make a new proprietary. Accordingly he got the manufacturers to demorphinize Pantopon.

Behold the mutilated somnifer became as mild as a summer morning! Pantopon minus morphin no longer disturbed the breathing and it could be given in doses fifty times as large as its parent, the original Pantopon. In these doses the new remedy seemed to be of benefit in a case of insomnia, which might have been expected, for codein at least was left. This tail end of Pantopon has already had its proprietary christening with the baptismal name "Opon," derived from Pantopon by cutting off the "pant." As with Pantopon we may soon expect to see medical literature enriched by a fresh crop of observations on this new and wonderful German product. We would suggest that the next appropriate step in the proprietary industry would be the removal of the codein from "opon," leaving a new remedy for which the name "pon" would readily occur.

## MORE FRAUDS

### ST. JAMES SOCIETY DRUG CURE

The St. James Society of New York City is one of those villainous concerns engaged in selling morphin to morphin habitués, under the guise of a "cure." Its method has been to send its poor dupes a series of bottles labeled 1 to 10, containing a mixture of morphin and alcohol. The Bureau of Chemistry of the Department of Agriculture, U. S. Government, recently declared two of the shipments made by this concern misbranded under the Food and Drugs Act in that the amount of morphin and alcohol found in the preparation was different from that stated on the label. The St. James Society pleaded guilty and was fined $25. [*Notice of Judgment No. 1291.*]

### GAUVIN'S ANISEED SYRUP

J. A. Gauvin, Lowell, Mass., sells a baby-killer which bears the innocent name Aniseed Syrup. Some of the claims made for this product are:

> "Is quite harmless."
> "Preeminently a Children's Remedy."
> "Containing nothing injurious to the health."
> "Cures colic, dysentery, coughs and colds."

Samples of this stuff were analyzed by the Bureau of Chemistry and found to be a watery-alcoholic solution of morphin acetate sweetened with sugar and flavored with oil of anise. As a mixture of morphin and alcohol is not "harmless" and may injure the health, and, as the amount of morphin was in excess of that given on the label, the stuff was declared misbranded. Gauvin pleaded guilty and was fined $150. [*Notice of Judgment No. 773.*]

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[1] Therap. Monatsh., March, 1911.

### BRANT'S SOOTHING BALM

This preparation was marketed by the J. W. Brant Co. of Albion, Mich. It was said to be:

> "Good for Colic, Bowel Complaint, Weak Stomach, Painter's Colic, Cholera, Cramps, Dysentery, Neuralgia, Tooth- and Ear-Ache, Scalds, Bruises and Sprains."

For "rheumatism and neuralgia," it was to be applied externally; for "dyspepsia, sour stomach, internal pain, diarrhea, fever and ague," it was to be taken internally. It was also recommended for "Diphtheria or Canker" and was said to be good "for Colic in Horses."

This "soothing balm" was analyzed by the government chemists and found to consist of camphor and oleoresin of capsicum dissolved in alcohol and containing a trace of sassafras oil and water. The label declared the presence of 98 per cent. of alcohol, which was found to be incorrect. For this reason, and—the Supreme Court not having emasculated the act at the time this prosecution was instituted—also because the therapeutic claims were utterly false, the stuff was declared misbranded. The Brant concern pleaded *nolo contendere* and was fined $10. [*Notice of Judgment No. 777.*]

### TILDEN'S FEBRISOL

The Tilden Company, New Lebanon, N. Y., some other of whose products have previously been the subject of comment in The Journal, put on the market the preparation Febrisol. It was sold as an "Analgesic, Antalgic and Antipyretic." When analyzed by the Bureau of Chemistry, Febrisol was found to contain, besides certain unidentified drugs:

Alcohol
Glycerin
Acetanilid

Acetphenetidin
Caffein
Salol

The proportion of alcohol, acetphenetidin and acetanilid being misstated on the label, the preparation was declared misbranded. The company, through S. J. Tilden, its president, pleaded guilty and was fined $150. [*Notice of Judgment No. 780.*]

# Correspondence

## Psychology in Medical Schools

*To the Editor:*—A recent letter of Professor Henderson (The Journal, April 20, 1912, p. 1219) bearing on the matter of psychology as preparation for the study of medicine, and containing also a reference to the age of students entering schools of medicine, moves me to make a statement of facts that do not seem to be generally known. Let it be granted that the study of psychology would be an excellent training and preparation for the student of medicine. It will be conceded, however, that this study of psychology should consist in the study of scientific or experimental psychology, not of metaphysical psychology, such as was pursued by William James during the later years of his life. It matters not whether the point of view be that of psychophysics or of modern experimental psychology resting on a biologic basis, scientific psychology it must be, not metaphysical psychology. A few years ago, when the prerequisites for the study of medicine were being arranged in the University of California, I investigated the courses in the departments of psychology in American colleges and universities, and found that in scarcely any college and in but few of the universities were such scientific or experimental courses in psychology to be obtained. Some of our universities are well equipped, to be sure; but in many colleges the only equipment in the laboratory of psychology is a sink and a clock. If the schools of medicine were to demand such a course in scientific psychology of their entering students, the students and the colleges would be placed in a perplexing quandary. Years ago when the Johns Hopkins University first made the demand of a laboratory course in physics for entering students, many colleges were unable to give it. And the responsive efforts on the part of the colleges to meet this demand for laboratory physics was of great advantage to the colleges themselves. If a similar demand for a laboratory course in psychology on the part of the schools of medicine were to result in the general installation of such courses in American colleges, the result would be indeed a notable advancement in education.

Dr. Henderson states that the age of entrance to the study of medicine should not be over 20 years. For schools that require but two years of collegiate work, this is certainly true. But there is no reason why all students should not enter on the study of medicine at this age. In the reports of the recent Chicago meeting of the Association of Medical Colleges, the statement was made that, in many instances, the age of graduation was as late as 29 years, and the conclusion was apparently drawn that this was to be attributed to the collegiate requirements. Now this is unfounded. Any student who graduates from medicine later than 25 years has in some way postponed his education. The common schools all prepare students for admission to colleges and universities in twelve years. If a boy enters the public school at 6, he will enter the college at 18, enter the school of medicine at 20 and graduate at 24 years. The private schools prepare their students usually in ten years. But as the pupils of private schools often do not enter until 7, they enter the college at 17 and graduate from medicine at 23. Any student who does not make this schedule has been restrained for reasons of health or finances, or in some other way. The twelve-year course of the common schools is too long; all the work could be easily done in ten if the work were systematized and needless detail and repetition excised. But even as matters stand, any normally healthy boy can enter the college or university at 18, take the two years of collegiate work required now by many schools of medicine, and graduate from medicine at 24. Taking the full college course would postpone graduation in medicine only to the age of 26.

Alonzo Englebert Taylor, Philadelphia.

*To the Editor:*—Apropos of the little symposium on psychology in the medical schools published in The Journal, March 30, 1912, p. 909, it seems not improper to state that I gave a course in normal medical psychology to the seniors of Tufts Medical School in the college year, 1901-02, and continued it for seven years, when it was merged into the course in psychopathology given with Prof. Morton Prince.

That I fully agree with the remarks of Professor Yandell Henderson of Yale, in The Journal, April 20, 1912, p. 1219, would be made plain to any who glanced over my two articles on the subject, namely "Psychology and the Medical School," *Science*, new series, July 26, 1901, xiv, 343, and "Medical Psychology," *Med. Rec.*, New York, Jan. 30, 1909, lxxv, 5. Knowledge of the fundamentals of human psychology is certainly one of the crying needs of our present medical education. It has long seemed to me strange that the profession so slowly recognizes this obvious fact. Perhaps I may venture, even, to make a brief quotation from the latter essay on this overtimely topic:

> "There are difficulties in teaching psychology to medical students which those who have tried it readily appreciate. Primarily, for one thing, the average student of this profession is an almost discouragingly practical, not to say mercenary, young person. He is very apt to have a yearning after little that has not a dollar attached to its *terminus ad quem*, if not more immediately concerned. . . . Another difficulty of successfully teaching this science to medical students is their often almost materialistic point of view. This forms at the outset a prejudice-barrier against all science that involves anything in any degree or sense allied to metaphysics that opprobrious and hateful delusion of the unbalanced intellect, except to those who know something about it. . . .
>
> "With all these difficulties, easily overcome by adequate instruction, the subject of medical psychology is a relatively simple science solely descriptive of easily observable facts. There need be nothing more obscure in descriptive psychology whether medical or academic, than there is in any adequat discussion of the complexities of the marvel man. Owing t

the nature of its subject-matter (immediate experience) there need not be used even the technical terms that are so great a bar at first to many of our sciences. There is little to be described outside the conscious experience, at one time or another, of the average intelligent man or woman. . . .

The natural leaders of public opinion in this general respect, medical schools and medical education, are just at present not a little behind the common average knowledge of the wide-awake community. The somewhat hackneyed 'average man' (of course, in reality there is no such) recognizes the far-pervading force of mental events and realizes the influence of that obvious progress in the spirit of mental science that is in his environment. If the particular 'mental science' that influences him oftentimes is on the outer margin of charlatanry, surely it is not his fault. All the more on this account, indeed, is it the business of the medical school to show him the rightful psychology and its tremendous moment in the care of most diseases, not less than in the conduct of his daily life."

George V. N. Dearborn, Boston.

## Danger to the Public from Praise of Caffein

*To the Editor:*—I read with some interest your editorial in the issue of March 16, reviewing the experiments of Dr. H. L. Hollingworth and of Dr. C. H. Wood, Jr., on the influence of caffein on the human system. This editorial appeared just at the time when I was retiring from my position in the Department of Agriculture, and I did not have the opportunity, at the time, to give it the attention which it merited.

Since the publication of this editorial I have read an editorial in the *Western Druggist* for April, 1912, in which reference is made to the article above noted. In speaking of the many blunders and other offenses of which I was guilty during my official career, the *Western Druggist* says:

> "As an example of these blunders might be mentioned the uit of the government instigated by Dr. Wiley against the oca-Cola Company to prohibit the use of caffein in the roduct of the company. The government was defeated in his suit, which cost the country thousands of dollars, and ow comes The Journal of the American Medical Association, n an issue almost coincident with the resignation of Dr. Wiley, with an editorial extolling the value of caffein in its nfluence on mental and motor efficiency and on the circuation."

In closing your editorial you say:

> "It is gratifying to have the effects on the human system of drug like caffein so investigated by rigorous scientific tests at he hands of capable investigators; only in this way will here be provided an adequate basis for correct conclusions as o the possible dangers of the use of caffein-containing everages."

For my part, believing as I do, in the eternal principles of nergy, and that you cannot get something for nothing, I am nable to see how the stimulation produced by a drug like affein can secure any energy except at a corresponding xpense, and hence when I read of such tremendous increases f energy and work, coupled with the statement that no epressing effects follow, I either must give up my belief in e fundamental principles of science or else look elsewhere r an explanation of the conclusions. Fatigue is the signal danger showing the need of rest and recreation. Caffein xtinguishes the red light but does not close the switch

In looking elsewhere, in the two instances which you have ted, I happen to have discovered that both series of experients to which reference was made in your editorial were nducted at the instigation of and paid for by the funds of e Coca-Cola Company of Atlanta, Ga. Dr. H. C. Wood, Jr., as one of the witnesses at the trial, and an abstract of his stimony is found in the notice of judgment now in type d soon to be issued by the Department of Agriculture. r. Hollingworth was employed when a professor in the lumbia University had refused the offer of the Coca-Cola mpany. Incidentally, Dr. Hollingworth is not a professor d is not connected with Columbia University; he is an structor in Barnard College which while educationally a part Columbia University is financially independent of it. In y opinion, the investigations made and paid for by interested rties, for the purposes of establishing a business for gain, cannot escape a taint which must pervade, even if unconsciously, the whole scope of the work.

About the time of the appearance of these reports, the first of the papers of Dr. Salant was published by the Bureau of Chemistry, Department of Agriculture, as Bulletin 148, on "The Toxicity of Caffein." That caffein is a lethal poison in not very large doses is thoroughly established by Dr. Salant's work on rabbits, guinea-pigs, cats and dogs. The evil effects of extensive drinking of coffee and tea are well known to all members of the medical profession. That caffein should be extracted from its natural belongings and placed in other foods or beverages where its presence is not known, and thus given to unsuspecting men, women and children, is an abuse which should be corrected by public indignation and the rigid arm of the law.

While no objection can be made to a study of the summary of experiments of this kind, care should be exercised that nothing be said which could possibly be used to support, to extend, or to justify such a crying abuse as that represented in Coca-Cola itself. It is also important that the readers of the results of scientific investigations should know why, and under what auspices, they were undertaken. It is to be regretted that the words of The Journal of the American Medical Association will hereafter be utilized by periodicals like the *Western Druggist* and by advertisers like the Coca-Cola Company, to promote and extend the use of a most objectionable form of beverage. We may look now, in the next instalment of Coca-Cola literature, for the approving words of The Journal of the American Medical Association, extolling "The Value of Caffein in Its Influence on Mental and Motor Efficiency."

H. W. Wiley, Washington, D. C.
Director, Bureau of Foods, Sanitation and Health,
*Good Housekeeping Magazine.*

Comment: The work done by Hollingworth and Wood was reviewed in The Journal for two reasons: first, because the subject of caffein-containing preparations is of wide-spread interest and further, because the findings of Wood and Hollingworth differ from those generally accepted. Dr. Wiley's letter was the first intimation that we had that commercialism might have prompted the investigation. Had The Journal known the connection, editorial mention would have been made of it so that our readers could have been forewarned. That the work of Wood and Hollingworth was otherwise than honest, neither The Journal nor, we feel free to say, Dr. Wiley believes. Everyone must admit, however, that experiments performed at the behest and expense of commercial interests are likely to be biased in favor of whatever hypothesis the interests concerned desire to prove. In the interests of scientific truth, therefore, it is particularly desirable that all work dealing with controversial subjects shall be done under conditions that are beyond criticism and by men whose disinterestedness is beyond question. The closing clause of our editorial made it plain that the conclusions of Hollingworth and Wood were not in any sense endorsed, but that they were given as a presumably valuable contribution to the subject discussed.

## Another Section Wanted

*To the Editor:*—Every additional meeting of the Association emphasizes the need of a section in which interested members may discuss the many questions arising daily in their employment of physical therapeutics. It is a well-known fact that the number of physicians employing high-frequency electric currents and other physical agencies is greatly on the increase, the first-mentioned modality giving clinical data of great value in the early stages of arteriosclerosis and allied affections; that new and important researches have been made in the electric generation of heat within the body, at predetermined points, by improvements in the d'Arsonval current; that new claims have been made for the reflex control of internal, local deviations from normal trophic conditions by vibration, etc., all of great interest, if confirmed, to the internist grappling daily with these very affections. Such a section would be of peculiar interest at the present moment to general practitioners possessing apparatus supposed to give these currents, not to mention a less general interest in the surgical uses of electricity and the *x*-ray. Ample opportunity is given for these discussions in the national representative bodies abroad, the British Medical Association in particular having a section on electrotherapeutics alone.

In our own Association the subject is represented solely by the large exhibit of apparatus in the commercial annex. Are we to assume that the Association endorses this movement merely as a commercial venture of its members? Such, at least, is the appearance presented when the total lack of recognition in the scientific sessions is remembered. The natural result is that the inquiring physician buys the apparatus and goes home to quack it, with only the meager instructions of the commercial agent to guide him.

At the St. Louis meeting a petition for such a section signed by 150 members was presented to the House of Delegates, but the section was not created.

It is thought by some that these physical therapeutic subjects should go into the Section on Pharmacology and Therapeutics. On closely scrutinizing this position it will be found to be impracticable. The members interested in drug purity and therapy have a large subject before them, with much important work to be done, and are naturally not interested in other lines of research. A proof of this was the refusal of the officers of this section to list any physical papers for the Los Angeles meeting.

I would like all members wishing a new Section on the Physical Forces, and willing to register in and support such a Section, to address a postal card without delay, stating their wish and intentions in the matter, to me or to Dr. Gustavus Werber, 1353 Q Street, N. W., Washington, D. C.

G. BETTON MASSEY, 1831 Chestnut Street, Philadelphia.

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### Thoremedin

*To the Editor:*—After some consideration I would like to make a statement in regard to my advocacy of a new remedy, then entitled "Thorium Paste," which was criticized, as Thoremedin, in THE JOURNAL, March 9, 1912, pp. 706 and 716. I wish to acknowledge that I made a mistake in publishing my article in the *Medical Record*, April 22, 1911, without securing a fuller statement of the exact volumetric formula for the thorium paste.

I accepted the statement of Semerak, who brought it to me with strong letters of recommendation from dermatologists of repute in Europe, where, he said, it had been used successfully for seven years, and I have before me the original memorandum furnished, giving the same ingredients as now appear on the labels. In using "Thorium Paste" and reporting on it, I had no intention of advocating a secret nostrum, as I had been promised by Semerak that the exact formula would be published shortly. I accepted, as you have accepted in THE JOURNAL, April 13, p. 1121, the reason given by Squibb for not publishing it at the time.

I must disagree, however, with Dr. Pusey's opinion that because thorium is present in so small a quantity, the radioactive properties of the remedy were unimportant; for the long-continued adherence of the paste, one to two weeks, with repetition if need be, gives a prolonged, weak, radio-active effect which is better than the relatively short application of strong radium. I believe that the results which I and others have obtained demonstrate that the remedy which I then advocated, the exact formula of which now accompanies each package, is of more value than as a simple caustic. Just in what this efficiency resides is a matter for further scientific investigation.

That the combination is of value I have no doubt, as I have demonstrated its effect repeatedly in the presence of others; and though ignorant of the agent to which it should be attributed, I believe that I was doing the profession a service in giving my experience with it, while I regret that the manner in which it was presented was open to criticism. I must therefore, claim the same kindly judgment which you have given to Squibb, in your editorial referred to; whatever mistake I made it was "one of judgment and not of intent."

L. DUNCAN BULKLEY, New York.

# Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

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### A CASE OF OVERDEVELOPMENT OF FETUS, WITH DELIVERY AT TEN MONTHS

*To the Editor:*—Mrs. A. E. S., aged 29, was the mother of four children, 12 to 3 years in age. Her previous labors were without instruments, the babies weighing from 10½ to 12½ pounds. She became pregnant in January, 1911, and expected confinement Oct. 15, 1911. Labor began November 16. After twenty-four hours of hard labor the head was engaged in the left occipito-anterior position. No progress being made for some time, I applied forceps and after two or three hours of hard work delivered the head, but, contrary to the rule, was unable to deliver the shoulders. Counsel and assistance which had been advised but refused by the husband was now called. Unable to deliver by force, we decapitated and with a blunt hook brought down the arms. It then required our combined strength to deliver the body part way. When the child's pelvis reached the superior strait it stuck again. Evisceration was begun, but I turned the body over, using traction at the same time. By this twisting the bony prominence of the pelvis was passed and the child delivered. The weight of the child, minus its blood and the bowel material expressed, was 18¼ pounds.

The mother was not infected, but the extreme pressure on the vaginal tissue caused extensive pressure necrosis, gangrene and sloughing, leaving her in a deplorable condition. She had a vesicovaginal fistula and complete prolapse of the bladder and the urethra was destroyed up to the neck of the bladder. She is at present in a hospital for surgical treatment, where, by a series of operations, it is hoped to repair some of the damage.

I know that this is a very unusual case as to the size of the fetus (the weight is authentic), but I should like to hear through your columns from some obstetricians whether with such a history—of previous labors, far from a hospital—could any other method of delivery have given any better results or prevented the serious results that followed this delivery? Taking into consideration the fact that the head was delivered and the child's body drawn tightly into the birth canal, how shall the delivery be effected?

J. E. B., Wisconsin.

ANSWER.—Although stories of the birth of children weighing 12, 14 or 16 pounds are not uncommon among the laity, yet reliable reports of children weighing more than 11 pounds are very rare. Ahlfeld says that in Marburg for a period of ten years, the largest child born weighed 11¼ pounds.

As it is hardly to be expected that a weight given by a simple spring balance which might satisfy a fisherman could be incorporated into obstetric records, it is desirable that any report should be substantiated by witnesses and the method of weighing given in detail.

A number of cases of very large children weighing more than 11 pounds have been reported from time to time. In most or all of these cases, pregnancy has been considerably prolonged beyond the usual period of 280 days. In some instances, the parents were unusually large. These points should be noted in the reports of similar cases. Among the cases of large children is that reported by A. Martin of a child that weighed 7,470 grams (nearly 16½ pounds) without brains or blood. Perhaps the largest authentic weight (23¾ pounds) was reported by A. P. Beach, in the *Medical Record*, 1879. The child measured 30 inches in length. The circumference of the head was 19 inches, that of the breast 24 inche and that of the hips 27 inches. The mother was 7 feet 9 inches tall and the father 7 feet 7 inches. The child was born dead after forceps operation and some traction to deliver the shoulders and hips.

The proper management of these cases is, of course, a cesarean section, undertaken early and before serious and fruitless efforts at extraction with forceps or with other manipulation have been made. The difficulty, however, is in making the diagnosis. The cases are so rare that no one—not even a specialist—has an opportunity to see many cases The size of the child is not suspected and therefore no correctly estimated. The same kind of a mistake is made in cases of fetal hydrocephalus. Everyone knows that the proper management of hydrocephalus is perforation, afte which extraction is simple and should be attended with n mortality. As a matter of fact, the maternal mortality i fetal hydrocephalus is over 50 per cent. because the conditio is not diagnosed and improper methods of extraction ar employed.

The remedy is the general introduction of careful method of examination. In every case of delay during labor it of the greatest importance to determine the station of th presenting part. Is the head above the inlet, in the inle or through the inlet? This must be determined by bot external and internal examination. The most advanced pa of a moldable head may be felt some distance below th inlet by the internal examination when the external exam ination shows the main part of the head still above th superior strait. With such findings and in case of a prolonged pregnancy, we should always suspect a large child.

It should also be emphasized that forceps applied to the head not yet through the inlet constitutes a high forceps operation. one of the most difficult of obstetric operations. either with a large child in a normal pelvis or a normal child in a contracted pelvis. With a suspicion of disproportion between the head and the pelvis, no operation should be undertaken with the head in the inlet without careful examination and measurement, and, if necessary, consultation. Then, if an operation is decided on, it should be remembered that the forceps operation is not the only one to be considered. Often a high-forceps operation is more dangerous to both mother and child than a cesarean section or a hebosteotomy. With such a plan of careful study and examination of cases we should not hear the sad and discouraging reports that after two or three hours of hard work with forceps the head was delivered.

In any mutilating operation, one should from the beginning always avoid injury to the mother as much as possible. With strong grasping forceps and large strong scissors and with the Braun hook the child should be cut or twisted into pieces that are extracted without tearing the mother. A wire saw like that used in hebosteotomy might sometimes be of value in removing a shoulder or thigh.

## JOHN HERR MUSSER

*To the Editor:*—The following beautiful poem on Dr. J. H. Musser, by Dr. R. H. G. Osborne, of Morrisville, Pa., appeared in the May number of the *Bucks County Medical Monthly*. I should like to see it in The Journal. J. B. Carrell, Hatboro, Pa.

### REQUIESCIT

Another warrior sinks to rest and folds his weary hands to sleep;
The deeds that he hath done attest how pure his motives were and deep.
Not his the pomp of sword and drum, or bugle pealing notes of strife,
For though he strove to overcome, he sought not death to bring, but life.

He rests at last, yet not as one whose toil for selfish ends is o'er;
He passes like the setting sun, in farther regions to explore;
He rests indeed, yet not with grief should we his hallow'd bier surround,
He falls not as the falling leaf, but as the seed in mellow ground.

We yield him Nature's tear and sigh, but grief before our faith recedes;
The true physician does not die, he lives in comrades' hearts and deeds;
His dauntless soul no fears appal, he knows how frail is human breath;
So, one by one her warriors fall, yet Life is victor over Death.

## FUCHSIN

*To the Editor:*—1. According to an article in The Journal (April 20, p. 1174), the acetate of fuchsin is a germicide, while the sulphate and the chlorid of fuchsin are inert. As the acetate, chlorid or sulphate radicals in themselves have no germicidal value, I do not understand why fuchsin in combination with an acetate radical should behave differently from fuchsin in combination with the chlorid or sulphate radical. Can you explain?

2. Also please explain why the author refers to fuchsin acetate as being basic while fuchsin chlorid and sulphate are said to be acid, when the formulas given show all three to be neutral.

P. C. R.

Answer.—1. The acetate, as the salt of a very weak acid, acetic acid, is decomposed by water (hydrolysis) to a greater extent than the chlorid or sulphate, which are probably decomposed only very slightly. We have a similar behavior in sodium acetate, which is decomposed by water into sodium hydroxid and acetic acid and reacts alkaline to an indicator like litmus or methyl orange, while sodium chlorid is decomposed only in faintest traces and reacts neutral. Sodium sulphate is decomposed slightly and reacts very faintly alkaline o neutral litmus. It may be, but is not likely, that the fact hat the acetate of fuchsin is more soluble than the chlorid and sulphate has something to do with its germicidal power, since the author of the paper in question speaks of the difficulty of preventing precipitation. The difference in the degree f hydrolysis (decomposition by water) of the acetate versus he chlorid, and the fact that the acetate is a much stronger germicide than the chlorid suggests clearly that the *germicidal power is due to the product of hydrolysis*, namely, the free base of fuchsin. Cases are often noted in which the reaction f a salt is due to its products of hydrolysis. For instance, odium acetate solution will saponify fats and other esters by virtue of the sodium hydroxid formed in hydrolysis, whereas sodium chlorid and sulphate have no such effect.

Just why the product of hydrolysis, the free base of fuchsin, should be germicidal, while the salts are not, is a different question and a very interesting one. The germicidal power might be due to the fact that the free base is an anilin. Of theoretic interest, and given with the utmost reserve, is the following suggestion: The free base is known to be unstable and to go over by a molecular change into a colorless derivative (a carbinol) of the same composition as the colored base, but of a different molecular structure. Acids convert the carbinol back into the colored base. This would indicate a continual change of structure of molecules in a solution of the acetate and these changes would involve the moving of electrons from position to position, and it is possible that it is this movement of electrons and the resulting forces that form the ultimate cause of the germicidal power. In other instances we find that similar changes of structure involve radical changes, such as color itself, fluorescence, etc.

2. Fuchsin acetate probably reacts basic, the base fuchsin being a stronger base than acetic acid is an acid. Sodium acetate, as stated above, also reacts alkaline for the same reason. The chlorid and sulphate probably react slightly acid, the acid produced by hydrolysis being stronger than the base, as is the case also for ammonium chlorid.

# Miscellany

**The Importance of a Well-Considered Prognosis.**—In the management of patients the prognosis, although it is beset with many pitfalls for even the experienced physician, is of no small importance. Dr. T. Fred. Gardner (*Brit. Med. Jour.*, Feb. 10, 1912, p. 285) says that medical men hold here an enormous power for good or ill to their patients, and that it is not a matter of indifference how that prognosis is given. "Of course," he says, "we must give an honest opinion, but how that honest opinion is given, matters a very great deal." He is led to this observation by the many errors made by himself, and by his colleagues coming within his knowledge, some of which were serious, some amusing, but in all of which the outcome was far different from that predicted by the medical attendant. Even the most trivial things may have a profound effect on patients, and though one should be optimistic when possible, one should always be careful and conservative. "Beware," he says, "the unguarded word! Beware the unguarded hesitation! Beware even the unconscious sigh!" He relates an instance in which the physician in examining the chest of a woman patient would listen to the breathing, then unconsciously give a little sigh. Though the prognosis in this case was favorable, the patient afterward told the physician that every time she heard that sigh, she said to herself: "Another bit of my lung gone!" Gardner warns physicians to be exceedingly careful in pronouncing a patient to be afflicted with some fearsome or fearful disease, or in declaring that they have only a few days or weeks to live. He believes that one should be exceedingly conservative in predicting the length of time which any patient may live, for most physicians have seen patients in the most desperate condition, with apparently only a few days or weeks to live, not only sometimes entirely recover but even live for years. in almost the same desperate condition, to plague their medical advisers on account of their mistakes in judgment. Even the optimist, with the best intentions in the world. may unwittingly embarrass himself by his most cheerful predictions. An optimistic physician told his 80-year old patient that he could see no reason why she should not live to be 90. This prediction, strangely enough, seemed to depress the patient, and when asked whether she was not glad the physician had made such a cheerful prediction, she said: "No, he limited me." But notwithstanding the possibility of making mistakes, Gardner believes that when honestly possible, optimism in prognosis is not only the privilege of the physician, but his bounden duty. Often it will turn the scale of the flagging forces and put the patient on the road to recovery. Gardner says that he could quote case after case in which a hopeful prognosis has done more than all the drugs, vaccines, serums, etc., in curing the patient. He says: "While we honestly can, let us add to our therapeutic armory the suggestion of hope. If we cannot give hope of cure, let us give hope of relief; if we cannot give relief, let us give hope of partial relief; if we cannot give hope of partial relief, let us have some philosophy to offer to our wounded and sorely stricken patients, that even then we may administer some medicine to the mind." While none of us is infallible—"not even," says Gardner, "the youngest of us"—and while we are and should be inclined to be more conservative about making positive prognoses, as we gain in years and experience, yet we should all pause before we destroy hope.

**The County Health Officer.**—In his report to the Rockefeller Commission for the Eradication of Hookworm Disease, Dr. Charles Wardell Stiles has this to say regarding the county health officer: "During the twenty years that I have been engaged on a study of practical health problems in this country, the fact has forced itself on me that the county health officer is theoretically the most important and practically the weakest point in the entire public-health organization of the United States. Some of our counties have excellent county health officers, but in the vast majority of cases the men are underpaid for the work, and they therefore do not perform their duties properly; for the support of their families they are dependent on their private practice among the people over whom they are called on to exercise police powers, and as a result these powers are not exercised; too often the position goes to the 'lowest bidder,' and too often it goes to a political appointee, technically totally unfitted for the work. To use a comparison, the county health officer may be compared with the sheriff or the local police, while the federal health authorities may be compared with the U. S. Army. Today there is a tendency to demand that the federal public-health service be increased. Much as I approve of strengthening the federal service, as a member of that service I feel convinced that the average citizen does not fully appreciate the fact that this service cannot possibly make up for the present inefficiencies of the mass of our county health officers. We might just as logically expect that an increase in the standing army of the United States would obviate the necessity of having county sheriffs or local police as to expect the federal public health service to obviate the necessity of appointing and equipping proper local and county health officers. Speaking from an experience of twenty years' work in federal service, with a considerable portion of this time spent in actual field work in many different states, I cannot escape the conclusion that the most important single problem in public health organization in our country is at present centered in the question of the county and local health officer rather than in Washington, and I wish to add all the emphasis in my power to that part of the report of the administrative secretary which deals with this point. If the counties in our Gulf-Atlantic states had active, properly trained county health officers, this commission would not be able to find any work there to enable it to carry out its trust, and I know of no way by which we can more quickly finish our work, and thereby render ourselves useless, than by encouraging the development of a thoroughly efficient system of county health officers."

**The Dairy Lunch.**—The *Boston Medical and Surgical Journal* champions the dairy lunch as a triumph of American genius, calling it educational, democratic and communal in the right sense. "Wise laws compel it to be sanitary. Public opinion makes it sensible and respectable." It is "a typical product of American genius for saving labor and waste in the feeding of busy thousands." It may, indeed, conduce to hasty habits of eating, still, it is said, speed in eating really becomes a factor of importance, provided it does not interfere with the quality and mastication of food, for the time saved by avoiding unnecessary delay in the serving of food may often profitably be employed otherwise. The typical dairy lunch of the best sort is not, as its dyspeptic and gouty critics would aver, a place for the purveying of pie and doughnuts and other indigestible things. It is clean, airy, orderly. Foods of the simple nutritious sort are furnished without unnecessary frills, which afford all of the essentials of nutrition, caloric and hygienic, without any of the unnecessary appurtenances which blind convention so often associates with the taking of food. The dairy lunch is not only an economic success, it is a force for education in hygiene and in discipline. Those who patronize it get only what is good for them and learn unconsciously how to select it. It is a place for those who eat to secure their greatest efficiency—for those who want the best and wish to pay what it is worth, but who do not intend to pay for mere form.

**Sanitary Rules for Camps.**—The following brief rules for the sanitary care of construction camps have been formulated by Jerome Cochran, C. E. (*Cornell Civil Engineer*, February, 1912). With slight modification they will apply to summer camps or cottage communities, and might profitably be followed during the coming vacation season:

1. All open windows must be carefully screened to preclude flies and mosquitoes. 2. No food whatever shall stand about uncovered except at mealtime. 3. Water from brooks or creeks must not be used for drinking or cooking purposes. 4. All kitchen waste, solid and liquid, must be put in tightly covered tins or in a garbage hole, and every evening covered with earth. 5. The dry-closet pails must be emptied frequently and the contents thoroughly covered with earth or otherwise satisfactorily disposed of and not allowed to become a nuisance. 6. The camp closets must be used exclusively; the "method of Moses" will not be tolerated about the camp. 7. No paper or rubbish shall be scattered about the camp: such material must be collected, and burned or buried. 8. Mosquito-pools in or about the camp shall be treated with kerosene or other oil at least every ten days and oftener if found necessary. 9. Weeds and grass must be kept short around the camp. 10. All dead animals found around the camp must be immediately buried or otherwise disposed of. 11. Proper precautions shall be taken against infectious diseases. 12. All other sanitary rules shall be strictly enforced as may be ordered by the state board of health.

**The Standardization of the Practices of State and Municipal Hygiene.**—One of the important functions of the Fifteenth International Congress on Hygiene and Demography next fall will be the standardization of the practices of state and municipal hygiene. This is clearly foreshadowed by the topics which have been outlined for Section VI of the program dealing with this subject. In this section, during sessions lasting the entire week of the congress, an opportunity will be afforded for the exposition by technicians of international reputation of the most recent practice on those extremely important phases of municipal hygiene which deal with the sanitation of habitations, streets, water-supplies, disposal of sewage and waste and the legislative and administrative functions of boards of health. The officers of the Section on State and Municipal Hygiene are: president, Dr. Frank F. Wesbrook, professor of pathology and bacteriology, University of Minnesota, Minneapolis; vice-presidents, Dr. John N. Hurty, secretary, State Board of Health of Indiana and Dr. Charles D. Chapin, superintendent of health, Providence, R. I.; secretaries, Dr. Herbert D. Pease, New York, and Dr. Marshall L. Price, secretary, State Board of Health of Maryland.

**Specialism in Medicine.**—Many a man has so centered his study, his thought, his practice and his interest in one organ as practically to forget that this is only one of many organs in the body, more or less interdependent and each demanding consideration. The result in technical knowledge of the different organs as derived from specialism has been great, but the natural effect on the special worker is narrowing. Unless the specialist is careful he becomes nothing but a tool in the hands of the general medical adviser, whose vision is broad enough to study the human body as a whole, and to select from the collection of tools at his command the proper one for the cure of his patient.—E. B. Cragin in *Med. Record.*

## Medical Economics

This Department Embodies the Subjects of Postgraduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

### FURTHER DEBATE ON THE OWEN BILL

For the purpose of keeping our readers informed on the progress of the Owen bill, the debate in the Senate on May 2 is given herewith complete, with the exception of a portion of Senator Owen's speech relating to matters familiar to our readers.

Mr. Culberson: Mr. President, as chairman of the Committee on Public Health and National Quarantine I have received a number of protests from people of the state of Oklahoma against the passage of what is known as the Owen public health bill, with a special request that I present them to the Senate. I do so, asking the substance of the memorials be printed in the *Record*, and not copying the names, of course, but that a note of the signatures may be made.

The Vice President: Without objection, that procedure will be had.

The memorials presented by Mr. Culberson are as follows:

From 84 citizens of Boley, 22 citizens of Oklahoma City, 5 citizens of Yale, 58 citizens of Chandler, 57 citizens of Oklahoma City, 40 citizens of South Coffeyville, 43 citizens of Boley, 15 citizens of Oklahoma City, 34 citizens of Norman, 28 citizens of Kiefer, 15 citizens of Oklahoma City, 12 citizens of Higley, 10 citizens of Okmulgee, 32 citizens of Morrison, 40 citizens of Oklahoma City, 112 citizens of Jennings, 23 citizens of Purcell, 43 citizens of Chelsea, 30 citizens of Enid, 14 citizens of Carmen, 21 citizens of Cherokee, 14 citizens of Oklahoma City, 28 citizens of Amber, 116 citizens of Lawton, 41 citizens of Lindsay, 29 citizens of Oklahoma City, 67 citizens of Stillwater, 96 citizens of Lawton, 46 citizens of Bartlesville, 35 citizens of Chickasha, 23 citizens of Lawton, 64 citizens of Oklahoma City, 41 citizens of Chickasha, 26 citizens of Enid, 13 citizens of Oklahoma City, 55 citizens of Poteau, 40 citizens of Oklahoma City, 22 citizens of El Reno, 14 citizens of Oklahoma City, 24 citizens of Bartlesville, 40 citizens of Ardmore, 7 citizens of Oklahoma City, 43 citizens of Ardmore, 15 citizens of Oklahoma City, 11 citizens of Perry, 61 citizens of Oklahoma City, 43 citizens of Wagoner, 13 citizens of Oklahoma City, 62 citizens of Chickasha, 32 citizens of Oklahoma City, 29 citizens of Wagoner, 43 citizens of Oklahoma City, 39 citizens of Chickasha, 16 citizens of Chandler, 20 citizens of Chickasha, 37 citizens of Oklahoma City, 12 citizens of Carmen, 39 citizens of Oklahoma City, 52 citizens of Guthrie, 36 citizens of Oklahoma City, 28 citizens of Woodward, 11 citizens of Oklahoma City, 27 citizens of Pawhuska, 8 citizens of Oklahoma City, 30 citizens of Guthrie, 5 citizens of Oklahoma City, 17 citizens of Walter, 21 citizens of Oklahoma City, 30 citizens of Tulsa, 13 citizens of Oklahoma City, 45 citizens of Wagoner, 23 citizens of Oklahoma City, 46 citizens of Stillwater, 8 citizens of Oklahoma City, 57 citizens of Stillwater, 52 citizens of Oklahoma City, 61 citizens of Ames, 32 citizens of Oklahoma City, 5 citizens of Britton, 9 citizens of Oklahoma City, 9 citizens of Claremore, 32 citizens of Oklahoma City, 90 citizens of Chandler. 14 citizens of Oklahoma City, 6 citizens of Britton, 4 citizens of Oklahoma City, 21 citizens of Ardmore, 23 citizens of Oklahoma City, 44 citizens of Shawnee, 13 citizens of Oklahoma City, 35 citizens of Stroud, 22 citizens of Oklahoma City, 43 citizens of Quapaw, 41 citizens of Oklahoma City, 31 citizens of Pond Creek, 31 citizens of Oklahoma City, 14 citizens of Pawnee. 48 citizens of Oklahoma City, 23 citizens of Orlando, 43 citizens of Oklahoma City, 26 citizens of Muskogee, 33 citizens of Oklahoma City, 2 citizens of Pawnee, 20 citizens of Oklahoma City, 28 citizens of Seminole, 49 citizens of Oklahoma City. 45 citizens of Shawnee, 43 citizens of Oklahoma City, 49 citizens of Shawnee, 45 citizens of Oklahoma City, 39 citizens of Lawton, 44 citizens of Oklahoma City, 18 citizens of Mangum, 37 citizens of Oklahoma City, 71 citizens of Miami, 102 citizens of Muskogee, 33 citizens of Oklahoma City, 86 citizens of Shawnee, 16 citizens of Oklahoma City, 18 citizens of Fairview, 89 citizens of Oklahoma City, 41 citizens of Fairfax, 33 citizens of Oklahoma City, 53 citizens of Glencoe, 17 citizens of Oklahoma City, 43 citizens of Guthrie, 11 citizens of Oklahoma City, 45 citizens of Guthrie, 17 citizens of Oklahoma City, 58 citizens of Guthrie, 8 citizens of Oklahoma City, 44 citizens of Guthrie, 7 citizens of Oklahoma City, 86 citizens of Idabel, 17 citizens of Oklahoma City, 131 citizens of Lawton, 58 citizens of Oklahoma City, 49 citizens of Enid, 44 citizens of Oklahoma City, 1 citizen of Edmond, 16 citizens of Oklahoma City, 59 citizens of Davenport, 37 citizens of Oklahoma, 25 citizens of Davenport, 22 citizens of Oklahoma City, 37 citizens of Cushing, 19 citizens of Oklahoma City, 40 citizens of Cushing, 36 citizens of Oklahoma City, 37 citizens of Collinsville. and 20 citizens of Oklahoma City, all remonstrating against the passage of the bill (S. 1) to establish a department of health and for other purposes.

Mr. Owen: Mr. President, I wish to put in the *Record* with regard to these alleged protests against Senate bill No. 1, establishing a public health service, my comment that the protest is based on the false theory that the health service of the United States would be "admittedly under the control of one school of medicine" and "ultimately abridge the right of the individual citizen to choose the practitioner of his choice in times of illness."

That suggestion is not true. The bill expressly provides the contrary—that the health service shall have nothing to do with controlling the practice of medicine; that it shall not interfere with the right of the citizen to choose his own practitioner; that it shall not interfere with the practitioner of any school of medicine or of healing to practice his profession. That matter being confessedly in the control of the police powers of the state need not to have been negatived by the bill itself, but out of abundant caution and for the reason that that contention had been made the bill does provide that no interference shall be made with any citizen in choosing his practitioner or in practicing any method of healing.

The bill, in fact, does not enlarge the powers now existing in the Bureau of Public Health and Marine-Hospital Service and "Vital Statistics" and in the administration of the pure food and drugs act. These departments are merely brought together in an independent bureau, so as to coordinate their activities and to make more economical and more efficient their administration.

The obvious mechanical and artificial character of these protests I call attention to. The protest which I have in my hand came from Boley, Okla., a little village which I know very well. This protest, like all the others, is based on gross error and obvious misinformation.

The objection which I make is that this protest is based on the theory that it would interfere with the liberty of the citizen and of the practitioner above referred to and on the further assertion that such a bureau or department would not only be expensive, which is not true, but that it could in nowise do more effective work than the present bureau, which is also not true.

The statement that there is no public demand for such legislation is also not true, because the public demand has been so great that it represents practically the opinion of a very great majority of the people of the United States, made obvious not only by resolutions of societies devoted to the public health, by the action taken by the various great insurance companies of this country which are concerned in prolonging the life of the policy holders, and of the various societies devoted to the cure and prevention of illness throughout the United States, but it is also made obvious by the declarations of the various great political parties, including the Republican party in its national platform and the Democratic party in its national platform.

Senator Owen then reviewed the position of political parties, scientific bodies, life insurance companies and prominent individuals on this subject, and the enormous waste of life and money from preventable diseases. He continued:

This bill provides that the health service shall not interfere with any of the functions belonging exclusively to the states, nor permit anyone to enter the premises of private persons without the permission of the owner or occupant thereof, and shall have no power to regulate the practice of medicine or the practice of healing, or to interfere with the right of a citizen to employ the practitioner of his choice, or to make any discrimination in favor of or against any school of medicine or of healing.

The opposition which has been stirred up against the establishment of an independent health service has proceeded on the assumption that the health service would have the right under this bill to interfere with the citizen in employing the practitioner of his own choice or to interfere with the states in the regulation of the practice of medicine or the practice of healing. The constitution offers abundant protection against these apprehended evils, and the bill permits nothing of the sort. It forbids it.

These protests do not represent the sentiment of the country. The opinion of the people on this question is set forth in Senate Document 637, Sixty-First Congress, second session, which contains over 200 pages of abstracts from resolutions of innumerable societies from the various states and from the opinions of leading public men, such as Bryan, Roosevelt, Taft, Cleveland, Gorgas, Wiley, and so forth.

The Senator from Washington [Mr. Jones] put into the *Record* some adverse telegrams, but the following telegram shows that these telegrams do not express the sentiment of the community:

Seattle, Wash., May 1, 1912.

Hon. Robert L. Owen,
United States Senate, Washington, D. C.:

The trustees of the King County Medical Society sent the following telegram to Senator Jones: "Beg to remind you of letter of Dec. 28, 1911, from King County Medical Society, representing 330 physicians practicing non-sectarian medicine, requesting your support of the Owen bill. Your telegrams read in Senate recently do not express the sentiment of the community." We desire to thank you for your attitude on this great question of public health.

R. W. Perry, R. J. O'Hea,
P. V. Von Phul, J. B. Manning,
J. C. Moore, H. E. Allen,
*Trustees King County Medical Society.*

It cannot be said truly that there is no sentiment for this measure. Our country is the only one in the world that is so far behind in the protection of the health of the country by a proper health service.

I call the attention of the Senate to the fact that while the disaster on the *Titanic* was a terrific destruction of life, the loss by the *Titanic* of 1,700 persons which so shocked the world is actually less than the daily unnecessary loss in the United States of human life by preventable illness. Every day of the year over 1,700 people die by preventable diseases in this country, whose lives could be saved if we had an intelligent administration and if we took more pains to instruct the public in the well-known laws governing human life, which ought to be made as public as the bulletins on the care of our swine against disease.

The Rockefeller Sanitary Commission has been studying the question of hookworm all over the world, and has caused to be made a world-wide investigation into this disorder.

The treatment of this disease is comparatively recent.

Nine hundred millions of the sixteen hundred millions of people on the globe live in countries which are infected by this disorder.

In certain states of the Union, or in certain localities in certain states where a thorough survey has been made, the percentage of children affected by this disease has come as high as 90 per cent., covering the cases of rural children between the ages of 6 and 18.

The number of cases actually diagnosed by the commission itself has been very large, and this work has been done through the state boards of health, which have been taking great interest in the matter.

The number of cases treated last year was over 142,000. It is comparatively easy to cure it.

Within the last three months over 23,000 recorded cases have been treated by the state organization in eight states.

I remind the Senate that when I suggested, two years ago, the prevalence of this disorder in two particular states in the Union—which I need not mention—a Senator from each of those states undertook to deride and ridicule this statement on the floor of the Senate.

The coöperation of state authorities, local authorities, the press, and all classes of citizens of the states affected has become admirable.

I suggest to the Senator from California that it would not suffice to put a corps of Christian Science healers in the field to deal with the hookworm, although I do not object to their activities so long as the world has access to other methods of healing.

Mr. President, I do not wish to have this matter passed by without making a comment on this character of alleged protest, because these so-called protests are based on untruth, and the citizens of the country are being misled by statements which are not only false, but are instigated by the patent medicine trust and the enemies of the pure food and drug laws, who can easily excite those who are innocent of wrong purpose to oppose this bill on the absurd theory of "medical freedom."

I enter my protest against memorials based on statements and conclusions which are obviously untrue. The ordinary citizen signing these petitions does not know that these statements and conclusions are untrue, and therefore may be easily induced to sign the petitions. He has not the bill before him. He has not had the opportunity of studying this measure. He does not know the facts nor the great need for this measure.

I therefore think it proper to put on the record at the time of the delivery of these petitions my comment on them.

Mr. President, I think that Senate bill No. 1, against which these petitions are filed, is a matter of such grave national importance that it is the duty of the members of the Senate to examine that bill and to examine the testimony which has been submitted in connection with it. It has been printed in the form of Senate documents. They are available, and I hope the Senate will, before acting on the matter, at least give it the patient and conscientious consideration which a measure of this great importance deserves.

## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

### Ninth Month—Fourth Weekly Meeting

### Carcinoma of the Liver

PATHOLOGY

Types of carcinoma, microscopic diagnosis of each. Gross appearances, (a) single tumor, with secondary deposits about it, (b) "Farre's tubercles" secondary to primary lesion. Primary or secondary cancer. Association of cancer and cirrhosis.

SYMPTOMS AND DIAGNOSIS

Symptoms: Variety and intensity of symptoms. Jaundice, pain, ascites, fever, cachexia, cerebral symptoms, metastases, the blood. Inspection, palpation, percussion.

Diagnosis: Carcinoma of pylorus, of colon. Abscess, syphilis, benign tumors and hypertrophic cirrhosis of liver.

### Cirrhosis of the Liver[1]

ATROPHIC

Etiology: Alcoholism, age, sex, diet, acute infections, chronic diseases, cardiac and pulmonary lesions.

Symptoms: Prodromal symptoms. Obstruction to portal circulation.[2] Gastro-intestinal disturbances, spleen, urine, ascites. Toxemic symptoms. Facies, "caput Medusæ." Inspection, palpation, percussion.

HYPERTROPHIC (HANOT)

Etiology: Sex, age, catarrhal jaundice, acute infections.

Symptoms: Onset, digestive disturbances. Jaundice, fever, pain, hemorrhages. Physical examination. Terminations.

BILIARY

Etiology: Chronic obstruction to ducts.

Symptoms: Symptoms of cholangeitis, jaundice, hepatic intermittent fever. Physical examination. Terminations.

### Monthly Meeting

Diagnosis and Treatment of Acute Cholecystitis.
Diagnosis of Malignant Disease of the Liver and Biliary Tract.
The Clinical Significance of Jaundice.

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[1] Edwards: International Clinics, 1902, vol. ii, p. 92. Stockton: Univer. Penn. Med. Bulletin, February, 1904. Kelly: Am. Jour. Med. Sciences, December, 1905. Progressive Medicine, December, 1909.

[2] Herrick: Jour. Exper. Medicine, January, 1907. Progressive Medicine, December, 1907.

## The Public Service

Journal Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

# Medical Education and State Boards of Registration

## COMING EXAMINATIONS

ARKANSAS: Regular, Little Rock, May 14. Sec., Dr. F. T. Murphy, Brinkley.

LOUISIANA: Regular, Tulane University, New Orleans, May 30 to June 1. Sec., Dr. A. B. Brown, 108 Baronne Street.

MASSACHUSETTS: State House, Boston, May 14-16. Sec., Dr. Edwin B. Harvey, State House.

MISSISSIPPI: State Capitol, Jackson, May 14. Sec., Dr. W. W. Smithson.

NEBRASKA: Senate Chamber, State House, Lincoln, May 22-23. Sec., Dr. C. P. Fall, Beatrice.

NEW YORK: May 14-17. Chief of Examinations Division, Mr. Harlan H. Horner, Department of Education, Albany.

WISCONSIN: Milwaukee, May 28-30. Sec., Dr. J. M. Beffel, 3200 Clybourn Street.

## Montana April Report

Dr. Wm. C. Riddell, secretary of the Montana State Board of Medical Examiners, reports the written examination held at Helena, April 2-4, 1912. The number of subjects examined in was 10; total number of questions asked, 50; percentage required to pass, 75. The total number of candidates examined was 31 of whom 25 passed and 6 failed. The following colleges were represented:

| College | Year Grad. | Per Cent. |
|---|---|---|
| PASSED | | |
| Denver and Gross College of Medicine | (1910) | 77.2 |
| Rush Medical College...(1897) 85.3; (1910) 81.7; | (1911) | 81 |
| Northwestern Univ. Medical School..(1906) 80.3; | (1909) | 84.3 |
| Bennett Medical College...(1908) 85; | (1911) | 79.7 |
| Medical College of Indiana | (1905) | 81.1 |
| Drake University | (1910) | 79.4 |
| Kansas Medical College | (1909) | 77.8 |
| University of Michigan, Department of Medicine and Surgery (1882) 82.2; (1910) 76.5, 80.7; (1911) 83. | | |
| University of Minnesota, College of Medicine and Surgery (1905) 78.4; (1908) 78.4. | | |
| Tufts College Medical School | (1901) | 80.7 |
| St. Louis College of Physicians and Surgeons | (1911) | 75 |
| University Medical College, Kansas City | (1910) | 80.2 |
| Columbia University, College of Physicians and Surgeons (1909) 88.1; (1910) 84.8. | | |
| University of Pittsburgh | (1911) | 80 |
| Marquette University, Milwaukee | (1911) | 77.2 |
| Aberdeen University, Scotland | (1908) | 86.3 |
| FAILED | | |
| University of Iowa, College of Medicine | (1895) | 68.5 |
| Keokuk Medical College, College of Phys. and Surgs. | (1907) | 70.7 |
| University of Louisville | (1908) | 67.3 |
| Baltimore Medical College | (1903) | 66.5 |
| Michigan College of Medicine and Surgery | (1911) | 64.2 |
| Marquette University, Milwaukee | (1911) | 72.9 |

# Book Notices

GESAMMELTE WERKE VON ROBERT KOCH. Herausgegeben von Prof. r. J. Schwalbe, unter Mitwirkung von Prof. Dr. G. Gaffky und rof. Dr. E. Pfuhl. Three Volumes. Paper. Price, 80 marks. Illusations. Leipsic: Georg Thieme, 1912.

The collected works of Robert Koch come in three stately olumes, each containing about 700 pages. Nominally there re two volumes only, but the second volume is divided into vo equal parts. The quality of the paper, the reproduction f the illustrations, many of which are in colors on plates t the end of the volumes, the arrangement of the material, nd the mechanical execution are in every way fully worthy the origin, contents and purpose of this publication. The ontispiece in Volume 1 shows Koch as he appeared in the st years of his life, and that in Volume 2 gives a view his sepulcher in the Institute for Infectious Diseases in erlin. The order of the contents is not strictly chronological ith respect to publication or writing—several of the addresses nd all of the special reports to official bodies of various nds have not been published before—but rather so far as ssible according to the topics considered. There is general index but each volume has a separate table contents. The general editorial supervision has been the hands of Professor Schwalbe of Berlin, the editor of the *Deutsche medicinische Wochenschrift*, in the columns of which so many of Koch's epochal communications were published first. In the preface the editor explains that not a few of Koch's special reports still remain unpublished either because of their inaccessibility, being buried in archives in various places, or because the nature of the contents seemed to render publication inadvisable. A few of the principal biographic facts, and a brief and succinct sketch of Koch's work and character are given by Koch's former assistant and successor in the Institute for Infectious Diseases, Professor Gaffky, whose memorial address before the University of Berlin is republished. Koch's collected works fall into two distinct parts, (1) the published articles, addresses, etc., and (2) hitherto unpublished reports and recommendations to various official bodies.

The first part opens with Koch's inaugural address before the Academy of Sciences in Berlin, July 1, 1909, in which he outlines briefly the scope of bacteriology, its relations to other sciences, and the part he took in its development and in the development of our knowledge of infectious diseases, their prevention and treatment. This address fills four pages only, but considering the extent of the ground it covers and Koch's personal relations to the subjects with which it deals, it is remarkably appropriate and adequate, a brilliant model of clear, concise statement, and a most fitting introduction to what follows. He gives the credit of awakening in him the investigative spirit to Meiszner, his teacher in physiology. Now come the early publications while he was district physician in Wollstein, on the cause of anthrax, wound infections, photography of bacteria; and then the articles dealing with the methods of study of bacteria, including the introduction of solid mediums—"the corner-stone of bacteriology"—with disinfection, and other subjects; and finally, the publications on tuberculosis, only about seventeen in all, headed by the paper based on the statement before the Physiologic Society of Berlin, March 24, 1882, in which the first public announcement of the discovery of the tubercle bacillus was made. This concludes Volume 1. At the end are the plates, twenty-nine in all, with the illustrations for the articles on anthrax, photography of bacteria, wound infections and tuberculosis, all reproduced beautifully. Consider for a moment the significance attached to these illustrations, especially those concerning tuberculosis!

In Volume 2 we have first the articles, reports and discussions concerning Asiatic cholera (1883-1895); then lectures to military physicians on the prevention of pestilential diseases in war-time; and now follow reports, addresses, and scientific articles on malaria, on sleeping-sickness, on bubonic pest, rinderpest, surra, etc., based on the expeditions to Africa and elsewhere. While in Africa, Koch engaged in anthropologic studies also and these form the subject of an interesting lecture. His prize essay, while still a student, on the ganglion cells and nerves in the uterus, some other publications not dealing with infectious diseases, and a few speeches at various festivities in his honor are included. Nearly 400 pages are filled with hitherto unpublished reports and recommendations to governmental bodies, mostly in regard to methods of prevention of infectious diseases in man and animals, beginning with anthrax and ending with sleeping-sickness and discussion as to the ability of the white man to survive in the tropics; covered by reports of this kind and by discussions in commissions and bodies are the subjects of vaccination and new regulations in regard to it, drainage and water-supply, and a wide range of other topics. These reports contain much of high value to the practical sanitarian and they illustrate the great service rendered by Koch to his country by taking an active part in matters of practical concern within the field in which he was master.

This hurried summary of the contents of Koch's works serves to bring to mind once more the nature and extent of his activities. This is not the place to enter on an analytic discussion of Koch's work. To us of the present generation it seems that rarely, if ever, has it been given to a man to achieve so many results of such far-reaching benefit to humanity and of such importance to the progress of medical science as was given to him. Witness the extent to which the struggle against infectious diseases the world over is being conducted along lines first drawn by Koch! The results of his investigations and discoveries form an integral part of the knowledge of every physician and determine in large measure many of his daily actions. Koch's writings consequently are to be classed with the choicest treasures of medical literature. To republish them in collected form was a duty to medicine and to Koch. It has been done well, and these volumes are his most impressive and most durable monument. They will be an ever-fruitful scource of inspiration and guidance to the true student and the investigator and should be found in every medical library.

HANDBOOK OF THERAPY. Edited by Oliver T. Osborne, M.D., Professor of Materia Medica, Therapeutics and Clinical Medicine in Yale Medical School. Third Edition. Revised and Enlarged. Cloth. Price, $1.50. Pp. 634. Chicago: American Medical Association, 535 Dearborn Avenue, 1912.

While the previous plan of this book has been continued, so many articles have been eliminated or revised and so many new ones added that the work is practically a new one. Over 200 pages have been added. New articles, as in previous editions, have been taken from the department of Therapeutics of THE JOURNAL of the American Medical Association.

The section on prescription-writing has been rewritten, the table of poisons has been classified and, in addition to the antidotes, special symptoms are mentioned. Among the new subjects giving added value to the book are articles on infectious diseases, measles, scarlet fever, whooping-cough, diphtheria, meningitis, infantile paralysis and typhoid fever, and on typhoid carriers and prophylactic vaccination. Rheumatism, chronic arthritis, diabetes, mellitus and insipidus, glycosuria and a section on tuberculosis are also new in the present edition. The section on the diseases of the digestive system, including the various enteritides, has also been greatly extended and amounts practically to a new section. Heart diseases are more fully treated and the genito-urinary section has been considerably enlarged. Among other subjects of practical importance, for which management and treatment are given, are alcoholism and the drug habits, asphyxia from gas poisoning and drowning, heat prostration and pruritus. Infant mortality and feeding, vaccine treatment, anesthesia and anesthetics and articles on drugs are also included.

The book, in its present form, contains articles of practical value selected from the writings of authorities on the various subjects. It cannot fail to be a most useful book to the student and practitioner.

DEVELOPMENTAL PATHOLOGY. A Study in Degenerative Evolution. By Eugene S. Talbot, M.S., D.D.S. Cloth. Price, $6. Pp. 435, with 346 illustrations. Boston: Richard G. Badger, 1911.

Dr. Talbot believes that "developmental pathology does not receive the attention which its relations to the etiologic moment of disease and disorder merit"; therefore he attempts to explain many defects, both mental and physical, on phylogenetic and ontogenetic grounds. Every deviation from the normal is considered a defect and hence a stigma of degeneration to be explained by phylogeny or ontogeny. The great difficulty, however, which the author meets constantly is the establishment of a normal. Man has reached his present state as a result of evolution and is still undergoing evolutionary changes. Hence, it may very readily be seen that a definite, fixed normal for every part of the body is impossible to establish. This fact, at times, places the author in a rather awkward position. For instance, a great many slight deviations in outline and contour of the ear are mentioned, each of which is considered a mark of degeneration. The author says: "The external ear is of all organs the most commonly affected by degeneracy." This is followed soon afterward by a statement to the effect that one almost never finds a normal ear. As almost all ears show defects and as these defects are marks of degeneracy, are we to conclude that most people are degenerates? The author is too much inclined to consider as evidences of degeneration slight deviations from an ideal normal which he admits is rarely if ever found.

Again: "If the brain be normal the structures of the body will develop normal. On the other hand, if from any cause the brain is abnormally developed, unstable or defective, the structures of the body will become abnormal." Neither of these statements is strictly correct, for many mentally normal persons are physically defective in some way, and many fine physiques are found in those who are mentally defective.

It is unsafe to attempt to draw deductions as to a given person's mentality from some slight physical defect. It is one thing to pick out the physical defects in one who is already an established criminal or degenerate and quite another thing to pick out those who are to become criminals or degenerates, by noting some slight physical defects. In other words, the rule is one which at present does not work both ways. The author, being a dentist, naturally has a great deal to say about defects of the teeth, palate and jaws. While these defects are all very interesting, they are perhaps not quite so significant as Dr. Talbot would have us believe. There is considerable repetition in the book due to summarizing at the end of each chapter what is contained in that chapter.

Some of the illustrations are very poor, so that it requires considerable imagination to recognize what they are intended to show. There are a great many facts contained in the book, covering as it does, both phylogeny and ontogeny, and it is so condensed as to make reading at times a little tiresome, but the work is a very interesting one and well worth reading as it will help both the physician and the sociologist to explain many conditions in the problem of life.

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY. A New and Complete Dictionary of the Terms Used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Nursing, Veterinary Science, Biology, Medical Biography, Etc., With the Pronunciation, Derivation, and Definition. Including Much Collateral Information of an Encyclopedic Character. Together with New and Elaborate Tables of Arteries, Muscles, Nerves, Veins, etc.; of Bacilli, Bacteria, Diplococci, Micrococci, Streptococci, Ptomains and Leukomains, Weights and Measures, Eponymic Tables of Diseases, Operations, Signs and Symptoms, Stains, Tests, Methods of Treatment, etc. By W. A. Newman Dorland, A.M., M.D., Member of Committee on Nomenclature and Classification of Diseases of the American Medical Association. Sixth Edition. Leather. Price, $4.50 net. Pp. 986, with illustrations. Philadelphia: W. B. Saunders Company, 1911,

Several improvements have been made over the fifth edition. For instance, title words are given with an initial lower-case letter, the capitals being reserved for proper names only, thus giving a complete guide to capitalization—a very desirable feature; short bibliographic sketches of the "fathers" of medicine, particularly those of greatest importance in the early history of medicine, are given; also full definitions of terms used in dentistry and veterinary medicine, and numerous tables of dosage and therapeutics. Many inconsistencies have been eliminated, but some still remain, as for instance, the varying spelling of derivatives from a single root evidenced in "angiitis," "cholangeitis," and "lymphangitis;" the random use of the dieresis; and the use of hyphens, which follows the style of the "Standard Dictionary" in the main but occasionally and erratically departs therefrom. "Bacteremia" and "bacteriemia" are given without indication of preference. For the seventh edition, it is to be hoped that careful collation will be done to make the work a consistent and reliable guide on such points as those we have mentioned. On the whole, however, this is a valuable and useful dictionary, which becomes more satisfactory with each succeeding edition.

THE ANGLO-AMERICAN MEDICAL ASSOCIATION OF BERLIN, 1911-12. Club Rooms and Bureau of Information. Friedrich-Strasse No. 105, Hotel Atlas. Paper. Price, 5 cents.

The Anglo-American Medical Association of Berlin, an organization formed to promote the scientific and social interests of American and British physicians in that city, has issued a pamphlet of eighty pages which proves to be a miniature Baedecker for American and English medical men desiring to pursue studies in that city. It contains a very extensive list of courses in medicine to be had in Berlin, giving name of instructor, address, course, fee, etc. The society has recently moved into its new rooms and headquarters in the Hotel Atlas, Friedrichstrasse, 105. American physicians visiting Berlin will be welcomed there and given aid with information in regard to courses, clinics and lodgings.

# Medicolegal

## Liability of Sellers of Unwholesome Food at Public Eating Places

*(Doyle vs. Fuerst & Kraemer, Limited (La.), 56 So. R. 906)*

The Supreme Court of Louisiana affirms a judgment for damages for the plaintiff, who alleges that he was ptomain poisoned from having eaten cakes and chocolate with whipped cream at the defendant's confectionary where refreshments were served to the public. The court holds that a seller of food, such as chocolate and cakes sold at a public eating place, is presumed to know any unwholesome condition of the food, and is liable for damages to a purchaser through being made ill on account of unwholesomeness. It is common knowledge, to which the keeper of a public eating place must be held, that food in which the process of decomposition has begun is liable to make the person who eats it ill. Indeed, the court does not think that there can be any serious difference of opinion on the point that an eating establishment which sells unwholesome food to be consumed by its customers must be held to have contemplated the probable effects of such tainted food on the customer. The measure of damages sustained by a purchaser of food, who is made ill through its unwholesomeness, is not merely reimbursement of the price, but all damages that were foreseen or could have easily been foreseen as likely to have resulted, though the seller's knowledge of the unwholesome condition was imputed and not actual. One hundred dollars was not an excessive award to a purchaser of food for illness resulting from ptomain poisoning caused by unwholesomeness of the food, where he suffered intense pain, believed for two hours that he was in danger of death and suffered an attack of jaundice in consequence.

## Application of Doctrine of Assumption of Risk to Treatment With X-Rays

*(Hales vs. Raines (Mo.), 141 S. W. R. 917)*

The St. Louis Court of Appeals reverses a judgment obtained y the plaintiff for alleged malpractice in the manner of the reatment of his hand for eczema with *x*-rays, by which the nner tissues of his hand were so burned as to occasion its ermanent injury, producing, according to the language of ome of the witnesses, a "claw hand." The court holds, among ther things, that an instruction given the jury should have equired them to answer pointedly as to whether or not the lefendant required the plaintiff to expose his hand within ne-half inch of the tube, as the plaintiff testified, or within to 12 inches thereof, as the defendant testified; for that was he issuable fact in the case. Also, that, as this suit was ightfully proceeding on the same cause of action as that eclared on in a prior suit, the court very properly instructed verdict for the plaintiff on the defendant's counterclaim, hich was predicated solely on the malicious prosecution with espect to specifications of negligence pertaining to the same ourse of treatment and contained in the same count of the rior petition, asserting damages for the injury to the plainff's hand, which was here declared on.

Assuming that the matter of assumed risk was properly an sue in the case, the court believes that the full measure of e agreement touching that matter should be regarded fordden by the precepts of public policy alone. It appeared that e defendant advised the use of the *x*-ray as a proper treatent, if the plaintiff desired it, though he warned him that was a new method which involved some danger. It was connded that the risk of this danger the plaintiff agreed to sume, if the defendant would apply that treatment which, his judgment, was proper, and that the plaintiff solicited the eatment. But, as to such matters, the parties were in no spect on equal footing. The defendant's position through ucation and experience was one which rendered him comtent to judge of the probable consequences which might sult from the use of the *x*-ray, and to speak with a degree authority thereon. The plaintiff, a man unlearned with spect to the science of medicine and the use of surgical appliances, must rely on the judgment of the physician so enlightened by learning and experience, and this he had a right to do, for so much was implied in the relation of physician and patient. If, then, on the request of the patient for such treatment, the physician advises the use of a particular appliance, such as the *x*-ray, to be proper, his patient undoubtedly may rely on this and act accordingly, though the physician says, too, it involves some danger.

Touching the matter of assumed risk, it appears quite clear that if, in the circumstances stated, the parties contract with respect to the assumption of the risk from such danger as is involved in the use of the *x*-ray, a new appliance not well understood, the risk assumed is one other and distinct from that which is introduced into the case by the defendant's negligence. In other words, though the plaintiff should be regarded as having assumed by his express agreement such risks as attend the employment of the *x*-ray, this agreement essentially implied a careful and skilful application thereof on the part of the defendant. The court deems it to be contrary to the precepts of public policy to declare such agreement valid in the full measure of its scope, and entail on the plaintiff, as within it, the consequences of the defendant's negligence in exposing his hand nine separate times within one-half inch of the tube; for consent concerning such matters avails nothing, unless due care and skill is employed by the physician. In this view, the matter of the risk which the defendant asserted that the plaintiff assumed amounted to no more than that which is assumed by the servant as ordinarily incident to the employment which the master affords him, and the consequences of which risk, it is declared, may not be enlarged by the master's negligence, or entailed on the servant if it arises from the failure of the master to observe the precepts of ordinary care. But, though that be true, the trial court erred in excluding the defendant's evidence touching this matter, for it might be that the plaintiff's injury resulted from a risk which attended the application of the *x*-ray with due care, and that he had agreed to take on himself.

## Representations as to Health and Physician's Statement as to Prior Condition Not Binding on Beneficiary

*(Frazier vs. Metropolitan Life Insurance Co. (Mo.), 141 S. W. R. 936)*

The St. Louis Court of Appeals affirms a judgment for the plaintiff as beneficiary under an insurance policy on the life of her daughter, dated May 31, 1909, when death occurred September 11, 1909, caused, according to the physician's certificate, by tuberculosis which the insured had since January 1, 1909, while the policy provided that the company assumed no obligation thereunder, unless on the date of the policy the insured was in sound health. The court holds that this condition of the policy amounted to nothing more, under the Missouri statute, than a representation the falsity of which rendered the policy void only if the matter misrepresented actually contributed to the death of the insured, and whether it so contributed in any case should be a question for the jury.

The policy also provided that "Proofs of death under this policy shall be made on blanks to be furnished by the company, and shall contain answers to each question propounded to the claimant, physicians, and other persons. . . . All the contents of such proofs of death shall be evidence of the facts therein stated in behalf of, but not against, the company." The court holds that statements in the physician's certificate, being contained in the proofs of death indorsed by the beneficiary, were admissible in evidence against her as admissions by her of the truth of the statements therein contained. But such admissions were not conclusive against her. It was competent for her to explain the alleged admissions, and to show that she was under a mistake in making them, or to prove any other circumstances which would do away with their effect.

Nor was there error in refusing to permit the attending physician of the insured to testify. No doubt by a provision in the policy the insured might waive in advance the incompetency of the physician under the statute to testify, and bind her beneficiary by such waiver. But such incompetency was not waived by the provision quoted concerning the proofs of death. That contained nothing to indicate that the answers of the physician might disclose information acquired by him from the insured while attending her in a professional capacity, and necessary to enable him to prescribe for her as a physician; nor that they were to relate to the medical history or cause of death of the insured. The insured might well have believed from the nature of the instrument which was to contain the answers that they would be confined within the proper scope of mere "proofs of death," and relate to nothing else than the fact of death.

### Tuberculous Throat and Representation for Life Insurance

*(Cole vs. Mutual Life Insurance Co. (La.), 56 So. R. 645)*

The Supreme Court of Louisiana holds that a life insurance company sued on a policy has the burden of showing that the insured's throat was tuberculous, as affecting a defense that he misstated in his application that he was in good health. A statement by an applicant for reinstatement of life insurance that his health has remained good and unimpaired since his examination under the original application does not amount to a warranty, but is a mere representation, needing to be true only to his best knowledge and belief. That an applicant for reinstatement of life insurance was treated by a physician for what was regarded as a common temporary inflammation of the throat did not constitute "consultation" of a physician within a statement in the application that he had not consulted a physician since a certain time, though it later appeared that applicant had tuberculous laryngitis.

## *Society Proceedings*

### COMING MEETINGS

American Medical Association, Atlantic City, N. J., June 4-7.

American Academy of Medicine, Atlantic City, May 30-June 2.
Amer. Assn. of Genito-Urinary Surgeons, Philadelphia, June 7-8.
American Association of Medical Examiners, Atlantic City, June 3.
American Climatological Association, Hartford, Conn., June 10-12
American Dermatological Association, St. Louis, May 23-25.
American Gastro-Enterological Association, Atlantic City, June 3-4.
American Gynecological Society, Baltimore, May 28-30.
Amer. Laryngolog., Rhinolog. and Otolog. Soc., Phila., May 13-15.
American Medico-Psychological Association, Atlantic City, May 28-31.
American Neurological Association, Boston, May 30-June 1.
American Ophthalmological Society, Atlantic City, June 12-13.
American Orthopedic Association, Atlantic City, May 30-June 1.
American Otological Society, Atlantic City, June 10-11.
American Pediatric Society, Hot Springs, Va., May 29-31.
American Proctologic Society, Atlantic City, June 3-4.
American Society of Tropical Medicine, Atlantic City, June 3.
American Surgical Association, Montreal, May 29-31.
American Therapeutic Society, Montreal, May 31-June 1.
Arkansas Medical Society, Hot Springs, May 13-16.
Association of American Physicians, Atlantic City, May 14-15.
Connecticut State Medical Society, New Haven, May 22.
Illinois State Medical Society, Springfield, May 21-23.
Maine Medical Association, Portland, June 12-13.
Massachusetts Medical Society, Boston, June 11-12.
Missouri State Medical Association, Sedalia, May 21-23.
Nat. Assn. for Study and Prev. Tuberculosis, Washington, May 30-31.
National Association for Study of Epilepsy, Vineland, N. J., June 3.
New Jersey Medical Society, Spring Lake, June 11-13.
North Carolina Medical Society, Hendersonville, June 18-20.
North Dakota State Medical Association, Valley City, May 14-15.
Rhode Island Medical Society, Providence, June 12-13.
South Dakota State Medical Association, Mitchell, May 22-24.
Wisconsin State Medical Society, Wausau, May 22-24.

## MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

*Annual Meeting, Held at Birmingham, April 16-19, 1912*

The President, Dr. Lewis Coleman Morris, Birmingham, in the Chair

### Officers Elected

The following officers were elected for the ensuing year: President, Dr. H. T. Inge, Mobile; vice-president, Dr. H. W. Blair, Sheffield; secretary, Dr. J. N. Baker, Montgomery. Mobile was chosen as the place for next year's meeting.

### Pellagra as It Exists in Alabama

Dr. M. B. Cameron, Eutaw: Pellagra in Alabama has been gradually spreading, until in 1910-11 it reached the proportion of an epidemic. It has reached every county in the state, and caused nearly 1,000 deaths during 1911. About three females are affected to one male, and the disease is more common among the whites than among the blacks. The true etiology of pellagra seems to be shrouded in mystery. Studying its extensive spread over Alabama during the last few years from a causative standpoint we have many substantial reasons to sustain the maize theory. Prior to 1905 the production of corn in this state was ample to supply the food needs of the inhabitants. Since that time the corn production in this state has been greatly reduced by droughts and the increased price of cotton. Although our state in the past two years has increased her yield of corn sufficient to supply the food demands of her people, we are without the means to convert this grain into meal, owing to the abandonment of our grist mills during the non-production period. The method of curing the corn in shocks tends to make it unfit for use. The supreme treatment of pellagra is prevention. To accomplish this there should be a rigid inspection of all food-supplies shipped into the state, especially corn products, and there should be a standard of purity established that would exclude all products of questionable character. This inspection should be directly in the hands of the medical profession.

### Certain Aspects of the Pellagra Question

P. A. Surgeon C. H. Lavinder, U. S. P. H. and M.-H. Service: What is the cause of pellagra? The question to be solved—at present an unanswerable one—is whether pellagra is to be considered as a food poison derived from maize or whether it is a parasitic disease. It has been shown, notably by Alsberg, that during the past few years the corn-supply of the southern states has been affected by new and different conditions. Once growing and consuming her own product, the South, still a large consumer of corn, is now largely supplied with the corn of the Middle West. Agricultural conditions there have undergone changes also, and corn is now grown so far north as to jeopardize its proper maturing. It is often harvested green, badly stored and, in the absence of proper inspection laws, is transported under unfavorable conditions. It is a grain more or less subject to ready deterioration, and only too often reaches the South in a damaged state. In our fight for pure food it appears to me that the elimination of spoiled corn is a factor of great importance.

The diagnosis of pellagra in well-marked cases offers little difficulty to any one who has such a disease in mind. It is always to be kept in mind that the disease is essentially a disturbance of the central nervous system. The skin manifestations, being so prominently in evidence, have always attracted great attention and have given the disease its name, but their great importance is in diagnosis.

The treatment of the disease is not always satisfactory and the outlook is often unpromising. This, together with the great publicity given this disease in the secular press, has given rise to a wide-spread pellagraphobia. I think it is our duty to do all in our power to counteract this fear, but we cannot and should not conceal from ourselves the gravity of the situation confronting us. This question rises to the gravity of a national problem demanding the most serious attention.

#### DISCUSSION

Dr. W. W. Harper, Selma: Is there any relation between pellagra and uncinariasis? How about salvarsan in pellagra? I have used it in some cases and it seemed to do good.

Dr. J. S. McLester, Birmingham: About a year ago we had a typical case of pellagra in which we gave salvarsan. The recovery for the time being was remarkable. At the same time we had two other cases that showed improvement. Later the first patient was admitted to the hospital with a return of the trouble, and died there. We have given salvarsan in nineteen cases in all, and in a number it has had no effect. A few cases have shown improvement. The only explanation I can offer is that salvarsan will help almost any condition temporarily.

Dr. J. T. Searcy, Tuscaloosa: Isn't it necessary for a person to have a nervous instability to have pellagra? We know that it produces insanity, and that the insane have pellagra. In nearly all cases seen outside of the hospital I can get a family history of insanity, alcoholism or epilepsy, and this has led me to believe that nervous instability predisposes to pellagra. The similarity between pellagra and ergot poisoning is so marked that the question arises, Why cannot corn smut produce pellagra if the smut on rye can produce ergot poisoning? In Iowa last summer I found that corn smut had been very common there for the last twelve or fifteen years, and that the method of gathering the corn favors the dissemination of this smut through the corn when it is milled.

Dr. M. B. Cameron: As to uncinariasis and pellagra: Any patient with a chronic complaint is apt to develop pellagra. Patients with tuberculosis, bad condition of the blood and carcinoma are apt to develop it.

Dr. C. H. Lavinder: Statistics show that salvarsan is not much better than anything else in pellagra. As to whether nervous instability predisposes to pellagra, I would answer in the affirmative. Pellagra is a secondary disease. I do not know the cause of pellagra; but there is no question but that the South is flooded with rotten corn, that it is not fit to eat, and that it is our business to get rid of it.

### Elimination of Preventable Disasters from Surgery

Dr. Maurice H. Richardson, Boston: Among the preventable causes of disaster is, first, failure on the part of the patient to recognize the necessity for surgical or medical advice. The physician or the surgeon, once the patient has come to him, may err in diagnosis so that the opportunity for timely intervention is lost. The remedy for the loss of opportunity is, first, the broad dissemination among the laity of a sound knowledge of the early symptoms of disease and the importance of reporting to the physician those symptoms. This effort is being made yearly at the Harvard Medical School by the establishment of popular lectures on medical subjects. Once medical aid is sought, the next thing is the establishment of the correct diagnosis and through our knowledge of the pathology an accurate prognosis. A sound basis of indications and contra-indications for or against operation is a natural consequence.

Most of our real preventable disasters in surgery come from ignorance and human fallibility. The remedy for this source of disaster is the cultivation of our powers of diagnosis through faithful and never-ending effort. The physician and the surgeon must ever seek to find the relation between cause and effect; must learn above all things to profit by their own errors in diagnosis and to teach others by the candid avowal and wide dissemination of their own mistakes. Haste, inadequate study and unquestioning acceptance of the diagnosis of others is responsible for many calamitous diagnoses, for on such interpretation of histories and physical signs preconceived and erroneous deductions are based, and on such deductions operations not only useless but actually disastrous are performed. A profound knowledge of pathology is requisite for prognosis.

A frequent source of disaster, and the most easily preventable of all, is that due to faulty technic. Our profession should make haste to insist on a technical education in surgery by which mechanical and technical disasters will be reduced to a minimum. The operator should combine a thorough knowledge of bacteriology and an intimate familiarity with human anatomy. Some of the preventable disasters in surgery are preventable only in theory. Such are the occasional, but fortunately more and more infrequent, contamination of operative fields apparently aseptic. To this group also belong uch awful calamities as the pulmonary embolism, and the occasional inexplicable death from anesthesia.

Surgeons, like other men whose work is in practice purely mechanical, have their equation of error. By constant, tireless effort, intellectually and mechanically, the surgeon may educe the contingency of error to low terms. There will ever emain the disasters that are unforeseeable, unpreventable, ike the lightning and the earthquake, beyond human powers f prediction or prevention—the uninsurable.

### The Removal of an Unusually Large Ureteral Stone

Dr. J. N. Baker, Montgomery: A man aged 24, white, consulted me on account of a prostatic condition. Under appropriate treatment the local condition markedly improved, although the pus in the urine persisted. An attack of ureteral colic some two months later was attributed to infection extending up the ureter, but a skiagram showed a stone in the lower end of the ureter. Operation was advised and accepted. The usual incision for stone in the lower end of the ureter was made. The stone was located just above where the ureter enters the bladder. It was pushed up an inch or more, and a stone weighing 94 grains was removed. The opening in the ureter was closed by three fine chromic catgut sutures, and a cigarette drain put in. The drain was removed on the eighth day, and recovery was uneventful.

### Nephritis: the Medical vs. the Surgical Aspect

Dr. James E. Dedman, Birmingham: Clinically the various types of nephritis can often be differentiated, but as far as end results are concerned (excluding pyogenic infections) it makes but little difference in the treatment. One type of nephritis may later assume all the characteristics of another type by progression of the degenerative process. The diagnosis should be made as early as possible, and it should be remembered that some of the severest nephritides may at times exhibit no albuminuria or cylinduria. In any person under 55 or 60 who exhibits a high blood-pressure, hardened arteries, and hypertrophied heart, renal disease should be suspected. Some of the severest types may have their beginning in former septic infections. It is important to maintain the nitrogen and circulatory equilibrium by proper diet and regimen, and the intake of nitrogen, sodium chlorid and water should be in fixed relation to the excretion. By proper dietetic regimen and right living, patients who at times are hopelessly doomed to lives of invalidism may be rescued to a comfortable and useful life. The phenolsulphonephthalein test for functional activity has opened up a field which may further lessen the mortality in the surgical field. When all the methods at hand for restoring the circulatory equilibrium have been exhausted, and the patient is in imminent danger from uremia, decapsulation may give wonderful relief, and be a means of prolonging the patient's life many years. No surgical procedure should be instituted without a careful weighing up of all the symptoms present, and a preoperative test for the functional activity of each kidney. Finally, just as in tuberculosis of the lungs, no hope of relief can be offered when the degenerative process has destroyed the functionating structures, so in no form of nephritis where a similar destructive process has made its inroads, can either medicine or surgery be of any avail.

### Some Lessons to Be Learned From Results of Treatment of Pulmonary Tuberculosis

Dr. W. L. Dunn, Asheville, N. C.: The post-mortem findings showing anatomic or absolute cures are, in nearly every instance, exceedingly small lesions which have produced few or no symptoms and which could have shown either no physical signs or so few that they might have been recognized only by the most painstaking examination. Autopsy findings showing cure of treated clinical tuberculosis are very few. Rational methods of treatment have exaggerated Nature's tendency to cure even in much more advanced cases, as manifested by a distinct lengthening of the periods of quiescence normally occurring in the course of the untreated disease. The earlier these methods are instituted, the more certain the bringing about this state of arrest and the longer the period before relapse. Only in the cases treated exceedingly early are we justified in anticipating a permanent result. From these observations we must conclude that if tuberculosis is to have a place in the list of curable diseases, either our methods of treatment must be greatly improved or the cases must be diagnosed earlier.

### Some Contra-Indications to the Removal of the Tonsils

Dr. C. F. Acker, Montevallo: The majority of operators in this country enucleate both tonsils as a routine procedure in practically every diseased condition of the ear, nose and throat and several constitutional diseases presenting little or no upper air passage manifestations; and this despite the fact that there exists with reference to the physiology and pathology of these structures the most widely divergent and sharply conflicting ideas. On the treatment, however, they agree that, diseased or not, prompt and complete enucleation is the thing. The removal of the tonsils, except for absolute inherent disease, is a needless sacrifice of important guardians of the body against invasion by germs and infectious material. As lymph-nodes they are certainly entitled to protection where possible, and as mucus-secreting organs they perform a substitute service entitling them to conservative treatment.

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## MEDICAL SOCIETY OF THE STATE OF NEW YORK

*One Hundred and Sixth Annual Meeting, held at Albany, April 15-18, 1912*

*(Concluded from page 1396)*

### Graphic Methods in the Diagnosis of Heart Lesions

Dr. L. H. Neuman, Albany: Paroxsymal tachycardia, if associated with regular rhythm, is usually auricular in origin. This can easily be determined by the polygraphic tracing. We see two forms of tachycardia, one in which the normal rhythm is preserved, and second where the pacemaker of the heart is not acting properly. Included in the latter are cases associated with auricular fibrillation. Auricular fibrillation is important. Where, in place of normal contraction of the auricle, a quivering of this part of the heart is substituted, we get very marked irregularity of the pulse. While fibrillation of the auricle may continue for years, fibrillation of the ventricle promptly produces death. In diseased hearts the administration of digitalis can be controlled polygraphically, as where the *a-c* interval is lengthened, serious results may follow its administration, the drug having an identical effect. In advanced cases of cardiosclerosis, with increase of the *a-c* interval, digitalis should be given with caution as it lowers the conductivity of the auriculoventricular bundle. In a pulse which shows regularity, digitalis may produce irregularity by its effect on conduction, but it is probable that digitalis or vagal stimulation only affects hearts with impairment of conduction due to disease of the auriculoventricular bundle. In the ventricular type of jugular pulse, associated with dilatation of the heart, digitalis often gives marvelous results.

DISCUSSION

Dr. Louis F. Bishop, New York City: After the introduction of the Mackenzie polygraph, I began to make pulse tracings of all my patients, and in 50 per cent. of the tracings something valuable was learned. We have learned that when the base of the heart is at fault, and the ventricles are fairly sound, digitalis gives wonderful therapeutic results. We have learned that the commonest and most serious form of heart trouble is a trembling palsy of the auricle. Each one of the tremors transmits to the ventricle an impulse to contract, and the ventricle responds as best it can. If the ventricle is absolutely healthy, which is seldom the case in advanced heart disease, it may respond in a perfectly rhythmic manner, but in most cases the ventricle is not absolutely sound, and it responds in a disorderly manner. We get a pulse varying from 120 to 160, and irregular. The proper administration of digitalis in a case like that produces artificial heart-block and cuts off from the ventricle a great many impulses, and the ventricle is able to respond to a sufficient number of them to take up its work again. These are the cases in which the efficient administration of digitalis—in the case of dropsy with irregular heart—causes disappearance of the dropsy in a week or ten days.

Dr. John M. Swan, Rochester: The Uskoff instrument has enabled me to make an early diagnosis in a case of heart-block, and in another case to determine that the cardiac irregularity was due to the overadministration of digitalis. As soon as the digitalis was discontinued, the cardiac irregularity disappeared.

### Treatment of Arterial Hypertension

Dr. Edward C. Titus, New York City: The dietary regulations in cases of arterial hypertension must be strictly individualized in accordance with the causative factors. Many of the subjects of hypertension are men and women who are overfed and underexercised. In advising exercise we must take this fact into consideration and counsel great moderation at the beginning of treatment.

To obtain the best results from the Nauheim baths, the patient should take them under the supervision of men who have made a specialty of this method of treatment. Massage in its various forms is particularly indicated in patients who are unwilling to take active exercise or are unable to do so until their hypertension has been brought under control.

### Treatment of Arteriosclerosis

Dr. John M. Swan, Rochester: Rest in bed with massage daily is capable of producing a marked reduction in the blood-pressure of a patient suffering from arteriosclerosis. The important details of the diet for patients with arteriosclerosis are, first, to reduce the total amount of food; second, to reduce the amount of protein in the dietary; third, to limit the amount of fluid ingested. Measures that will produce sweating—hot baths with blanket packs, Russian baths, vapor cabinet baths, and electric light baths—are capable of reducing the blood-pressure, ameliorating the symptoms in cases of arteriosclerosis with high blood-pressure. In thin patients the severer forms of treatment may be replaced by the administration of a neutral full bath of either fresh or salt water. Carbonated brine—Nauheim baths—should not be given in cases of arteriosclerosis with high blood-pressure, particularly when there are indications of nephritis. Faradism, galvanism, and the high-frequency current applied to the skin through the vacuum tube are valuable in relieving anesthesias, hyperesthesias, and the paresthesias which are met with in cases of arteriosclerosis. Autocondensation may reduce blood-pressure, but the treatment should be given with great care. The crown breeze, particularly administered at bed-time, is capable of relieving insomnia in some cases.

### Hyperacidity

Dr. George R. Lockwood, New York City: In my own experience in private practice, 17.4 per cent. of cases of indigestion show hyperacidity associated with hypersecretion, while but 13.8 per cent. reveal hyperacidity alone without any increase in the quantity of the gastric juice either in the fasting or in the digesting period. My experience leads me to the conclusion that hyperacidity is about one-half as common in hospital cases as it is in private practice. Dietetic errors of various kinds have been and are still generally considered the most prolific causes for hyperacidity. This I cannot verify. In my cases the effect of diet has been practically negligible.

### The Significance of an Acid Gastric Juice in the Fasting Stomach

Dr. Harold Barclay, New York City: Chronic continuous hypersecretion in the fasting stomach is a symptom, and not a disease. The condition is due to some definite lesion of the gastro-intestinal tract, and is not dependent on a nervous irritability of the gastric glands, or the motor function of the stomach.

### The Services of the Sciences to Rational Medicine

Dr. Harvey W. Wiley, Washington, D. C.: The studies into the causes of immunity from disease have been epochmaking in the last quarter of a century. The whole theory of immunity has been taken out of the realm of pure empiricism and based on scientific truth. The healthy, well-nourished individual has a marvelous power of resistance to infection. Even if we should not succeed in exterminating the sources of infection entirely, we may make the human race so immune to the ravages of infective diseases as to render their effects on the death-rate negligible. Fortunately, there is no creed or doctrine to which the true physician must subscribe.

The science of medicine does not know the name of any school which restricts the activities of investigation or the belief which the true physician can bear. The introduction of scientific methods into medicine has shown that in practically every so-called school of medicine there is some kernel of truth which may be available to the physician, but it has been used beyond its natural limit of application by the school in question, so as to reduce it to absurdity. All that is good in all the schools or creeds belongs to the science of medicine. Many of the so-called schools are only branches of medicine as it is practiced to-day. There are other so-called schools of medicine, which are of a character to defy accurate description. One of the chief objections to such creeds is that they are narrow the limit of medicine to such an extent that there is no room for expansion without transgressing the creed. Creeds restrict and restrain. They breed distrust and denunciation. They incite prejudice and battle. If they are useful, it is because they make people think and consider, and a full discussion of every problem leads gradually to the elimination of error and the establishment of truth.

### Cancer of the Prostate

Dr. Eugene Fuller, New York City: Clinically, it is well to divide these cases into two groups. In the first and principal one, cancer engrafts itself on the part as a primary pathologic process. In the second and minor group, what was primarily apparently a benign senile hypertrophy, becomes secondarily cancerous. In these latter cases the irritating effects of trauma and infection, to which the gland is exposed in a state of hypertrophy, act as agencies favorable to the implantation on it of malignancy as a secondary pathologic process. If a diagnosis can be made very early, while the disease is wholly confined to the prostate proper, a prompt prostatectomy, with a careful and radical removal of the entire gland would be the proper and ideal treatment. Such a diagnosis is rarely made in the very early stage of the disease. If prostatectomy be performed in a case in which the cancerous process is so advanced that the radical and complete removal of the growth is impossible, and at the same time, before the patient has become especially inconvenienced by his disease, t is probable that the development of the growth subsequent to operation, will, after a short interval, render the patient as uncomfortable, or, perhaps, more uncomfortable, than he was before the operation. Where prostatectomy has been horoughly performed for cancer of the prostate in a case in which the disease has not extensively progressed beyond the gland, the growth being somewhat scirrhous in its composi-ion, the outlook for the patient ought to be a state of complete or comparative comfort, as far as the urinary condition s concerned, for a period of from seven to eleven months. After that time it is unusual for symptoms of retention o recur, but rather those of incontinence, and should here develop intravesical infection, especially associated with riple phosphate deposits, there may be considerable vesical ain, which could then be relieved by anodynes. When symp-oms of grave discomfort gradually develop many months fter prostatectomy in these cases, they are generally due to he gradual process of the disease into other parts away from e immediate region of the prostate.

### Cardiac Sequelæ of Tonsillar Infection

Dr. Joseph R. Wiseman, Syracuse: Every case of tonsiltis or throat inflammation should be regarded as a serious sease and should be treated by rest in bed. Before discharge ery patient should have several careful examinations of the art and urine. Cardiac complications following throat infec-ons are much more common than is generally believed. hen cardiac sequelæ occur they should be treated by pro-nged rest in bed.

### e Duty of the Family Physician in the Management of Surgical Cases

Dr. John M. T. Finney, Baltimore: Surgery should be stricted to the trained surgeon. There is no royal road to rgery. It cannot be acquired in a ten-days' course, or by just tching some one operate. The family physician should not attempt to operate, as both his judgment and his execution are at fault. He is also putting himself in a wrong position before the community. He should not put himself in a place where he cannot defend himself in court before a jury—in a place where he cannot prove that he is competent to do the work he has undertaken. Only a small percentage of the cases coming to the general practitioner are surgical, so that referring them to the proper surgeon cannot appreciably affect his income.

In regard to the responsibility for the after-care of surgical cases, there should be no division of responsibility. The surgeon is responsible. The family physician should not interfere with his treatment by ordering favored remedies or failing to comply with the directions of the surgeon. Since the making of an early diagnosis is so important in many conditions, it is necessary that the family physician should be an expert diagnostician. He should not delay too long in calling in a surgeon. Surgery should be a last resort, but never a late one.

### The Benefits of Vivisection to Mankind

Dr. Walter B. Cannon, Boston: The whole science of drug action has been discovered by animal experimentation. Ergot was tested on animals before it was put on the market, and this seems more fitting than that it should be tested on a woman who is bleeding to death. Antivivisectionists may think this over and take their choice. The Wassermann test for syphilis and Ehrlich's triumph are the result of animal experimentation. Animals are useful in making a diagnosis in some conditions, and in detecting typhoid and cholera carriers. If we are to prevent epidemics, it is important to find these carriers, and without animal experimentation sanatoriums would be deprived of their weapons of defense. For our knowledge of physiologic phenomena, vascular, cardiac, digestive, and the intricacies of the nervous system we are indebted to animals. A striking example of the value of physiologic study is its revelations that have made possible the cure of cretinism. All these things show an immense saving of human life, but the animals have shared in this benefit as well as mankind. The animal experimenter never justifies the infliction of needless pain.

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# *Current Medical Literature*

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### Texas State Journal of Medicine, Fort Worth

*April, VII, No. 12, pp. 319-356*

1 Jaundice in Surgery. C. Johnson, Fort Worth.
2 Acute Diffuse Peritonitis Resulting from Ruptured Pyosalpinx. W. B. Carrell, Dallas.
3 Some Appendiceal Conditions and Interpretation of Blood Count. M. A. Wood, Houston.
4 *Treatment of Nasal Catarrh. L. L. Bartlett, Dalhart.
5 Gastric Roentgenology. E. H. Skinner, Kansas City, Mo.

4. **Treatment of Nasal Catarrh.**—In all cases of nasal catarrh in children between the ages of 4 and 12 years coming under his observation, Bartlett believes that eye strain was a factor in the cause of 20 per cent., and good results have been obtained by the aid of glasses. Nasal catarrh in children under 4 years of age is often from another cause, he says—intestinal irritation. The intestinal trouble may be worms or some bacteria acting as an irritant. The symptoms of this form of catarrh are closing of the nares, an abundant flow of mucus, and some excoriations around the nostrils. Often the symptoms of the intestinal parasites are plain. Often, also, the intestinal symptoms are absent or are also so slight that they are overlooked. The treatment of such patients is to relieve the intestinal trouble. When satisfied that there are worms or intestinal parasites present, santonin, Bartlett thinks, is probably the best remedy. Bartlett has had most satisfactory results following its administration, not only when there were parasites present, but even in cases in which symptoms did not indicate any such condition. Its action is more than that of a simple vermifuge. It seems to clear the alimentary

tract of the germs of decomposition, and has a very soothing effect on the mucosa and the nerve-endings of the stomach and intestines. In nasal catarrh in children under 5 years of age, in whom the cause is not deformity, heredity, irritating air, intestinal trouble should be thought of, and appropriate medicinal treatment instituted.

### Journal-Lancet, Minneapolis

*April 15, XXXII, No. 8, pp. 197-224*

6 Some Malformations of Female Genitalia. F. L. Adair, Minneapolis.
7 Imperforate Anus. A. A. Law, Minneapolis.
8 The New Public Health. H. W. Hill, Minneapolis.

### Bulletin of Manila Medical Society

*February, IV, No. 2, pp. 26-39*

9 *Cure of Infantile Beriberi by Administration to Infant of Extract of Rice Polishings and Bearing Thereof on Etiology of Beriberi. W. P. Chamberlain and E. B. Vedder, U. S. A.
10 Medical Observations in Islands of South Pacific Ocean. V. G. Heiser, U. S. P. H. and M.-H. S.

9. **Cure of Infantile Beriberi.**—The history of the patients treated are condensed by the authors as follows: The mothers have all had symptoms of incipient or marked beriberi. In the incipient cases the symptoms have been numbness and pain in the legs, severe pain when the muscles were squeezed, and in some instances localized anesthesia and loss of knee-jerks. In the more advanced cases edema and rather marked paraplegia were present. A number of these mothers have previously had infants die with symptoms similar to those presented by the children which were brought to them. In every case the diet of the mother has been chiefly highly milled rice with a little fish and occasionally a bit of meat. The children have all been breast fed. With one exception all have been under 3 months of age. The disease usually has been ushered in with vomiting, which after a few days was followed by great restlessness, sleeplessness, continual whining and later by dypsnea, increased cardiac action and edema of the face and legs. Later still oliguria and aphonia developed in many of the patients. About one-half of the patients treated had aphonia, and some appeared to be at the point of death. On the other hand, several cases were milder.

The above is not intended as a complete clinical history, but merely as an indication of the class of patients treated by them. The infants were all given twenty drops of the extract of rice polishings every two hours while awake, and the results have been truly marvelous. Improvement is immediate. The vomiting stops in twenty-four or thirty-six hours. The child, who has not passed any urine for several days, urinates five or six times freely. The edema disappears in the course of a few days. Usually on the first night after treatment is begun the infant falls into a deep sleep, although it may have been practically sleepless for several weeks. The dyspnea and palpitation cease after two or three days. At the end of a week, or in less time, the patients are completely cured with the exception of the aphonia. The mother is positive that the baby is well and that she would be completely satisfied if only it would recover its voice. The aphonia, however, does not disappear until after about two months of treatment, when the voice usually returns quite suddenly. Ths is probably due to the fact that the aphonia is caused by degeneration of the pneumogastric nerve, which only slowly regenerates.

The authors claim that this extract is a "cure" in the true sense of the word, just as lime juice is a "cure" for scurvy, and that it acts with as great promptitude as does fruit juice in infantile scorbutus. Five cubic centimeters is the dose of extract given daily to the infants treated. It will thus be seen that these babies have received daily the equivalent of 83 grams of rice polishings, a very large dose, and this the authors believe accounts for the extremely rapid improvement. The administration of this quantity is readily accomplished by giving the mother exactly 5 cubic centimeters of extract and telling her she must give it to the child that day. By simply prescribing 20 drops every two hours, while awake, approximately the same quantity will be given. In cases that are far advanced and of a serious nature a larger amount should be given, since the extract is absolutely harmless and instead of irritating the stomach, appears to quiet it.

### American Journal of Public Health, New York

*March, II, No. 3, pp. 135-222*

11 Air and Contact Infection at Providence City Hospital. C. V. Chapin, Providence, R. I.
12 Recent Contributions to Infantile Paralysis. M. W. Richardson, Boston.
13 Sanitary Inspection of Canal Zone. A. J. Orenstein, Canal Zone.
14 Use of Antityphoid Vaccine in Public Institutions and Among Civilians. F. W. Hachtel and H. W. Stoner, Baltimore.
15 Synthetic Milk Medium. H. A. Whittaker.
16 Further Observations on Chemistry of Disinfectants. W. Dreyfus, New York.
17 False Alarm of Yellow Fever and How It Was Met by Health Department. J. Guiteras, Cuba.
18 Annual Report on Yellow Fever in Mexican Republic. E. Liceaga, Mexico City.
19 Use of Modified Hess' Medium for Isolating Typhoid Bacillus and Cholera Spirillum from Stools. W. R. Stokes and F. W. Hachtel, Baltimore.
20 Hygiene of Swimming Pool. E. J. Tully, Madson, Wis.

### Journal of Medical Research, Boston

*April, XXVI, No. 1, pp. 1-194*

21 Morphology of Parasitic and Cultural Amebæ. C. F. Craig, Washington, D. C.
22 Molasses Plate Method: Modification of Huber-Schmorl-Obregia Method. A. S. Warthin, Ann Arbor, Mich.
23 *Colorimetric Test for Cholesterol. P. G. Weston, Warren, Pa.
24 *Antiseptic and Bactericidal Properties of Egg-White. L. F. Rettger and J. A. Sperry, New Haven, Conn.
25 *Formation of Pigment by Dermal Chromatophores. O. T. Schultz, Cleveland.
26 Study of Renal Epithelium in Various Types of Acute Experimental Nephritis and of Relation Which Exists Between Epithelial Changes and Total Output of Urine. W. de B. MacNider, Chapel Hill, N. C.
27 *Tests of Efficiency of Pasteurization of Milk Under Practical Conditions. E. H. Schorer and M. J. Rosenau, U. S. P. H. and M.-H. S.
28 Cultivation of Tissues in Vitro. G. C. Weil, Pittsburgh.
29 Experimental Study of Measles in Monkeys. W. P. Lucas and E. L. Prizer, Boston.

23. **Colorimetric Test for Cholesterol.**—Satisfactory quantitative estimations of small quantities of cholesterol have been made by Weston by the following method: The cholesterol is dissolved in pure chloroform and a series of dilutions is made which will bring at least one solution between 0.0001 and 0.00025 gram to 1 c.c. of chloroform. A set of tubes is made up, containing pure cholesterol in quantities ranging from 0.0001 to 0.00025 gram to 1 c.c. of chloroform, each tube containing 0.000025 gram more than the preceding one. To each tube is now added 0.1 c.c. of concentrated sulphuric acid, and the mixture is thoroughly shaken. After thirty minutes 1 c.c. of chloroform is added, and thirty minutes later the unknown solutions are compared with the known. By this method differences of 0.00005 or 0.000025 gram can be detected. This method is recommended especially for the estimation of cholesterol in the blood, lymph and other fluids of which it is rarely possible to obtain a sufficient amount to enable one to isolate a weighable quantity.

24. **Antiseptic Properties of Egg-White.**—The observations made by Rettger and Sperry confirm those of other investigators, namely that egg-white has pronounced antiseptic and bactericidal properties toward certain bacteria.

25. **Formation of Pigment.**—The pigment produced by the pigment-forming cells of the skin Schultz says is not a hemoglobin derivative and it is not a degeneration in the ordinary sense. It is the product of the specialized physiological activity of the cell by which nuclear derivatives are transformed directly into pigment.

27. **Efficiency of Pasteurization of Milk.**—The authors undertook tests to determine the effectiveness of pasteurization under the conditions which commonly obtain in commercial practice. The essential parts of the pasteurizing apparatus consisted of a heater and a holding tank. Four separate tests were made, each with one hundred gallons of milk. In two of the tests it was planned to heat the milk to 140 F. and in the other two tests to 145 F. The temperature attempted was not attained. In the first test the milk flowing from the heater varied as much as 21 F.; more reliable records obtained at the holding tank showed a variation of as much as 40.2 F. In the first test in which it was attempted to pasteurize the milk at 145 F. some of the milk registered only 123.2 F. They found that it requires about seven minutes for a pasteurizing heater, of the type used, to settle down to a satisfactory working basis. That is, an automatically controlled pasteurizer does not heat

the milk uniformly until it has been running at least seven minutes. They therefore recommend that milk which is pasteurized during the first ten minutes should again be run through the heater. In a deep holding tank the warmer milk rises. The coolest layer at the bottom may be the portion held for the shortest period of time. In any holding device the time should be counted from the moment the last milk reaches the holder. The phenomenon of layering was so pronounced in one of the tests that a difference of 13.4 F. was observed between the top and bottom layers.

They determined the efficiency of the apparatus with micro-organisms that represent the most frequent and the most serious causes of trouble in milk, viz., tubercle, typhoid and diphtheria. In two tests with *B. diphtheria* one succeeded, but the other failed to kill all these bacilli which had been added to the milk. In two tests with *B. typhosus* one succeeded, but the other failed. In two tests with *B. tuberculosis* (human) both failed, and in two tests with *B. tuberculosis* (bovine) one succeeded and one failed. Quantitative determinations of the number of typhoid, diphtheria and tubercle bacilli that may have been killed were not made, but the results plainly indicate that there was a quantitative reduction in the case of the experiments with tubercle bacilli. If the milk reaches 140 F. and is held there for twenty minutes it will kill tubercle, typhoid and diphtheria bacilli. The experiments show that milk pasteurized at this temperature for the specified time may not always, in practice, reach these minimum requirements. It is, therefore, evident that a liberal factor of safety is necessary in the operation of this type of pasteurizer under commercial conditions. The process should not be unduly hurried, for this increases the physical difficulties of uniformly heating all portions of the milk. Perhaps the best temperature to meet practical conditions is 145 F., and the milk should be held at this temperature from thirty to forty-five minutes.

The authors' observations indicate that a single holding tank is not as trustworthy as two, three or four in series. The first holding tank acts as an equalizer and the remaining tanks hold the milk at a uniform temperature for a definite period of time. Their studies again emphasize the necessity for official control over all pasteurizing plants. The process is such an important public health measure that it should not be left to the caprice of the individual. When pasteurizing apparatus is run by rule-of-thumb methods there is danger of under-heating and false security.

### Journal of Missouri State Medical Association, St. Louis

*April, VIII, No. 10, pp. 371-412*

30 Common Deformities in Hip Disease: Their Treatment and Correction. A. O'Reilly, St. Louis.
31 Care of Epileptics in Special Institutions in United States. W. C. Graves, Chicago.
32 Prevention of Epilepsy. M. L. Perry, Parsons, Kan.
33 Plea for More Physical Education in Our Public Schools. J. Q. Cope, Lexington.
34 Interesting Cases of Ruptured Extra-Uterine Pregnancy. H. S. McKay, St. Louis.
35 Milk-Supply of Columbia, Mo. H. H. Van Horn, New Orleans.
36 Function of Ductless Glands. C. W. Watts, Fayette.
37 Case of Pyonephrosis from Calculus in Kidney. E. L. Haffner, Hermann.

### Lancet-Clinic, Cincinnati

*April 13, CVII, No. 15, pp. 397-422*

38 *Effects Produced by Numerous Injections of Indol and Tyrosin in Experimental Animals: Contribution to Study of Chronic Intestinal Intoxications. L. H. Newburgh and P. C. Woolley, Cincinnati.
39 Some Features Essential to Success in Operative Treatment of Fractures. W. Fuller, Chicago.
40 Clinical Experiences with Typhoid. J. C. Larkin, Hillsboro, Ohio.
41 Researches in Prophylactic and Anaphylactic Medicine. L. K. Hirschberg, Baltimore.
42 Case of Crossed Hemidysergia and Tremor, with Asynergia of Binocular Movements. T. A. Williams, Washington, D. C.

*April 20, CVII, No. 16, pp. 423-450*

43 *Diagnosis of Prostatic Obstruction. B. Lewis, St. Louis.
44 *Cancer of Prostate. R. C. Bryan, Richmond, Va.
45 Cleft Palate. T. W. Brophy, Chicago.
46 Diagnosis in Important Surgical Conditions in Upper Abdomen, with Special Reference to Gastric and Duodenal Ulcers. A. D. Willmoth, Louisville, Ky.
47 Gunshot Wound of Spinal Cord. W. B. Burns, Memphis, Tenn.
48 Patent Laws of United States as They Apply to Medicines and Chemicals. W. T. Thackeray, Chicago.

38. **Injections of Indol and Tyrosin.**—Some evidence has been obtained by the authors that certain substances (indol and tyrosin) have a slight effect on the adrenals and that these glands are more markedly affected than the liver and kidneys. They have found no evidence in their material to support the belief that indicanuria is in any way responsible for the symptom-complex named "presclerosis" by Huchard. However, they believe that symptoms are produced when these bodies are present in sufficient concentration. They suggest that "sufficient concentration" does not depend on rate of production; in other words, that there is probably never sufficient indol produced in the intestine to cause symptoms so long as the oxidative and eliminative functions are normal. Certainly by no means all persons with a persistent indicanuria are sufferers from intestinal autointoxication. It is equally true that there is a group of individuals with persistent indicanuria whose symptoms are relieved when the indicanuria disappears. These persons are sick, not because too much indol is being formed, but because it is not removed with sufficient rapidity.

43 and 44.—Abstracted in The Journal Nov. 4, 1911, p. 1553.

### Ohio State Medical Journal, Columbus

*April 15, VIII, No. 4, pp. 171-240*

49 Use of Bacterial Vaccines in Nasopharyngeal Infections. T. B. Cooley, Detroit.
50 What Does Medical Organization Mean to Profession and People? J. A. Thompson, Cincinnati.
51 Tuberculin in Diagnosis and Treatment of Surgical Tuberculosis. W. G. Stern, Cleveland.
52 *Abdominal Pain. R. H. Grube, Xenia.
53 Etiology and Pathology of Small Cystic Degeneration of Ovary. L. F. Smead, Toledo.
54 Position of Patient for Throat and Nasal Operations Under Local and General Anesthesia. M. D. Stevenson, Akron.
55 Medical Inspection in Public Schools. P. B. Brockway, Toledo.
56 Influence of Development of Brain on Nose and Face. J. M. Ingersoll, Cleveland.

52. Abstracted in The Journal May 27, 1911, p. 1601

### American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

*April, LXV, No. 412, pp. 557-752*

57 *Experimental Poisoning with Chloral Hydrate, with Reference to Its Effect on Liver and Kidneys. J. G. Hopkins, New York.
58 Lymphangioma of Fallopian Tube. A. P. Leighton, Portland, Me.
59 Case of Osteomalacia; Review of American Cases. W. H. W. Knipe, New York.
60 Cornual Pregnancy in Normal Uterus, with Report of Case. E. A. Shumann, Philadelphia.
61 *Normal Human Blood Serum in Obstetric and Pediatric Practice. J. E. Welch, New York.
62 *Case of Delivery Through Perineum. A. J. Rongy, New York.
63 Tristram Shandy and Obstetrics. W. H. Allport, Chicago.
64 Erb's Palsy. H. W. Frauenthal, New York.
65 Treatment of Fractures at Elbow in Childhood. W. F. Campbell, Brooklyn.
66 Blood in Infancy and Childhood. W. D. Ludlum, Brooklyn.
67 Symptomatology of Infantile Paralysis. J. V. Manning, Brooklyn.

57. **Experimental Poisoning.**—In a series of twenty-six dogs poisoned experimentally by Hopkins in various ways by chloral hydrate, only six were found whose livers showed definite pathologic changes. These changes consisted in the appearance of fat in the liver cells, the change being either restricted to the central zone or affecting the whole lobule evenly. None of the livers showed necrosis of the cells about the central veins, the lesion which is the most characteristic of chronic chloroform poisoning. In regard to the other twenty dogs, most of them showed a few fine fat droplets scattered through the lobules but not in sufficient number to be definitely abnormal. It could not be determined what occasioned the production of fatty changes after chloral hydrate. All except one of the animals which showed lesions were given the drug subcutaneously. The severity of the lesion seems to bear no relation to the amount administered or the depth of anesthesia. The nitrogen output of three dogs was increased during the chloral hydrate poisoning and returned afterward practically to normal. Two dogs in this series which died of acute chloral hydrate poisoning excreted less nitrogen after than before administration of the drug. One dog which was very severely poisoned but subsequently recovered showed diminished nitrogen output during the anesthesia, followed by an enormous increase during the after-period.

61. **Normal Human Blood Serum.**—Drawing a conclusion from experience with thirty-two cases of hemorrhagic conditions, treated by normal human blood serum, Welsh is convinced that this agent is a specific for this pathologic condition. In septic conditions normal human blood serum appears to have considerable value. Welch has injected four individuals having bacteremia, from the blood of whom the streptococcus was obtained by culture. Two of these individuals recovered and two died. Two cases of very grave peritonitis have also received these injections. The first, a postoperative case, on whom a panhysterectomy had been done, showed marked signs of acute peritonitis on the day following the operation. Beside high fever, rapid pulse, marked abdominal tenderness and distention, she had from the second day, uncontrollable vomiting. She was unable to take any nourishment whatever and was rapidly sinking. Injections of normal human blood serum in doses of 5 to 7 ounces were given daily. After the second dose was administered she showed decided improvement in that the vomiting ceased, she was able to take liquid by mouth, the temperature receded and the abdominal condition quickly cleared up. The second case, a girl nineteen years old, curetted after abortion, ran a high temperature, between 103 and 104, with rapid pulse, shallow rapid respirations, distended tender abdomen, flushed cheeks and dry mouth. This girl was considered in a hopeless condition when injections of human serum were begun. Over a period of five days the serum was administered to the amount of three hundred cubic centimeters. The serum caused a decided improvement and the patient returned slowly to her normal health.

62. **Delivery Through Perineum.**—Rongy's case was one of spontaneous delivery of a child through the perineum. No anomalies in the construction of the vagina and pelvic floor were noticed. The woman was in active labor having pains every five to seven minutes and apparently was expected to go through a normal and spontaneous delivery. After several hours the attending nurse noticed an unusual amount of bulging of the anterior wall of the rectum and the perineum. This was increased with each succeeding pain. Rongy on his arrival one-half hour later found the patient in very active labor, the head pressing on the pelvic floor, stretching the anterior wall of the rectum and the whole pelvic floor in front of it. As the head advanced the parts became more thinned out and it was evident that the parts would not withstand the strain and that the anterior wall of the rectum would be torn away. No mechanical manipulation to make the head extend in order to relieve the tension on the pelvic floor was of any avail, and rupture of the perineum at the junction of the rectum soon took place, the head presenting, and the child delivered itself through this artificial opening, leaving the vulvar orifice intact and a bridge of the perineum 1½ inch wide separating it from the newly created opening. The placenta was also delivered through the perineal opening.

### Bulletin of American Academy of Medicine, Easton, Pa.

*April, XIII, No. 2, pp. 55-123*

68 *Conservation and Progress in Human Evolution. H. B. Ward, Urbana, Ill.
69 *Contagious Diseases in Schools. E. B. Hoag and I. C. Hall, Pasadena, Cal.
70 Effect of Medical Missionary on Sociology of Orient. L. D. Bulkley, New York.
71 *Present Magnitude of Alturistic Medical Effort in Far Orient. C. McIntire, Easton, Pa.
72 Medical Uplift of Burma. E. S. Corson, Bridgeton, N. J.
73 The Caroline A. Ladd Hospital, Presbyterian Mission, Pyengyang, Korea. J. H. Wells, Pyengyang, Korea.
74 Medical Practice in China. F. W. Goddard, Shaohsing, China.
75 Necessity for Trained Workers. M. E. Carlton, Ming Chiange, China.
76 Western Medicine in South China. H. W. Boyd, Canton, China.

68, 69 and 71. Abstracted in The Journal, July 22, pp. 311 and 312.

### New York Medical Journal

*April 27, XCV, No. 17, pp. 833-912*

77 *Correction of Lateral Curvature of Spine. E. G. Abbott, Portland, Me.
78 *Abbott's Method of Correcting Fixed Lateral Curvature. D. D. Ashley, New York.
79 Rotary Lateral Curvature; Report of Results Obtained. C. Ogilvy, New York.
80 Exaggerated Lordosis in Adult. J. J. Nutt, New York.
81 *Physical Exercises for Correction of Lumbar Lordosis. W. J. Schatz, Philadelphia.
82 American Orthopedic Association; Its Organization. N. M. Shaffer, New York.
83 Surgery for Cancer of Breast. E. S. Judd, Rochester, Minn.
84 Plea for Reform in University Education. E. Souchon, New Orleans.
85 Short Outline of Medical Career of Maitre Francois Rabelais. C. G. Cumston, Boston.
86 Intravenous Injections of Phenol in Tetanus. W. F. Bernart, Chicago.

77 and 78. **Correction of Lateral Curvature of Spine.**—The two fundamental principles underlying the correction of scoliosis according to Abbott are: First, overcorrection, for if motion is not established in all directions to the extreme of normal motion, the treatment is only palliative, and not curative. Second, fixation in the overcorrected position, until the parts are so thoroughly stretched and changed in their shape that the deformity will not return. He reports a large series of cases in which excellent results were obtained by his particular method of treatment, which is described in detail. It is said not to be a cure for all conditions and forms of scoliosis. It is especially applicable in the acquired forms, when not too rigid, severe and complicated by structural changes or bony ankylosis.

Abbott's conception according to Ashley is based on the theory of a rotating forward of the concave side, and that in correction the bodies must move to the concave side and backward; as the deformity was produced by flexion and side bending toward the convex side, the correction and overcorrection must take place in the same position of flexion and side bending to the other side.

To attain this effect, Abbott flexes the spine with pressure over the lower ribs, with side bending, arm of depressed side brought high up and forward, arm of convex side well down and backward. To facilitate holding the patient in this position of extreme flexion while he applies the plaster-of-Paris jacket, Abbott places the patient on the back in a hammock suspended on a frame. Ample felt pads, from three-eighths to one-half inch thick, are fitted over the angles of the ribs on the convex side and prominent ribs in front and the crests of the ilia. A large felt roll is placed over the concave side, to be removed through the large fenestra in the back when trimming the jacket. The efficiency of the technic depends on the use of bandages and weights to secure flexion and side bending, without the application of crushing force to the ribs.

The plaster-of-Paris jacket is applied, embracing the pelvis and extending about one and a half inch below the anterior superior spines. The plaster is carried high up under the arm of the concave side, and well down on the convex side, permitting the high shoulder to fall back and downward. The body in flexion, the jacket is made roomy in front over the upper part of the sternum, to relieve the elevated breasts, and permit the body to fall farther forward in flexion, still give high thoracic breathing space and close over the lower ribs to compel the flexed position. Usually four fenestras are cut out, the largest behind to permit farther flexion and free rotation of the concave side backward, and two in front, commencing at base of breasts and extending from 5 to 8 inches; these to adjust pressure pads. Another is generally made on the side of the convexity better to control any crushing or bending of the ribs, which is to be avoided. The jacket is made strong, especially at the sides and front, by reinforcement of plaster to permit the immediate removal of the large temporary pad over the concavity, and the cutting out of the fenestra. The right adjustment of the felt pads put in from this time, combined with the power of respiration, determines success.

81. **Physical Exercise for Lumbar Lordosis.**—The exercise referred to by Schatz is as follows: The performer lies on his back, the legs flexed on the thighs, which in turn are flexed on the pelvis, and the arms are placed at the sides, adducted slightly so as to give support during the performance. The movement to be executed consists in bringing the knees into the armpits, or as near to them as possible, and allowing them to return to the starting position. In order to make the abdominal muscles do all the work, the performers must not swing legs, but must endeavor to make the abdominal muscles pull the pubis directly upward toward the xiphoid

appendix; observe that if the muscles are not sufficiently strong to do the work correctly otherwise, the leg swing is permissible during the first few periods of exercise. The best results are obtained if the performer makes special effort to emphasize the last stage of the upward pull. The leg should remain flexed on the thigh throughout the entire procedure so that gravity does not come into play by acting through the lengthened lever that would otherwise be made by the extended legs. The exercise is continued until the muscles are tired, after which a short rest follows; this alternation of work and rest is continued until the exercise has been executed from thirty-five to 100 times for one period. Increase in duration of the exercise must be brought about progressively. After correction has been brought about, the exercises must be continued over a sufficient time to overcome former tendencies and make the results permanent.

### Albany Medical Annals, N. Y.

*April, XXXIII, No. 4, pp. 191-252*

87 How Shall the Mother Tell the Sex Story to Her Child? G. W. Goler, Rochester, N. Y.
88 Program for Sex Instruction. I. S. Wile, New York.
89 Relation of Obstetrician to Program of Sex Education. P. T. Harper, Albany, N. Y.

### Chicago Medical Recorder

*April 15, XXXIV, No. 4, pp. 175-240*

90 Sanitary Conditions in Philippines on American Occupancy and Work of Board of Health. L. M. Maus, U. S. Army.
91 Chronic Gonorrhea and Mixed Infection; Their Location and Treatment. F. Kreissl, Chicago.
92 Value of Child Study. D. P. Macmillan, Chicago.

### Buffalo Medical Journal, N. Y.

*April, LXVII, No. 9, pp. 476-538*

93 Law as It Relates to Physicians and Buffalo Health Department. F. E. Fronczak, Buffalo.
94 Results from Use of Dowd's Phosphatometer and Tonic. C. P. Smith, Buffalo.

### Journal of Biological Chemistry, Baltimore

*April, XI, No. 3, pp. 169-266*

95 *Putrefaction Processes in Intestine of Man During Fasting and During Subsequent Periods of Low and High Protein Ingestion. C. P. Scherwin and P. B. Hawk, Urbana, Ill.
96 Refractive Indices of Solutions of Certain Proteins: Proteins of Ox-Serum. T. B. Robertson, San Francisco.
97 Quantitative Determination of Benzoic, Hippuric and Phenaceturic Acids in Urine. H. Steenbock, Madison.
98 Case of Pentosuria Presenting Unusual Features. J. H. Elliott and H. S. Raper, Toronto.
99 Brief Investigation on Estimation of Lecithin. R. C. Collinson, Wooster, Ohio.
100 Purins of Muscle. C. B. Bennett, San Francisco.
101 *Influence of Cocain on Metabolism, with Special Reference to Elimination of Lactic Acid. F. P. Underhill and C. L. Black, New Haven, Conn.
102 *Creatin in Urine of Children O. Folin and W. Denis, Boston.
103 New Method for Determination of Hippuric Acid in Urine. O. Folin and F. F. Flanders, Boston.
104 Blue Color Reaction of Phosphotungstic Acid (?) with Uric Acid and Other Substances. O. Folin and A. B. Macallum, Boston.

95. **Intestinal Putrefaction During Fasting.**—The subject of the authors' experiment was a man weighing 76 kilos. Intestinal putrefaction as measured by the output of urinary indi-an was markedly decreased during the fasting interval. The eventh fasting day showed an indican excretion amounting o 13.7 mg. as against an output of 60.5 mg. for the second asting day. During the post-fasting interval of low protein ngestion putrefaction was increased in a very pronounced nanner, the indican values rising far above those obtained luring the normal period preceding the fast. The average laily indican output was but slightly higher during the eriod of high protein ingestion than during the low protein eriod. It was demonstrated that intestinal putrefaction was 0 per cent. greater when but 5.23 grams of nitrogen was assed into the gastro-intestinal tract after the fast than it as when 21.86 grams of nitrogen was ingested before the ast. Data from this and previous experiments along similar nes seem to indicate that there is of necessity no uniform lationship between the urinary indican excretion and the output of bacteria in the feces, even when the diet of the subject of the same general character. The indican value for the igh protein period subsequent to the fast was approximately 0 per cent. higher than the indican value for the preliminary eriod, notwithstanding the fact that the ingested diet was identical in kind and quantity in the two instances. On the seventh day of fasting approximately 40 per cent. of the total quantity of ethereal-$SO_3$ excreted in the urine was in the form of indican-$SO_3$ whereas only about 10 per cent. was excreted in this form in the urine of the fourth fasting day.

101. **Influence of Cocain on Metabolism.**—In confirmation of previous investigation, it was found by Underhill and Black that cocain introduced subcutaneously into dogs causes a temporary but significant increase in body temperature. With daily doses of 10 mg. of cocain hydrochlorid per kilo of body weight for short periods of time no influence can be detected on nitrogenous metabolism nor on fat utilization. Fat utilization is slightly impaired and body weight is considerably decreased when daily injections of 15 mg. cocain are administered. When the dose of cocain is increased to 20 mg. per kilo body weight per day a distinct lowering of both nitrogen and fat utilization is noted. This may be accompanied by a slight negative nitrogen balance. Lactic acid excretion in the urine is markedly increased in well-fed dogs and rabbits as a result of cocain injection. In a starving condition the dog eliminates less lactic acid after cocain injections than is excreted by the normal well-fed animal. It is not unlikely that the increased lactic acid elimination after cocain injections is associated with increased muscular activity induced by the drug. The ammonia output apparently bears little relation to lactic acid elimination under the experimental conditions. Lactic acid and carbohydrate metabolism are presumably intimately associated although there are indications that lactic acid may at times arise from more than a single antecedent.

102. **Creatin in Children's Urine.**—The authors incline to the belief that the creatin in children's urine does not depend, as Rose suggests, on a peculiar carbohydrate metabolism but that it is due to an excessively high level of protein consumption (in proportion to mass of muscles in the body). The creatin output in response to creatin feeding depends very much on the level of protein metabolism maintained. Whether the creatin is taken with the food or whether it comes directly from the tissues, as in fevers (and possibly also in starvation), may be more or less immaterial in view of the fact ascertained by one of the authors that creatinin and creatin like urea and amino acids are promptly transported from the digestive tract to the blood and from the blood to the tissues.

### Journal of Ophthalmology and Oto-Laryngology, Chicago

*April, VI, No. 4, pp. 105-139*

105 Treatment of Gonorrheal Conjunctivitis in Adult. J. S. Hosford and G. B. James, London.
106 Chronic Nasal Diphtheria. C. M. Miller, Richmond, Va.

### Delaware State Medical Journal, Wilmington

*April, III, No. 5, pp. 1-27*

107 Acute Laryngitis. J. A. Ellegood, Wilmington.

### Medical Record, New York

*April 20, LXXXI, No. 16, pp. 743-788*

108 Acute Endocarditis with Rupture of All Chorda Tendinæ of Anterior Curtain of Mitral Valve. L. F. Frissell, New York.
109 *Camphor and Pneumococci. A. Seibert, New York.
110 Geriatrics. I. L. Nascher, New York.
111 Free Postgraduate Medical Instruction. G. Mannheimer, New York.
112 Gonorrhea in Women. M. Glasgow, New York.
113 Movement for Internationalism in Medicine and Hygiene. K. M. Vogel, New York.

109. **Camphor and Pneumococci.**—In the cases of pneumococcic pneumonia cited by Seibert, camphor injections invariably reduced the toxemia gradually until practically normal conditions were reached three or four days after the first injection, while the alveolar exudate remained, to be absorbed later on. This phenomenon and the absence of a crisis were noticed in every case.

In twenty-one cases 12 c.c. of a 20 per cent. camphorated oil were injected every twelve hours in adults, and 6 c.c. in children (the youngest being four years of age), irrespective of the size and weight of the patient, the intensity of the toxemia, and the extent of the local process. In four of the next sixteen cases the limitations of this treatment were observed. A sudden rise of temperature in two patients on the second and third days of treatment, respectively, proved to be due to pneumococcic nephritis, promptly subdued by appropriate doses of hexamethylenamin, while the camphor injections were continued and resulted in speedy recovery. In two cases of severe pleuropneumonia from the onset (aged thirteen and twenty-eight respectively) the camphor reduced the general toxemia markedly, but did not prevent the accumulation of pus in the pleura, necessitating rib resection in the one on the fourth, and in the other on the eighth day after the initial chill, pneumococci in pure culture being found in the exudate, and both patients recovering. The one death among the thirty-seven cases of pneumonia so treated occurred in a man 68 years of age, weighing 200 pounds, with fatty heart, attacked by pneumococcic invasion of both lower lobes, marked toxemia and copious bloody sputum. Although early camphor injections had the usual good effect on the sensorium, the temperature and the respiration, his flabby heart began to give out on the fifth day, resulting in fatal pulmonary edema on the sixth. During the last four years Seibert has made many hypodermic injections of 10 per cent. salicylic acid solutions in 20 per cent. camphor oil in rheumatics, and has observed the prompt destruction of meningococci in the blood of a two-year-old patient by a 3 per cent. salicylic acid solution in a 30 per cent. camphor oil, 5 cc. being injected every forty-eight hours.

Seibert's attempts to interfere in human and animal pneumococcic infections with camphor have established the following facts: (1) That 10 c.c. of a 30 per cent. camphorated oil (equal to 36 grains of pure camphor) injected hypodermically to 100 pounds of human body weight every 8 to 12 hours, do not produce symptoms of poisoning, in fact are harmless; (2) that much larger doses (to the body weight) in rabbits are equally well borne, and (3) that *these quantities of camphor materially assist in overcoming pneumococcic toxemia;* and (4) that the earlier this treatment is resorted to the better the results.

### Southern California Practitioner, Los Angeles

*April, XXVII, No. 4, pp. 147-202*

114 Preliminary Survey of California Tuberculosis Statistics. W. F. Snow, Sacramento.
115 Early Diagnosis of Tuberculosis. J. A. Parks, La Mesa.
116 Nauheim Baths. E. A. Newton, Bad Nauheim, Germany.
117 Relationship of Adenoids and Enlarged Tonsils to Deformities of Dental Arches, Maxillary Bones and Adjacent Bony Structures. J. D. McCoy, Los Angeles.
118 Case of Advanced Pulmonary Tuberculosis. H. F. Boatman, Los Angeles.
119 Mercury; Its Discovery. H. Fracastor.

### Western Medical Review, Omaha, Neb.

*April, XVII, No. 4, pp. 159-234*

120 Thrombosis of Lateral Sinus from Otitis Media. H. Gifford, Omaha.
121 Migraine; Its Etiology, Symptomatology and Treatment. J. M. Banister, Omaha.
122 Dissection of Buried Tonsil in Children. H. L. Arnold, Omaha.
123 Occult Blood in Stool. A. D. Dunn, Omaha.
124 Gonorrhea in Children. P. Findley, Omaha.
125 Bronchial Asthma. A. Sachs, Omaha.
126 Management of Toxemia of Pregnancy. A. B. Somers, Omaha.
127 Epidemic Cerebrospinal Meningitis. M. Langfeld, Omaha.
128 Rupture of Plantaris Tendon. R. R. Hollister, Omaha.
129 Diverticula of Esophagus. C. C. Allison, Omaha.
130 Enterostomy. J. P. Lord, Omaha.

*April 27, LXXXI, No. 17, pp. 789-834*

131 Observations of Wassermann's Experiments on Mouse Tumors. O. Kiliani, New York.
132 All Pulmonary Physical Signs Are Not Those of Tuberculosis. H. A. Hare, Philadelphia.
133 Athletic Superiority of Our New Stocks. C. E. Woodruff, U. S. Army.
134 Chemical Constitution and Physiologic Action. W. A. Jacobs, New York.
135 *Pellagra. M. M. Smith, Dallas, Tex.
136 Overwork and Fatigue in Relation to Nervous Prostration. E. L. Hunt, New York.
137 *Injection of Paraffin for Incontinence of Urine Following Trauma to Urethra. E. H. Eising, New York.
138 Pure Air by Diffusion. J. F. Lockwood, Kansas City, Mo.

135. **Pellagra.**—It is urged by Smith that pellagra be made a reportable disease, with a statute requiring all cases to be reported to the proper health officers, thus furnishing vital statistics and affording an opportunity for scientific investigators to ascertain the complete case-histories and such other information as may be desired, which will aid very materially in ascertaining the cause of the disease, its prevention and the most successful treatment. Further, an educational campaign should be waged by the national government, the respective state health departments where the disease exists, including the county and city health officers, for the education of the medical profession at large, so that they may be able to recognize the disease in its earliest stages and be prepared to administer the best possible treatment. Such educational work can be materially improved by well-arranged clinics through the various medical associations and schools and the presentation of suitable papers and their discussion in such organizations. In addition to these clinics, lectures should be held and wholesome literature for the people in general should be distributed so that the people may realize the value of healthy surroundings, the need of wholesome foods, the proper observance of rules of bathing, strict vigilance as to quality of corn preparations they eat, suitable screening for places of residence, and such other educational steps as will tend to better their condition, particularly of the poorer classes, of whom the disease exacts its greatest toll.

137. **Injection of Paraffin.**—Based on an experience of only two cases and from a citation of the literature, Eising suggests the submucous injection of paraffin as the method of first recourse giving the greatest probability of cure for incontinence of urine following trauma to the urethra.

### New York State Journal of Medicine, New York

*April, XII, No. 4, pp. 157-208*

139 Value of Roentgenography in Diagnosis of Disturbances of Gastro-Intestinal Tract. A. MacFarlane and A. F. Holding, Albany.
140 Intratracheal Insufflation Anesthesia. W. C. Woolsey, Brooklyn.
141 Administration of Nitrous Oxid and Oxygen as Anesthetic. P. J. Flagg, Yonkers.
142 Balantidium Infection and Pernicious Anemia. C. G. R. Jennings, Elmira.
143 Diagnosis and Symptoms of Diseases of Liver. J. Meyers, Albany.
144 Dangers of Salvarsan. N. W. Wilson, Buffalo.
145 Bronchopneumonia in Children. H. A. Hoyt, Watertown.
146 Infant Feeding with Undilutetd Cow's Milk. W. B. Hanbidge, Ogdensburg.
147 Bullet Wounds of Abdomen. C. G. Hacker, Albany.
148 Case of Erythema Multiforme and Typhoid Occurring Simultaneously in a Previously Healthy Man. M. B. Downer, Woodstock.
149 John Hunter. E. R. McGuire, Buffalo.
150 Medical School Inspection. T. E. Bullard, Schuylerville.

### Boston Medical and Surgical Journal

*April 25, CLXVI, No. 17, pp. 615-650*

151 *Care and Control of Alcoholic. A. Lambert, New York.
152 Conference on Diseases Among School Children, and Remedy. E. O. Otis, Boston.
153 Diseases of Mouth, Throat and Chest. R. C. Cabot, Boston.
154 Malnutrition. G. S. C. Badger, Boston.
155 Diseases of the Skin. C. M. Smith, Boston.
156 Orthopedic Defects and Rickets. J. E. Goldwait, Boston.
157 Nervous and Mental Disorders in Schools. A. W. Fairbanks, Boston.
158 Blood Transfusion for Hemorrhagic Disease of New-Born; Use of External Jugular Vein in Infants. B. Vincent, Boston.

151. **Care and Control of Alcoholic.**—There were 131 patients treated in Bellevue Hospital, New York, for the alcohol habit by the Lambert-Town formula. Eighteen months afterward Lambert endeavored to look up the records of these men; forty-three could not be found; two were dead, and one was insane. Of the eighty-five in whom we could judge accurately of the results, sixty-seven had reverted and eighteen had remained abstinent. That is, 78.8 per cent. had reverted and 21.2 per cent. had remained straight. That one could succeed in the ordinary alcoholic wards of Bellevue Hospital in one-fifth of the cases, Lambert says, is a far better result than one could expect from the usual methods of treatment. Among those who have been given this treatment in a private institution during the past two years, having voluntarily sought the treatment, the results have been much more encouraging. Among these cases the percentage is practically reversed. In 375 patients there have been 46, or 12.2 per cent. known relapses.

### Journal of Medical Association of Georgia, Augusta

*April, I, No. 9, pp. 313-342*

159 Surgery of Large Intestines. A. Van der Veer, Albany, N. Y.
160 One Hundred and Five Emergency Laparotomies. R. M. Harbin, Rome.

161 Significance of Leukocyte Count in Appendicitis and Allied Acute Surgical Conditions. C. H. Richardson, Macon.
162 Some Points Needing Emphasis in Treatment of Tuberculosis. J. H. Hamond, Lafayette.
163 Some Surgical Difficulties Encountered by a Country Practitioner. B. Williams, Folkston.
164 Bacilli Carriers and Their Relation to Public Health. A. R. Collins, Atlanta.

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## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### Medical Press and Circular, London

*March 20, XCIII, No. 3802, pp. 291-313*

1 Odontoma in Man Aged 62. J. Bland-Sutton.
2 Important Phases in Evolution of Man. A. Keith.
3 Operative Treatment of Conical Cornea. C. A. Worth.
4 *Hydropiginous Tuberculous Nephritis. L. Bernard.
5 Nervous Disorders and Neurologist in Relation to Profession and Public. T. A. Williams.

*March 27, XCIII, No. 3803, pp. 314-342*

6 Conditions Associated with Ocular Nerve Paralysis. J. Taylor.
7 Dangers of Salvarsan in Syphilitic Affections. P. Gancher.
8 Hypochondriasis; Its Significance and Treatment. R. H. Cole.
9 Treatment of Surgical Tuberculosis by Dioradin. R. A. Stoney.

*April 3, XCIII, No. 3804, pp. 343-366*

10 Sarcoma of Kidney Treated by Eight Hours Roentgen-Ray Exposure and Subsequently by Radium Ionization. F. Hernaman-Johnson.
11 Cattle Trypanosomiasis and Early History of Sleeping Sickness. F. M. Sandwith.
12 Treatment of Syphilis of Nervous System and of Parasyphilitic Diseases. W. B. Warrington.
13 Fatal Case of Gonorrheal Septicemia. T. G. Moorhead.

4. **Hydropiginous Tuberculous Nephritis.**—Bernard is convinced that there is no pure amyloid degeneration of the kidneys in these cases, while there are frequently the lesions of diffuse nephritis. When we meet with amyloid changes they are, he says, invariably associated with other lesions, epithelial and interstitial, with predominance of the former. As to the pathogenesis of these alterations, they were formerly attributed to poisons secreted by the tubercle bacillus, but nowadays, after Jousset's and Bernard's researches they must be looked on as nephritic lesions due to the direct action of the bacillus. Inoculations made by Jousset gave positive results. These facts demonstrate that tuberculous nephritis is due to the action of the bacillus. By inoculating the tubercle bacillus in the arteries of dogs and rabbits, there are reproduced the identical lesions of hydropiginous nephritis; extensive epithelial degeneration conjunctivo-vascular reactions with diapedetic afflux. Ethero-bacilline, the poison secreted by the tubercle bacillus, which acts only at the very seat of the parasitic vegetation, causes the same epithelial and interstitial lesions, as we have been shown by other experiments. On the contrary, injections of tuberculin in the animal, like the methods of collodion bags applied to the tubercle bacillus, only yielded inconstant discrete renal lesions, and without individual character. Hydropiginous nephritis, then, is caused not by tuberculins, but by the direct local action of bacillus multiplying in the kidney. In all probability this special reaction of the kidney to the tubercle bacillus is the response to massive inoculation of bacilli conveyed in the blood-stream to the kidney, where they find an excellent culture medium. If this be the case it expresses the highest degree of tubercle contamination, while interstitial nephritis corresponds to minute inoculations of not very virulent bacilli, while, lastly, nfiltrating tuberculosis of the organ is the consequence of direct or accidental inoculation.

Of all the varieties of renal tuberculosis the gravest is unquestionably hydropiginous nephritis, in that it is not amenable to treatment. Nevertheless, one can sometimes, ays Bernard, delay its course, but it must be borne in mind hat milk diet is not indicated, since the kidney is not permeable, and uremia is not to be apprehended. The patient must be regarded and treated as a tuberculous subject. His trength must be maintained by generous feeding, and in rder to combat the edema the chlorids should be reduced or iscarded altogether. Eggs should not be allowed. The alimentary pastes and farinaceous articles of food will constitute he basis of his diet. Counter-irritation over the kidneys often ffords some relief, preferably by dry cupping. If diuresis be inadequate, theobromin is indicated along with salts of calcium.

### Edinburgh Medical Journal

*April, VIII, No. 4, pp. 289-384*

14 *Treatment of Tuberculous Peritonitis in Adults; Thirty-One Cases. F. M. Caird.
15 Treatment of Simple Fractures. C. W. Cathcart.
16 Trauma as Factor in Disease. A. James.
17 *Tuberculous Infection in Infancy and Childhood as Revealed by Cutaneous Tuberculin Test. C. McNeil.
18 *Tylosis Palmaris Et Plantaris; Report of Three Cases. L. Thatcher.
19 Pipette for Collection of Discharges for Bacteriologic Examination. I. S. Stewart.

14. **Treatment of Tuberculous Peritonitis.**—Only thirty-one cases of tuberculous peritonitis in patients between 13 and 60 years of age were seen by Caird in the Edinburgh Royal Infirmary during a period of ten years. He excludes tabes mesenterica, tuberculous stricture of the intestine and early examples of tuberculous appendicitis and includes cases showing general invasion of the serous surfaces as the main feature, as also a few in which the fallopian tubes or ovaries were, in addition, markedly affected, and those in which a general peritoneal tuberculous infiltration seemed to have penetrated from the serous to the deeper layers of the intestinal wall. The majority of the patients had been treated in the medical department without much benefit, and so were referred to the surgical side.

Surgical treatment consisted in an exploratory mesial incision midway between the umbilicus and the symphysis pubis, or, as occasion seemed to demand, in the linea semilunaris or appendicular region. An attempt was made to find and remove any prominent focus, but no labored or prolonged search was ever regarded as advisable, and on few occasions were tuberculous tubes and ovaries removed or masses of infiltrated omentum. In such cases, or when the exudate was distinctly purulent, drainage was adopted for a short period. As a rule, the abdomen was at once closed after evacuating the fluid and freeing such adhesions as could readily be separated.

Twenty-eight patients recovered. There were three deaths, all among the exudative type. The dry forms, not generally regarded as favorable to surgical interference, all recovered. It is noteworthy that with the exception of the fatalities and a couple of patients in whom healing was not followed by marked relief, all the others received benefit from operation. Ten of the twenty-eight patients who left the hospital healed cannot be traced. Nine died at varying periods; eight are known to be alive and well, one two years after operation, one three years, one four years, four five years, one nine years. Caird says that it is only when medical means fail or appear to be of doubtful utility that surgical intervention is required.

17. **Tuberculous Infection.**—The tuberculin test was performed by McNeil in 541 cases in all, the ages of the patients ranging from a few weeks up to 15 years. A positive reaction was obtained in 44.5 per cent. of the cases.

18. **Tylosis Palmaris et Plantaris.**—The best results in treatment were got by Thatcher by complete rest, starch poultices, soaking in a strong solution of carbonate of soda, scraping off as much of the softened debris as possible and then applying 3 per cent. salicylic acid plaster. At times the following ointment was used instead:

℞.

| | | | gm. or c.c. |
|---|---|---|---|
| Acidi salicylici | gr. xxx | | 2 |
| Ichthyolis | ʒi | or | 4 |
| Olei olivæ | ♏ xxx | | 2 |
| Lanolini | ℥i | | 30 |

### Annals of Tropical Medicine and Parasitology, Liverpool

*March 29, VI, No. 1, pp. 1-40*

20 Transmission of Human Trypanosomes by Glossina Morsitans; Human Trypanosomes in Game. A. Kinghorn and W. Yorke.
21 Herpetomonas Pediculi, Parasite in Alimentary Tract of Pediculus Vestimenti, Human Body Louse. H. B. Fantham.

### Lancet, London

*April 13, I, No. 4624, pp. 969-1040*

22 Modern Views on Significance of Skin Eruptions. H. G. Adamson.
23 *Study of Secondary Infections in Pulmonary Tuberculosis. A. C. Inman.
24 Corneo-Scleral Trephining. B. T. Lang.
25 *Treatment of Condylomata Acuminata. D. Watson.
26 Three Consecutive Cases of Carcinoma of Jejunum. E. T. Tatlow.

23. **Secondary Infections in Tuberculosis.**—In nearly every case of open tuberculosis of the lungs the tubercle bacillus is held by Lang to be the predominant infecting agent. The blood examinations made by him have shown that secondary infections do occur. In all resting, febrile cases there was evidence of such infection. Even in the ambulant afebrile group such infection could not be excluded. A consideration of the morbid anatomy of advanced tuberculosis, and of the uncontrolled auto-inoculations spontaneously occurring in such cases, precludes the hope of a successful issue from specific treatment directed against the secondary infections; the situation is more encouraging in afebrile cases.

25. **Treatment of Condylomata Acuminata.**—The treatment which Watson has found to be most simple, effective and free from objection is the application of lactic acid. The mode of employment depends on the condition present. In the male circumcision is performed when necessary, pedunculated warts may be removed with scissors, and pure lactic acid applied to the base after the bleeding has been controlled. Other growths are treated with a continuous 1 per cent. wet dressing or the occasional application of a strong solution. In the female, when there are several large masses, each portion is isolated and kept surrounded by strips of lint wet with a ½ to 1 per cent. solution. The base of these growths may in addition be touched at intervals of a few days with the pure acid. Smaller growths are painted with the undiluted acid or a strong solution, and when there is a large field of minute growths the wet dressing is employed. The dressings are changed as frequently as the amount of discharge necessitates, and at each change the parts are thoroughly bathed with an antiseptic, in the case of females a sitz bath being used. The largest masses wither and drop off, small growths are inhibited and cure results without the formation of any cicatrices and without pain. The only disadvantage Watson has encounted in the use of lactic acid is the occasional occurrence of a general erythema when the treatment is pushed too energetically. This erythema is of trifling significance and quickly subsides on the temporary withdrawal of the acid and the substitution of a zinc and calomel dusting powder or ointment. On this account, however, it may be necessary when large areas are involved to intermit the treatment for two days in each week, and to protect the surrounding healthy tissues with vaseline in order to discourage excessive absorption of the acid. As soon as the seats of gonorrheal infection, urethra, cervix, rectum, etc., can be reached, appropriate treatment is initiated, and this, combined with strict cleanliness, has an important influence in preventing the appearances of fresh growths.

### British Medical Journal, London

*April 13, I, No. 2675, pp. 817-872*

27 Precise Relationship of Cystocele, Prolapse and Rectocele; Operations for Their Relief. W. E. Fothergill.
28 *Gastro-Enterostomy. J. C. Renton.
29 Retroversion of Uterus Treated by Gilliam's Round Ligament Ventrosuspension. F. Ivens.
30 Twin Monsters with Acute Hydramnios. A. E. Turnbull.
31 Rupture of Uterus with Expulsion of Fetus Into Abdominal Cavity. H. R. Andrews.
32 *Treatment of Certain Forms of Coccydynia. O. Beddard.
33 *Causation of Parenchymatous Nephritis. G. W. Watson.
34 Pyonephrosis; Operation; Recovery. E. O. Bowen.
35 Acute Pyelonephritis Complicating Pregnancy. F. D. Crew.
36 *Foreign Bodies in Vermiform Appendix. S. Boyd.
37 Threadworms in Vermiform Appendix. C. Wilson.
38 *Foreign Bodies in Intestine. A. S. Hosford.
39 Observations on Infant Fed with Barley Water and Cow's Milk. R. C. Verley.
40 *Boracic Acid Poisoning. V. Harley.
41 Acute Epididymitis Produced by Muscular Strain. A. Edwards.

28. **Gastro-Enterostomy.**—Thirteen of Renton's last eighty-one patients were operated on for ruptured gastric ulcer. One patient died; the other twelve cases have been quite successful. The operation was done in sixty cases for pyloric stenosis, gastric ulcers with hemorrhage and duodenal ulcers with hemorrhage. Out of the sixty, two died, one from pneumonia, the other from exhaustion. Three operations were for malignant disease, two partial gastrectomies with gastro-enterostomy, the third a simple gastro-enterostomy. One of the gastrectomy cases done three years ago, the patient is still quite well; the other one died at the end of four months from secondary growths all over the inside of the abdomen, with ascites; the third case lived for six months. The atonic cases, four in number, were the most disappointing. Perseverance in careful dieting and other treatment generally, however, gives a satisfactory result. Ten years ago Renton operated for a ruptured gastric ulcer in the body of the stomach, from which the patient recovered. She was sent back to the hospital with severe hemorrhage, from which he feared she would die, but, aided by adrenalin and normal horse serum, she recovered sufficiently to enable him to perform a gastro-gastrostomy. She continues to be quite well, eighteen months after the operation. Renton recommends gastro-enterostomy as a safe and satisfactory operation.

32. **Treatment of Coccydynia.**—It seemed to Beddard as though much pressure on the coccyx could be avoided if the tubera ischii could be maintained on raised supports. He found that this could be effected by a simple contrivance made of fine longcloth shaped on the lines of a napkin provided with two hollow rubber rings to receive the tubera. The rubber rings are 1 inch in depth, 2½ inches in diameter, their contained circles being 1¼ inches in diameter. They are held within circular pockets, which close with snap fasteners, with their centers 4½ inches apart. The garment should accurately and closely fit the body, and be worn next the skin. It is kept in position by a broad silk elastic band passing round the waist, and a similar band passes across just above the pubes. The arrangement permits of the use of an ordinary diaper. The rubber rings do not cause noticeable projection when worn under ordinary clothing, as they take up a position below the gluteal folds when the patient is standing. Beddard has found decided relief from the severe pain of coccydynia has resulted.

33. **Parenchymatous Nephritis.**—Watson concludes that acute nephritis is not a very common disorder. It is usually due to the direct effect of some infectious fever, catarrh or septic process. The great majority of cases recover completely, therefore the prognosis is good. The diagnosis of acute nephritis (primary) can seldom be made with certainty during the acute attack, and therefore a prognosis cannot safely be given until after an interval of a few weeks at least.

36. **Foreign Bodies in Vermiform Appendix.**—Boyd reports a case of appendicitis in which he found a small piece of wood, about a third of an inch long and an eighth of an inch in the other two diameters in the appendix. It was irregularly shaped, but being somewhat macerated its points were not sharp. The color suggested that it had originally belonged to a cedar-wood pencil, but the boy, on being questioned afterward, denied that he was in the habit of biting his pencils. There were also two hairs about three-quarters of an inch long, the nature of which was confirmed by microscopic examination. There were also several thread-worms present. Nothing else was present except some soft fecal matter. No concretions had formed around the foreign bodies.

38. **Foreign Bodies in Intestine.**—Hosford's patient was a male lunatic aged 33, who complained of pain in the abdomen. He had not been sick. The abdomen was slightly distended and tender all over; it moved fairly well on respiration, was tympanitic, and nothing definite could be made out. Nothing was detected per rectum, and having excluded as far as possible all forms of external strangulated hernia, and finding no physical signs in his chest, he was ordered an enema and restricted to fluids. The time occupied in the passage of the following articles was twenty-four hours: fourteen pieces of wood, ranging in size between 3¼ in. by ⅝ in. and 1 in. by ⅛ in.; twelve pieces of stone, ranging in size between 2 in. by 1 in. and ¼ in. by ¼ in.; twenty pieces of cloth, ranging in size between 12 in. by 1 in. and 1 in. by 1 in.; ten pieces of cotton neckties, ranging in size between 13 in. by 1½ in. and 4½ in. by 1½ in.; forty pieces of blanket, ranging in size between 13 in. by 1½ in. and 2 in. by 1 in.; nineteen pieces of fustian and corduroy, ranging in size from 12 in. by 1 in. to 2½ in. by ½ in.; eight linen buttons; four brass buttons; five match stalks; one overcoat button; one piece of tape 3 in. long; five boot-laces 6 in. long; two pieces of linen shirt

6 and 9 in. long, respectively, by 2½ in. wide; the bottom piece of a match-box; a sharp piece of the bowl of a clay pipe (½ in. square), besides several large pieces of coal, rolled-up paper, wool and seven long pieces of knotted handkerchiefs, etc.

Six days after the patient had been declared to be convalescent and was up and about taking ordinary food and apparently in a normal state of health, he was sent to bed with diarrhea. He had no temperature, but the abdomen was slightly distended and tender all over. He died sixteen days later. At the post-mortem examination there was marked chronic pelvic peritonitis. The lower portions of the intestines were absolutely matted together. There was marked congestion of the jejunum and ileum, and also of the large intestines; but there was no ulceration and, morevover, no perforation. On opening the intestines, the following is a list of some of the articles removed: Twenty pieces of linen, ranging in size from 11 in. by 3¼ in. to 1 in. by 1½ in.; fourteen pieces of blanket, ranging in size from 4½ in. by 2½ in. to 2 in. by 1 in.; six pieces of wood, ranging in size from 3¾ in. by 1½ in. to 1½ in. by ½ in.; six pieces of neckties, ranging in size from 5 in. by 4 in. to 3 in. by 3¼ in.; fifty shirt and trouser buttons; seven match stalks; three large pieces of cinder; one long boot-lace; one overcoat button, and one piece of handkerchief 4 in. square, besides a quantity of rolled-up paper. The majority of the articles were found in the jejunum and ileum, and several of the pieces of blanket were firmly wound round pieces of wood and covered with fecal accumulation. From the first to the last there was never complete obstruction; there was no vomiting and no hemorrhage.

40. **Boracic Acid Poisoning.**—Harley formerly used boracic acid solutions for lavage of the bowel in cases of colitis, but, after having seen symptoms arise in at least three patients, decided it might not be such a harmless method as one would be inclined to believe. Although when used as an intestinal douche he has not found it to cause any serious symptoms, it has, apparently, frequently caused marked symptoms of toxemia. He believes it is probable that this poisoning, if in reality caused by boracic acid, is due to some idiosyncrasy, as one frequently has been carried out over a considerable period without any toxemia.

### Journal of Obstetrics and Gynecology of British Empire, London

*February, XXI, No. 2, pp. 66-128*

42 Osteomalacia: Broughton Pelvis in Museum of Royal College of Surgeons. A. Doran.
43 Moderately Contracted Pelvis and Induction of Labor. E. McDonald, New York.
44 Kezmarszky's Decapitating Ecraseur. B. Nadory.

### Annales de l'Institut Pasteur, Paris

*March, XXII, No. 3, pp. 161-240*

45 Influence of Temperature on the Activity of Emulsine. G. Bertrand and A. Compton.
46 Phagocytosis as Factor in Immunity of Mice. (L'importance de la phagocytose dans l'immunite de la souris à l'égard de quelques flagellés.) P. Delanoe.
47 Antidysentery Serum. (Les agglutinines et les substances sensibilisatrices des sérums dysentériques.) T. Gryglewicz.
48 The Negative Phase in Vaccination of Young Rabbits Against Typhoid. (La "phase negative" de Wright dans la vaccination antityphique des jeunes lapins.) F. De Gasperi.

### Annales de Médecine et Chirurgie Infantiles, Paris

*April 1, XVI, No. 7, pp. 193-224*

49 *Erythema with Malignant Syndrome in Infectious Diseases. V. Hutinel.
50 *Cirrhosis of the Liver in Child. (Cirrhose de Hanot chez un enfant. Infantilisme consécutif.) Pagliano and de Luna.

49. Abstracted in THE JOURNAL, April 20, p. 1236.

50. **Cirrhosis of the Liver in a Child.**—The liver affection developed very gradually, with enlargement of both the spleen and liver, slow fever and some jaundice, swollen lymph-nodes, tendency to hemorrhage and arrest of growth. The boy was 12 when the first symptoms developed and he has not grown during the eight years since, his appearance being still that of a boy of 12. The primary cause is a mystery as neither inherited syphilis, malaria nor alcohol can be incriminated. The young man now shows signs of tuberculosis, but it seems to be secondary.

### Archives des Maladies de l'App. Digestif, Paris

*March, VI, No. 3, pp. 121-180*

51 Molecular Concentration of Fluids in the Stomach. (La concentration moléculaire des liquides gastriques et l'activité de dilution de l'estomac.) M. Loepers and J. Thinh.
52 Diagnosis of Cancer of Thoracic Duct. (Le diagnostic de l'oblitération cancéreuse du canal thoracique, est-il possible?) A. Plot.
53 Syphilis of the Pancreas. J. W. Salis.
54 Roentgenography of Stomach and Intestines. (3 ans de la Société de radiologie médicale de Paris au point de vue des maladies de l'appareil digestif.) R. Glénard.

### Archives de Médecine des Enfants, Paris

*April, XV, No. 4, pp. 241-320*

55 *Curable Tuberculous Meningitis. (Des épisodes méningés tuberculeux curables.) H. Barbier and G. Gougelet.
56 Anasarca Without Albuminuria or Heart Disease in Child of 8 with Inherited Syphilitic Taint. Deléarde and Repellin.
57 Atypical Measles. (Epidémie de rougeole en 1905.) Fédon.
58 Rachitis with Multiple Deformities. (Rachitisme avec déformations excessives.) J. Comby.
59 *Medical Treatment of Strabismus. J. Comby.

55. **Curable Tuberculous Meningitis.**—Barbier and Gougelet refer by this term to certain transient brain symptoms, evidently of meningeal origin, observed in children suspected of tuberculosis. These meningeal episodes have been overlooked hitherto as a rule just because they have been transient, and hence their connection with actual tuberculous meningitis has not been suspected. They state that eight writers have reported cases of tuberculous meningitis with long periods of subsidence of symptoms. They have also found records of twenty-four cases in which the diagnosis was confirmed by lumbar puncture and inoculation of animals, and yet the patients recovered. In ten other cases, including one from their own experience, there were three successive episodes of tuberculous meningitis with intervals of apparent health. In six other cases there were two of these episodes before the fatal termination. In eight other personal cases of tuberculous meningitis a history of a period of similar symptoms some time before was learned. The meningeal episode may be manifested solely by zona, or there may be pain in regions innervated by certain peripheral nerves or other meningeal symptoms. If one is on the alert for them, these curable episodes can be detected. They impose special care in hygiene, warning against mental or physical overexertion and against dampness and too high altitudes and excitement of any kind. A return of the meningeal symptoms is generally the beginning of a speedy end.

59. **Medical Treatment of Squint in Children.**—Comby quotes with approval some recent works on this subject which emphasize the value of medical treatment alone for divergent strabismus; the convergent type can be influenced only by operative measures as a rule. Reeducation of binocular vision by exercising the eyes with the diploscope is an important aid to surgical treatment; it should precede the operative measures as well as follow them.

### Bulletin de l'Académie de Médecine, Paris

*March 26, LXXVI, No 13, pp. 261-288*

60 *Decortication of the Lung. (Cas de décortication pulmonaire—opération de Delorme.) L. Picqué and Delorme.
61 *Virulence and Contagiousness of the Sweat in Tuberculosis. (Virulence et contagiosité de la sueur des tuberculeux.) A. Poncet and M. Piéry.

60. **Decortication of the Lung.**—Delorme is the originator of this method of treating the sequelæ of purulent pleurisy, and here reports a case described by Picqué and reviews the work of others in this line. Most of it has been done in America, he says, and he cites freely from Ferguson, Lund and Dowd, especially the latter's article in THE JOURNAL, 1909, liii, 1281. Delorme urges that the method should be tried on children more than has hitherto been the case, thus warding off the deformity in the spine so often observed in these cases. In the case described the envelop encapsulating the left lung was several centimeters thick, the cavity being small, as seen by roentgenoscopy. The moment that the lung was freed from its thick shell, it expanded immediately, protruding from the wound, showing the retention of its elasticity. The trouble in this case followed a double stab wound of the chest entailing purulent pleurisy, and the decortication was done three months and a half after the pleurisy had developed.

61. See Paris Letter in THE JOURNAL, April 20, p. 1211.

## Journal de Chirurgie, Paris

*March, VIII, No. 3, pp. 233-364*

62 *Thymectomy. (De la valeur et des indications opératoires de la thymectomie dans l'hypertrophie du thymus.) E. Olivier.

62. **Thymectomy.**—Olivier declares that subtotal subcapsular thymectomy is a simple operation that any practitioner should be able to do, while it is the only treatment for serious disturbances from an enlarged thymus. There is no operative mortality provided that no attempt is made to drain and that the thymectomy is not preceded or followed by tracheotomy or removal of any septic organ. Neglect of one or more of these precautions was responsible for the fifteen deaths on record in the forty-two cases of thymectomy that have been published. The thymectomy itself was not responsible in any instance, but it put an end at once to the permanent suffocation in twenty-five out of twenty-eight cases; to paroxysmal suffocation in ten out of twelve, and to the stridor in twelve out of sixteen. In conclusion he lists twenty-three quite recent articles on the subject.

## Journal de Medécine de Bordeaux

*March 17, XXIV, No. 11, pp. 161-176*

63 *Diabetes Insipidus of Syphilitic Origin. X. Arnozan.

*March 24, No. 12, pp. 177-192*

64 *Treatment of Old Talipes Equinus. (2 cas de pieds bots paralytiques anciens.) J. Gourdon.
65 Serum of Non-Syphilitic Pregnant Women Gives Positive Response to Simplified Wassermann Test. (Sur une particularité du sérum de femme enceinte, cause d'erreur dans le séro-diagnostic de la syphilis par les méthodes simplifiées.) G. Fieux and P. Mauriac.
66 Suppuration in Lacrimal Sac. (Des abcès lacrymaux sus-ligamenteux.) M. Aubaret.

*March 31, No. 13, pp. 193-208*

67 Successful Resection of Polycystic Kidney. (Néphrectomie partielle pour rein polykystique.) G. Chavannaz and Lefèvre.

63. **Diabetes Insipidus of Syphilitic Origin.**—Arnozan's patient had both malaria and syphilis, but the prompt improvement under mercurial treatment confirmed his assumption of its syphilitic nature. The benefit has not been stable to date; the polyuria returns when treatment is suspended. In the literature on the subject, both mercury and iodid are stated to have been effectual and it might be well to combine the two, he thinks. The local congestion induced by salvarsan, which is one of the factors in its efficiency, might have serious effects by affecting the medulla oblongata, which he assumes to be responsible for the diabetes insipidus in this case, so he has refrained on principle from the administration of salvarsan.

64. **Old Talipes Equinus.**—In Gourdon's two cases the deformity was the result of infantile paralysis in early childhood, but after thirty and ten years complete correction was obtained. Tenotomy of the Achilles tendon was followed by the Lorenz procedure to reduce the forward displacement of the astragalus, an assistant exerting strong traction downward with a strip of cloth while Gourdon raised the front part of the foot. The foot was then immobilized in a walking plaster cast for eight months or a year and conditions have been normal during the four years since. The muscles in both of these cases reacted to electric tests, although feebly. The paralysis consequently could not have been very severe, notwithstanding the serious deformity; it was probably maintained by the predominance of the antagonists. All of the deformity probably might have been avoided if the foot and leg at the time of the disease in childhood had been held in a correct position. He ascribes the good results of his treatment in large part to the long use of the plaster cast, immobilizing the foot in overcorrection. Whenever he has taken off the cast in such cases in three or four months, he has always had to apply it again.

## Lyon Médical, Lyons

*March 10, XLIV, No. 10, pp. 529-588*

68 Artificial Pneumothorax in Treatment of Pulmonary Tuberculosis. M. Piéry. Commenced in No. 9.
69 *Direct Sunlight in Treatment of Laryngeal Tuberculosis. (Hélio-thérapie dans la tuberculose du larynx.) F. J. Collet.

*March 24, No. 12, pp. 653-700*

70 Spontaneous Partial Heart Block. (Du block partiel et toléré.) L. Gallavardin. Commenced in No. 11.
71 *Criminal Abortion. (Avortement.) Plauchu.

69. **Direct Sunlight in Treatment of Laryngeal Tuberculosis.**—Collet has been one of the pioneers in this line and his success has been very encouraging. His first patient treated in this way in 1905 has been permanently cured for over six years to date. This patient was a man of 33 without fever or much cough, but with relative dulness over the right apex. He wore a broad black hat and black spectacles and sat facing the sun, projecting on the larynx the sunlight received on the mirror of the laryngoscope placed in the throat, supervising the reflection of the rays with a hand-glass. He kept this up at intervals during the day, amounting to a total of half an hour at first and later an hour daily. He had been combating the tuberculosis with the ordinary general measures for several months but the laryngeal process had continued a progressive course until arrested by the heliotherapy. In six weeks the improvement was marked and by the end of seven months there was scarcely a trace of the laryngeal affection. In a second case, two-hour exposures during the day were made with equally favorable outcome, and in a third case marked improvement was realized in a few weeks.

71. **Abortions.**—Plauchu gives the statistics from three Lyons hospitals showing how the number of cases of abortion has tripled during the last six years and that the morbidity and mortality of abortions are increasing in the same ratio.

## Presse Médicale, Paris

*April 3, XX, No. 27, pp. 269-276*

72 *Diabetic Acidosis and Coma. (Syndrome d'acidose et coma diabétique.) M. Labbé.
73 Mechanism of Action of Remedies for Asthma. (Mécanisme des médications anti-asthmatiques.) A. Martinet.
74 *The Wassermann Reaction in Diagnosis of Inherited Syphilis. E. Andronesco and F. Saratzeano.

72. **Acidosis and Diabetic Coma.**—Labbé insists on the importance of distinguishing between the groups of symptoms due to the excess of sugar in the blood and to the acidosis. The difference in the effect of large doses of sodium bicarbonate in acidosis and in coma confirm the difference in their causal factors. The acidosis, the result of intoxication with acetonic bodies, is characterized by somnolency, vertigo, dyspnea, vomiting or diarrhea, etc., but coma shows other symptoms, muscular relaxation, loss of consciousness and disturbances in respiration, circulation and temperature. When in the course of progressive acidosis coma comes on suddenly, it never gives the impression of being an aggravation but a superposed complication. The two are closely associated, but they may possibly be due to intoxication by a different mechanism. Many features of coma suggest intoxication from polypeptids. Labbé urges the necessity for standardizing methods for dosage of oxybutyric acid; the findings in different countries and clinics will not bear comparison on account of the different technics applied. He cites a few cases in which the acidosis was kept under control by sodium bicarbonate but coma suddenly developing was uninfluenced by it.

74. **Wassermann Reaction in Inherited Syphilis.**—This communication from Bucharest reports application of the test to twenty-two infants and thirteen mothers. The findings confirm the truth of Colle's law and show that the Wassermann reaction is the most reliable means at our disposal for detecting inherited syphilis in the absence of visible lesions. It was always found more pronounced in the infants than in the mothers with latent syphilis.

## Semaine Médicale, Paris

*April 17, XXXII, No. 16, pp. 181-192*

75 Fibrous Stenosis of the Small Intestine. (Les sténoses fibreuses de l'intestin grêle.) F. Lejars.

## Archiv für Kinderheilkunde, Stuttgart

*LVII, Nos. 4-6, pp. 241-480. Last indexed Feb. 24, p. 594*

76 New Public Children's Hospital. (Der Ausbau des städtischen Kaiser- und Kaiserin-Friedrich-Kinderkrankenhauses in Berlin.) A. Baginsky and the Architects.
77 *Epidemic Parotitis and Secondary Meningitis. (Zur Polymorphie der Parotitis epidemica mit bes. Berücksichtigung secundärer Meningitiden.) H. Zade.

78 White versus Yellow Cod-Liver Oil in Rachitis. (Ist der weisse Lebertran bei der Behandlung der Rachitis dem gelben gleichwertig?) J. A. Schabad and R. F. Sorochowitsch.
79 Research on Blood Platelets. (Specifische Blutplättchen und die Theorie der directen reactiven Aufeinanderwirkung.) P. P. Emlnet.
80 Amount of Food and Protein Required by Young Children. (Zum Nahrungsbedarf und Eiweissbedarf des Kindes jenseits des Säuglingsalters.) J. Stargardter.
81 Acute Osteomyelitis of the Upper Jaw in Three-Weeks Infant. H. Filess.
82 Measures for Child Welfare in Russia. (Der gegenwärtige Stand der Frage über die Kindersterblichkeit in Russland und deren Bekämpfung.) W. Hubert.

77. **Meningitis Secondary to Mumps.**—Zade reports a case of mumps in which the symptoms at first indicated appendicitis accompanied by sore throat and tonsil enlargement. The pains in the iliac fossa were intense and the boy of 12 became delirious. By the second day the temperature was 104 F. and the right neck and face swelled, the appearance by the third day first suggesting the true diagnosis of epidemic parotitis. Symptoms of meningitis followed, but the condition began to improve the eighth day and the patient was soon apparently completely restored. As the local symptoms of the parotitis subsided, the meningitic symptoms became more pronounced. The pulse became abnormally slow almost from the first. Another child in the same family had a typical attack of mumps soon after. Zade reviews the cases of secondary meningitis following epidemic parotitis on record, five of the nineteen terminating fatally. He also reviews the various complications liable to follow mumps, citing records of severe nephritis, vulvovaginitis, cystitis, ptyalism, endocarditis and pericarditis, conjunctivitis, keratitis, retinitis and neuritis, giving his authorities for each. He also mentions articular rheumatism in this connection, Catrin having found in the joint effusion the same diplococcus which he and Laveran had found in the puncture fluid of the diseased parotid gland, and had been accepted by them as the causal germ of mumps. Comby has also reported ostitis and osteomyelitis as a complication of mumps. The skin may also be affected, and there may be respiratory disturbances, even edema of the glottis. Gastro-intestinal complications are not rare but generally pass over harmlessly. Comby and Woodwart have reported loss of hearing and sight. Aphasia and persisting paralysis have been reported by others, but secondary meningitis is the only complication liable to prove rapidly fatal.

### Deutsche medizinische Wochenschrift, Berlin

*March 28, XXXVIII, No. 13, pp. 585-632*

83 *Laryngeal Tuberculosis. (Behandlung der Kehlkopftuberkulose.) G. Killian.
84 Rosenbach's Tuberculin in Surgical Tuberculosis. (Erfahrungen über die Anwendung des Tuberkulin Rosenbach bei chirurgischen Tuberkulosen.) F. J. Rosenbach. Commenced in No. 12.
85 Present Status of Diagnosis of Tuberculosis. (Der gegenwärtige Stand der Tuberkulosediagnostik.) O. Roepke. Commenced in No. 11.
86 Traumatic Appendicitis. (Zur Frage der traumatischen Appendicitis.) E. Sonnenburg.
87 Tincture of Iodin Catgut. (Ueber Jodtinktur Katgut.) W. Hoffmann and F. Budde.
88 *Prolapse of the Rectum. (Behandlung des Mastdarmvorfalles.) B. Heile.
89 *Simple Method for Determining Uric Acid in the Blood and in Other Colloid Fluids. (Einfache Methode zum Nachweis von Harnsäure im Blut und andern kolloiden Flüssigkeiten.) F. Gudzent and E. Apolant.
90 Dentition. R. Flachs.
91 *Results of Orthopedic Treatment of Epidemic Poliomyelitis. (Erfolge der orthopädischen Behandlung der spinalen Kinderlähmung.) E. Klose.
92 Improved Stain for Diphtheria Bacilli. (Ergänzung der Mitteilung über die einzeitige Doppelfärbungsmethode der Diphtheriestäbchen.) M. Raskin.

83. **Larnygeal Tuberculosis.**—Killian remarks that few affecions require so much persevering care as this, and that the utcome depends mainly on the condition of the lungs and ther organs. If the kidneys or intestines are diseased or here is a history of old syphilis or the patient is diabetic, here is not much chance of a cure. Local treatment with sufflation of a powder like iodoform or application of lactic cid may have to be supplemented by operative measures. hese patients do not bear tracheotomy well, and Killian has tely devised what he calls the "floating" technic for laryn-scopy and laryngeal operations, *Schwebelaryngoskopie* described in abstract 69, p. 1404). This technic permits a uch better vew of the larynx and enables it to be thoroughly curetted as is possible otherwise only by access through a tracheotomy.

88. **Treatment of Rectal Prolapse.**—In severe cases in women past the child-bearing age, Heile reenforces the floor of the pelvis by suturing the uterine cervix directly to the anterior wall of the rectum, drawing up the cervix to a position at a right angle to its natural position, and drawing the fundus horizontally across the pelvis and down through an opening in the upper part of the anterior wall of the vagina, where it is held with a couple of sutures. The reflection of the peritoneum down into the pouch of Douglas is first resected. The simple technic is illustrated as it was applied in two cases, two years ago, permanently curing the patients of all tendency to prolapse. The only incisions are the one through the posterior wall of the vagina into the pouch of Douglas and the one in the anterior wall down to which the fundus is drawn.

89. **Test for Uric Acid in the Body Fluids.**—Gudzent's reasearch has established that uric acid in the blood is always in the form of a monosodium urate and that it can be isolated by dialyzing the blood of other fluids being examined. Two years of experience have confirmed the value of this method which requires only about 20 c.c. of blood and six hours of time. The blood is drawn into a condom which is suspended in a dialyzing vial containing 40 c.c. of distilled water. The level of the blood must be a few mm. above the level of the water. After two hours the water is let out into a dish below, and another 40 c.c is poured in and let out in the same way after another two hours, and the same repeated once more. The 120 c.c. thus accumulated in the dish below is evaporated on the water bath and the dry residue treated with murexid. In case there is uric acid present, parts of the residue stain a reddish purple. On addition of soda or potassium solution the tint changes to a reddish blue or violet. The test applied to 200 gouty patients showed the presence of the monosodium urate in nearly saturation concentration (8.3 mg. monosodium urate in 100 c.c. of blood serum). When the test was applied to control the effects of radium treatment of gout, the findings were always about the same as before or else they showed total absence of the monosodium urate—there was never any gradual decline.

91. **Orthopedic Treatment of Epidemic Poliomyelitis.**—Klose urges that orthopedic treatment should begin early, during the stage of repair, not waiting for irreparable contractures to become installed. Operative measures later are much facilitated when splints are applied early and the limbs bandaged to ward off contractures. He gives illustrations and summaries of five severe cases in which the patients were restored to active life by induced ankylosis of the knees. Tendon transplantation has not fulfilled its promise in these cases, and Klose prefers the shorter method of arthrodesis by nailing the parts in position.

### Medizinische Klinik, Berlin

*March 31, VIII, No. 13, pp. 513-552 and Supplement*

93 Treatment of Appendicitis. (Die chirurgische Behandlung der eitrigen Peritonitis bei Appendicitis.) D. Pupovac
94 *Differentiation of Acute Leukemia and Sepssis.) (Zur Differentialdiagnose zwischen akuter Leukämie und Sepsis, mit bes. Berücksichtigung der "Sepsis bei Verkümmerung des Granulocytensystems.") H. Stursberg.
95 Indications and Technic for Resection of the Septum. (Die submuköse Septum-Resektion.) C. O. v. Eicken.
96 The Wassermann Reaction with Salvarsan Circulating in the Blood. (Die Wassermannsche Reaktion bei im Blute kreisendem Salvarsan.) F. v. Gutfeld.
97 Winter Rest of Plants. (Ueber die Winterruhe unserer Pflanzen insbes. der Holzgewächse.) W. Wangerin.
98 *Operative Treatment of Simple Fractures. (Blutige Behandlung der subkutanen Knochenbrüche.) F. Steinmann.

94. **Acute Leukemia or Sepsis.**—In the first of Stursberg's two cases everything indicated streptococcus sepsis except the blood findings—these spoke for leukemia, and necropsy confirmed the existence of lymphatic leukemia which had probably preceded the sepsis. A second case had the same features with the difference that the proportion of lymphocytes was abnormally small, while in the first case their number was much above normal. In the second case nothing was found at necropsy to confirm the diagnosis of leukemia; the trouble was evidently solely a streptococcus sepsis.

98. **Operative Treatment of Simple Fractures.**—Steinmann gives forty-six illustrations of the various methods for maintaining the stumps in a good position when extension and other bloodless measures fail to ensure perfect consolidation in a good attitude. With nail extension it is almost always possible to reduce and hold the fracture, but in the rare cases in which this fails, it may be necessary to hold the parts together with removable pegs or bolts or a suture may be required. The fractures most liable to require this are those of the apophysis, fractures of the spongiosa part of the bone, of the lower end of the humerus in children, fracture of the olecranon and of the upper end of the olecranon. For these fractures one or two nails driven temporarily into the bone or a suture may be advisable. In the leg, fracture of the patella or calcaneum is the one usually involved. Operative treatment is indicated for the fracture of long bones with displacement to the side which it is impossible to correct without some such measure. All lengthwise dislocation, he says, can be readily corrected by his method of nail extension. The nails are driven horizontally into the bone from each side with a curved strip of metal fastened to the outer end of each nail, a weight being suspended from the crossed ends of the metal strips below. The advantages claimed for this extension are its extreme effectiveness, the comparative freedom from pain and discomfort, and the unhindered access to the regions for early massage, exercising and dressing the parts. By graduating the size of the semicircle formed by the crossed strips, the direction of the traction can be altered. He adds that this nail extension scarcely comes under the heading of operative measures as no wound is made except where the nails are driven into the bone at a point always remote from the fracture. The danger of infection on this account is much less than when nails and pegs are driven directly into the fractured stumps. (Compare with abstract 75, May 4, 1912.)

### Münchener medizinische Wochenschrift

*March 26, LIX, No. 13, pp. 681-736*

99 *Reflex Influencing of Muscles in Limbs by Movements of the Head. (Ueber die Beziehungen des Kopfes zu den Gliedern.) R. Magnus.
100 Application to Leprosy of Lessons Learned from Study of Tuberculosis. (Neue immunobiologische und klinische Tuberkulosestudien mit Berücksichtigung der Lepra.) H. Much.
101 Colorimetric Determination of Sugar and Indican in the Urine and of Iron in the Blood. V. (Beiträge zu den kolorimetrischen Bestimmungsmethoden des Traubenzuckers und Indikans im Harne sowie des Eisens im Blute.) W. Autenrieth and A. Funk. Concluded in No. 14.
102 Substances Analogous to Epinephrin in the Serum. (Zur Frage des Serumgehaltes an adrenalinähnlichen Substanzen.) F. Kahn.
103 Suppurative Peritonitis. (Die allgemeine eitrige Peritonitis und Behandlung mit bes. Berücksichtigung der Appendizitis.) P. Tschmarke.
104 *Roentgenoscopic Diagnosis of Gastric Ulcer. (Zur Röntgendiagnose des Magengeschwürs.) F. Eisler.
105 *Roentgen-Ray Castration for Hypertrophy of the Prostate. (Zur Kasuistik der Hodenbestrahlung bei Prostatahypertrophie.) O. Ehrmann.
106 Reply to Criticism of Hormonal. (Zur Kenntnis der Hormonalwirkung.) G. Zuelzer.
107 Conditions of Nourishment of Munich School Children. (Ueber den Ernährungszustand von Münchner Volksschülern.) K. Oppenheimer and W. Landauer.
108 Chronic Inflammation of the Cecum. (Coecum mobile und chronische Appendizitis.) F. Crämer. Commenced in No. 12.

99. **Reflex Influencing of Muscles in Limbs by Movements of the Head.**—Magnus reports experiments which showed tonic cramps in the limbs when the head of the animal was moved around as it lay on the board after removal of the brain. The phenomena observed suggest that there are two sets of reflexes involved. One set of reflexes is the work of the labyrinth as it is influenced by changes in the position of the head in regard to space. The other reflexes are induced by changes in the position of the head in regard to the body; that is, they are neck reflexes. These same labyrinth and neck reflexes may be observed in certain clinical pathologic conditions. In five infants with such severe brain trouble, hydrocephalus, suppurative meningitis or intracranial hemorrhage, as to suspend all action of the brain and hence all volitional movements, it was found possible to induce tonic spasms in the arms by altering the position of the head, thus eliciting the neck reflexes. The labyrinth reflexes can be elicited in normal very young infants by turning the head; in the normal infants the reflex action is transient but in children with brain affections practically excluding cerebration the tonic extension is durable. He shows in an illustration the peculiar stiffening and twisting of the arms and legs from this reflex action in a nine-days' old babe with bilateral obstetric hemorrhage in the region of the lenticular nucleus. This occurred even when the seated infant was merely made to lie down, bringing the head from a vertical (vertex up) to a horizontal position (nose up). The reflex action is all of a tonic character and it throws light on the tonicity of the muscles in general. Magnus urges others to study these phenomena as occasion arises; he is now conducting research on the phenomena after removal of the labyrinth.

104. **Roentgenoscopic Diagnosis of Gastric Ulcer.**—Eisler writes from the Roentgen institute at Vienna in charge of Kienböck to call attention to certain minor differential points, among them the fact that very small ulcers or erosions do not cause any appreciable spastic contraction of the stomach wall when the stomach is not empty. Detection of the spastic contracture is possible only in the fasting stomach in these cases. The duodenum should be empty also. He has frequently observed that the motor function of the stomach behaves differently at times according as the duodenum is full or empty, and consequently this point should be borne in mind in examining the stomach for suspected ulceration. He has his patients take a single swallow of the bismuth suspension; as this passes into the stomach a transverse constriction in the greater curvature may become apparent, which vanishes at once when the patient drinks more of the suspension or pressure is applied to the stomach region. The phenomenon is the same as the functional hour-glass stomach only that the spasm subsides as more fluid is taken into the stomach. He has found further that the tender point in the fasting stomach corresponds always to the point located by the spasm. Tenderness when the stomach is not empty is liable to be vague and misleading; it is far more reliable when tested on the fasting stomach.

105. **Roentgen-Ray Castration for Hypertrophy of the Prostate.**—Ehrmann exposed the testicles to Roentgen rays in the case reported; the patient was a man nearly 60 with signs of soft enlargement of the prostate, hematuria and recurring attacks of uremic symptoms. A single ten-minute exposure was made with two-thirds erythema dose, equivalent to 3 ll Holzknecht degrees on the Sabouraud-Noiré color scale. Improvement became apparent about the ninth day, the residual urine growing less in amount and by the end of the second week none was left. There was no further hematuria and the general health has materially improved; the testicles are much smaller but soft, and the prostate, although still large, feels softer. The benefit realized has been durable to date, nearly three months since the exposure, and no by-effects of any kind have been observed. The same treatment in another case, in which the prostate was of a tough fibrous structure, failed to induce any change for the better.

### Wiener klinische Wochenschrift, Vienna

*March 28, XXV, No. 13, pp. 475-510*

109 *Cutaneous Luetin Reaction in Syphilis. (Zur Intrakutanreaktion bei Syphilis.) G. Nobl and K. Fluss.
110 Sedatives and Oxytocics in Obstetrical Practice. (Wehenschmerzlindernde und wehenanregende Mittel in der Geburtshilfe.) I. Richter.
111 *Modern Treatment of Emphysema. L. Hofbauer.
112 *Simple Operative Treatment of Esophageal Diverticulum. (Vorschlag eines einfachen Operationsverfahrens zur Behandlung Oesophagusdivertikels.) H. H. Schmid.
113 Paratyphoid Osteomyelitis. (Fall von Osteomyelitis, hervorgerufen durch Paratyphusbazillen.) N. Spassokukozky.

109. **Cutaneous Reaction in Syphilis.**—Nobl and Fluss have applied Noguchi's luetin in 107 cases of syphilis. (This diagnostic reaction was described in The Journal, April 20 1912, p. 1163 and Dec. 23, 1911, p. 2103). A colored plate is given to show the different stages of a typical reaction after intradermal application of the luetin, which is an emulsion or extract of pure cultures of the *Spirochæta pallida*. The control lesion begins to fade away by the third or fourth day while the specific lesion keeps angry and may increase in diameter for week or two. It begins to retrogress by the tenth or twentieth

day, but a hard lump is still perceptible by the end of the month. The findings are tabulated according to the reaction; there was no reaction in four of the seven patients with the primary form of syphilis and in twenty-six of the sixty-two in the secondary stage; in four of the sixteen in a late latent stage, and in one of the three patients with inherited syphilis. The test seems to have the greatest diagnostic value in the later phases of the disease.

111. **Treatment of Emphysema.**—Hofbauer describes the physiologic factors which he utilizes in treatment of emphysema, especially the work of the diaphragm as it is sucked up by prolonged expiration, this upward movement of the diaphragm being reenforced and supplemented by drawing in the abdominal walls as the act of expiration draws to a close—not before. The patient is taught not to deepen or prolong inspiration but merely his expiration, bringing all the elastic factors into play that he can control. With ordinary breathing the muscles engaged in inspiration are worked more than those concerned in expiration, and this he has to combat, striving to train the latter to more effectual functioning. The
atient must breathe exclusively through his nose and make a
umming noise during the expiration. This latter ensures his
eeping his mouth shut and also trains his ear to watch over
is prolonged expiration not only when he is doing these exer-
ises but when he is walking or at work. Hofbauer uses
contrivance which presses in the abdominal wall— an air-
illed cushion under an inelastic band. The cushion is inflated
o exert pressure just at the end of expiration; it forces
p the relaxed diaphragm and the immediate relief is so
arked that the patient realizes the advantages from draw-
ng or forcing the diaphragm up as high as possible during
xpiration, and he learns to utilize his own forces for this.
he circulation is promoted at the same time by these breath-
g exercises to such an extent that the general health benefits
aterially.

112. **Treatment of Esophageal Diverticulum.**—Schmid says
hat all trouble from a diverticulum ceases if it is pulled
ut straight and the lower end drawn up high and fastened.
that the pocket formed by the diverticulum is upside down,
ith its mouth at the lowest point. This answers the same
urpose as excision of the diverticulum, while it is a much
ss serious operation. He has never applied the method in
ractice, but he thinks that the chances are that the diverticu-
m would shrivel up in time when treated in this way.

### Zentralblatt für Chirurgie, Leipsic

*March 30, XXXIX, No. 13, pp. 417-456*

4 Improved Durable Esmarch Bandage. (Ein haltbarer Ersatz der Esmarch'schen Gummibinde.) A. Henle.
5 Case of Primary Liver Calculus. (Ein primärer Leberstein.) F. Neugebauer.

### Zentralblatt für Gynäkologie, Leipsic

*March 30, XXXVI, No. 13, pp. 385-416*

6 *Resection of Promontory as Means to Enlarge Contracted Pelvis. (Verfahren zur Heilung enger Becken.) H. Rotter.
7 Bacteriologic Control During Operations. (Ueber bakteriologische Kontrolluntersuchungen vor und bei gynäkologischen Operationen.) A. Bauereisen.
8 Shortening the Broad Ligaments Back of the Uterus to Correct Retroflexion. (Neue Operation der Retroflexio uteri.) L. Heusner.

116. **Enlargement of Pelvis by Resection of Promontory.**—
tter proposes to facilitate childbirth, in case of a rachitic
tracted pelvis, by chipping off the anterior part of the pro-
ntory. The sacrum and vertebra forming the promontory
e so thick that a piece 2 cm. in thickness can be split
in front without impairing the solidity of the spine and
thout the least risk. He has done this operation a number
times on the cadaver and found it remarkably simple and
ectual for the purpose designed. He obtains access to the
montory through a median laparotomy, the pelvis raised.
intestines are readily pushed out of the way, the parietal
itoneum incised and the sacral artery and vein ligated. He
the resection with a slightly concave chisel 3 or 3.5 cm.
le, applied to the body of the lowest lumbar vertebra,
splits off a single flat ovoid piece comprising part of the
nbar vertebra and the upper part of the sacral vertebra and
ervertebral ligament, the latter forming the largest part of the segment split off. The soft parts are then sutured over the raw bone surface and the abdominal incision is closed. If this operation proves as simple and feasible as it appears from his experience to date, he says, it will do away with all other methods of managing contracted pelvis, all of which to date merely temporarily remove the obstacle to birth but do not permanently enlarge the pelvis, as this does. The operation adds from 1.5 to 2 cm. to the true conjugate, and he thinks it should be considered in all such cases in which this diameter is not less than 7 cm.

### Zentralblatt für innere Medizin, Leipsic

*March 30, XXXIII, No. 13, pp. 293-316*

119 Technic for Therapeutic Application of Radium Emanation. (Radiuminhalations- und Trinkmethode.) J. Kemen.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*March 24, XXXIII, No. 36, pp. 369-384*

120 Medicolegal Definition of "Permanent Invalidism" and "Incurable Disease." (Sulla diagnosi differenziale tra "indebolimento permanente" e "malattia probabilmente o certamente insanabile" a scopo medico-forense.) L. Borri.
121 Keloid Acne of the Neck. (Studio istologico dell'acne cheloidiena della nuca.) A. Nardi.

### Policlinico, Rome

*March 24, XIX, No. 13, pp. 445-480*

122 Organotherapy for Disturbances from Abnormal Thyroid and Adrenal Secretion. (La cura opoterapica nelle sindromi da alterata secrezione tiroidea e surrenale.) T. Pontano. Commenced in No. 12.
123 *Chorea of Genital Origin. L. M. Bossi.

*March 31, No. 14, pp. 481-516*

124 Abortive and "Walking" Small-Pox. (Il vaiuolo abortivo e il vaiuolo ambulatorio.) G. Pecori.
125 Medical Journalism of the World. (Il giornalismo medico in Italia e all'Estero.) M. Luzzatto. Commenced in No. 13.

123. **Chorea of Genital Origin.**—Bossi declares that the genital origin of the chorea in the case he reports was established beyond question by its prompt subsidence as soon as proper measures to cure the endometritis and correct the retroversion of the uterus had been applied. The patient has since passed through a normal pregnancy in the best of health.

### Riforma Medica, Naples

*March 16, XXVIII, No. 11, pp. 281-308*

126 *Alcohol Sterilization of the Peritoneum. (Disinfezione peritoneale coll'alcool.) I. Tansini.
127 Action of Salvarsan on the Heart and Vessels. (L'azione del Salvarsan sull'apparato cardio-vascolare.) G. Burzi.
128 The Round Ligament in Femoral Hernia. (Il legamento rotondo nelle ernie crurali.) M. Dardanelli.

*March 23, No. 12, 309-336*

129 *Complement-Fixation Test in Diagnosis of Echinococcus Disease. (La deviazione del complemento nell'echinococcosi fatta anche col sistema emolitico di L. Ferrannini.) D. De Sandro.
130 Experimental Research on Elimination and Toxic Power of Salvarsan. (Sulla eliminazione e sul potere tossico del diossidiamidoarsenobenzolo.) A. Saccone.

126. **Alcohol Disinfection of the Peritoneum.**—Tansini has not been able to find in the literature any record of alcohol having been used on an extensive scale to cleanse and disinfect the peritoneum after contamination with fecal matters. He reports its use in two cases in which entero-anastomosis had been done for tuberculous stenosis or the entire cecum resected for a local tuberculous process. The patients were 17 and 29 years old, and recovery was remarkably prompt and uneventful. He washed with 95 per cent. alcohol the loops of intestine that had been soiled by escaping feces during the operation, and swabbed with the alcohol the soiled regions of the peritoneum and also the lines of the sutures.

129. **Complement-Fixation Test for Echinococcus Disease.**—De Sandro has been applying the complement-fixation test to the diagnosis of echinococcus disease, by two different technics, the rabbit-sheep technic of Weinberg and Ferrannini's eel-rabbit technic. He gives the details of a number of suspected cases and compares his findings with those that have been reported by others. Both technics were found reliable, the only difference being that a negative response is less noticeable in the eel-rabbit test than with the Weinberg technic, but this slight drawback is far outweighed by the superior simplicity and rapidity of the former, and even this drawback can be eliminated by using an 8 per cent. instead of a 5 per

per cent. suspension of the rabbit blood-corpuscles. The reaction is complete in a few hours instead of the days required for the Weinberg test. De Sandro is now studying the application of the eel-rabbit technic to the Wassermann test for syphilis. (This simplified eel-rabbit technic was described in The Journal March 18, 1911, page 860.)

### Brazil Medico, Rio de Janeiro

*March 8, XXVI, No. 10, pp. 91-100*

131 Uremia. L. Freire.
132 Perinephritis. B. do Amaral.
133 Cystic Kidney. (Kystos do rim.) B. do Amaral.

### Semana Medica, Buenos Aires

*February 22, XIX, No. 8, pp. 345-396*

134 Amino-Acids in the Cerebrospinal Fluid and in Effusions. M. R. Castex.
135 *Propaganda Against Alcohol. (El alcoholismo.) V. Delfino.

135. **Alcoholism.**—Delfino gives a comprehensive historical summary of alcoholism through the ages and the various systems and methods for control of the liquor traffic in vogue in different lands at present. He emphasizes anew that limitation of the number of dramshops is the most important forward movement in the campaign against alcoholism.

### Hospitalstidende, Copenhagen

*March 27, LV, No. 13, pp. 357-388*

136 Dysentery in Denmark; Sixty-Four Cases Reported in 1911. (Oversigt over Dysenteri. Epidemiologiske og bakteriologiske Undersøgelser af Dysenteritilfælde i Danmark 1911.) W. Leschly and C. Sonne.

### Hygiea, Stockholm

*March, LXXIV, No. 3, pp. 257-384*

137 *Scarlatinal Otitis Media. (Om otitis media perforativa vid scarlatina.) G. Holmgren. To be continued.
138 *Influenzal Meningitis and Pneumonia. (Ytterligare bidrag till frågan om influensans etiologi och patologi.) I. Jundell.
139 Opsonins in Human Milk and Cow's Milk. (Kvinnomjölkens och komjölkens opsoniner.) I. Jundell.
140 Ossifying Myositis After Dislocation of the Elbow. (Ossificerande myosit i musculus brachialis anticus efter armbågsdistorsion med anledning of 2 fall.) G. Nilson.

137. **Otitis Media in Scarlet Fever.**—Holmgren's article is not concluded in this number but this instalment gives an oversight of 9,590 cases of scarlet fever during the last ten years, and the occurrence of otitis media in over 21 per cent. of the total. This material is arranged in twenty-five tables as considered from as many different standpoints, with other tables comparing similar data from various hospitals at home and abroad. The majority of cases of scarlatinal otitis were in children under 5; the frequency declined with increasing age. The otitis was most prevalent in the winter months. The total mortality averaged 5.33 per cent; that is, 511; 184 of the children who died had otitis media.

138. **Influenzal Meningitis.**—Jundell states that influenza seems to be endemic at Stockholm, hundreds of cases being reported there each year, but during the last seven years he found true influenza bacilli only in about 10 per cent. of the cases in which the diagnosis of influenza seemed certain and in which he had made a bacteriologic examination. In January, 1911, a healthy 2-year-old babe was taken suddenly with vomiting one afternoon but there was no cough or nasal discharge; the next morning the child was found unconscious and died in two hours. Necropsy disclosed evidences of fulminating meningitis. Two months later another infant developed the same syndrome, with convulsions and died in scarcely more than twenty-four hours with similar necropsy findings. Bacteriologic examination disclosed innumerable influenza bacilli in pure cultures in the meninges. About the same time he had a case of pneumonia in an infant and the influenza bacillus was cultivated from the sputum; the child recovered. In cultivating the influenza bacillus the culture medium should be free from hemoglobin. In 1904 he had found records in the literature of thirteen cases of meningitis apparently the work of influenza bacilli; eight of the children were from 10 weeks to 2 years old. Since then five more cases have been published, he says, including the one mentioned above, all in infants from 7 to 15 months old and a child of 4—showing that influenzal meningitis is almost exclusively a children's disease.

### Norsk Magazin for Lægevidenskaben, Christiania

*April, LXXIII, No. 4, pp. 449-616*

141 *Experiences with a Salt-Poor Diet. (Erfaringer med koksaltfattig diæt.) O. Hanssen.
142 *Diabetes Insipidus. O. Hanssen.
143 *Cancer of the Rectum. (Resultaterne efter radikaloperation for maligne tumores i rectum.) N. Paus.
144 Dermatitis with Pigmentation After Salvarsan. (Melanodermi efter Salvarsaninjektion.) K. Grøn.
145 Three Cases of Rupture of the Bladder. (Tre tilfælder av blærebrok.) R. Ingebrigtsen.
146 Incarcerated Obturator Hernia. (Et tilfælde av Hernia obturatoria incarcerata.) R. Ingebrigsten.

141. **Experiences with a Salt-Poor Diet.**—Hanssen gives the details of considerable experience in this line. In three cases of diabetes insipidus the effect was marked in two; the third patient did not keep to the ordered diet. The benefit was striking also in a young man with epilepsy and in several cases of ascites. In a very severe case of the latter, besides abstention from salt, the patient took on alternate days 5 gm. of magnesium sulphate or sodium sulphate and all the ascites disappeared in a month but a fatal hemorrhage from the esophagus occurred a month later. It is possible that the changes in the circulation from the absorption and elimination of such large amounts of ascitic fluid may have favored the development of hemorrhage. Hanssen mentions that Finsen said that he did not feel so well when all his ascites had been drawn or absorbed as when there was a certain amount of fluid in the peritoneal cavity. In a second case Hanssen supplemented the salt-poor diet with cream of tartar or calomel, and the ascites retrogressed to a remarkable extent. In a case of nephritis in a man of 33 several weeks elapsed before the benefit from the salt-poor diet became marked although the patient began to lose weight from the first. In another case of nephritic edema no benefit was detected, but prompt improvement followed in a case of idiopathic or intestinal hydrops, free from any tendency to albuminuria. The patient had chronic diarrhea and extensive edema; this combination is rare in adults. Under thirteen days of the salt-poor diet the weight dropped by several pounds, but some were regained as the ordinary diet was resumed. Hanssén discusses the technic of the salt-poor diet in the hospital and the home with minute detail.

142. **Diabetes Insipidus.**—Hanssen reports five cases in women and two in men; a tuberculous taint was evident in four of the seven and one had acromegaly. The findings tabulated show that a diet poor in salt and albumin is able to reduce the diuresis whether the kidneys have lost or retained their power of concentration.

143. **Cancer of the Rectum.**—Paus states that a radical operation was performed in 68.6 per cent. of the twenty-nine patients with rectal cancer in Strøm's service 1897-1910. Five of this group of twenty did not survive for longer than three years afterward, but 42.2 per cent. have been well since the operation, the interval ranging from nearly four to eleven years. In this group of long survivals, the operation had been by way of the perineum in one case, with resection of the coccyx in two; in four the access had been by resection of the sacrum and in one by the vaginal route. This 42.2 per cent. of permanent cures is thus higher than the statistics from nine other large clinics which he cites, only from 14.8 to 37.5 per cent. of these patients being free from recurrence after three years. In the cases of recurrence, the survivals averaged two and a third years. Ten pages are devoted to tabulation of the minute details of the twenty operative cases.

### Ugeskrift for Læger, Copenhagen

*March 28, LXXIV, No. 13, pp. 497-526*

147 Secondary Disease of the Labyrinth with Suppurative Middle Ear Disease; Twenty-One Cases. (Kliniske Bidrag til de under Forløbet af Mellemøresuppurationer optrædende sekundære Labyrintaffektioner.) C. Heilskov.

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## Books Received

Journal Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

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# THE TREATMENT OF PERSISTENT PAIN OF ORGANIC ORIGIN IN THE LOWER PART OF THE BODY BY DIVISION OF THE ANTEROLATERAL COLUMN OF THE SPINAL CORD

WILLIAM G. SPILLER, M.D.
Professor of Neuropathology in the University of Pennsylvania
AND
EDWARD MARTIN, M.D.
John Rhea Barton Professor of Surgery in the University of Pennsylvania
PHILADELPHIA

## REMARKS BY DR. SPILLER

Occasionally the pain from tumor of the cauda equina is so intense that complete division of the spinal cord has been suggested for its relief, and it is only recently that I have seen a case in which this measure had been proposed. If division of the anterolateral columns alone will remove pain, it may be possible, if the other parts of the cord be left intact, to avoid paralysis of the lower limbs and of the bowels and bladder by this operation. It probably would produce ataxia. Such an operation may be considered only in extreme cases when life has become almost a burden because of severe suffering.

A. Schüller[1] has suggested that as a substitution operation partial division of the spinal cord might be employed instead of section of the posterior roots for spasticity and gastric crises. The posterior columns, he suggests, might be cut for spasticity either alone or with the direct cerebellar tracts; the anterolateral columns might be cut for gastric crises. He reported no cases in which this operation was performed, and he advised it for these two conditions.

I would suggest that the operation of division of the anterolateral columns is applicable for pain independent of gastric crises, and that it may be much more than an *Ersatzoperation* for division of the posterior roots. So far as I know, the case reported in this paper is the only one in which this operation has been done.

On what is this operation for the relief of persistent pain based? Are fibers of pain confined to one system within the spinal cord, and if so, can pain sensations be conveyed by other systems when the fibers usually employed for this purpose are destroyed? These are important questions.

Head and Holmes,[2] in their recent Croonian lectures, refer to the work of Rivers and Head, in which it was shown that beneath the skin, independent of all "touch" and "pain spots," lies an afferent system capable of a wide range of functions. Pressure which in ordinary life would be called a touch can be appreciated and localized with considerable accuracy. Increase of pressure, especially on bones and tendons, will cause pain. In the peripheral mechanism, therefore, there are two independent mechanisms for the initiation of pain. Within the spinal cord, however, the conditions are different. All impulses capable of generating pain become grouped together in the same path and can be disturbed simultaneously by an appropriate lesion of the spinal cord. In the same way, sensibility to heat or cold may be lost independently of one another, showing that all the impulses on which they are based have been sorted out into two functional groups, each of which passes by a separate system in the spinal cord. It should be possible, therefore, to divide the tracts for the conduction of pain sensation with little damage to the rest of the cord, except that the fibers of temperature sensation probably would be implicated. It is questionable whether objective disturbance of sensation would be produced by such an operation, and, if it were, whether it would be persistent.

Fabritius[3] recently has stated that little attention has been paid in neurology to the late results of interruption of the temperature and pain tracts in the spinal cord. It is in general assumed that the disturbance in these sensations gradually disappears, but if one attempts to determine on what this opinion depends he meets with difficulty. Fabritius was not able to find any extensive investigation of this subject, and he attempts to fill the gap by collecting cases from the literature. The summary of his findings is that after stab-wounds of the spinal cord no regularity exists in the restoration of pain and temperature sensations. In the majority of the cases (twenty-three out of thirty-five) temperature sensation seems to have been permanently lost. Pain sensation returned more frequently, but in diminished intensity, namely in eighteen out of thirty-eight cases, but was permanently lost in sixteen cases. It is questionable whether all the statements regarding sensation in these cases can be accepted as accurate.

Rothmann,[4] in a paper read at the recent meeting of the Gesellschaft deutscher Nervenärzte, gave as the results of his investigations that pain sensations are conducted essentially through the anterior part of the lateral column, and that the gray matter may be concerned in this function, but concerning the latter statement the report is not very definite.

The work of Petrén[5] and my own studies[6] of the location of pain fibers within the spinal cord lead to the conclusion that fibers for the conduction of pain are located in the anterolateral columns.

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[1] Schüller: Wien. med. Wchnschr., 1910, p. 2292.

[2] Head and Holmes: Lancet, London, Jan. 6, 1912.

[3] Fabritius: Monatschr. f. Psychiat., u. Neurol., January, 1912.

[4] Rothmann: Monatschr. f. Psychiat. u. Neurol, January, 1912, p. 81.

[5] Petrén: Arch. f. Psychiat., xlvii, 495.

[6] Spiller: Univ. of Penn. Med. Bull., July and August, 1905.

In order to make a test of this reasoning in a very severe case of tumor of the lower part of the cord, when pain was intolerable, I referred a patient to Dr. Edward Martin for division of the anterolateral column on each side. Dr. W. B. Cadwalader and Dr. J. E. Sweet later performed the same operation on dogs to further our knowledge in respect to the function of these columns.

*Patient.*—A man, aged 47, was admitted to the Philadelphia General Hospital, March 8, 1909, in my service, and came later under the care of my colleagues on the staff. He had had pain for two months in the knees and ankles, and at the time of admission had pain about the pelvis. The pain increased, and by August, 1909, he complained greatly of it and had almost complete flaccid paralysis of the lower limbs, with loss of tendon-reflexes, and paralysis of bladder and rectum. He had anesthesia over the buttocks and external genitalia and down the back of the thighs. The lower limbs were atrophied and faradic contractility was diminished.

*Diagnosis.*—In November, 1909, introduction of the finger into the rectum caused no contraction of the internal or external sphincter. Dr. W. P. Hearn operated and found a growth on the left side and lower part of the spinal cord about as large as a goose-egg, the cord being implicated by the tumor. It was regarded as malignant and irremovable.

In January, 1910, the man came again into my service and notes taken by me at that time record that he had very slight movement at each hip and in the left knee, and no movement elsewhere in the lower limbs. These limbs were greatly wasted. Sensations of touch, pain, heat and cold were lost in the back of each thigh and in all parts of the legs below the knees, although deep pin-prick seemed to be felt in the left calf and left foot. The tendon-reflexes were lost and the legs were contracted on the thighs and the thighs on the abdomen. Sensation in its various forms was preserved in the abdomen and front of the thighs. The man suffered greatly from pain in the lower limbs and required morphin every night for relief.

*Operation.*—The division of each anterolateral column was performed by Dr. Martin, Jan. 19, 1911. On January 22, there was great relief of pain in both lower limbs. The patient appeared very grateful for the relief from suffering and received only 1/6 grain morphin on the day following the operation and a similar amount two days later, and this was given for the pain caused by the operation. The intern on the surgical service, who had the opportunity of observing the man constantly, believed that he was not suffering pain in the lower limbs. Sensation in its various forms objectively tested did not seem to be much impaired above the hip-joints. Pain was felt occasionally in the lower limbs during the three weeks following the operation, but the man was positive that it was less than before the operation.

*Course.*—In March, 1912, when he was again under my care, he lay in bed with his lower limbs greatly contracted and atrophied. Objective sensation was lost in the front of the thighs, but pain and pin-prick sensations were keen over the lower abdomen. His countenance expressed no pain and he never complained unless he was asked concerning his condition, when he would reply that he sometimes had pain. As he is a foreigner and not very intelligent, and his condition is pitiable, it is hard to judge whether he really has any pain from the tumor. The operation seems to have been successful in the diminution of pain. I should be unwilling to form an incorrect judgment regarding this case. When one remembers, however, that the pain from a malignant tumor of the lower part of the cord usually is excruciating and continues as the tumor implicates additional posterior roots, I think it may be said that the peaceful expression of this man's face is evidence that he has been greatly relieved by the operation. He has certainly not been made any worse, as his condition before the operation was very grave.

### REMARKS BY DR. EDWARD MARTIN

The problem presented by Dr. Spiller was the making of a transverse cut into the spinal cord, roughly 2 mm. in length, of a similar depth and with its posterior end 3 mm. anterior to the entrance of the posterior root, this cut to be bilateral. The only special instrument required was a small thin-bladed cataract knife, double-edged on its angled point, the latter being about 5 mm. long. Since in this individual case there was no need for conservation of the bone, the laminæ and spinous processes of the sixth, seventh and eighth dorsal vertebræ were removed. The dura was split, retracted by threads, the cord was slightly lateralized by passing threads about the posterior roots and gently using them as tractors, and the cord incision was made on each side with very little bleeding. The wound was closed without drainage and, in so far as it was concerned, the after-course was uneventful.

The approach to the cord is greatly simplified and expedited — although it was not done in this case — by the use of the Hudson trephine and the Cryer bone-cutting instrument. By the help of these tools it is possible rapidly and safely to obtain, by unilateral resection, preserving the spinous processes, an exposure adequate for many forms of dural and cord intervention. It would certainly be so for a limited section, such as was practiced in this case, or for section of posterior roots. Such exposure leaves little or no subsequent crippling so far as the spinal column is concerned and is much simpler than an osteoplastic flap. In case of unilateral pain, uncontrollable by other means, cord section on the side opposite to that in which the pain is felt and sufficiently high to allow for the decussation of sensory fibers should be adequate.

2046 Chestnut Street.—1506 Locust Street.

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# EXPERIMENTAL WORK ON THE FUNCTION OF THE ANTEROLATERAL COLUMN OF THE SPINAL CORD

WILLIAMS B. CADWALADER, M.D.
Instructor in Neurology and Neuropathology, University of Pennsylvania
AND
J. E. SWEET, M.D.
Assistant Professor of Surgical Research, University of Pennsylvania
PHILADELPHIA

The present investigation was undertaken at the suggestion of Dr. William G. Spiller, in order to determine what symptoms would be produced by destroying the anterolateral column, including Gowers' tract. In Gowers' original observation[1] he referred to a group of fibers situated in the anterolateral columns of the cord, which underwent degeneration from a lesion of the eleventh thoracic segment. He traced these degenerated fibers upward as far as the cervical region, and believed that they were concerned in the transmission of painful stimuli from the opposite side of the body.

Since that time innumerable clinical and pathologic studies seem to confirm Gowers' first impression. Experiments on animals, however, have not always lent support to this opinion, the results in some instances having been very confusing and even contradictory; indeed, Mott,[2] after cutting this tract in monkeys, concluded that its function was unknown. Bing,[3] experimenting on dogs, observed ataxia without disturbance of cutaneous sensation, but in his cases, as in Marburg's,[4] the area destroyed was chiefly the dorsal cerebellar tract or close to it. Bruce and Schäfer[5] conducted similar experiments on monkeys in which only the ventrolateral region was destroyed; they not only found sensation entirely normal, but, unlike Bing, could not demonstrate any sign of ataxia, though paralysis did occur. On the other hand, Lewandowsky,[6] Rothmann[7] and others rather positively state that section of Gowers' tract in dogs does produce a certain degree of analgesia.

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[1] Gowers: Diagnosis of the Diseases of the Cord, 1879.

[2] Mott: Brain, 1895, xviii, 1.

[3] Bing: Die Bedeutung der spinocerebellaren Systeme, Wiesbaden, 1907, Neurol. Centralbl., 1912, p. 270.

In the following experiments our object was to completely destroy the anterolateral region, including Gowers' tract, and not to injure the area occupied by the dorsal cerebellar tract or any part of the gray matter. Dogs were chosen for purely extraneous reasons.

Under complete ether anesthesia an incision was made over two spinous processes and carried down directly to the bone; this incision was carried on as a subperiosteal resection of the processes and the laminæ of the vertebræ, until the cord was exposed for about 3 cm. The dura was slit longitudinally in the midline and retracted on either side; the cord was then rolled over as gently as possible till the line of insertion of the ligamentum denticulatum was identified, believing this to correspond quite accurately to the posterior limits of the anterolateral tract; a small knife was inserted immediately in front of that point and thrust obliquely forward, then cutting outward through the periphery of the cord. A similar incision was made at the corresponding point on the opposite side. There was little hemorrhage. The dura was closed with a fine silk suture and the wound repaired with catgut. Iodin and collodion were used for dressing. Wound healing was perfectly normal.

The dogs were carefully watched from day to day; generally the first observations recorded were made a day or two after operation, so that the effects of the operation itself might not be mistaken. Here we wish to point out one possible source of confusion. Any one at all familiar with animals, particularly the laboratory dog, should not lose sight of the fact that their general conduct and intelligence influences the manner in which they react to stimuli of any kind; even in health this may differ very greatly. Each dog has his own peculiarity, and has a distinct individuality not unlike man. Many are extremely dull and apathetic and others high-strung, intelligent and active, and accustomed to responding quickly to the various stimuli originating through the association of friends and master. No doubt it was a thorough appreciation of these facts which led Lewandowsky and Kallisher to adopt their methods of training. Our dogs were not trained; nevertheless a careful estimate of individual traits and temperament was constantly kept in mind. In considering disturbances of sensation these facts are of the utmost importance and have therefore been referred to in detail.

After a period of time the dogs were killed and the brains and cords immediately removed and placed in Müller's fluid. The segment in which the incision had been made was mounted in celloidin and cut in serial sections in order to ascertain the exact limits of the area destroyed; sections were also made from each segment of the cord and parts of the medulla and pons, so that the course of degeneration could be followed.

In the following descriptions of cases the data have been given chronologically so as to show the course of the general symptomatology; then follows the microscopic study.

Dog 1.—Black and tan, short-haired male dog, weighing about 25 pounds. Operation Dec. 4, 1911. Cutting the anterolateral column of both sides in the seventh thoracic segment.

December 5: Incomplete weakness of both hind legs, more marked on right. Dog can stand but often falls behind. After falling it can rise on hind legs without evidence of weakness, but is awkward and can only stand a second or two before again falling. It frequently assumes curious positions as if kneeling, or may stand with right foot flexed so that dorsum of foot touches the floor; sometimes sits with weight on one leg which is crossed under rump. These positions do not seem to cause any discomfort, and appear to be from impairment of the sense of muscular position; it is very striking, and it even seems doubtful if there is any real motor weakness, the apparent weakness being due to uncertainty of ataxia. Sensation for pain tested with pin point and with hemostats shows definite impairment; dog reacts quickly in front legs and shoulders, and very slowly or not at all on hind legs. Extreme heat gives the same results.

December 8: Sensory tests gave same results. Ataxia seems definite and very striking, no motor palsy.

December 10: Sensory tests the same. Dog can stand on all four limbs without evidence of ataxia or of motor weakness. Ataxia very striking when in motion, trunk and rump involved, feet frequently crossed and seem to be misplaced so that dog often falls; curious positions when at rest as before, very striking. Both sides alike, possibly right side more ataxic.

Jan. 4, 1912: Bilateral ataxia of hind legs and rump very distinct in walking and running. Dog falls very frequently with hind leg. Curious position of legs seen less often than before. Painful faradic current causes slight or doubtful evidence of discomfort in hind legs and rump, but distinctly less marked than on front legs where it is positively painful. When applied to soles of feet, hind legs are drawn away but not promptly, while on soles of front feet legs are drawn away quickly and with vigor. Application of hemostats caudal to site of operation is distinctly less painful than above operation-scar, though when attention is directed to the procedure, the dog seems to feel some discomfort very occasionally. For extreme heat the same holds true.

January 11: Ataxia is gradually recovering; no other change.

January 18: The same as on the 11th.

February 1: All sensory tests the same as before, but at times very confusing, depending very much on whether or not dog's attention is directed to what examiner is doing or to distant object. When attention is held by assistant then analgesia is very pronounced and unmistakable, but when attention is not diverted, sensation is affected, but not at all pronounced or even doubtful. Rapid examination might easily show that sensation was normal, but careful, frequent and prolonged examinations make it unquestionably correct that there is incomplete analgesia and thermo-anesthesia and pronounced bilateral ataxia of hind legs and no motor paralysis.

Dog 2.—Black and tan, long-haired male dog, weighing about 25 pounds. Operation Dec. 5, 1911; cutting the anterolateral column of both sides at seventh thoracic segment.

December 6: Dog cannot stand or walk on account of inability to use hind legs. Tendon-reflexes are equal and active. There is no spasticity nor do the hind legs feel exactly flaccid. Two sides are alike. Sphincters are not affected; no spontaneous pain. Application of hemostats over hind legs and also heated instrument seems to cause no discomfort; when it is applied to front legs dog reacts rather slowly so that conclusions are unreliable.

December 10: Ability to use hind legs voluntarily rapidly returning. Dog makes effort to stand and walk; can rise on hind legs but generally falls; muscular weakness very doubtful. Seems as if he had some loss of sense of muscular position; legs appear awkward. Pinching of skin over hind legs with hemostats does not seem to be appreciated; but when applied to front legs it is quickly recognized. Testing with heat perhaps the same but unreliable.

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[4] Marburg: Arch. f. Physiol., suppl., 1904, p. 457.

[5] Bruce and Schäfer: Quart. Jour. Exper. Physiol., 1910, No. 3.

[6] Lewandowsky: Handbuch der Neurologie, pp. 773 and 779.

[7] Rothmann: Berl. klin. Wchnschr., 1906, No. 2, p. 47; ibid., 901; Arch. f. Physiol., 1902, p. 154; Suppl., 1902, p. 440: Ztschr. klin Med., 1902, xliv, 183; Neurol. Centralbl., 1911, p. 1207.

December 15: Loss of the sense of muscular position or ataxia very striking. No motor weakness. When standing at rest dog is inclined to lower head below line of shoulders, with hind legs somewhat further apart than normal and slightly rotated outward, vertebral column shows slight tendency to arching in lower thoracic and lumbar region; this varies from time to time; the tail is held in what may be a purposeful position, straight out from the body, varying in its angle as position of legs is changed, but generally curved, tip turned downward or laterally and more or less rigid at base. The general position is very like that assumed by a dog standing on a swing in motion, attempting to retain balance. In walking or running he repeatedly falls with hind legs, feet are often crossed but when moved are lifted clear of the floor, though not higher than normal. Rump sways a little. Dog often assumes unnatural positions, typical kneeling position, or stands on dorsum of foot, toes being in flexion, one or both hind legs may be crossed under rump when in sitting position. This does not seem to be in the least uncomfortable.

Pinching with hemostats and application of extreme heat over rump, hind legs and belly do not appear to be as distinctly or as quickly felt as when front legs are tested. At times there seems to be very decided analgesia but a few minutes later dog seems to feel quite well; although when compared to front legs there is a decided difference in reaction time. The tendon-reflexes are equal and active.

December 20: About the same as on the 15th.

December 29: Ataxia is somewhat less marked. Dog does not fall so often in walking and running. Sensation the same as before.

Jan. 4, 1912: Much the same as before. Application of painful faradic current gives exactly the same results as in first dog.

January 15: Sensory tests about the same. Analgesia seems definite at times while at another examination it seems very doubtful. Ataxia less marked; dog still falls when walking, but unnatural positions are assumed only very occasionally. In standing the position already described is still very striking.

January 24: Just the same.

February 6: Dog killed sixty-three days after the operation and the brain and cord removed for examination.

Conclusions: Ataxia very striking.

Impairment of sense of pain and for extreme heat and painful faradic current over lower half of body and lower extremities.

Microscopic examination showed that the anterior and lateral portions of the white columns of the cord had been destroyed on both sides. A line drawn through the posterior limits of this area would just bisect the central canal. Anteriorly it extended to a point which corresponded to the position of the most medially situated anterior root fibers. The ventral and dorsal cerebellar tracts were degenerated as far as the pons. In addition some of the degenerated fibers seen in the thoracic segments of the cord corresponded to the positions given by Edinger[8] for the spinotectal, spinothalamic, vestibulospinal and spinovestibular fibers. In segments below the area destroyed there were a few scattered degenerated fibers situated in the extreme lateral periphery. The pyramidal tract and von Monakow's bundles did not seem to be injured. The posterior columns were intact.

In both dogs motor paralysis was noted immediately following the operations, but it disappeared rapidly and was replaced by very marked ataxia. Why motor weakness should occur at all is difficult to explain, for we believe that Gowers' tract is sensory in function and the microscopic examination showed that the pyramidal and von Monakow's bundles were not injured. It may have been from temporarily disturbed vascular supply.

Rothmann has proved that when both the pyramidal tracts and von Monakow's bundles are destroyed, either in dogs or in monkeys, the resulting paralysis may not be permanent. He was forced therefore to conclude that volitional impulses might be conducted from the cortex by some other route. In this connection Schäfer's experiments are important. He cut Gowers' tract in monkeys and obtained motor weakness but without any evidence of ataxia or of cutaneous sensory disturbances. In order to explain the occurrence of paralysis he inclined to the opinion that voluntary impulses must be carried from the cortex down the cord by fibers which arise in Deiter's nucleus, and pass through the ventral and anterolateral columns near the periphery, and represent therefore a subsidiary motor pathway. It does not seem possible to make a complete section of the anterolateral tracts without destroying these long descending fibers; in our cases they must have been destroyed, yet motor paralysis was not permanent. Microscopic examinations of the segments below the level of section did reveal some evidence of scattered descending degeneration; the great majority of degenerations, however, occurred above the area destroyed and extended in the ascending direction.

Consequently Schäfer's[9] explanation does not seem to us entirely satisfactory. The experiments of Mott and Sherrington,[10] on the other hand, are most suggestive. They divided the posterior roots of the nerves supplying the brachial plexus in a monkey and found that the arm was as much paralyzed for ordinary volitional movements as in other cases in which the motor nerves themselves were cut. This they attributed to the cutting off of sensory impulses which pass from the muscles to the cortex. Bastian, referring to these experiments, suggested that in consequence of dividing the posterior roots there must have been a loss of tone in the neuromuscular apparatus. This seems to us the most probable explanation, for we know that the fibers of Gowers' tract represent the secondary continuations of some of the posterior root fibers, and it is probable that the function of one is represented in part by the other. Furthermore, it is known that the fibers of Gowers' tract end chiefly in the cerebellum.

Inasmuch as our dogs did not show the ordinary signs of spastic paralysis and the apparent motor weakness gradually subsided, and ataxia became more and more apparent, and finally entirely replaced disturbance of voluntary motion, we believe that motor paralysis in the true sense never existed. But on account of a very profound derangement of the neuromuscular apparatus, together with impairment of cutaneous sensibility, a pseudoparalytic state or a true paralytic ataxia did occur, because sensory impressions which should pass through Gowers' tract had been cut off; and as the compensatory function of the remaining sensory tracts was being established the apparent paralysis gradually disappeared and ataxia which had previously been masked then became evident and remained permanent.

The character of the ataxia was similar to that described by Bing and Marburg and, according to them, should be expected, as the spinocerebellar tracts are essentially the afferent connections between the cerebellum and spinal cord. It seems to us that the rubrospinal and vestibulospinal fibers may, as Bing has lately indicated, repressed efferent connections between the cerebellum and cord and their destruction might be partially responsible for the extreme incoordination; however, proof is lacking.

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[8] Edinger: Bau der nervosen Zentralorgane, Ed. 8, 1911.

[9] Schäfer: Jour. Physiol., 1899, xxiv, 23.

[10] Mott and Sherrington: Quoted in Schäfer's article.

In regard to the occurrence of cutaneous sensory disturbances there is considerable difference of opinion. Schäfer, Bruce, Bing and others were unable to demonstrate definite cutaneous disturbances. On the other hand, Rothmann, Schuster,[11] Lewandowsky and others all agree that Gowers' tract in the dog does convey painful sensations, though the posterior columns are also concerned. Why such contradictory views should be expressed we have no explanation to offer unless it is that the character of the dogs has not always been considered.

In concluding we feel certain that our dogs did have a definite, though incomplete, loss of cutaneous sensation for pain and for extreme heat, and very pronounced ataxia of the hind legs and rump. The fibers whose function it is to conduct painful sensations probably are connected with the thalamus and are situated close to the tractus spinocerebellaris ventralis, whose function is chiefly concerned in the regulation of purposive movements.

1710 Locust Street—301 St. Mark's Square.

# THE BLOOD-PICTURE OF THE AUTO-INTOXICATION DUE TO CHRONIC COLONIC STASIS

## A PRELIMINARY NOTE

GEORGE HOWARD HOXIE, A.M., M.D.
KANSAS CITY, MO.

During the past year I have had the opportunity of studying the blood of many patients applying for treatment for obscure abdominal pains and I have been struck by the uniformity of the findings in the cases in which auto-intoxication from colonic stasis lay at the bottom of the trouble. This has led me to become an adherent of the school which believes that auto-intoxication from the intestinal tract is a possibility and in fact a fairly frequent occurrence. But I believe that there are also many cases of constipation in which there appears to be no intoxication, and these patients do not seem to present the same blood-picture. In them, evidently, the intestinal mucosa and the liver-filters are still efficient barriers in guarding the body-cells from the results of the fermentation and the putrefaction of the intestinal contents.

While the cause of the colonic stasis may be various—bands, adhesions, pericolitic membranes, kinks, splanchnoptosis—nevertheless, the resulting symptoms, when the toxins finally break through the various bodily defenses, appear approximately stable. The patients are nervous and depressed. The skin shows dirty discolorations, especially about the eyes, about the neck, in the axillary folds, and where the skin has much loose connective tissue under it. The appetite may be ravenous. There is usually some headache. And then there is usually backache with periodic or intermittent pain in the abdomen. The colon seems usually distended and tender, at least in spots. The urine shows indicanuria and an excess of phenols. The presence of indican is not important, however, for there may be indicanuria and the colon be fairly innocent.

The blood-picture in general is the following: Hemoglobin is high, with normal red-cell count. The whites also run within normal limits— usually under or about 9,000. The number of polymorphonuclears is low, usually below 70 per cent. The lymphocytes are correspondingly increased. Of these the larger forms with angular nuclei and wide unstained borders are in the great majority. The mast-cells are infrequent. The ripe eosinophils are about normal. In some specimens one finds many polymorphonuclears with oxyphilic granules. The platelets seem reduced in number.

When studied with Wright's stain, the polynuclears show an increase in the proportion of cells showing large ambophilic granules, so much so that the observer is struck with the "dark" appearance of the protoplasm. That is, the granules are large and purplish and seem to lie in a mauve cytoplasm. The proportion of these heavily staining cells decreases as the patient gets rid of the toxins. Hence, one can estimate rather closely how intoxicated the patient is by the proportion of these dark cells to the total number of polynuclears.

A few case histories may make my findings clearer:

CASE 1.—*Patient.*—J. H. D., aged 52, ranchman, had scarlet fever when a child, and a "typhomalaria" about twenty years ago. In 1895, he had an attack of pain in the calf of the left leg, with similar but lighter pain in the right iliac fossa. He lost flesh, but after much varying treatment, he managed to return to his work after several months of illness. He was not entirely well until 1901, when his appendix (which was only slightly clubbed) was removed and the cecal adhesions broken up. For six months after the operation he was constipated, but thereafter for two or three years was free not only of the constipation but also of the neuritic pains. In the winter months, however, he had been troubled nearly every year since 1905 with "sciatica." He sought treatment on account of a "sciatica" of two months' standing, wherein the pain shifted from the thigh to the calf. He was constipated with ravenous appetite, bad taste in the mouth mornings, irritable; slept well except for pains.

*Examination.*—The nose was slightly congested; the lungs negative. The heart presented a slight presystolic bruit, loudest under the xyphoid. Blood-pressure: right 135, left 145. The stomach was dilated, reaching 2 inches below naval. The anal mucosa was redundant. Rectal mucosa showed capillary hemorrhagic areas. Urine 1.010, neutral, some indican. Blood: hemoglobin 100, reds 5,500,000, whites 9,800, polynuclears 67, large lymphocytes 14, small lymphocytes 16, other mononuclears 2, eosinophils 1. Nuclei lilac in about one-half the cells. The polynuclears showed dark blue and purplish granules in mauve cytoplasm (granules thickly set). The lymphocytes had wide unstained border in most cases.

We have here, evidently, a patient with adhesions or bands so constricting the intestines as to prevent normal peristalsis. The operation for appendicitis accidentally helped the situation for a time. But now the patient is absorbing toxins and during the cold weather fails to excrete them sufficiently to keep off the toxic neuritis. That this is the true explanation is evidenced by the failure of all sorts of therapy aimed at the symptom by the many able physicians whom he consulted.

*Treatment and Course of Disease.*—After five days of exclusive milk diet with cathartics and the application of heat to the leg the blood-picture showed hemoglobin 90, reds 5,264,000, whites 10,000, polynuclears 66 per cent. eosinophils 1 per cent, large lymphocytes 26 per cent., small lymphocytes 3 per cent., mononuclears 3 per cent., mast-cells 1 per cent., transitionals 18 per cent. Nuclei were refractory; of the polynuclear granules not quite half were dark. The patient was feeling better. Four days later the neuritis showed in only one or two sore spots and the blood showed hemoglobin 90, whites 9,600, polynuclears 65 per cent., eosinophils 1 per cent., large lymphocytes 27 per cent., small lymphocytes 1 per cent., transitionals 40 (including many indefinite forms that might be degenerate instead of immature). Nuclei

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11. Schuster: Monatschr. f. Psych., xx, No. 2.

were refractory; granules of polynuclears showed only 21 per cent. of "dark" forms. Stools were now liquid and inoffensive.

Case 2.—*Patient.*—M. T., a girl aged 16, student, was admitted, complaining of pain in appendiceal region; not very severe. Family history was negative. Patient had had measles. Present illness started about a year previously as a dull pain in the iliac region; pain increased after exercise; for previous three weeks she had had constant pain; the region was painful on pressure. Patient was quite constipated.

*Examinations.*—Temperature 99; pulse 100. Urinalysis, July 13, 1909: Acid, straw-yellow, aromatic odor, slightly cloudy, specific gravity 1.027, no albumin, sugar negative, indican negative, casts negative, blood negative, pus-cells, epithelium (a good many squamous) deposits, quite a sediment, floccular precipitate.

*Treatment and Course of Disease.*—The appendix was removed. Recovery was uneventful. Patient was discharged as cured July 29, 1909.

March 9, 1912, patient appeared again, stating that the pains for which she had had the operation had returned after a few months' absence. She felt "cross;" could not do her university work. Her back was weak; no headache. She had tremor on fatigue; the pains appeared in right side especially after exercise or when stretching, or during the occasional attacks of diarrhea. Appetite and digestion good; bowels ordinarily regular; menses painful. Highest weight 125, now 117. The blood-picture was the following: hemoglobin 80, red blood-cells 4,960,000, white blood-cells 7,600, polynuclears 53 (of which 3 were immature, 46 ripe, 4 degenerate; of the ripe cells 29 were "dark" and 17 light). Eosinophils 2, lymphocytes 34 (larger forms 24, smaller 10), mast-cells 1.

Case 3.—*Patient.*—V. K., male, aged 25, farmer, had for two years attacks of pain localized in right inguinal region. He was never confined to bed though said to have had fever; constipated.

*Examination and Operative Findings.*—There was no abdominal distention or rigidity, but well-marked tenderness over McBurney's point. The blood examination showed: hemoglobin 100; white blood-cells 9,300; polynuclears 56 (of which 4 were immature, 45 ripe and 7 degenerate), lymphocytes 42 (of which 33 were large), eosinophils 1, mast-cells 1. The protoplasm of the polynuclears exhibited, in the majority of the cells, the purplish granules in mauve cytoplasm. The lymphocytes had wide unstained borders. The operation demonstrated ileocecal bands with kinks; no appendicitis.

The following is presented as a contrasting picture in which the blood study was made before the present series was begun:

Case 4.—*Patient.*—E. H. E., aged 15, entered the Bell Memorial Hospital Jan. 26, 1909. He complained of loss of weight, gas on his stomach, distress due to bloating immediately after eating a whole meal but of less distress when on a restricted diet. Family history was negative. The boy had had the mumps, measles and whooping-cough. His tonsils and adenoids had been treated, cauterized and clipped. His present illness began in February, 1907, with a feeling of fulness in the abdomen. He had gradually lost weight and grown weaker; had some nausea and sour stomach but seldom vomited. His temperature on admission was 98, pulse 72, weight 88. His weight six months previously was 115. He slept well, appetite was good, but digestion was bad, and he was constipated.

*Examination.*—Urine examination showed high color, specific gravity 1.030, reaction acid, no albumin, no sugar, no excessive indican. Blood examination: hemoglobin 90 to 100; reds 4,760,000; whites 6,600, polynuclears 49.5 per cent., large lymphocytes 6 per cent., small lymphocytes 7.5 per cent., transitionals 2, eosinophils 9, mast-cells 0.5, mononuclears 21.5, azure granulated mononuclears 3, Turck's irritation form 1. Physical examination showed patient emaciated, skin brownish, but soft, except on wrist and hands. Lungs and heart normal, abdomen retracted and muscles tense. Palpation over the stomach and colon showed no definite tenderness. The gastric analysis, after a Boas test-meal, showed: total acidity 70, combined acidity 54, free hydrochloric acid 46, lactic acid absent. The microscropic examination was negative. The examination of the feces showed: color yellowish, faintly acid with evidences of fermentation, and trichomonas numerous. No tubercle bacilli. The administration of tuberculin, February 1 and 3, was negative.

*Operation and Course.*—March 8 an exploratory laparotomy was done with appendectomy and cecostomy. The entire colon was found to be covered with an extra membrane, which was not removed. The cecostomy wound was utilized to irrigate the colon; and as long as the irrigation was continued the patient made steady gains. March 7 the urine was examined and proved to be acid, clear, no sediment, specific gravity 1.010. The gastric contents, March 4, after a full meal, were total acidity 107, combined acidity 81, free hydrochloric acid 41, trace of lactic acid. The gastric contents, March 6, after forty-eight hours of fasting, showed: total acidity 56, combined acidity 40, free hydrochloric acid 24. After operation the colon was irrigated through the cecum and the patient improved rapidly, so that he left the hospital April 7.

The patient reentered the hospital May 9, 1909, complaining of distress because of the closure of the cecostomy wound. The stools were found to be negative. The blood-count showed: reds 5,220,000, whites 12,000, polynuclears 65 per cent., large lymphocytes 6, small lymphocytes 15.5, transitionals 3, eosinophils 0.5, mononuclears 10. The urine examination, May 10, was alkaline, no sediment, specific gravity 1.010. Patient left the hospital May 12, 1909.

He reentered the hospital May 18, 1910, complaining of nausea, no appetite, belching, and pain over stomach. His colon had been flushed for about nine months. After the tube was removed he began to have gastric symptoms—gas, fermentation, lack of appetite, and at intervals soreness over the epigastrium, and nausea. His temperature was 98.6, pulse 120, weight 120. His bowels moved only by the aid of laxatives. The urinalysis at this time showed the urine to be acid, specific gravity 1.025, with some calcium oxalates; otherwise normal. The patient was operated on, May 20, 1910, and an ileosigmoidostomy performed. He recovered rapidly and was dismissed from the hospital June 12. Since then the patient has been normal in every respect.

The value of this blood-picture, if verified by other observers, is at once apparent as an aid in the differential diagnosis of appendicitis and other intra-abdominal inflammations.

My thanks are due to my colleague, Dr. J. F. Binnie, for the privilege of studying his case histories and patients and of utilizing his material in connection with my own in the above study.

301 Argyle Building.

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**Concepts and Realities.**—Theories can never take precedence over facts, and in medicine they should always be viewed with some suspicion and by no means with that credulity and assent which the present tendency seems disposed to accord to them. Every scientist, of course, must have in his mind certain concrete pictures of the nature of the units with which he deals; for example, the chemist must have some sort of notion, theoretical, of course, concerning the fundamentals of his science, as of atoms, molecules, chemical affinity, valency, ionization, etc. But he must not mistake these ideas, pure mental imagery, for actual realities, and must ever be ready to shift them. The biologist and the physician must also have their imageries or mental conceptions concerning protoplasm, the cell, immunity, etc., but they must be very careful to regard such ideas as mere working hypotheses and not to consider, for example, that the side-chain theory of immunity actually represents the facts as they are. In fact, if the theory is complex he should view it with suspicion in proportion to this complexity.—W. M. Barton in *Washington Med. Ann.*

# THE UTILITY OF THE VACUUM BOTTLE IN INFANT-FEEDING *

F. O. TONNEY, A.B., M.D.
AND
H. H. PILLINGER, M.D.
CHICAGO

Since the advent of the vacuum-jacketed bottle, one of the uses to which it has been put is that of keeping a supply of baby's milk warm over several feeding-periods. From the standpoint of convenience, the idea of adopting this procedure, especially for night feeding, is attractive, as the troublesome process of warming the milk to the proper nursing-temperature at each feeding is thereby eliminated. The usual procedure is simply to warm a suitable quantity of properly modified milk to a temperature somewhat above that required for feeding and place the heated mixture in a vacuum bottle, which is then tightly stoppered and set aside until needed. The milk remains warm enough for feeding over a very considerable period of time.

From a bacteriologic standpoint, it becomes evident on reflection that this practice may or may not be safe for the infant, according to whether the milk is kept at a germicidal temperature or at an incubating-temperature. It is manifest that if incubating-temperatures are used the multiplication of bacteria in the milk will be enormous, and will soon render the milk unfit and even dangerous for infant-feeding.

TABLE 1.—MILK HEATED TO 150 F. AT THE OUTSET, KEPT IN ONE-PINT VACUUM BOTTLE AT ROOM TEMPERATURE, OPENED AT THE INTERVALS NAMED

SAMPLE 1

| Time | Temp. F. | Bacterial Count | Remarks |
|---|---|---|---|
| At outset ... | 150 | 7,500 | |
| After 2 hours | 138 | Less than 100 | |
| After 4 hours | 131 | Less than 100 | |
| After 6 hours | 122 | Less than 100 | |
| After 12 hours | 100 | 4,500,000 | |
| After 24 hours | 86 | Too thick to plate | Sour and curdled. |

SAMPLE 2

| Time | Temp. F. | Bacterial Count | Remarks |
|---|---|---|---|
| At outset ... | 150 | | |
| After 7 hours | 125.5 | Less than 100 | |
| After 8 hours | 122 | Less than 100 | |
| After 9 hours | 117 | Less than 100 | |
| After 10 hours | 115 | Less than 100 | |
| After 11 hours | 113 | 1,500 | Peculiar taste. |
| After 12 hours | 107.5 | 850,000 | Acid taste. |
| After 13 hours | 104 | 50,000,000 | Sour, bitter taste. |

With the idea of drawing a sharp line of distinction between the safe and unsafe methods of using the vacuum bottle for this purpose, the few simple experiments here reported were undertaken. The results, we believe, are of sufficient general interest to justify their inclusion here.

For the first set of experiments an initial temperature of 150 F. was chosen.

The milk was heated to the desired temperature and transferred to vacuum bottles which had been previously warmed by immersion in hot water. The bottles were kept at room temperature and opened at intervals for temperature readings and bacterial tests.

It will be seen from a study of Table 1 that the bacterial count of milk treated in this manner was extremely low; in fact, that this method of treatment was quite as efficient, from the standpoint of elimination of bacteria, as the best pasteurizing processes now in use. When treated in this way, the temperature of the milk remained germicidal for from six to ten hours, depending on the temperature of the place in which the bottle was stored. After that time, and as the temperature fell below 115 F., the bacteria began to multiply rapidly and soon reached enormous numbers.

It was found that the temperature of the atmosphere surrounding the bottles influenced materially the rate of heat loss; thus in the ice-box (40 F.) a germicidal temperature within the bottle was maintained for six hours. Bottles placed out of doors at a temperature of from 20 to 30 F. maintained a germicidal temperature for five hours, while bottles placed at room temperature, which varied somewhat, depending on whether the night hours were included in the experimental period, maintained a germicidal temperature for from six to ten hours. It follows, therefore, that in using the method, the bottle should be kept in a warm place, if the milk is to be used beyond five hours from the time it is placed in the bottle.

While the method is safe and efficient from a germicidal standpoint, if properly applied, it should be borne in mind that when it is improperly or carelessly used it represents about as potent a factor for harm as could be conceived. The housewife may easily fall into the error of heating the milk to incubating temperatures, as these temperatures coincide closely with the temperatures used in feeding. Such a practice is fraught with danger and cannot be too strongly condemned.

To emphasize the danger from the improper use of the vacuum bottle, the second set of tests (see Table 2) was made. Samples of both raw and pasteurized milk were heated to about the temperature required for infant-feeding, 100 F. The milk was then placed in vacuum bottles and kept at room temperature. The bottles were opened after varying periods of time, temperatures taken, and bacterial counts made. The results showed that both raw and pasteurized milk heated at the outset to 100 F. became dangerous within two hours. An excellent temperature for the incubation of bacteria was maintained for from six to eight hours. The bottles used in all of the tests were the ordinary vacuum bottles of 1-pint capacity.

## SUMMARY

1. There is a right and a wrong way of using the vacuum bottle for the purpose mentioned.

2. Properly used, the bottle not only keeps the milk warm, but effectually pasteurizes the milk; in fact, the method amounts to a prolonged "holding process," reducing the bacterial count to practically *nil*.

3. The bottle if placed in a warm place will maintain a proper temperature for ten hours or more.

4. The temperature below which the bacterial growth begins is about 115 F.

5. If incubating-temperatures are used, or if the temperature falls below 115 F., the practice is extremely dangerous, because of excessive bacterial multiplication.

6. The use of the vacuum bottle should not be attempted for purposes of infant-feeding, unless it is controlled by means of a thermometer.

## DIRECTIONS

The directions for its use are very simple. Warm the milk, properly modified, until a thermometer immersed in it registers 150 F., and pour it into a vacuum bottle previously warmed by hot water. Stopper the bottle tightly and put it in a warm place. At feeding-time remove the stopper and take the temperature with a thermometer. For this purpose a short thermometer which can be kept inside the bottle is preferable, as the danger of bacterial contamination from this source is thus reduced to a minimum. If the reading is above 115 F., fill the nursing-bottle, allow the milk to cool a few minutes, and proceed with the feeding. Replace the cork of the vacuum bottle quickly. and set it aside for the next feeding. Do not use the milk, under any circumstances, if the temperature has fallen below 115 degrees.

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* From the Laboratory of the Department of Health, City of Chicago

32 North State Street—161 North Austin Avenue.

TABLE 2.—RAW MILK, HEATED TO 100 F. AT OUTSET, KEPT IN ONE-PINT VACUUM BOTTLE AT ROOM TEMPERATURE, OPENED AT TWO-HOUR INTERVALS

| Time | Temp. F. | Bacterial Count | Remarks |
|---|---|---|---|
| At outset ... | 100 | 2,300,000 | |
| After 2 hours | 95 | 200,000,000 | |
| After 4 hours | 93 | 280,000,000 | |
| After 6 hours | 89 | 400,000,000 | Not curdled; still sweet to taste. |
| After 24 hours | 77 | Too thick to plate | Sour and curdled. |

FOUR-HOUR SAMPLE—RAW MILK

| Time | Temp. F. | Bacterial Count | Remarks |
|---|---|---|---|
| At outset ... | 100 | 1,640,000 | |
| After 4 hours | 88 | 540,000,000 | Still sweet. |

SIX-HOUR SAMPLE—RAW MILK

| Time | Temp. F. | Bacterial Count | Remarks |
|---|---|---|---|
| At outset ... | 100 | 1,640,000 | |
| After 6 hours | 86 | 8,000,000,000 | Still sweet. |

TWELVE-HOUR SAMPLE—RAW MILK

| Time | Temp. F. | Bacterial Count | Remarks |
|---|---|---|---|
| At outset ... | 100 | 2,400,000 | |
| After 12 hours | 75 | Too numerous to count | Sour and curdled. |

TABLE 3.—PASTEURIZED MILK, HEATED TO 100 F. AT OUTSET, KEPT IN ONE-PINT VACUUM BOTTLE AT ROOM TEMPERATURE, OPENED AT TWO-HOUR INTERVALS *

| Time | Temp. F. | Bacterial Count |
|---|---|---|
| At outset ... | 100 | 6,900 |
| After 2 hours | 98 | 1,060,000 |
| After 4 hours | 97 | 3,500,000 |
| After 6 hours | 95 | 3,800,000 |
| After 8 hours | 82 | 7,300,000 |

* The specimen was pasteurized by heating to 145 F. for twenty minutes.

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**An Exacting Correspondent.**—We try to anticipate the flight of time as far as possible, and we occasionally have the pleasure of telling a correspondent that he will find his query answered in a previous issue. We are flattered, therefore, though a little fearful of the exacting precedent established, when a correspondent asks us "please to answer in a recent number."

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# HYDROPHOBIA (RABIES)

## WITH REPORT OF A CASE *

JAMES GORDON CUMMING, M.D.
In Charge of Pasteur Institute of University of Michigan
ANN ARBOR, MICH.

"Hydrophobia" and "rabies" are two different terms for the same disease; the former is derived from the Greek, meaning dread of water. Consequently, as we find only in the human subject the dread of an attempt to drink water, the term "hydrophobia" is properly used only in such a case. A rabid dog will repeatedly attempt to drink water, even though the act induces a spasm of the deglutitory muscles. "Rabies," meaning rage or madness, applies more especially to the disease as we find it in the maniacal form in the lower animals.

The relation of water to the disease in the lower animals, chiefly dogs, is very much overrated. A dog never develops rabies from lack of water — a common fallacy. A dog may be overheated during the hot summer weather; in addition it may not have sufficient water to quench its thirst, but these conditions alone cannot cause the disease. Invariably, whether the disease exists in man or in animal, the history will point to a previous infection by a diseased animal, for the transmission from animal to animal is necessary for the maintenance of the disease. Its occurrence is not limited to the hot weather as was believed until recently; moreover, it should not be confused with a disease known as fits, common among dogs. This disease differs from rabies in that it is of short duration, from thirty minutes to two hours. A rabid dog, on the contrary, is sick from three to seven days. A second point of differentiation between the two diseases is that rabid dogs seldom froth at the mouth; they may drool as a result of deglutitory paralysis, in which there is a drooping of the lower jaw; whereas in fits there is profuse frothing accompanied by generalized clonic convulsions. Again, a rabid dog invariably dies as a result of this disease; on the other hand, one with fits often recovers. The latter disease should not be confused with rabies if the history is carefully investigated, and this confirmed by negative animal inoculations and the absence of Negri bodies. The number of cases of rabies during the winter of 1906 and 1907 tends to disprove the "dog-day theory." The records of this institute for that winter show an increase of about 30 per cent. in the number of cases over the summer months; these conditions, it should be added, were exceptional and largely due to the occurrence of an epidemic. Ordinarily we have only sporadic cases; yet veritable epidemics may occur as the result of negligence on the part of those whose duty it is to protect and preserve public health.

All mammals are subject to the disease; it is, however, confined chiefly to dogs, owing to the fact that they naturally attack their own species. Although the canine by nature follows this rule, in the excitement stage it goes to the other extreme and bites even its own master, not to mention numerous horses, cattle, sheep. etc. The most vicious breeds are, of course, the most dangerous and do the most damage. About 90 per cent. of the cases are due to rabid dogs; the next most important factor in spreading the disease in this country is the cat, which is responsible for about 4 per cent. of the cases; the remaining 6 per cent. are due to horses, cattle, hogs, wolves, etc. In some countries, as in Russia, the wolf contributes a high percentage of cases.

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* Read before the Clinical Society of the University of Michigan Hospital.

Hydrophobia is an acute inoculation disease communicated to man by the saliva of an animal suffering from rabies. It is due to a definite specific virus which is transmitted through the saliva either by the bite of a rabid animal or by the saliva coming in contact with a wound already existing. The normal habitat of the virus is the nervous system and it retains its virulence only temporarily when introduced into any other system of organs. The fresh fixed virus injected into the bloodstream does not usually cause the disease; moreover, its injection by the intramuscular route does not give a high mortality — about 50 per cent. If moderately thick homogeneous emulsions in collodion sacs are introduced into the peritoneal cavity, it is found that the virus is destroyed in six hours. The virus rapidly loses its virulence when not in its normal habitat; it is readily destroyed by heat and desiccation. In short, laboratory experiments prove that it cannot exist "in nature." When inoculated into a wound this virus must come in immediate contact with a broken nerve-trunk in order to survive and reproduce itself. If it gains entrance to the nerve-trunk it is protected from the antagonistic action of the blood- and lymph-streams; it slowly extends to the brain or spinal cord. Here a favorable media exists; the virus grows rapidly and the characteristic toxic symptoms are produced.

Since the establishment, in 1903, of a Pasteur Institute by the University of Michigan, 761 patients have been treated for the prevention of hydrophobia. In this state, as in many others, the disease has occurred in both the sporadic and epidemic forms among the lower animals. Seldom are there no cases in the institute; while at times, when the disease reaches the proportions of an epidemic among the lower animals, especially dogs, we have had as many as thirty patients at one time.

### CLASSIFICATION OF WOUNDS

In considering the danger of infection from a wound inflicted by a rabid animal we find it advisable to classify the patients according to the following: the location of the bite, the severity of the wound, the degree of cauterization, the lapse of time before reporting for treatment, and the stage of the disease in the animal at the time the wound was inflicted.

Of the patients in the University Institute, 42 per cent. were bitten on uncovered surfaces, head and hands; the remaining 58 per cent. were bitten through the clothing. Of those bitten on uncovered surfaces, 24 per cent. had severe lacerating wounds, 52 per cent. were wounds of a puncturing type, and the remaining 24 per cent. were merely scratched. Those patients bitten on covered surfaces may be divided in about the same percentage as to the location of the wounds. There is another class of patients who have not been bitten, but have been accidentally infected by the saliva of the rabid animal coming in contact with an open wound or scratch. Inasmuch as it is possible for the disease to develop under these conditions of infection, the preventive treatment should be instituted without hesitancy. Although the disease may develop simply from a rabid dog licking a scratch, deep and severe wounds are the most dangerous. In fact, the probable reason for the high mortality in wolf-bites is the lacerating, slashing character of the wounds. Bites on exposed surfaces are the most dangerous on account of the easy access of the saliva to the wound; whereas, in those bites on parts protected by clothing, the teeth are partly freed of their saliva, and the degree of infection is considerably lessened.

### CAUTERIZATION

The cauterization of a bite is recognized as the first and most important measure in dealing with this disease. The free use of fuming nitric acid is a satisfactory method of cauterization. The penetration of the acid makes it a valuable cauterization agent, but even when this procedure is carried out, about 10 per cent. of the experimental animals die. It is advisable, after sufficient application of the acid, to wash the wound freely with sterile physiologic salt solution, thus removing the acid and preventing unnecessary destruction of tissue. If nitric acid is not to be had, full strength phenol (carbolic acid) may be used.

It is, however, eminently important that this cauterizing agent be washed from the wound by the free use of absolute alcohol. This procedure prevents subsequent ulceration which is so common when the alcohol wash is neglected.

These two agents, nitric acid and phenol, destroy the virus by virtue of their cauterizing action; yet in high dilutions neither has a disinfectant action on the virus. In fact, a 1 per cent. solution of carbolic acid is an excellent preservative for this particular virus; for instance, an emulsion of rabic brain made up in a 1 per cent. phenol solution, or any one of its numerous derivatives, will preserve the virulence for several weeks.

In formaldehyd solution, on the other hand, we have a specific disinfectant for this virus. The specificity of the antiferment action of formaldehyd on rabies virus is easily demonstrated by laboratory experiments. Formaldehyd in as high a dilution as 0.025 per cent. will destroy the virus in a short time. In the treatment of wounds inflicted by rabid dogs the use of a 5 per cent. formaldehyd solution applied to the wound for twelve hours is preferable to the cauterizing action of nitric acid or phenol because of the specific disinfectant and penetrating action of the former.

Especially should this preliminary preventive measure be instituted in severe lacerating wounds, for in such wounds the degree of infection is high. The immediate treatment of a wound gives the best results; nevertheless, treatment should not be neglected even after the lapse of a couple of days; moreover, under the latter condition the wound should be opened and thoroughly scrubbed. If every wound, especially severe ones on the head, be thoroughly cauterized, and this immediately followed by antirabic treatment the mortality would be *nil* among those bitten.

As to the time of exposure it can reasonably be said that a wound on the hand after a delay of three weeks is quite as dangerous as a bite on the head exposed only a few days. The cumulative action and the extension of the virus along the nerve-trunks to the central nervous system during the interval of exposure should always be borne in mind. Therefore it is quite as necessary to prescribe an intensive form of treatment to a patient bitten slightly on the extremities with a prolonged exposure as it is to one with a recent head wound.

It is quite safe to say that the virus is not transmitted by the bite of a rabid animal until two days previous to the appearance of the first symptoms. The early symptoms, however, are often very obscure and so slight that they are not recognized. So it is with some difficulty that a decision is reached in advising patients bitten early in the course of the disease to take treatment.

If a dog which is naturally not of a vicious kind suddenly bites without provocation, it should be tied securely and kept under close observation for at least seven days. Should the dog develop symptoms of rabies during its confinement the bite should be considered dangerous. An investigation of such a case will usually reveal the fact that the external cause inciting the dog to bite was not sufficient to cause the same act in this dog when normal. Occasionally the only recognized symptom in the early stage is a tendency to bite, but such cases, if kept under observation, develop well-defined symptoms within a few days.

Physicians should not fail to recognize the difference between a dog which bites because vicious and one which is in the early stages of rabies. In either case the dog should not be killed, but confined and kept under observation for seven days. If simply vicious it remains well and healthy. If, on the contrary, it is rabid it will develop either the maniacal or paralytic form of the disease and die within a few days. On the other hand, if the dog is shot in the first stages of the disease, a satisfactory laboratory diagnosis may be difficult and delayed a longer time than is required for the development of the characteristic symptoms in the dog.

### SYMPTOMS OF RABIES IN DOGS

The symptoms of rabies are well defined, and are not confused, even by the casual observer, with those of other diseases. The first symptoms are those of mild or marked excitement, nervousness, irritability, and often a tendency to stray away from home. This stage of the disease has a duration of about two days, seldom more than four days. As the disease progresses the excitement becomes more marked, and unless this is cut short by generalized paralysis, the dog becomes furiously rabid. In this condition the dog is uncontrollable; it has hallucinations, and may, without provocation, bite its own master.

Partial paralysis marks the onset of the second stage of the disease. The paresis may be unilateral, or it may be limited to the hind extremities or the lower jaw. If there is paralysis of the posterior extremities, the dog walks with a humped back and an apparent stiffening of these parts. Later they become weak and tremulous and it is with difficulty that the dog walks. The drooping of the lower jaw is a diagnostic sign, although it is not present in more than about 30 per cent. of the cases. The unilateral paralysis is characterized by a turning of the head to one side, and a tendency to cross the fore paws. As this condition becomes more pronounced the animal is inclined to, and may, run or walk in a circle. During the second stage the voice may change; it is at first low and muffled, finally it becomes difficult to evoke and is a succession of low-pitched howls coming from far back in the throat. As the paralysis of the cheeks, mouth and lower jaw becomes more evident the power to bark is completely lost.

Although few rabid dogs eat and drink without discomfort, yet we find in the majority of cases repeated attempts will be made without success. In some cases solid substances may be swallowed without discrimination, and on post-mortem, when foreign material is found in the stomach, there is sufficient evidence to arouse suspicion of rabies. Food may be held in the mouth for a short time and then dropped, a condition which may occur in advanced paralysis of the deglutitory muscles. As was stated in the opening paragraph, the rabid dog has no fear of water; a dread of water is, however, characteristic of hydrophobia in the human subject. The dog may not be able to swallow; despite this fact it will make many attempts, succeeding only in emptying a dish of water by splashing the water over the sides, in the eager attempt to lap it up. The owner of this dog usually makes the statement that it could not be rabid because it drank one or more dishes of water.

When the paralytic stage appears early in the course of the disease the dog is usually morose, but not aggressive; under such conditions we have the so-called dumb rabies. This type, however, is not so common as the maniacal form in which there is a condition of furious rage, in the diagnosis of which there can be no mistake. This is the most common diagnostic feature of rabies in dogs. In this state of delirium the animal runs amuck, furiously attacking all animals, including man and even its own master. It may travel as far as forty miles, leaving in its path numerous bitten animals which in turn may act as spreaders of the disease.

The stage of paralysis lasts from one to four days, after which the third stage appears with the complete loss of equilibrium. This period of complete paralysis varies in duration from a few hours to two days. Finally, from two to seven days after the appearance of the first symptoms, death results from complete paralysis of the respiratory center.

That rabies and hydrophobia are transmissible by the bite of a rabid animal is a well-established fact, both by common experience and by laboratory experiment. This point is clearly exemplified, among dogs, by the possibility of tracing, through four distinct generations, that strain of virus which caused hydrophobia in a case which came to our attention recently. The first reference to this particular strain of virus was noticed in the case of a dog which had well-defined symptoms of rabies. Laboratory experiment proved, by both the microscopic and the biologic tests, that this dog was rabid. Two of the dogs bitten by the one just referred to were neither killed nor kept under close surveillance; furthermore they were not muzzled. One of these developed rabies and acted as a spreader of the disease. Laboratory examination of this specimen showed that it was rabid. Practically the same circumstances accompanied the transmission of the virus in the third generation. All dogs carrying virus in the fourth generation were killed with the exception of one. The owner of this dog insisted on keeping it so that he might demonstrate to his own satisfaction the existence of such a disease as rabies. The authorities, whose duty it was to protect public health, neither caused the dog to be killed nor did they compel the owner to muzzle it. After an incubation period of four weeks the dog acted strangely; it was excited and refused food and water. Then it was tied, but, as is apt to occur with rabid dogs, gained its liberty. On the following day, while still at large, it bit a human subject, who, not having been given the preventive treatment, died from hydrophobia.

### REPORT OF A CASE OF HYDROPHOBIA

A typical case of hydrophobia was brought to the University of Michigan Pasteur Institute last May. The patient, a boy, 3 years old, had been bitten severely on the face three weeks previously by a rabid dog. This animal had been shot and the Pasteur Institute of the University of Michigan had reported positive findings from an examination of the brain, at the same time advising immediate treatment of the child at the institute. This advice, however, had not been acted on and it was nearly three weeks after the accident that the patient reported for treatment. Then it was found that the wound had not been properly cauterized, but merely held in place by adhesive plaster. Already on about the sixteenth day the child, usually quiet and of an amiable disposition, was nervous and fretful, evincing a sense of apprehension, a decided loss of appetite; moreover he drank water with some difficulty. A day or so later the reflex irritability of the deglutitory apparatus became so marked that the child realized that water could not be drunk without causing a most distressing spasm. Despite this fact he made repeated efforts to satisfy his thirst until within a day or two the spasms were so violent that the patient not only was unable to drink, but he evinced the dislike of water characteristic of hydrophobia. On the nineteenth day the first symptom of paralysis appeared; the gait was unsteady and staggering. The paralysis became marked on the twentieth day. This stage of the disease lasted but twelve hours, however, an unusually short duration. During this stage of the disease the facial symptoms, expressions of fear, or apprehension of impending danger, became aggravated.

During this stage the child developed twitchings of the extremities—there had been only a slight tremor of the hands before—and he suffered from hallucinations which frightened him; at times, however, he seemed to imagine that he was driving horses, making a peculiar frequent clucking sound, or he would call to dogs—subconscious images of his life on a farm. At this time chloral and morphin were administered with quieting effects. The temperature rose to 107.2 F. and there was a marked tendency to sweating. The tongue was heavily coated, and on several occasions he vomited a thick, yellowish, creamy fluid. There was considerable drooling and collection of saliva owing to the inability to swallow. When the mouth was not kept free from saliva by frequent swabbing, the patient, breathing through the mouth, caused the characteristic frothing. This condition was particularly pronounced during the convulsive stages, owing to the increased rapid respirations. These tonic convulsions, particularly of the lower limbs, occurred from fifteen to twenty minutes apart; in the intervals between these the patient ground his teeth and muttered continuously. In the meantime the eyes became reddened and glassy; the pupils were widely dilated; the lower jaw dropped and the patient breathed with a respiratory grunt. About two hours before death there was marked cyanosis, the eyes became fixed in a vacant stare and consciousness was lost. At this time the muscles became flaccid and death resulted from paralysis of the respiratory muscles.

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# MORPHINISM AND ITS TREATMENT

ERNEST S. BISHOP, M.D.
NEW YORK

Every physician is familiar with at least a few cases of morphinism. Nearly every physician has made effort to rescue from the addiction its victim, and as a rule has given over the effort as hopeless, because even when the patient has been taken off his drug, he relapsed, or while under treatment he did not have the courage to persevere or the stamina to endure the necessary suffering. The profession as a whole has adopted a cynical attitude toward the possibility of permanent cure and many have relegated to quacks and charlatans the treatment which these poor people seek.

Three lines of endeavor have been employed: so-called slow reduction, sudden withdrawal and withdrawal accompanied by the administration of belladonna or its alkaloids.

"Slow reduction" simply means gradually reducing the patient's accustomed dosage. It is perfectly easy and unnecessarily slow up to the point of minimum organic need. Then must come withdrawal, and the wrench of actual final withdrawal is nearly as severe from a very small dosage as from a moderate one. Prolonging its accomplishment means subjecting the patient to the strain of persistent craving, discomfort, self-denial and organic need. These sequelæ or remnants of the old trouble remain for months and render the patient especially prone to relapse.

As to sudden withdrawal, anyone who has watched a addictee in the agonies of morphin deprivation will hesitate to attempt to prolong this to convalescence. Those who have undergone it show for years, in shattered nerves, premature age, etc., the effects of the terrific shock.

It has been shown from studies of the blood of patients undergoing very slow and very rapid withdrawal that they have, following treatment, very much lowered vitality and powers of recuperation. This is the natural result of the prolonged, nagging strain of the one and the shock of the other.

Withdrawal by the use of belladonna or its alkaloids has been attempted for a long time and in many combinations, and has a rational basis. The clinical picture of full belladonna effect is in many ways similar to that of an acute febrile disturbance. Morphin users are much less susceptible to such febrile attacks than ordinary men. During an attack, however, they are perfectly comfortable on a dosage far below that to which they are accustomed. The same is true of full belladonna-effect. Whatever its mode of action, whether it simply benumbs sensation, or produces artificially the systemic disturbance of a febrile condition, or is actually physiologically antidotal to morphin and other narcotics, it does reduce craving in a narcotic addictee.

In my work in the alcoholic service of Bellevue Hospital, I had to treat many cases of morphin addiction. Attempts at slow withdrawal proved wearisome, difficult, and unsatisfactory in application and abortive in results. The patients could not be kept a sufficient time in the hospital, and could not afford to retire to sanatoriums for the months of prolonged convalescence necessary to enable them to return to active life with its strain and manifold temptations without a certainty of relapse. Early trials of the treatment, an outline of which was published by Dr. Alexander Lambert, were unsatisfactory in my hands. Although some patients came through well and comfortably, too many others did so with too much suffering and too severe and persistent prostration and other sequelæ. This was due to my inexperience and lack of understanding of morphin cases.

Subsequent observation showed three things.

1. A morphin addictee can take enormous single doses without any untoward effect.

2. The duration of his freedom from craving following his dose is in ratio to the amount taken and can be fairly estimated.

3. Following adequate catharsis, smaller amounts of the drug are needed than before.

It seemed to me, therefore, that some method based on these facts and employing belladonna could best accomplish the result. That described by Dr. Lambert met these requirements. It had given undoubted results, and I determined to try it again, in the light of further experience, endeavoring to study the occasion for its failure in the hands of so many, including myself, and to minimize the difficulties with which it had been attended in the hands of everybody.

Analysis of cases and of results obtained during and following treatment points to a conclusion that the fairly robust individual not using excessive amounts of the drug, and with good resistance and reactive ability, responds well and goes through this method of rapid withdrawal with but little complicating disturbance or sequelæ. On the other hand, the poorly nourished, weakened user of large amounts, who has come to depend on his drug for nearly everything including food, or the moderate user whose physical resistance is poor from illness or other cause, or whose inherent susceptibility to the drug is marked, has lost the power of reaction to physical insult unless helped by the drug. For him the shock of withdrawal is a serious matter, making the care of convalescence more difficult than the withdrawal of the drug. In other words, the ease of withdrawal and subsequent recuperation is commensurate with the extent of organic dependence on the drug and the physical condition of the patient. In the endeavor to estimate and control these factors, it becomes apparent that there is a wide variation in morphin tolerance and in reaction to morphin in different individuals. One man using the same amount as another is depending on its effect for the support of his organic processes to a much greater extent than is his more resistant brother. A certain amount for each individual addictee becomes a physiologic need. As long as this amount organically required is not exceeded, general metabolism is not markedly affected. Amounts in excess of this inhibit metabolism, and it seems likely that they are to a considerable extent stored up in the liver, whose capacity for storing is limited by the activity of its cells. These cells from repeated excess storing, acquire increased tolerance and at the same time a progressive inhibition of their normal function. As in other instances, the liver protects the organism from deleterious intakes extrinsic and autogenous; so, to the limit of its ability, it does with morphin. The general system adapts itself to an accustomed pseudophysiologic action supportive and stimulative to it, until increased dosage, or some intercurrent condition of strain, lowered vitality, illness, etc., renders the protective action of the liver inadequate, and metabolism suffers.

However this may be, a weak wreck using large quantities a day does not readily recuperate physically under careful treatment while his excessive dosage is kept up. His constipation is extreme; he has no appetite; his color is poor and his nourishment far below par. Nor does he improve till his dosage is cut down to that amount needed for his physiologic support. Then there is a definite change, and he gains rapidly and can be made comparatively healthy and vigorous and of fairly good reaction to strain. Less than this amount brings symptoms on withdrawal, and renders abortive attempts to improve metabolism, reaction and general tone. This amount varies with the individual and it varies in the same individual under different conditions of health, weariness, anxiety, etc. By keeping the patient on it, the inhibitory effects of overdosage can be to a great extent overcome and the whole organism, especially the liver, can be put into an active condition and able to respond to its task of elimination and subsequent readjustment.

The foregoing offers explanation and points to solution of the two main difficulties of treatment:

1. During withdrawal, failure of the patient completely to eliminate stored-up products because of weakness or long-continued inhibition of hepatic function.

2. After the drug has been taken away, inability to respond to the task of readjustment and to react to the shock of ordinary stimuli exaggerated by an oversensitive nervous system.

The solution seems to lie in a preliminary stage removing inhibition and putting the patient into as good a reactive condition as possible. The untrained man going into a grueling contest may feel the effects of the strain and shock for days or weeks while his better-conditioned fellow is perfectly fit the next day. In like manner, I believe that in many cases it is almost imperative to train the patient for the shock and strain of morphin withdrawal, and in many other cases, though less imperative, highly desirable. It has been objected that it will prolong treatment. My experience has been that it very much facilitates and renders easier treatment, and that it shortens and makes less troublesome convalescence.

I have therefore instituted a preliminary stage before attempting withdrawal of the drug. During this time I study my patient, regarding him not simply as a morphin addictee but as a sick man, to be investigated as carefully as a typhoid or pneumonia patient and all his organic conditions appreciated as far as possible before active treatment. Conditions long masked by morphin and forgotten even by the patient may seriously affect treatment, convalescence and prognosis if undetected. With the patient under control and morphin intake regulated, these may be allowed to show through, and if advisable or possible remedied before withdrawal. The reason for addiction, the strength of desire to stop, and the mental and moral caliber of the patient should be determined. It is also well at this time to determine his mental attitude and to win his confidence, and thus gain control over him. These patients are nearly always well informed on morphin and acquainted with the divers methods of attempting cure. They are suspiciously analytic of themselves and of the physician, and when despondent soon become intractable. Cooperation and confidence between patient and physician vastly influence the amount of nervous energy wasted by both and are big factors in treatment and in convalescence.

The first step in active preliminary treatment is to determine what, for the individual, is the amount of drug necessary to maintain metabolism and fully supply his self-created needs. A grain every four hours is a good average maximum. With many the amount is much less. Any patient can be cut to his physiologic amount almost immediately if attention is paid to his elimination. Most users are taking amounts in excess of their need and have a very sluggish elimination, and therefore require heavier catharsis than the ordinary man. Elimination should go to adequate catharsis and not to the point of excessive purging. Otherwise the diarrhea will mask one of the valuable indices as to morphin need, deplete and furnish less adequate elimination than that from a normal intestine. The patient can then be rapidly built up by tonic treatment, feeding, exercise and rest. In a few days to a week, as a rule, the patient has lost his leaden color, has a good appetite, gained in weight; his intestinal tract is in good tonic condition and he has normal movements on fairly mild catharsis or none; his circulation and nervous system are in better tone and balance; he feels well and encouraged, and his mental attitude is more optimistic. He has been put into a condition which may be regarded as his normal and can be started on a treatment of extreme elimination with his organs in good condition to respond to medication and his system toned up to react to the shock of withdrawal. His tolerance and the time required for his elimination of morphin in known dosage has been estimated, and his reaction to catharsis determined, and he is ready for the withdrawal of the drug.

In accomplishing withdrawal I have had my most satisfactory results from the method described by Dr. Lambert. It does remove organic need and consequent physical craving, and when competently administered, and modified and adapted when necessary to the individual case, does so with less disturbance and suffering than any other with which I am acquainted. It is a treatment of extreme elimination and rapid but not sudden withdrawal, accompanied by the administration of belladonna to the point of full physiologic effect, estimating the periods of cathartic and drug administration on the basis of the average time required for cathartic action and morphin elimination in the chronic drug user.

Lambert gives strong purgatives, following result from them with divided doses of morphin administered within one and one-half hours and totaling two-thirds of the patient's accustomed daily intake. At the same time he begins the so-called "specific mixture," containing two parts of the 15 per cent. tincture of belladonna to one part each of the fluidextracts of hyoscyamus and xanthoxylon. This mixture is given every hour, beginning at 6 drops and increasing 2 drops every six hours up to 16 drops, unless full effect is reached before, and there maintained. Purgation is repeated ten hours after the administration of the morphin and a dose of one-half of the initial total of morphin follows result from it. Catharsis follows morphin at ten-hour intervals and morphin in a dosage of one-half of the preceding dose follows result from catharsis. This is continued until the appearance of a stool which is described, and mentioned as occurring about the sixtieth hour, marking the desired result, and as a rule terminating treatment. Complete description of the routine and administration everyone is familiar with from Lambert's articles. The above is merely an outline of its principles stated as a basis to show the various modifications and adaptations which I have found useful.

### MORPHIN DOSAGE

Instead of estimating morphin dosage on the patient's customary daily intake, which is almost as a rule far in excess of his actual need, I have, since the initiation of a preliminary stage, based it on his actual tolerance for, reaction to and elimination of the drug, under the physical conditions which obtain in him at the time of starting withdrawal. I give the initial administration in two or three doses. The first is one-half to two-thirds of the total daily amount needed to keep the patient at his best during the preceding few days. The second is one-half of the first, given an hour later. The third is given or not, according to judgment. It is the same as the second in amount and is given a half hour after it, if there is any doubt as to the preliminary dosage not being quite high enough, and after observation of the effects of the first two doses. Succeeding administrations during treatment are in one dose, each amount being one-half of the preceding one.

The above dosage is not fixed in amount. It is a statement of average results, to be varied in accordance with the needs of the individual patient, as shown by the duration of morphin effect in him, by the adequacy of his elimination, and by his condition during treatment.

### CATHARSIS

The object of this is to secure both stimulation and elimination from the liver and adequate emptying out of the intestines. I therefore place most dependence on the mercurials, giving, as a rule, blue-mass in 5- to 10-grain doses at the indicated intervals, and reinforcing its action as necessary with other cathartics, as compound cathartic or vegetable cathartic pills. Salines of course follow mercurial catharsis. Castor oil given in lemon juice or sarsaparilla and vichy, I have found very useful and well tolerated by many of these patients. What catharsis we use should be determined by the needs and known response to catharsis in the individual case, determined during the preliminary stage. The inhibition and atonic tendency in chronic users has been to a large extent overcome by the preliminary treatment.

Much of the difficulty of the treatment, it seems to me, has resulted from overirritation of the intestinal tract. This exhausts a less robust patient and does not assist especially in the excretion from the liver of its stored-up products. Constantly whipping up an organ unable to respond can only result in its non-functionating. In the asthenic type of case repeated excessive stimulation of liver and intestines may cause an exhaustion of liver and intestinal function before the elimination of deleterious matters is complete, and thus defeat its own end. It seems to me that the nearer to a stimulated normal we can keep the bowels for as long a part of the treatment as possible, the less trouble we shall have.

To this end I have found useful the addition of continued doses of calomel throughout part or all of the treatment. I have given it in ½-grain doses every two, three or four hours. In my experience it does not produce salivation, and in patients so treated there has been less vomiting, and abdominal pain, and less need for drastic irritating catharsis. Moreover, there seems to be a steadier and more adequate liver elimination, shown by more constant and uniform bile content in the stools. It also gives added control over the duration of periods and ability to give morphin should need arise. Morphin cannot be given without intense abdominal discomfort if there has been no result from a preceding irritating cathartic acting below the duodenum. This does not apply to continued calomel administration. During its use there is always some cholagogue cathartic in the intestine sufficient to move the bowels at short notice by the aid of castor oil followed in a half hour by a saline, or in many cases by the saline alone. Stronger catharsis is rarely necessary. The calomel is, I believe, especially useful in the asthenic type of cases, and where there is tendency to gastric irritability and undue reaction to the more drastic cathartics.

I do not offer the above as a routine substitution for the cathartic procedure outlined by Dr. Lambert. It is offered as a basis for adaptation of treatment to those cases in which variation seems advisable.

### ADMINISTRATION OF DRUGS

The belladonna mixture is administered, as previously described, to the point of full physiologic action, and continued at a dosage which will maintain belladonna effect. Tolerance varies and some cases will have to be carried above the 16 drops, while others will respond to a very small dosage. As to indications, my experience has been that the earliest in advent, and those to be used for guidance, are dryness of the mouth and throat, dilatation of the pupils, blurred vision, headache, flushing of the face, rapid pulse. These generally occur within the first twenty-four hours, and so long as they occasion but slight discomfort may be disregarded, as the patient acquires a tolerance and they alleviate as a rule. They should not be allowed to go to serious discomfort. Experience will guide the physician in this matter. The mixture can be most conveniently administered in gelatine capsules.

Intervals of drug administration can be changed with benefit after some experience, in indicated cases. Individuals react differently to any given drug, and morphin users are no exception to the rule. They eliminate morphin with different rapidity, and they absorb and eliminate belladonna and hyoscyamus differently. A good average for the effects of the initial dose of morphin to wear off in an untreated addictee is the ten hours plus time for cathartic action, as stated by Dr. Lambert. Following preliminary treatment, however, and the dosage changed to that organically required, together with the consequent removal of metabolic inhibition, the patient reacts more as a non-user does. The time of elimination, and the duration of drug-effect are more varied. The physician should recognize this fact and shorten or lengthen his periods, or increase his morphin dosage according to the requirements of the individual. In this he can be guided by the onset of withdrawal symptoms, as yawning, sneezing, nausea, nervousness, etc., and by the behavior of the intestinal tract. Should elimination prove more rapid than was expected, or the estimated dosage of morphin not be large enough to carry the patient over the calculated period, catharsis should be secured earlier and the next dose of morphin given as soon as result from it occurs. If continued administration of calomel has been employed, this can be easily done as already explained.

## THE STOOLS

It has seemed to me that the "typical stool," while marking the advent of adequate elimination in most patients, especially those who are robust and possessed of good tone and reaction and capable of adequate eliminative response, is yet an unreliable index in many others. Observation of the stools is valuable, in my experience, chiefly as furnishing an index of bile elimination and liver activity. As to the interpretation of the mucous content, I am uncertain. It is extremely varying and I have been unable to satisfy myself that its advent and amount is a guide to the extent of morphin elimination.

I have seen stools of solid mucus and good bile-content several times repeated and the patient not yet relieved of his morphinism. On the other hand, I have seen perfectly satisfactory results in patients showing none or very little mucus, or passing it some time after treatment was cut. There are several possible explanations for it, and I do not feel that I can offer an opinion on the matter. Further observation may interpret it. I am guided by clinical observation of my patient's condition for the regulation of medication.

## DURATION AND COURSE OF TREATMENT

As to length of treatment, I have had best results, especially in the weaker and poorly reacting type of case, from more extended and less vigorous treatment. I rarely keep the medication up less than eighty hours and often go higher. This means the addition of more periods of catharsis and drug administration, and the variation from the hourly administration of belladonna. After full belladonna-effect has been reached I have not seen results influenced by cutting it for a few hours to ensure sleep, to give the stomach a rest, etc.

Indications for cutting treatment I find in the condition of my patient. As a rule his course has been comfortable, free from craving, suffering but slight if any nausea, vomiting, etc., until there comes the onset of a distinct change. He becomes restless, may have some abdominal discomfort and feel "sick at his stomach"; has a sense of depression, feels generally uncomfortable and wants to go to bed. These symptoms are distinct from those caused by morphin need, of which no signs are present. The difference is recognized by the patient himself who does not want morphin for relief, but simply "feels sick." I believe it marks the final morphin elimination and the manifestation of uninhibited belladonna symptoms. Its detection is to an extent a matter of experience and is as yet, in my own mind, largely a matter of clinical impression. Its manifestations vary. That it does occur I have been repeatedly assured by patients, among them physicians. Further study may clear up its clinical picture.

When this change occurs I give heavy catharsis and cut treatment. If recognized in its incipiency and discomfort is not marked, I give something like compound cathartic pills, followed in a few hours by castor oil and this in an hour or two by a saline. A high enema or colon irrigation is also of use. If it is not recognized early, it is better to get a quick clearing out of the bowels by castor oil followed by a saline. After this the patient generally sleeps. If not he may be given a hypnotic. I use mostly bromid and chloral reinforced if necessary by some codein. It is sometimes wise not to cut the belladonna at once, but to diminish its dosage and increase its intervals for a day or two.

## DIET

One of the most important factors in treatment is the matter of diet. Overloading the stomach is disastrous. Food should be light and given in small quantities. In some cases I have found the use of hydrochloric acid and pepsin of value. The gastric secreting glands sustain considerable inhibition during treatment and the supplying of pseudonormal media seems to aid in preserving gastric tone and activity.

The nutritive aspect of the problem is of little importance during withdrawal. I doubt if there is much absorption of food during active treatment, and its main function at this time seems to be to furnish some solid material to the intestines. Diet is an individual problem, and as a rule I put patients on dry toast and weak tea or coffee, and satisfy hunger as it arises according to discretion. Milk, even when peptonized, is not well tolerated during the administration of belladonna. I force fluids, especially water, and discourage their being taken too cold.

Careful regulation of diet during early convalescence cannot be too strongly emphasized, as at this time the patients often have ravenous appetites and are with difficulty restrained from indiscretions. Their diet must be moderate in amount and easily digestible.

## COMPLICATIONS OF TREATMENT AND CONVALESCENCE

Space is lacking for an exhaustive discussion of these and their management. I shall therefore confine myself to a mention of the most common with brief indication of my conception of their character and remedy.

The vomiting is of at least four kinds:

1. Gastric revolt from dietary indiscretion or from repeated administration of the same kind of medicine at frequent intervals. Patients sometimes say that the thought of taking another capsule in an hour "turns their stomachs."

2. Vomiting due to a mucous gastritis with the ejection of sour-tasting mucus, probably a neurotic or atonic gastritis and due to asthenia or belladonna inhibition.

These two types can be easily controlled as a rule. They rarely occur till after full belladonna-effect has been reached and this medication can be cut for a few hours without influencing treatment, and the local condition treated as indicated.

3. Vomiting from morphin need is accompanied or preceded by other withdrawal signs, as yawning, nervousness, etc., and the patient himself recognizes his need. It can only be relieved by morphin which may be administered as previously described.

4. Vomiting due to reflex irritation from the intestinal tract may result from inadequate catharsis, or may accompany an atonic colon containing unpassed liquid fecal matter. Cleansing of the bowel will relieve it. Morphin administration is not needed.

All types of vomiting can, as a rule, be prevented or controlled by preparation and careful observation of the patient. The calomel, I believe, has aided much in their control. The usual antemetics do not seem very efficacious. In all forms except that caused by need for morphin, it is well to cut everything by mouth except small quantities of water, give the stomach a rest and the patient a chance to sleep.

Delirium is of at least four kinds:

1. Belladonna delirium, due to overadministration of belladonna and easily avoided after some experience.

2. The coal-tar products will cause delirium in some cases during the administration of belladonna. Their administration, however, is rarely necessary.

3. Exhaustion psychosis, coming on in asthenic cases, late and often deferred until convalescence, especially marked in late afternoon and night. It is the result of excessive depletion and of too rapid withdrawal in a case unable to react. It is typical of this class of psychoses.

4. Delirium from auto-intoxication, closely allied to and often associated with the previous type, and due to inadequate elimination. This does not necessarily mean lack of stools, but may occur in patients who have had stools almost dysenteric in character and number, but yet have a distended colon containing liquid fecal matter.

Delirium is practically unknown in a carefully handled case.

Leg and arm pains are very troublesome. They often occur late and continue well into convalescence. What their origin is I am not certain, but do not think it the same in all cases. As a basis for speculation and treatment I have regarded them as:

1. Neuritic from possible morphin poisoning and comparable to the alcoholic neuritis which occurs under like conditions of withdrawal in the chronic alcoholic.

2. As circulatory due possibly to shock or exhaustion of vasomotor nerves. They are worst after undue exercise and at night.

3. Some uneliminated remnant of morphin or other toxic product. This does occur, but does not account for the great majority of cases, and I incline rather to the first two explanations, either neuritic or circulatory due to taking away from the nervous and circulatory systems in a comparatively short time of a long accustomed support.

They are relieved by massage, hot applications, electricity, and in varying degree by the different analgesics, and disappear as the patient gains in tone and reactive ability.

Nervousness and sleeplessness may be present during early convalescence and prove annoyingly persistent. They are probably due to the nervous exhaustion following weakness and continued strain, or to the shock consequent on the release of the nerves from morphin inhibition. Their immediate treatment is by hydrotherapy, massage, sedatives, etc. Sedatives may have to be reinforced by codein for a few doses, but this should not be kept up for more than forty-eight hours.

The above complications are seen at their worst in the weak, poorly reacting patients with impaired circulatory and nervous tone, and are practically absent in the robust beginning withdrawal in good tonic condition, and not suffering too much discomfort during withdrawal. Nobody can stand too prolonged discomfort, anxiety and loss of sleep. If these cannot be avoided they should come late and terminate as soon as possible. Complications can be to a very great extent controlled and in many cases eliminated by getting the patient into good condition before withdrawal, and then during withdrawal grading his treatment to his endurance and reaction.

### CONVALESCENCE

The period immediately following withdrawal is full of uncertainty commensurate with the instability of the physical condition in which the withdrawal has left the patient. He is often overbuoyant and overconfident in his new-found freedom, and is apt to interpret the feeling of well-being and improvement which has come to him as indicative of complete health and unlimited endurance, and to overstrain his strength and reactive ability by indiscretions in diet, overexertion, assumption of worry, etc., before he is able to respond to the tax they impose. Until the patient has readjusted and is reacting normally to the stimuli of ordinary environment, slight indiscretions in diet, overexertion, excitement, constipation, etc., have a tremendously exaggerated result. He should be carefully controlled, and warned that until pronounced absolutely well he must regard himself as convalescent and remain under the supervision of his physician. Readjustment is very rapid, however, if the patient starts withdrawal in good condition and is not pushed beyond his ability to respond during active treatment.

### NURSING

Adequate nursing is a matter of very great importance. The best nurses are none too good for the purpose of morphin withdrawal. They should combine nursing ability with tact, attractive personality, ability to handle the patient, trustworthiness and unusual powers of observation. On their adequacy will depend, to a large extent, the early detection of incipient complications, easily controlled if taken in time, but bringing discomfort, anxiety and difficulty of control if allowed to develop.

Their experience is of course a factor in their selection. A case of morphinism should not be started with incompetent nurses.

### PROGNOSIS

Prognosis as to permanent cure must always be guarded. It depends on the origin of the addiction, mental caliber of the patient, environment, occupation and physical condition. Some can be identified as poor risks from the start. In considerably over one-half of the cases that I have seen, the origin of addiction lay in innocent and ignorant use of the drug, often too freely prescribed by physicians or others for relief of illness. This type of patient is otherwise a normal man, and once his addiction is removed, and given an environment, not too adverse, occupation and fair health, he will not relapse.

Some of my patients have since their treatment gone through illness, lack of work, despondency and destitution without relapsing. Ward patients disappear and cannot be followed closely. I am confident, however, that at least one-half of my patients have kept away from their drug. If this proportion were far lower — and it may be higher — I should feel that results had amply justified the work I have done for them. With private patients in favorable conditions, the proportion should be much higher. Get the patient into good physical condition and free from organic need for the drug, and the prognosis is good.

In the title of this article and throughout its length I have spoken only of morphin. Each of the opium products varies in some of its effects and in degree of effect from the others. In the main, however, what I have written of morphin applies to any opium product and to a great extent to the other narcotic drugs.

422 West End Avenue.

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# A PRACTICAL METHOD OF PROPHYLACTIC IMMUNIZATION AGAINST TUBERCULOSIS

## A PRELIMINARY ANNOUNCEMENT

KARL VON RUCK, M.D.
ASHEVILLE, N. C.

The results at which I have arrived in my studies of the subject indicated by the title will appear in a forthcoming publication in greater detail than I am able to offer now without using much more space than is practicable.

I therefore condense and give now only a summary of them, sufficiently explicit to enable the reader to judge of the value and practicability of the method, the requirements for which I formulated in the beginning of my investigations to be a preparation or vaccine, absolutely free from real or even supposed danger, powerful enough to act by one or two applications, uniform in action to a degree that the results need not be proved in practice, and simple enough so that any general practitioner can apply it.

The preparation which I have made and used contains all the soluble proteid constituents of the tubercle bacillus with addition of a small amount of fatty extractives. It would require far too much space to describe the mode of preparation at this place, but this will be done in detail in the complete report, which will appear at an early date.

In the selection of cases, my earlier precautions of excluding children presumably already the subjects of tuberculous infection, were found unnecessary and only such were excluded as showed active symptoms or had progressed to the open stage of pulmonary phthisis.

There have been no marked general reactions in the normal or in the supposedly infected children; in the latter sore arms. in a few instances with more or less diffused redness and swelling, were more frequent, and in all other cases a slight degree of tenderness, lasting twenty-four to forty-eight hours, was the usual observation.

My object in the study of doses having been to find that quantity which, while causing no marked general or local reactions, was efficient, I adopted 0.05 c.c. and 0.1 c.c. for nurslings according to their ages, and from 0.2 to 0.3 or 0.4 for older children, as a single dose. When two doses were given, the first was half and the second slightly less or the same in amount, as the single case.

The total number of children immunized since last July is 339. Of these 262 were made available to me by the interest and courtesy of Dr. C. A. Julian of Thomasville, N. C., where in the Baptist Orphanage in the earlier part of last October, with his cooperation and the aid of my assistant, Dr. A. E. von Tobel, the necessary preliminary and subsequent examinations were made, which, as in seventy-seven children immunized in Asheville, included the recording of their general condition, present enlarged lymph-nodes, physical signs in the lungs, tuberculin tests, blood studies and serum examinations of antibodies, before and after the administration of each dose; and reexaminations in 300 children were made from three to eight months thereafter.

These examinations justified their grouping:

| | |
|---|---|
| As normal | 85. |
| As suspects (probably tuberculous) | 94. |
| As tuberculous | 160. |

In the preliminary examinations slight and occasionally well-marked physical signs were present in the lungs in 118 of those classed as tuberculous, most children being over 10 years of age, while in those classed as suspects the children were usually under that age and lymph-node enlargement, most frequently that of the cervical and axillary groups, was almost the rule.

The determinations of blood-states by cell-counts and hemoglobin, per cent. of alkalinity, and of serum tests for specific antibodies represent a total of over 3,000 individual examinations, and from their tabulations I give the following averages:

| | Average |
|---|---|
| *Blood Alkalinity.*[1]—Preliminary | 0.85 per cent. |
| After first dose | 1.05 per cent. |
| After second dose | 1.20 per cent. |
| After from three to eight months | 1.20 per cent. |

*Serum Agglutination.*—In normal children there were comparatively few in which agglutination was positive in serum dilutions of 1:5, and only rarely was this the case in dilutions of 1:10, while in preliminary examinations of the probably and presumably tuberculous children, the minimum was 1:5 and the maximum 1:40 with an average of 1:12.

| | Average |
|---|---|
| Examinations after the first dose | 1: 50 |
| Examinations after the second dose | 1:112 |
| Examinations three to eight months later | 1:100 |

Preliminary examinations in complement fixation were made in 110 children, most of them suspected or believed to be tuberculous. In twenty-five of the normal children and in the study of complement fixation of serum specimens from 100 new-born children, for other purposes, complete fixation was never observed in serum dilutions of 1:4, a trace only being shown in two instances. In the groups of children probably tuberculous and accepted as such, the eighty-five determinations made showed complete fixation with a low precipitin curve, in serum dilutions of 1:4 in six and a trace was shown in fourteen cases.

My records of complete complement fixation after the first and second doses and on reexaminations from three to eight months later show:

Complete fixation in serum dilutions averaging:
1:24 after first dose.
1:20 after second dose.
1:22 from three to eight months later.

These averages represent findings when the blood specimen was taken during the positive phase without, however, awaiting its acme, the guide for the positive phase having been the state of the precipitin curve, to the relation of which with Wright's opsonic index I have called attention heretofore, showing that a low precipitin curve corresponds with a high opsonic index and *vice versa.*

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[1] The blood alkalinity was estimated by Dare's method, which is based on a normal of 266 mg. sodium hydroxid per 100 c.c. of blood. We have repeatedly controlled the results obtained with trituration methods and found no material difference. Appreciating that no method is absolutely accurate, that of Dare has the advantage of rapidity and appears to serve for comparative studies as well as any other.

It will be noted that there was no increase after the first dose in the averages shown; and I may add that no marked difference was observed in individual cases. I should, however, state that the relation between the precipitin curve and the degree of complement fixation was not absolute in the sense that the serum specimen from another or from the same child at the same precipitin curve gave invariably identical readings.

Quantitative variations were also noted in other respects, especially in comparative studies with the several proteins and the fatty acids and neutral fats, with the usually employed emulsions as antigens, which were made under due precautions as to possible differences arising in technic, in inactivation, serum dilutions, standardization of the several antigens, incubation and in the hemolytic system employed.

The results observed are illustrated in several tabulations which appear in the full text of this communication.

Table 1 represents one of my complete records in the case of a probably tuberculous child. In addition to showing the variability in complement fixation, it shows the response of the organism to a single dose of 0.2 c.c. of the preparation after five preliminary daily observations six hours after the dose was given, and for the next seven consecutive days. The results of reexamination in complement fixation in the sixth and seventh months being also added.

Table 2 is illustrative of variability of complement fixation with several of the antigens on successive days, showing coincidences of fixation with all of them, when the serum was likewise lytic *in vitro,* indicating also the high degree of immunity induced and maintained in the case of a non-tuberculous child immunized eight years ago, with one of the constituent proteins of the preparation.

Table 3 gives hourly observations of like variation in the case of an immunized adult to which are added several daily records, the last of which shows a similar coincidence, when the serum was lytic in its action. These and many other similar observations will eventually find their explanation by further study and experiment, perhaps in respect to a multiplicity of the haptophore groups of the specific amboceptor, of fitting complements or specific opsonins.[2]

In further reference to serum studies, I may add that the determination of the precipitin curve was useful chiefly as a guide to the positive and negative phases of complement fixation and that in the tabulation made for the study it appeared as a rule higher and more variable in tuberculous than in normal children, in the former not reaching the low point as frequently and in some cases not at all until several months after giving the immunizing dose.

The opsonic index in preliminary examinations was usually normal in normal children. It averaged 0.85 per cent. of the normal, with a minimum of 0.50 per cent. for the probably or presumably tuberculous. Its marked increase was not missed in any child on subsequent examination, when the serum specimen was taken in the positive phase.

Studies of the so-called immune opsonins, with normal salt solution as a control, show that these likewise varied inversely with the precipitin curve and that the degree of opsonic power shown is in approximate relation with that of complement fixation, reaching the salt level in serum dilutions of from 1:500 to 1:1000 or more, when complement fixation occurred in dilutions of 1:20 or 1:40.

The general results shown after periods of from three to eight months in immunized tuberculous children were marked by the improvement of their general appearance and nutrition when previously deficient, not only by comparison of records, but also as evident to those who observed them continually.

Increase in weight was uniform and especially apparent when this had been markedly below normal, amounting frequently to 10 and from that up to 40 pounds and was therefore in excess of the normal increase of a growing child.

In regard to the effect on enlarged lymph-nodes, while difficult to compare, I can state that in numerous instances none were found when their presence had been recorded or only one or a few were found when the records showed many previously present.

More accurate comparison was possible in regard to physical signs, especially when these had been recorded on a special chart. Frequently they had entirely disappeared and there was not a single instance in which a comparison did not indicate unmistakable improvement.

Having shown the prompt and uniform development of all specific antibodies after a single dose of the preparation by the method described, and the induced immunity as shown by serum tests being still evident in like degree in every patient reexamined from three to eight months later, and in one case after a lapse of eight years, and having in numerous instances been able to show much longer permanency in therapeutic immunization with one of the constituent proteins, I proceed now to the relation of experimental studies designed to show that the method is ample to protect against virulent infection.

## BACTERIOLYTIC STUDIES

My bacteriolytic studies with immune serums *in vitro* designed for this purpose were not immediately successful to the desired degree. By various modifications of the technic, but especially by the use of fresh active immune serum and by the study of the effects of serum specimens in regard to their power of complement fixation with other bacillary products than T.B. Emulsion as antigens, I was enabled to obtain the satisfactory results which will be noted in reproductions of my mounted slides.

The microscopic specimens show that normal serum has no lytic power *in vitro;* that with a serum in which complement fixation occurs with only one or two antigens, and especially if fixation is absent with the fatty extractives of tubercle bacilli, the lytic effect *in vitro* is also absent, or at best but partial, that when the serum specimen shows a coincidence of complement fixation with all the antigens, the lytic action of the immune serum *in vitro* is complete to a degree that only a few fine indifferently stained clumps of granules may be found.

## ANIMAL EXPERIMENTS

In describing to you the results of my animal experiments, I begin with the first group, which was designed to test the absence or presence of virulence by intraperitoneal injection of tube contents referred to in the preceding experiments *in vitro.*

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[2] In my studies of this observed variability, which have as yet made but small progress, I have in a number of trials, with like results in each, made the interesting observation that there is a difference in the lytic action of immune serum on tubercle bacilli *in vitro,* when used without previous inactivation as compared with another part of the same specimen after being inactivated and normal serum added for complement, even though the normal serum is taken from the human subject, the inactivation apparently preventing or at least greatly diminishing the lytic effect *in vitro.*

Of four guinea-pigs used for control, two were infected with tube contents in which 0.01 mg. of virulent tubercle bacilli of human origin had been incubated with normal human serum for twenty-four hours, in the third and fourth animal normal salt solution having been substituted for the serum. The four animals died, two on the forty-first, one on the forty-second and one on the thirty-second day thereafter, all showing on autopsy generalized tuberculosis.

Two guinea-pigs infected with the contents of tubes in which inactivated immune serum plus normal rabbit complement was incubated with the bacilli, but in which no lytic effect was evident *in vitro*, failed to show protection. The animals died on the seventy-sixth and eighty-third day after infection and though they outlived the controls by a month or more, their autopsies showed local tuberculosis.

Of the animals infected with tube contents in which the lytic effect *in vitro* was more pronounced, none died. In five of them which were killed three months later, nothing was found at autopsy beyond a few encapsulated nodules in the omentum or the mesentery, some of them showing slight degrees of central caseation or round-cell infiltration, in some instances a few acid-fast granules could still be shown in smears or in the residue after the whole or unused portion of the specimen was dissolved with antiformin.

In six guinea-pigs infected with tube contents in which the maximum of the lytic effect of the immune serum had been obtained as shown in slides No. 7, 8 and 9, the fatal effect following a few hours thereafter in five, and a week later in the sixth, may be of interest. Five animals were found dead twelve hours after infection. Their autopsies showed the heart distended with blood, the lungs congested and a small amount of serous exudate in the peritoneal cavity; smears from the exudate showed neither bacilli nor granules. The sixth pig lost weight rapidly (100 gm.), and after death on the sixth day, exudative peritonitis was found. The examination of the exudate was also negative.

The results, especially in the five pigs which when found were quite cold and stiff, suggesting that they had been dead for several hours, can be best explained by bacterial anaphylaxis, against the occurrence of which I had believed that I had guarded by the small dose of 0.01 mg. of tubercle bacilli used in the experiment, Aronson in a recent contribution giving 10 to 20 mg. as the minimum for such results. The present observation, with only 0.01 mg. used but the bacilli having undergone complete lysis, appears to confirm those who consider the presence of a specific amboceptor of influence in the production of the phenomenon.

Experiments on rabbits by intraperitoneal injection with 0.1 mg. of virulent bacilli of bovine origin, incubated twenty-four hours as in the previous experiments, gave interesting results. In one animal in which the tubercle bacilli were incubated with normal salt solution and in another with the serum from a new-born baby, death occurred on the forty-seventh and forty-eighth days respectively with practically the same degree of generalized tuberculosis found on autopsy. None of the other animals died. One in which normal human serum of an adult had been used was killed 111 days after infection. The lower lobes of the left lung showed numerous nodules well encapsulated, none of them caseous; but epitheloid and giant cells were found interspersed between tissue fibers. Tubercle bacilli could not be demonstrated in stained sections or in smears made from the residue of a portion of the involved lung tissue after dissolving it with antiformin.

The other two rabbits, in which immune serum had been used, were killed at the same time. Nothing was found whatever as suggestive of their preceding infection.

While the incidental observation of the action of normal human serum limited to a single experiment permits of no conclusion, it is nevertheless suggestive in regard to the relative resistance of adults and infants to bovine infection and justifies further experimental studies which I contemplate making in the near future.

The next group of experiments were made on immunized guinea-pigs for the purpose of observing Pfeiffer's phenomenon after intraperitoneal infections with 10 mg. or 5 mg. of living virulent tubercle bacilli and likewise for determining their resistance to such massive infections.

Pfeiffer's phenomenon in the two normal control animals gave identical results.

After one hour many tubercle bacilli were found free in the exudate with but few in leukocytes.

After three hours the results were the same.

After twenty-four hours there were still many free bacilli in the exudate, but they were also numerous within the leukocytes.

In the immunized animals the results observed were that:

After one hour a few bacilli were found free; many granules and but few bacilli were seen in the leukocytes.

After three hours nothing was found free in the exudate; the leukocytes contained fine granules but no bacilli. After twenty-four hours nothing was found free in the exudate or in leukocytes. Free granules were only occasionally seen in the exudate and the bacillary disintegration appeared to occur after phagocytosis within the leukocytes.

In regard to the further outcome of these infections, I can state that death occurred in the two controls thirty-one and forty-one days, respectively, after infection, the former having received 10, the other 5 mg. of tubercle bacilli. Generalized tuberculosis was found on autopsy in both, the lungs showing greater involvement in the one that lived longest.

Five of the immunized animals were killed ninety days after infection. Their autopsies showed a few firmly encapsulated nodules in the omentum or the mesentery. Three such nodules had caseous centers showing a few acid-fast granules, the others were fibroid in structure throughout.

In my last group of fourteen immunized guinea-pigs and a normal one used as a control, a suspension of 0.01 mg. of virulent tubercle bacilli was injected with a hypodermic syringe into the lumen of the trachea, just above the sternum.

The control animal died twenty-three days after infection. The autopsy showed tuberculosis of the liver, peritoneum, spleen, mesenteric and retroperitoneal glands with but few tubercles in the lungs, but extensive involvement of the bronchial glands which were very much enlarged and pressure from which, causing interference with respiration during life, no doubt accounts for the comparatively early death. The axillary and inguinal groups of lymph-nodes were also found tuberculous.

Five of the immunized guinea-pigs were killed eight weeks after infection. The others, as also some of the animals of the preceding groups, were allowed to live for further observation. They are still in good condition, gaining steadily in weight.

The autopsies of those killed showed from one to three enlarged lymph-nodes, either bronchial or tracheal. In one animal a firmly encapsulated tracheal gland showed central caseation with acid-fast granules in the smears. In the other animals the histologic examination of enlarged nodes showed in addition to their fibrous periphery in the central portions more or less round-cell infiltration, but no tubercle or giant cells were found. In two instances the antiformin residue of the node showed a few fine acid-fast granules, nothing being found by this method in the other nodes.

I have arrived at the end of this summary of my evidence:

The results shown in my bacteriolytic studies *in vitro* and the evident harmlessness of infections with tube-contents in which the tubercle bacilli were more or less disintegrated, would alone establish the fact that the immunity shown in the children is of a high degree without the further confirmations by the study of Pfeiffer's phenomenon, and the evident protection of immunized animals in that series against degrees of infection which are not reached under any kind of exposure of the human subjects, the results of their autopsies, as also those shown after intratracheal infections being the same as may be found when dead tubercle bacilli are used in the experiments. I would not, however, be understood that I am of the opinion that further studies would not be valuable or desirable for the perfection of the method or of the preparation. These studies I am continuing and I hope that others will take them up also. All I feel justified in claiming at this time is that I am the first to have made a successful advent in this most important and promising field of specific prophylaxis, in a disease that leads in the mortality statistics of the human race.

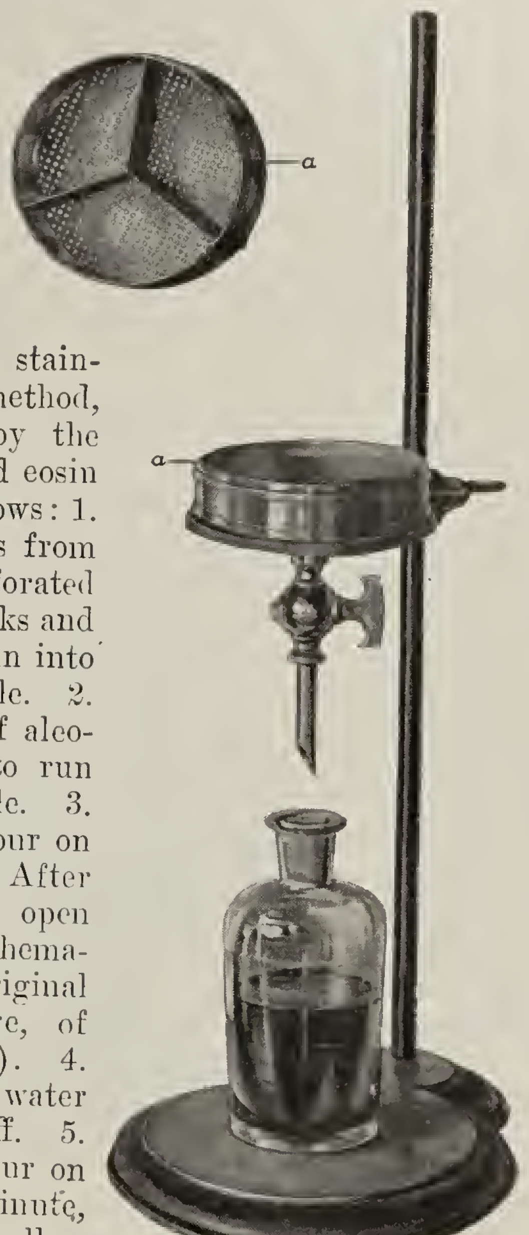
## A RAPID STAINING FUNNEL *

WILLIAM LINTZ, M.D.
Associate Professor of Bacteriology, Lecturer in Histology, Long Island College Hospital; Associate Visiting Physician, Kings County, and Assistant Visiting Physician Jewish Hospitals
BROOKLYN

The staining of the various elements of organic tissue is, as a rule, a complicated process, and when the sections to be stained are numerous, the amount of time and labor represents quite an item. By means of the funnel devised, this becomes nominal; a thousand sections can be stained in the same amount of time and by the same amount of work as can one.

The instrument consists of a shallow funnel with a stop-cock located beneath the expanded portion. In the expanded portion fits a removable, flat, shallow, finely perforated tray, divided into several compartments. The size of the funnel is about 6 inches in diameter, and the number of compartments depends on the scope of the work, and may be from twelve to twenty-four. The entire apparatus may be made of metal, porcelain or glass. One can readily make the entire outfit (by cutting off the top part of a suitable glass bottle, fitting the neck with a piece of rubber tubing and a pinch-cock, and fitting into the expanded portion a shallow tray made out of finely perforated tin or wire mesh, divided into as many compartments as may be desired). A little air-space between the perforated and the expanded portion of the funnel will allow the air to escape when the stop-cock is closed and fluid is poured into the tray.

This apparatus can be used for both the celloidin and the paraffin methods. The cut sections are placed in the perforated tray, the various tissues and organs being placed in separate compartments so as not to mix them. (If the paraffin method is employed, one has to first fix the sections on cover-glasses in the usual manner — by Mayer's albumin or any other method.) From now on one employs the usual procedure, by pouring, in regular order, on the specimens the various solutions necessary in the process of staining. The time of these various solutions on the sections is regulated by opening and closing the stop-cock, thus allowing the fluid either to remain in the funnel or to drain off into a suitable receptacle.



Funnel for staining tissue section.

For example, if, in staining by the celloidin method, one wishes to employ the usual hematoxylin and eosin stains, proceed as follows: 1. Place the cut sections from alcohol into the perforated tray, open the stop-cocks and allow the alcohol to run into the waste-alcohol bottle. 2. Wash out all traces of alcohol, allowing water to run into suitable receptacle. 3. Close stop-cock and pour on sections, hematoxylin. After three to five minutes, open stop-cock and allow hematoxylin to run into original bottle (the same dye, of course, can be reused). 4. Wash sections with water which allow to run off. 5. Close stop-cock and pour on eosin. After one minute, open stop-cock and allow dye to run into its original bottle (to be used again). 6. Pour on water and allow to run off. 7. Pour on 80 per cent. alcohol; allow to run off or save it. 8. Pour on 95 per cent. alcohol; after the usual exposure, open stop-cock and allow alcohol to run off. 9. Transfer sections from perforated tray to oil of origanum. 10. Mount in Canada balsam in the usual way. Of course the technic is the same, irrespective of the dyes or solutions employed.

### ADVANTAGES

1. A thousand or more sections can be stained in the same length of time that it takes to stain one by other methods.

2. The delicate sections are placed in one receptacle and remain there undisturbed throughout the process; hence, less chances of ruining tissue.

3. There is no confusion of tissues, as sections remain in the same compartment throughout the process.

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* From the Histological and Bacteriological Departments of the Long Island College Hospital.

4. The same apparatus can be used for both the paraffin and celloidin methods.

5. Stain is economized. No intermediate receptacle is necessary, the dye, after acting on tissue, is collected back into the bottle.

6. Results are uniform, as the same tissues are exposed to dye the same length of time.

7. It makes unnecessary the cleaning of ten to fifteen receptacles containing dyes, etc., and table is not littered with dishes, dyes, etc.

8. One can readily make the apparatus himself at a trifling cost.

907 St. Marks Avenue.

# THE FEMALE PERINEUM FROM A GENERAL SURGEON'S POINT OF VIEW *

ROBERT T. MORRIS, M.D.
Professor of Surgery at the New York Post-Graduate Medical School
NEW YORK

Many years ago I was impressed by the fact that common operations for perineal repair dealt with fascia only, although operators spoke of catching up muscles which were not actually seen. Examination of perineums repaired in classical ways seemed to indicate that permanently satisfactory results are often missed. The general surgeon likes really to see muscles which he brings together for purposes of repair.

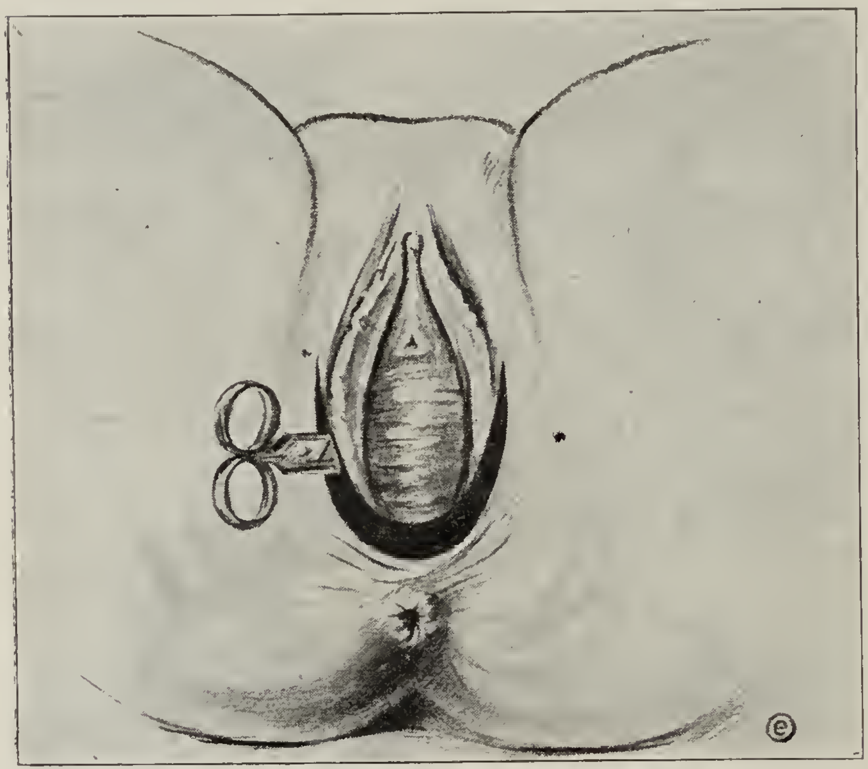

Fig. 1.—Scissors stabbed to pubococcygeal margin of levator ani muscle.

Dissections of ruptured perineums showed that atrophy of most of the muscles and fascia took place rather rapidly when they were thrown out of commission. One muscle, however, remains plump and full because it continues to act in a special function. This is the pubococcygeal portion of the levator ani muscle. If the full free margins of this muscle are exposed and brought together in the mid-line with three or four kangaroo tendon sutures, the most important contractile part of the perineum is strongly restored.

A second line of sutures, coapting margins of perineal fascia, brings into place whatever remains of the transverse muscles of the perineum and neighboring remnants of the sphincters of the vagina and anus.

Haynes[1] describes elaborately the anatomy of this region, together with the steps required for restoring what he calls the pubococcygeal "hammock," consisting of the external sphincter of the anus, sphincter vaginæ and the transverse muscles of the perineum. He introduces a refinement over my former operation, in paying particular attention to union of the sphincters with each other, completing the hammock.

My operation for repair of the perineum, however, has been satisfactory without definitely regarding this refinement of Haynes, because it is probable that remnants of sphincters were actually included in the continuous fascial suture overlying the muscle suture of the levator ani.

My views on the subject of perineal operations in the female may be briefly stated as follows: In the freshly torn perineum one cannot make nice anatomic union of structures which are contused and lacerated; consequently *en masse* repair must be done. Very good union is commonly obtained, because this is one of the "protected areas" of the body, and infection of tissues dee not readily occur if Nature's antiseptic, the norma lochial fluid, pours over the wound freely and continuously.

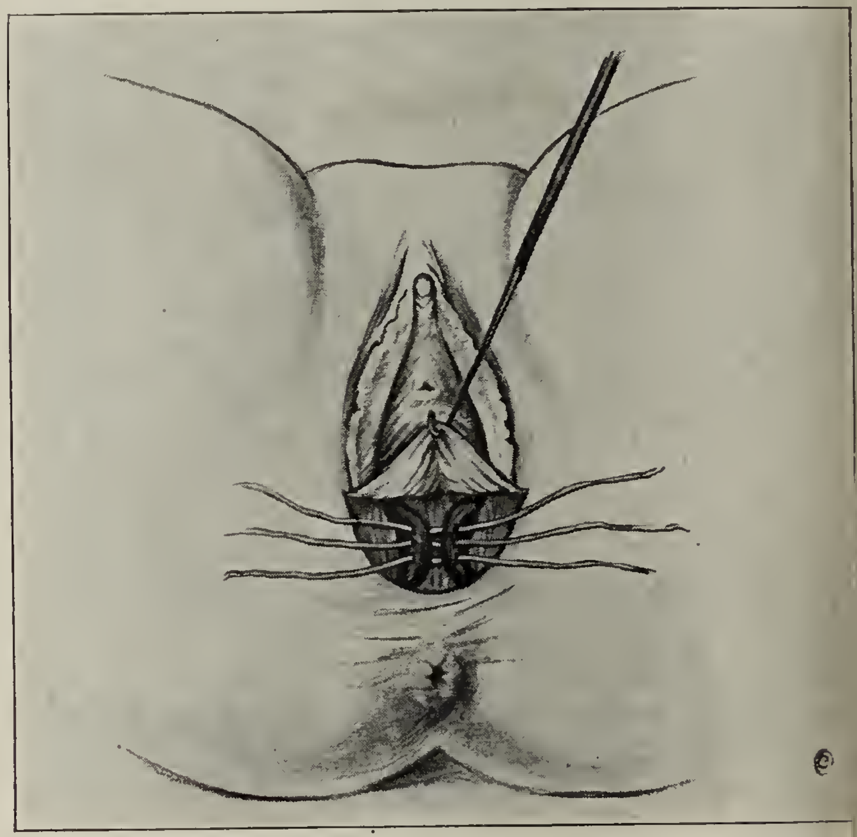

Fig. 2.—Sutures for uniting margins of pubococcygeal portion o levator ani muscle.

If immediate repair does not succeed, the nice anatomic operation should be done within the course of few months, before muscles and fascia thrown out o action have undergone atrophic changes. Good repai may be made, however, years afterward, even with complications of rectocele and cystocele present, if we properly utilize the levator ani muscles, which have no undergone changes of consequence.

The anatomic operation can be done speedily an thoroughly, requiring but a few minutes of time, wit no other instruments than a pair of straight, sharp pointed scissors and a Hagedorn needle.

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* Read at the meeting of the Medical Association of the Greater City of New York, April 15, 1912.

[1] Haynes, Irving S.: Am. Jour. Obst., 1908, lviii.

### TECHNIC

Make a horse-shoe incision, beginning just above the anus, and extend the incision arms ventrad to points nearly opposite the urethral meatus. Put a finger in the vagina, and feel the well-rounded margin of the pubococcygeal portion of the levator ani muscle on one side. Enter the point of the closed scissors in one arm of the horse-shoe incision, stab the closed scissors down to the muscle that is felt by the finger, open the scissors *in situ* widely, stripping the muscle free for a couple of inches. Repeat the process on the opposite side. Lift up the vaginal flap with a tenaculum and snip all fascia interposed between the levator ani muscle margins. Hook a large curved Hagedorn needle armed with kangaroo tendon into one levator ani muscle margin, then into the opposite one, and lift the two out plainly in sight by pulling on the suture. Tie the suture, but leave long ends for traction purposes until two or three more kangaroo tendon sutures have reconstructed this important contractile part of the perineum. Next, run a continuous suture of small kangaroo tendon through margins of perineal fascia, and bring these fascial margins together. This will approximate pretty well whatever remains of transverse perineal muscles and sphincters. Bleeding may usually be disregarded during the course of the operation, as it practically stops by the time the suturing is completed.

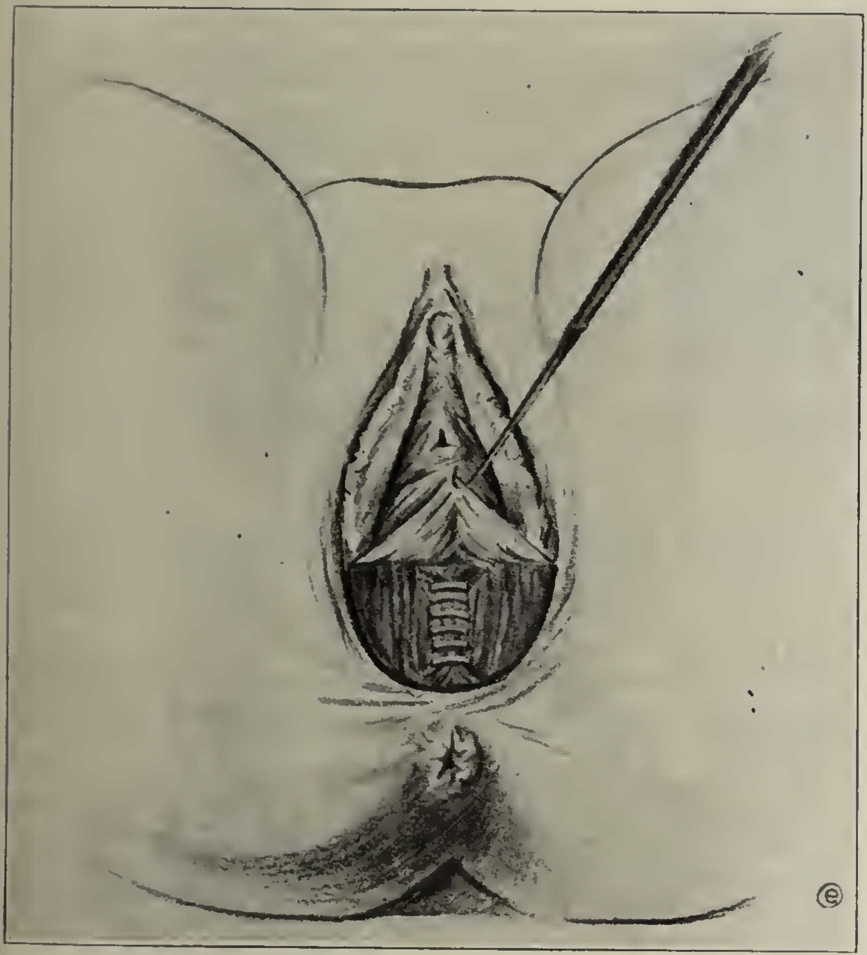

Fig. 3.—Sutures uniting margins of perineal fascia and placing in action remnants of sphincters and of transverse perineal muscles.

Leave room for the tips of three fingers in the vagina. When all of the deep suturing is completed, there should be just room in the vagina for the entrance of the tips of three fingers used as a gauge.

Finally, unite margins of skin first with a single interrupted suture of small chromic catgut in the mid-line for artistic symmetry. The rest of the skin sutures, preferably of small chromic catgut, may be continuous or interrupted as one pleases, but not drawn too snugly; leaving room for escape of oozing blood.

Dust the suture line with aristol. Put on a firm pad with T-bandage, for compression to stop oozing, for a few hours. Empty the bladder by catheter for three days. Keep a handful of dry gauze between the thighs, against the perineum, to avoid maceration of sutures, for a week.

In cases with complete rupture of the external sphincter of the anus, a second horse-shoe incision is made, with the arms pointing dorsad. Expose the blunt ends of the contracted sphincter ani, unite them accurately with one or two kangaroo tendon sutures, and then proceed to do the chief perineal operation above described.

Cases with very extensive perineal lacerations, involving walls of rectum and vagina, requiring special technic, are not described in this article, the object of which is to present a really satisfactory perineal operation, requiring but a few minutes of time for its performance and applicable in most of our cases as they run.

616 Madison Avenue

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# SALVARSAN IN PELLAGRA

## REPORT OF CASES TREATED AT THE GEORGIA STATE SANITARIUM IN 1911

W. J. CRANSTON, M.D.
MILLEDGEVILLE, GA.

The treatment of pellagra has demonstrated only the absolute futility of the drugs used. We constantly hear of some specific, which, on a fair trial in the hands of those in position to pass on the remedy, proves to be an utter failure. Too many spontaneous cures are accredited to the use of drugs or some line of treatment.

Among the first drugs strongly advocated was atoxyl. This preparation of arsenic was given a fair trial by Dr. N. P. Walker, of the Georgia State Sanitarium, who decided that there had been no effect made on pellagra so far as he was able to see. Subcutaneous injection of bichlorid of mercury proved equally useless.

Hexamethylenamin (urotropin), also used by Dr. Walker, produced no beneficial effect that he was able to observe.

Mizell, of Atlanta, strongly advocates the use of calcium sulphid. In a recent article he says: "In fact, the results are so prompt that I would feel like claiming specific action without a knowledge of its chemical action." Again: "In one case in which the eruption had been continuous for twelve months, the patient, although being treated by arsenic, was relieved in twelve hours; was out of bed in three days, and had no erythema in ten days." Quoting again: "In all cases this drug is all that is necessary to relieve aggravated cases of simple pellagra." These quotations show this observer's faith in his remedy.

Calcium sulphid was given a careful and systematic trial by me and my assistant absolutely without success.

Baker, of Augusta, Ga., advocated sodium bicarbonate, 0.3 gm. every four hours, and 0.3 gm. pancreatin, in salol-coated tablets, every four hours, a meat-free diet, and stressing carbohydrates.

Case 1.—J. C., a well-nourished, middle-aged colored man, resisted all other treatment. Late in the summer of 1910 he was put on this line of treatment and the effect was remarkable. He became entirely well, and was discharged as clinically cured. We have not heard from him since.

The following early summer this treatment was inaugurated in some eight or ten colored females and was uniformly unsuccessful. J. C. "just got well."

Walker and Yarbrough, in the spring of 1911, gave salvarsan to three pellagrous patients.

Case 2.—P. T., a well-nourished, middle-aged, colored woman had a most severe attack, and was thought to be in a hopeless condition. Salvarsan was given intravenously; recovery was prompt and complete, except mentally. She gained rapidly in weight and was permitted to go home clinically cured. We have not heard from her.

Case 3.—N. D., colored woman, aged 23, had first symptoms probably in 1909; admitted to the sanatorium in October, 1910; following spring developed classical pellagra symptoms; was given salvarsan intravenously. All the symptoms cleared up, and she remained well until April, 1912, when she complained of severe abdominal pain and she has slightly inflamed tongue and marked tremors now (April). Benefit, if due to salvarsan, is only temporary.

Case 4.—L. C., colored woman, well nourished, aged about 25, developed classical symptoms of pellagra in the spring of 1911; was given salvarsan intravenously. All the symptoms cleared up promptly, and she remained entirely well until the early part of March, 1912, when she had a sudden rise in temperature to over 105 F. with general prostration. Nothing pointing to other troubles developed, and we were finally forced to admit the return of pellagra. Diarrhea then developed. She was again given salvarsan on March 16, 1912, and her general condition has improved slightly, high temperature immediately disappearing. Benefit, if due to salvarsan, was only temporary.

Following this work by Walker and Yarbrough, I gave salvarsan in eight cases in the summer of 1911.

Case 5.—A. B., a colored girl, aged 16, laborer, developed first symptoms probably in the summer of 1910. In the spring of 1911 she developed classical symptoms of pellagra; was given salvarsan intravenously and all symptoms abated nicely, and the patient was permitted to go home on furlough in the late winter, clinically cured.

Case 6.—N. S., well-nourished colored woman, aged 39, was said to have developed classical symptoms of pellagra, nervous type, for the first time in April, 1911. She was given salvarsan July 29, 1911, intravenously. Before treatment the patient had been having convulsions for about one week. Following administration of the drug convulsions stopped. The skin, tongue and intestinal symptoms promptly cleared up. Aug. 23. 1911, patient had three convulsions within four hours and died in the fourth. Benefit in this case, if due to salvarsan, was very brief.

Case 7.—T. S., emaciated colored woman, aged 32, showed first symptoms of pellagra in the fall of 1910. In the spring of 1911 patient developed typical symptoms of pellagra, nervous type, and was given salvarsan intravenously Aug. 11, 1911. Following this there was slight intestinal improvement, but otherwise no change. Patient died Aug. 26, 1911. No benefit.

Case 8.—J. F., fairly well-nourished colored woman, aged 22, laundress, in the summer of 1911 developed typical pellagrous symptoms, nervous type. She was given salvarsan intravenously, and mouth symptoms cleared up. Her general condition showed little improvement. She dragged along until Jan. 6, 1912, when she died of a complication of nephritis, meningitis, atelectasis of the right lung, etc. Benefit in this case, if due to salvarsan, slight.

Case 9.—N. N., a well-nourished colored woman, aged 26, in the spring of 1911 showed classical symptoms of pellagra (probably the first) with mania. July 20, 1911, salvarsan was given intravenously. July 30 there was a general improvement in the skin, bowels, tongue and mental symptoms. Aug. 4, 1911, she was reported much worse, gradually grew weaker, and died Sept. 22, 1911. Benefit, if due to salvarsan, brief.

Case 10.—M. J., poorly nourished colored female, aged about 16, in the spring of 1911 developed nervous type of pellagra; was in rather bad shape when salvarsan was given July 29, 1911. By August 22, all symptoms had slightly improved except twitching of the upper lip, which had not abated. She is virtually the same now as when given salvarsan. Probably no benefit in this case.

Case 11.—A. L., fairly well-nourished colored female, aged 30. Second attack. Salvarsan given intravenously Aug. 5, 1911. On August 30 there was general improvement. December 15, bowels were normal; tongue red on edges and fissured; skin symptoms improved but not well. March 25, 1912, general condition good, but roughening over elbows noticeable; tongue showed tremor and slight inflammation, and she has had severe abdominal pain for a week (April). Benefit, if due to salvarsan, was not permanent.

Case 12.—O. S., well-nourished colored female, aged 27. First attack of pellagra, which is typical, developed Aug. 11, 1911. On August 16 salvarsan was given intravenously; on August 22 all symptoms had disappeared. August 25 patient was in excellent condition. She had remained well until the past few days (April, 1912) when she complained of nausea, which we are disposed to attribute to the return of pellagra. Benefit, if due to salvarsan, was marked but not permanent.

Of the eleven patients given salvarsan in 1911, two went out on furlough clinically cured, and we have not heard from them since the opening of the pellagra season. One was supposed to have been well until the nausea developed a few days ago (April, 1912). As stated, this is construed as a return of pellagra; three have relapsed and have been treated the second time; one is unimproved; four are dead. Not a very encouraging showing.

In percentages: 18 per cent recovered; 9 per cent. unimproved; 36 per cent. relapsed, and 36 per cent. died.

Dr. Martin, of Hot Springs, Ark., gives us a very good paper on salvarsan and pellagra, and would explain my failure to get results by saying I should have repeated my treatment every ten days, as that appears to be the cycle of the theoretical pellagra germ. Perhaps so. The symptoms in my cases, however, have not shown the prompt and spectacular abatement that his cases have shown.

I am forced to the conclusion that we have not as yet found a cure for pellagra. Salvarsan, however, has not been given a thorough trial as yet, and it may be that the coming spring will develop obscure points in the use of salvarsan that will bring more certain and permanent results than I have been able to obtain with its use thus far.

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# A CASE OF FATAL HEMATOPORPHYRINURIA FOLLOWING THE PROLONGED USE OF TRIONAL AND SULPHONAL

Arthur W. Rogers, M.D., Oconomowoc, Wis.
Professor of Nervous Diseases, Milwaukee Medical School, Medical Department, Marquette University

Because of the unusual occurrence of this condition it might be well to define it and consider it briefly from a historical standpoint.

Hematoporphyrin is described as hematin without the iron, and, in minute traces, occurs as a constant constituent of normal urine. Hematoporphyrin is frequently present in the urine in increased quantity in disease, but without being associated with any obvious change in the color of the urine. This form of hematoporphyrinuria is seen in many ailments and was first described in connection with measles and rheumatic fever. Again hematoporphyrin may occur in great excess in the urine associated with a distinctly abnormal color described as pink, dark brown, port wine or almost black. Until recently it was supposed that it was the hematoporphyrin which caused these abnormal colors, but we now know that other elements, as yet unrecognized, are responsible for this, since these changes in color occur without discoverable hematoporphyrin in the urine and even persist after its removal.

Hematoporphyrin appears in the urine in pathologic quantities under two conditions:

1. A class of rare cases due to disturbed metabolism, apparently of gastro-intestinal origin. This type is more liable to be intermittent or paroxysmal, or again the condition may exist for many years. In this group the abnormal condition of the urine seems not to be in itself of any very grave significance.

2. In a larger class of cases we find that hematoporphyrinuria is a symptom of drug intoxication, usually sulphonal, trional or veronal. The condition is only seen in those cases

in which one or more of these drugs have been used over a more or less prolonged period and not in acute poisoning.

Several years ago I had a patient who had taken, with suicidal intent, 120 grains of trional in one dose, but no observable changes in the urine followed:

The patient was a man, aged 39, suffering from chronic neurasthenia. For several years he had suffered from pronounced insomnia and had been accustomed to take more or less trional. Having had him under my observation for several weeks at a time during the past four years, I am confident that he was not immoderate in the use of hypnotics until early this winter. While at home he had an acute exacerbation of all his symptoms and began the use of increasing doses of sulphonal and at times would use trional. Jan. 24, 1912, he again came under my observation and so far as I could judge had averaged about 12 grains of sulphonal each twenty-four hours for from four to five weeks with an occasional dose of 15 grains of trional. At this time he exhibited a series of new symptoms, viz., profound exhaustion of body and mind, obstinate constipation, tympanites, nausea, occasional vomiting and much abdominal pain which he localized around the umbilicus. The urine was scanty and presented the appearance of free blood, but failed to react to blood tests. The above symptoms gradually grew worse and during the next ten days his condition became critical. He was unable to retain anything on his stomach; the bowels acted as if obstructed and tympanites was intense. Morphin was necessary to relieve the abdominal pain and give him some sleep. At this time the urine was passing more freely and was of a dark port-wine color. Death from exhaustion occurred February 18.

Dr. Arthur Patek of Milwaukee kindly made a urinalysis which he reported as follows: Specific gravity, 1.022; slightly acid; color distinctly a dark port-wine; sugar and albumin negative; negative to free blood tests; microscopically nothing was found but a few small hyaline and granular casts; no blood-cells or other cellular elements.

It would seem from the description of cases in the literature and from the case just described that the symptoms of this condition were quite well defined, namely, marked gastric distress with almost continuous vomiting, continuous abdominal pain, particularly around the umbilicus with tympanites, obstinate constipation and the usual characteristic discoloration of the urine.

The number of these cases described are quite limited. Günther summarizes the fourteen acute cases reported up to date; five of the patients died, the others recovered. He also reports nine cases of chronic hematoporphyrinuria which he speaks of as congenital and not due to drug intoxication.

The treatment of this condition has been wholly empirical. Sodium bicarbonate, in large doses, has been recommended, presumably to offset the effect of some gastro-intestinal toxin and the stimulation of elimination through the bowels preferably by the free use of magnesium sulphate.

My only comment on the outcome of this case is that it is one more vigorous argument against the all-too-prevalent laxness in prescribing and the failure of the physician to prevent the refilling of his prescriptions without his consent, and to caution his patients against the dangers in the use of all these coal-tar derivatives.

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## A FACE-MASK

Malcolm E. Smith, M.D., Seattle, Wash.

For the past eighteen months I have used, in the Copper River and Northwestern Railway Company's hospital, at Cordova, Alaska, where I have been chief surgeon, a face-mask showing the following features:

The mask is made of heavy muslin sheeting which is easily slipped over a nickeled wired frame somewhat resembling bowed spectacles and is firmly secured in the back with three pairs of tapes. The frame holds the mask sufficiently far enough from the face, without obscuring the line of vision, thoroughly to protect the operative field from perspiration or any excretions from the wearer's mouth and nose (Fig.1).

The material is less pervious than manifold layers of gauze. This greatly lessens the expense, as it is designed to be laundered before each sterilization and used repeatedly. It is light, cool, easily put on and stays in place without binding or annoying the wearer, thus greatly adding to his comfort. It may be readily adjusted to the features of various individuals.

With these masks I use caps of the same material, open in the back and fitted with draw-strings (Fig. 3). As placed on the market by Sharp and Smith, Chicago, each package contains four masks and four caps. After each operation the muslin is detached from the frames, laundered, replaced on the frames and put in packages, to be sterilized for a subsequent operation.

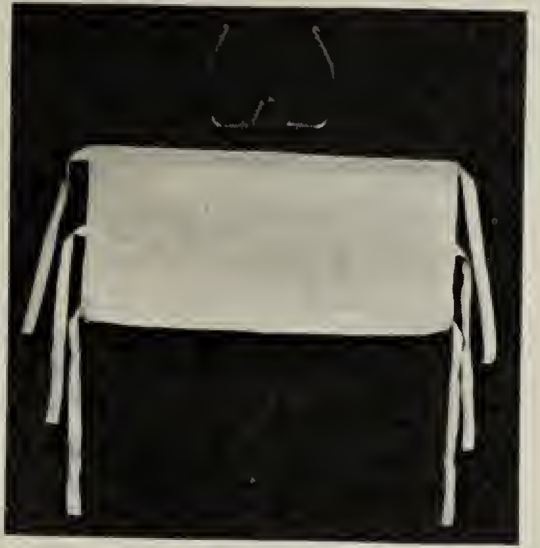

Fig. 1.—Face-mask of heavy muslin sheeting with wire frame to be slipped into it; for use as in Figure 3.

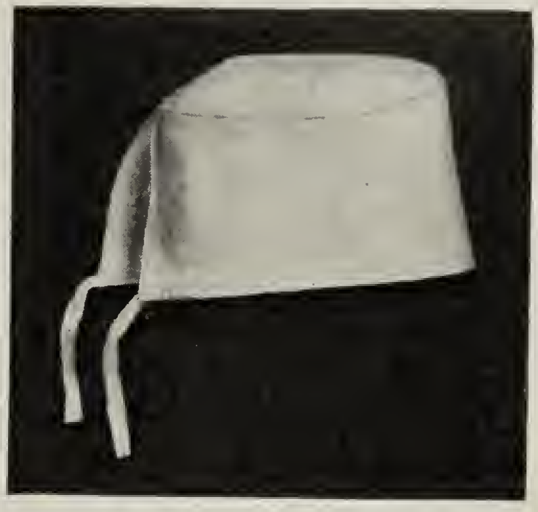

Fig. 2.—Improved adjustable cap. It will be noted that the cap is open in the back and has tie-strings so that it is adjustable to any size head.

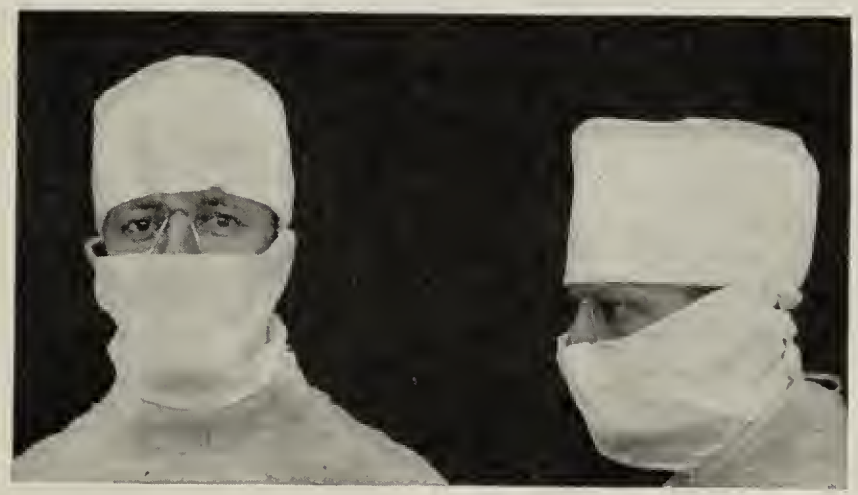

Fig. 3.—Front and side view of cap and mask in position. The wire, bent at the nose like a pair of spectacles, prevents undue pressure on the nose, although the tip is covered, and holds the mask away from the face, making it cool and comfortable. At the bottom, the neck is protected, as well as the chin. Any perspiration runs down inside of the mask.

Cobb Building.

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**Transmission of Infectious Diseases.**—Every competent health officer of to-day bases the chief work of his department on the fundamental conception that, so far as our present knowledge goes, every contagious disease is dependent for its spread on the transfer of tangible material from a specifically infected person to the next victim. He further knows that this infectious material is given off from the affected individual in the body secretions and excretions, except in that group of diseases in which some insect carrier acts as an intermediary host.—Levy in *Am. Jour. Public Health*, January, 1912.

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SATURDAY, MAY 18, 1912

## THE ANASTOMOSIS OF THE PORTAL VEIN AND THE VENA CAVA

Eck's fistula, involving the establishment surgically of a communication between the portal vein and the vena cava, is familiar as an experimental device for diverting the portal blood from the liver and thereby altering the activities of that organ. The difficulties of technic involved in the operation and the delicate manipulations which such blood-vessel anastomosis calls for have restricted the employment of this method of partial liver exclusion to a few skilled investigators. From year to year improvements and simplifications of the technic have brought this important surgical expedient within the range of an increasingly larger number of experimenters.[1]

Eck's original intention was to employ the operation for the palliation of certain pathologic conditions, notably abdominal ascites due to cirrhosis of the liver. He never ventured, however, to perform it on human beings. The earlier reports of the behavior of dogs with Eck fistulas indicated that the animals with a sidetracked portal circulation were extremely sensitive to an exclusive meat diet, apparently developing some form of poisoning from products of the digestion of meat which are ordinarily carried directly to the liver and presumably detoxicated there. This injurious effect of a pure meat diet under these conditions has repeatedly been confirmed.

Bernheim and Voegtlin[2] have found, however, that on a mixed diet, consisting of milk, meat and bread, Eck fistula dogs will live for a long time without showing any noticeable abnormalities. They gain in weight and are lively in appearance. The sexual functions are not impaired. The urine does not contain any abnormal constituents, despite the marked alterations in the conditions of the hepatic circulation. Nevertheless certain metabolic processes are found to be more or less depressed. There is a lessened tolerance for sugars. The formation of bile constituents is decreased, often to such an extent that ligation of the common bile-duct is not followed by obstructive jaundice. Obviously much less blood passes the capillary system of the liver and therefore fewer red blood-corpuscles, the ultimate sources of the bile pigments, are brought into contact with the liver cells. The hemolytic functions of the liver are diminished. Bernheim and Voegtlin are confident that the portal vein and the vena cava will be successfully anastomosed in human beings in the near future. They hold that the feasibility of the operation is beyond question and believe that it is perfectly compatible with life. The dangers of intoxication by errors of diet in individuals with occluded portal circulation is remote; and surgeons like Bier in Germany and Vidal in France look forward to a satisfactory application of the Eck fistula operation.

The Baltimore investigators remark: "In those suffering from cirrhosis of the liver, we believe that an Eck fistula will give the relief that has been earnestly desired. It is only necessary to obtain a patient early enough in the course of the disease to carry out the various steps of the procedure." Meanwhile further experimental investigations in this field would seem worth while.

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[1] The most recent improvement is that of Bernheim and Voegtlin, described in Johns Hopkins Hosp. Bull., 1912, xxiii, 46.

[2] Bernheim and Voegtlin: Is the Anastomosis Between the Portal Vein and the Vena Cava Compatible with Life? Johns Hopkins Hosp. Bull., 1912, xxiii, 46.

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## THE NATURE OF HYPERTROPHY OF THE PROSTATE

It is said that from 35 to 50 per cent. of all men over sixty years of age have an enlarged prostate, although not all of them may show symptoms. The nature of the causes of these enlargements has long been the subject of discussion and study. Ordinarily it is said that the so-called hypertrophied prostate is usually predominantly fibromuscular or glandular in structure, both these changes occurring diffusely or nodularly, nodules being the rule, however, in the glandular form, which is the more frequent. Of the causes that have been advanced from time to time may be mentioned heredity, active and passive hyperemia, arteriosclerosis, retention of prostatic concretions and cessation of the internal secretion of the testicle; but most numerously supported is the oldest view of all, namely, that it is an "idiopathic" affection of unknown cause.

Of recent years some have urged that the underlying process leading to prostatic enlargement is essentially inflammatory and dependent in most part on ancient gonococcal infection, which finally has led to proliferation of the connective tissue about the ducts with narrowing of the lumina and consecutive changes in the gland. On the basis of a thorough examination of a large number of hypertrophied prostates, Runge concludes that it practically always involves processes of an adenomatous character. These growths fall into three groups: first, intracanalicular papillary adenomas; second, intracanalicular papillary fibro-adenomas; and third, tubular adenomas. The distinction between the simple adenoma and the fibro-adenoma is based on the amount of connective tissue apparent. Chiari,[1] in whose institute this work was done, agrees that in by far the largest percentage of enlarged prostates, the process is an adenomatous overgrowth, independent of inflammation, neoplastic in character. The new tissue consists largely of newly formed glands with high cylindrical epithelium from which emerge epithelial sprouts that eventually form typical papillæ, recalling very much the hyperplasia observed in certain goiters. The tissue between the adenomatous areas may show signs of atrophy from compression, the smooth muscle tissue not being increased. In a few instances of prostatic enlargement, however, there is little or no glandular proliferation, but increase in the muscular and fibrous tissues, so that one may speak of a muscular or fibromuscular overgrowth. These forms, however, are much less frequent than the adenomatous forms. Very rarely, indeed, pure myomas occur in the prostate.

These results consequently do not support the view that prostatic hypertrophy is the result of inflammatory changes, but bring us back to the old idea that it is an idiopathic new growth of the structural elements of the prostate. Of course, inflammatory changes may develop secondarily in the enlarged gland. It would seem that this general conclusion harmonizes best with the fact that many patients with hypertrophied prostate never have had inflammations of the urinary tract, gonorrheal or otherwise. As in the case of human tumors in general and of the analogous proliferations in the thyroid gland and in the mammary gland, the exact cause of prostatic hypertrophy must be regarded as not yet understood. It naturally lies near at hand to associate the changes in the prostates of old men with circulatory disturbances in the organs of the pelvis.

## SUMMER DRINKS AND BACTERIA

The summer days will soon be here again, bringing with them both the joys and the dangers of the heated season. Among the special requisites of the warm weather are the carbonated beverages, with "soda-water" in its various manifestations as a most conspicuous type. To a very large class of our population these nonalcoholic drinks appeal so strongly as refreshing and innocuous forms of fluid intake that their purity and harmlessness ought to be adequately safeguarded. In respect to the presence of preservatives, artificial coloring matter, saccharin and similar sophistications, the "summer beverages" have been subjected to a careful control by the various authorities entrusted with the enforcement of the food laws. But there appears to be a current misapprehension in respect to their bacteriologic features which needs to be counteracted.

There is said to be a tradition among bottlers of carbonated soft drinks, founded, as far as can be learned, on very meager experimental data, that the conditions under which these beverages are prepared are destructive to bacteria. There has likewise been an unwarranted indifference to the bacterial contamination of many bottled potable waters whose sparkling appearance and attractive labels have commended them without regard for the possibility of danger lurking within. The basis for the assumed hygienic safety of the carbonated waters presumably rests on the statements that carbon dioxid under pressure is highly destructive to microorganisms. One fact to be borne in mind in this connection is that during the summer months in many cases these "bottled goods," such as ginger ale and "pops," are consumed within a short time after bottling; so that only a brief period is allowed for a microbicidal effect to manifest itself. This question has been investigated with respect to two well-known pathogenic organisms, *B. typhosus* and *B. coli*, as well as *B. prodigiosus*, under conditions imitating those which pertain in the trade.[1]

The investigations of Young and Sherwood at the Kansas University Water Laboratories show that, although there was a marked reduction in the number of organisms introduced into both carbonated and uncarbonated waters with syrup, there was not a complete killing out of the organisms introduced, during the entire experiment. They state that inasmuch as only "the most hardy individuals can resist these adverse conditions for a considerable length of time, the logical conclusion is that no water should be used in the manufacture of a carbonated drink that is in the least suspicious, and if a doubtful water is the only source of supply this should be subjected to treatment by some method of sterilization with subsequent filtration through a trustworthy and efficient filter."

## THE UNRECOGNIZED DANGERS OF CHLOROFORM GIVEN DURING CHILDBIRTH.

That the pregnant woman possesses a peculiar immunity to the evil effects of chloroform is a belief which has had almost unchallenged acceptance, ever since Sir James Clark made this anesthetic popular in obstetrics by its use on royal subjects. Text-books on obstetrics approve the teaching, and it passes current in class-room, in clinic and in practice. So far as immediate fatal cardiac or respiratory failure is concerned, it probably is true that such catastrophes rarely do occur in women under chloroform during childbirth. But in the past few years we have learned that immediate serious poisoning by chloroform, dangerous as this anesthetic is in this respect, is probably of less importance than the remote effects which follow some time later, the result of a severe and almost selective toxic action which chloroform has on the liver. Extensive fatty change in the liver, with severe intoxication accompanied by acidosis, is frequently observed, especially in children, and in adults even more often a wide-spread necrosis of the liver and profound intoxication, resembling acute yellow atrophy and causing death in a few hours, has been found to result from even moderate use of chloroform as an anesthetic. This effect of chloroform on the liver constitutes a grave danger and a serious obstacle to its wide-spread use, for it is not always possible to anticipate any special predisposition to such an accident in any given operation.

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[1] Strassburger Med. Ztg., 1912.

[1] Young and Sherwood: The Effect of the Environment of Carbonated Beverages on Bacteria, Jour. Indust. Engineer. Chem., 1911, iii, 495.

That pregnancy should confer an immunity to this effect of chloroform seems improbable, especially when we recall how frequently "acute yellow atrophy of the liver" has been reported as a sequel of childbirth, just as it has also been described as a sequel to operations. If the liver changes in the latter cases are now found to be commonly the result of chloroform, is it not highly probable that the same agent accounts for many of the puerperal cases? The possibility of such a result from chloroform administered during labor is rendered even more significant by the fact that in the puerperal state the liver often suffers severe damage from unknown causes, as seen in its maximum degree in eclampsia, and such injury would predispose to a toxic effect of chloroform. Indeed, the connection between acute yellow atrophy of the liver and the use of chloroform in pregnancy has been noted clinically by some observers, and the danger of the common use of chloroform to control the convulsions of eclampsia was pointed out several years ago by Lyons.[1]

Experimental evidence has now been furnished by Whipple[2] that pregnant dogs are fully as susceptible as normal dogs to this toxic effect of chloroform on the liver; and as dogs react to chloroform in quite the same way as man, by extensive necrosis in the centers of the lobules, it would seem fair to consider this observation as being entirely applicable to man.

Neither is the effect of chloroform limited to the mother, according to the observations of Evarts Graham.[3] He found that administration of chloroform to pregnant animals near term, even for so short a time as ten or fifteen minutes, might result in intra-uterine death of the fetuses, in which fatty changes are found in the liver. When, after very light anesthesia of the mother, the young have been born in apparent good health, they often succumb during the first week with hemorrhagic lesions or icterus and their usual accompaniments. In other words, the "delayed chloroform poisoning" which follows anesthesia in adults may also manifest itself in the new-born infant which has absorbed chloroform from its mother through the placenta. Furthermore, the anatomic effects observed in new-born experimental animals are quite the same as those characteristic of such recognized hemorrhagic diseases of the new-born as icterus neonatorum, melena neonatorum, Buhl's disease, Winckel's disease, etc. Graham points out that these various symptom-complexes may all be produced by one or by many toxic agents, chloroform being one of these, and that it is quite possible that many instances of these fatal diseases of infancy are the result of chloroform given to the mother, especially during protracted, difficult labors, when the amount of anesthetic consumed is large, and there is a considerable period during which it might be absorbed by the fetus before delivery. Unquestionably there is here pointed out by these two investigators a source of danger in the use of chloroform during childbirth which has not been generally appreciated, and this information should lead to a careful discrimination in the use of this dangerous drug in obstetrics, a use which hitherto has been promiscuous and lavish under an apparently erroneous confidence in a supposed immunity of the mother and a disregard of possible remote effects on the child.

## THE OATMEAL DIET AND THE PERMEABILITY OF THE KIDNEY

In a discussion of the oatmeal cure in diabetes which appeared in these columns some time ago[1] it was pointed out that the favorable results which have undoubtedly at times been observed clinically with this method of treatment still lack an adequate explanation. Some investigators completely deny the specific efficiency of the oatmeal treatment, attributing any reputed beneficial effects to the absence of animal protein in the diet; others assume that the favorable influence is associated with the oat starch, and maintain that equally favorable results attend the employment of other kinds of starch. In addition to all of these points of view remains the controverted assumption that the oat products contain some specific compound to which must be ascribed the ameliorating influence on the glycosuria.

Von Noorden, to whom we owe the oatmeal treatment of diabetes, has pointed out that a possible explanation of the diminished glycosuria may be found in connection with the altered permeability of the kidney. To test this hypothesis experiments have lately been conducted in his clinic at Vienna by Dr. Barrenscheen.[2] His method consisted in following the rate and extent of elimination in the urine of milk-sugar introduced intravenously in non-diabetic human subjects both before and after a diet containing a liberal addition of oatmeal as it is usually prescribed to patients. The observations show that on the oatmeal days there was in every case a noticeable delay in the excretion of the milk-sugar. The diminished volume of urine and the rise in content of sugar in the blood which accompany these effects are attributed to an influence on the kidney vessels whereby a diminished permeability manifests itself. Experiments especially directed to ascertain the seat of actio here involved gave no indication of any connection of the renal tubules with the results described.

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[1] Lyons: Northwest Med., 1906, iv, 401.
[2] Whipple: Jour. Exper. Med., 1912, xv, 246.
[3] Graham, Evarts: Jour. Exper. Med., 1912, xv, 307.

[1] The Journal A. M. A., Jan. 6, 1912, p. 38.
[2] Barrenscheen, H. K.: Ueber die Dichtung des Nierenfilter: Biochem. Ztschr., 1912, xxxix, 232.

It has frequently been reported that infectious diseases are attended with diminished excretion of sugar in patients with glycosuria. It is of interest, therefore, to note that Barrenscheen found evidences of a functional damage of the kidney vessels in such diseased conditions likewise manifesting itself by a retarded elimination of sugar after these test injections. The apparent diminution in glycosuria associated with infectious diseases is, therefore, attributable to a vascular damage to the kidney, and may manifest itself even in the absence of severer kidney symptoms such as albuminuria and the presence of formed elements in the urine. The kidney filter has merely become more impermeable and sugar fails to be eliminated through it with the same ease as earlier in the progress of the diabetes. If these investigations are substantiated by further study, they will throw an important side-light on the probable action of what is just at present a popular mode of dietetic treatment.

## HEALTH WORK AMONG INDIANS

The general policy of the United States government toward the American Indians has been to encourage and promote conditions of self-support among them. The effort has been to prepare the Indian to maintain himself without government aid and, when he is ready, to withdraw that aid. This policy has been worked out with notable success, and no feature of it is more interesting than the methods used to educate the Indians in matters of health and sanitation.

The report of the Commissioner of Indian Affairs[1] to the Secretary of the Interior for the fiscal year 1911 constitutes the eightieth such annual report. The Office of Indian Affairs has a medical supervisor, one hundred regular and sixty contract physicians, fifty-four nurses and eighty-eight field matrons. The number of Indians who receive medical care from this office is 310,926. Most of these are found in Oklahoma, California, Arizona, New Mexico and South Dakota. Great emphasis is put on the prevention of disease, although all possible care is given to actual sickness. A good beginning has been made by having physicians secure detailed information about the living arrangements of each individual by going from house to house and from camp to camp inquiring into sanitary conditions. This quickly awakens the Indians to the dangers of contagious diseases and the suggestions and instruction which are given help them toward an improvement in living conditions, and to do away with the insanitary surroundings to which so many are accustomed. The trained physicians are acquiring influence and prestige at the expense of the Indian medicine-men. In some cases, indeed, the medicine-man has become the ally and chief assistant of the physician.

Other educative and preventive methods are the employment of stereopticon lectures and motion pictures to illustrate in contrast the ordinary habitations of careless Indians and the pleasant healthful homes of those who have improved the opportunities offered by the government. In such lectures, a simple practical talk is given on outdoor exercise, ventilation, disposal of garbage, clean milk and water, tuberculosis, and trachoma.

One of the important objects of the sanitary survey has been the elimination of toilet- and bath-rooms from basements, as well as the removal from basements of all rooms used by students, especially playrooms. The field matrons prepare the way for and augment the work of the physicians. They have had a great influence in decreasing the former high infant mortality, and the severity of children's diseases. Vaccination is becoming common among the Indians, and small-pox, formerly one of their worst scourges, has decreased amazingly.

Tuberculosis is now the most serious disease. The lack of hereditary immunity, the overcrowded and unventilated houses and the insanitary habits of the Indians all contribute to a high mortality rate. In the Fort Lapwai Reservation, Idaho, practically every family in the population of over 1,400 has one or more tuberculous members. The Indian Office is enlarging its four tuberculosis sanatoriums; the one at Phoenix, Arizona, now accommodates sixty-five patients; the one at Laguna, New Mexico, twenty-five; at Fort Lapwai, Idaho, 120. At the sanatoriums over 90 per cent. of the patients have shown marked improvement, and 11 per cent. have entirely recovered.

Trachoma stands next in importance to tuberculosis. In some sections of the Southwest, from 65 to 95 per cent. of the Indians are affected. The trachoma specialists of the service have visited nearly every point in the southwest, treating existing cases, and instructing the local physicians in its prevention and treatment. At the trachoma hospital in Phoenix, Arizona, over eight hundred patients have been operated on and treated.

It is the prevailing opinion among those engaged in the work that there has been an encouraging improvement in health and in sanitation among the Indians as a whole.

## MILK STANDARDIZATION

The commission on milk standards appointed by the New York Milk Committee about a year ago has just made its final report.[1] The document is an important one.

It is always a difficult task to obtain uniformity and effectiveness in public health legislation, partly because of the rapid shifting of opinion due to advancing knowledge, partly because of variation in local conditions and partly because of the opposition of firmly intrenched commercial interests. Particularly has this been so in the case of milk-supply, in regard to which current farm practice has long violated the laws of hygiene and any suggestion of change has had to grapple from the beginning with deep-seated conservatism.

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[1] Ann. Rep. Comm. Indian Affairs for fiscal year 1911.

[1] Public Health Report, May 10, 1912.

Unfortunately reformer and laboratory worker have on their side by no means presented a united front, and practical administrators have sometimes been almost lost in a wilderness of bacterial "standards" and specifications. The work of the certified milk commissions has done a great deal to bring us out of this state of confusion and bewilderment, and there are signs that we are entering on a more satisfactory stage characterized by greater precision and unanimity. The report before us is a long step toward this end.

At least two points in the report are likely to attract general attention. One of them is the emphasis on the grading of milk. The advisability of some sort of classification of milk is obvious. Although a difference in the quality of every article of food has long been recognized in commerce, as in the "dirties," "checks" and "extras" of the egg trade, milk, which from a sanitary point of view is perhaps the most important of them all, has until lately remained ungraded and unclassified. Good, bad and indifferent milk has been sold at a uniform price, and few producers have had anything to gain by using care or to lose by being slovenly. The commission recommends grading milk into four classes: (A) certified milk or its equivalent; (B) inspected milk; (C) pasteurized milk; (D) milk not suitable for drinking purposes. The classes are carefully defined in the report and will, we believe, find ready acceptance. They are in part similar to gradings previously proposed and are the natural outgrowth of several years of discussion. The important fact to notice is not so much the precise delimiting of various grades as the assumption which runs apparently through all the deliberations of the commission that some sort of classification accompanied by precise and controlled labeling is indispensable.

Another point of general interest is the favor with which the commission regards the process of pasteurization. The report makes it clear that in the opinion of the commission the chief distinction in grades of milk is that between raw milk and pasteurized milk. Two sentences are significant enough to be quoted: "The commission thinks that pasteurization is necessary for all milk at all times excepting certified milk or its equivalent. The majority of the commissioners voted in favor of the pasteurization of all milk, including certified." Such an opinion is naturally accompanied by detailed specification of pasteurizing methods and a full survey of the difficulties encountered in the proper supervision of pasteurization on a large scale. The necessity of adopting standard rules for pasteurization, as indeed for all the processes of producing, handling and distributing milk, is frankly recognized. The commission believes that such rules should be just as carefully drawn and as rigorously applied as any of the excellent regulations made by the American Association of Medical Milk Commissions. The rules proposed are clear and concise, as may be seen by consulting the full report.

One other recommendation finally may be mentioned. We have maintained on several occasions (for example, in discussing the Montclair, N. J., milk situation) that a judicious publicity is of advantage to both producer and consumer. The shrewd consumer may then choose his milk-supply intelligently with all pertinent facts before him, and the producer is given a proper incentive and may reap the reward of his labor. We are gratified to observe that the commission recommends "that the reports of laboratory analyses of milk made by departments of health be regularly published."

## INVESTIGATIONS OF THE TITANIC DISASTER—AMERICAN AND BRITISH

The first horror of the *Titanic* disaster has passed, and the American and British publics are now waiting to see what practical results the tragedy will bring forth. The senatorial inquiry brought out many facts damning not only to the steamship companies, but also and equally to the British Board of Trade which has full power to make such regulations as it deems necessary for the safety of British ships. Some English newspapers, whose opinions, apparently, are largely shaped by their advertisers, have seen fit to criticize adversely the American inquiry into the disaster. That this criticism is not shared by the British people generally is evident from the attitude of the more responsible and conservative newspapers on the other side. Two facts Senator Smith's committee brought out clearly and beyond question: first, that the *Titanic* was being driven at high speed through a sea known to be dangerous with ice; second, that the steamship did not have life-boat accommodation for one-half as many people as it carried.

It remains to be seen what additional facts may be brought out by the British inquiry. Thus far the trend of the investigation is not encouraging. The British public may well look with suspicion on a court of inquiry that is to be presided over by Lord Mersey. This gentleman was on the South Africa committee which inquired into the Jameson raid and there has probably never been a more scandalous wielding of the official whitewash-brush than that which occurred in the farcical investigation of the raid in South Africa. Lord Mersey has already used the technicalities of court procedure — he is a judge — effectually to prevent a witness answering a question of vital practical importance in the present inquiry.

Americans are sometimes likely to think that the "interests" in this country are able to stifle damaging investigations in a way that would not be permitted in Europe. This is not the case. Truth is choked with equal ease on the two sides of the Atlantic. The difference is one of method. The throttling is done with a little more finesse in the Eastern hemisphere than in the Western, but it is equally effective.

The British Board of Trade, which is directly responsible for the safety of British ships, watched the building of the *Titanic* — at least, such was its duty — but raised no protest when the original plans of the vessel were changed during the building so that the life-boat accommodation was reduced nearly one-half. Such official blindness is not to be wondered at when it is known that the board's advisory committee on safety regulations at sea has, as one of its prominent members, Mr. A. M. Carlisle, who is also a consultant to the firm that was building the *Titanic*. The chairman of the same committee, Sir Norman Hill, is the head of the firm, Hill, Dickinsons & Co., which is acting as counsel for the White Star Company during the present inquiry!

The Board of Trade regulations exempt big liners from carrying life-boat accommodation sufficient for all on board provided these liners install wireless apparatus. At the same time, the board does not compel the installation of wireless apparatus on vessels under 10,000 tons. Practically these regulations mean that while the large boats with insufficient life-boat accommodation can call for help by means of wireless, the majority of small boats which might be expected to be in the vicinity would be unable to catch the call for help and thus for practical purposes the efficiency of the wireless equipment is reduced almost to zero. Of what value is a fire-alarm box just outside the house if the fire-engine station is so distant that the house would be consumed before it was possible to reach it?

The whole inquiry shows, as has been pointed out time and again, that safety on the big liners has been sacrificed at every point for luxury, for it is luxury that pays dividends. It is the first-class passengers that are catered to; this was true not only in the building of the ship but, apparently, in its sinking. "Every rich child saved, fifty-five out of seventy-eight poor children drowned." As a British magazine trenchantly remarks: "The rule of the sea as interpreted in a crack liner is, not women and children first, but *ladies* and *their* children first."

Senator Smith may lack the technical knowledge of maritime matters possessed by Lord Mersey; his committee may have asked some questions that to a seaman appear trivial or even ridiculous; but whatever else may be charged against the senatorial committee, suppression of the truth or any attempt to turn the investigation into a whitewashing affair cannot in fairness be alleged. It is to be hoped, both in the interest of common humanity and for the good name of British shipping, that the same earnest desire to get at the truth, no matter whom it may hurt, will actuate the official body at present inquiring into the *Titanic* disaster in Great Britain.

# Current Comment

## WORKING THE PROFESSION IN THE INTERESTS OF QUACKERY

The ramifications of quackery are many and various. The matter that follows starts from nowhere and leads nowhere; nevertheless, it is of value not only for the information given, but because it shows the menace of quackery to the public. Last November, physicians in various parts of the country received a short letter from a physician in central New York, stating that its writer was preparing a paper on locomotor ataxia and, wishing to make it exhaustive, desired "to get into personal communication with as many of these sufferers as possible." With this object in view, he asked:

> "May I not ask your assistance to the extent of sending me the names and addresses (not for publication) of any you may know in your city or county?"

Several physicians wrote to The Journal asking if there was a "nigger in the wood-pile." Inquiries made brought the information from the New York physician that "the statements made are genuine and honest and requests are legitimate." Some of the physicians who received the request, however, sent in names of hypothetical cases of locomotor ataxia. The results were interesting. Those whose names were sent in received no letter from the New York man, but did receive at intervals imitation typewritten communications consisting of testimonials relative to the wonderful cure for locomotor ataxia by a Dr. C. H. Burton of Detroit, Mich. The same individuals also received an elaborate booklet of thirty-two pages describing the cure of tabes by Burton's wonderful serum. Burton, who is a graduate of the Detroit Homeopathic Medical College, used to live at Hastings, Mich., where he was associated with that notorious fraud "Drs. Mixer," the cancer-cure fake which was put out of business both by a fraud-order issued by the Post-Office and by prosecution under the Food and Drugs Act. Since the Mixer concern has ceased to be a source of income for Burton, he seems to have turned his attention to the exploitation of an equally cruel fraud, that of selling a fake cure for locomotor ataxia. After Mixer had been denied the use of the mails, pressure was brought to bear at Washington and an investigation was made of the Post-Office Department for the apparent purpose of showing that an injustice had been done to the Mixer concern. Those who read The Journal's account of the fraud order case against "Drs. Mixer" may remember that Congressman E. L. Hamilton of Michigan came to the defense of Mixer. Whether Hamilton was responsible for the attempt to discredit the government in the Mixer case or whether his evident sympathies for the cruelest kind of quackery have anything to do with the apparent immunity of Michigan mail-order medical fakes from government interference, we do not know. It is interesting in this connection to note that Mixer's congressional defenders were willing to accept C. H. Burton's statement to the effect that Mixer's nostrum would cure cancer in the face of opposing testimony from men such as Anders of Philadelphia, Carl Beck of New York, Deaver of Philadelphia, Kelly of Baltimore, Mayo of Rochester, Murphy of Chicago, Osborne of New Haven, and many other equally well-known physicians and surgeons.

### EARLY OBSERVATIONS OF ALLERGIC PHENOMENA

Recently we commented on the observations of the phenomenon of allergy by Jenner,[1] during his researches on cow-pox and small-pox. Mention was also made of the observations of Koch[1] concerning the hypersusceptibility of the tuberculous organism to a repeated dose of tuberculin. Von Behring noted a few years later that a second injection of a small dose of diphtheria antitoxin sometimes produced death in a guinea-pig, the amount required sometimes being not more than one one-hundredth of the minimal lethal dose. Theobald Smith also made the same observation with reference to diphtheria antitoxin. It would seem that these interesting observations concerning allergy, though their true significance and nature were not recognized at that time, were not the only observations along the same line. W. d'E. Emery[2] notes a number of examples previous to the description of the phenomena by von Pirquet and by Rosenau and Anderson. Magendie, as long ago as 1839, noticed that a rabbit that had received an injection of albumin without obvious ill effects might die from a second minimal dose some days later. Richet, in 1902, in studying the effects of the poison of certain actinians, noted definitely and described the production in animals of hypersensitiveness to certain substances. He found that a dog which had received a small dose of the poisons which he had investigated, and which might not cause any symptoms, would become so altered that a second dose, also innocuous to normal animals, would produce a series of remarkable symptoms and even death in a short time. He also ascertained that a period of about ten days was necessary for the production of this hypersensitiveness and that the condition lasted some weeks and was specific. These additional observations of what is now known as allergy or anaphylaxis again emphasize the point made in our former editorial that a study of the work of even very early observers might furnish suggestions which in the light of knowledge acquired by modern research would lead to important discoveries.

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[1] The Journal A. M. A., April 13, 1912, p. 1117.

[2] Emery, W. d'E.: Anaphylaxis, Brit. Med. Jour., Nov. 4, 1911, p. 1178.

**The First Mortality Records.**—At the beginning of the seventeenth century, a time when the plague was prevalent in the city and suburbs of London, matrons and searchers were appointed in several parishes within and without the city to collect records of births and burials. In the case of burials the corpse was inspected by the searchers, and the cause of death ascertained as correctly as possible from the friends and relatives. These reports were sent to the parish clerks, entered in the books of the parish vestry halls, and the results were published every Thursday. The primary object of the reports was to ascertain the mortality from the plague and its proportion to deaths from other causes and to the birthrate. Captain John Graunt, F. R. S., collected the records for twenty years, and drew up some tables from them on which he founded some interesting observations. These were the first records of mortality ever published, and, appearing in 1662, attracted much attention and went through five editions.—Powell in the *Practitioner.*

# Medical News

## CALIFORNIA

**Personal.**—Dr. J. Perry Lewis, wife and daughter, San Diego, have started for Europe.——Dr. G. E. Malsbary, Los Angeles, has purchased the *Southern California Practitioner* from Dr. Walter Lindley, Los Angeles.——Dr. Walter Lindley has resigned as trustee of the Whittier State School.

**County Medical Society Buys Site for Building.**—The Los Angeles County Medical Association Building Company has purchased a lot 132 by 150 feet at Sixth and Olive streets for $528,000. On this site, as previously stated in The Journal, the society will erect a twelve-story office building for the exclusive use of physicians.

**Dinner to Dr. Ellis.**—In recognition of the services of Dr. H. Bert Ellis, Los Angeles, in securing the meeting of the American Medical Association in Los Angeles last year, one hundred and ten members of the medical profession and other friends tendered Dr. Ellis a testimonial dinner at the University club, April 22. Dr. William M. Lewis was chairman of the evening and Dr. Norman Bridge officiated as toastmaster.

**Medical Library Nearing Completion.**—The new medical library building, opposite the Lane Hospital and Cooper Medical College, San Francisco, is nearing completion. The building covers an area of 60 by 100 feet; the book-stacks will be four stories in height, constructed of steel with glass doors and will have a capacity of 80,000 volumes, with the possibility of an increase of 30,000.

**Endowment Fund of Sanatorium Increased.**—The directors and advisory board of the Barlow Sanatorium, Los Angeles, gave a charity ball, April 10, of which the net receipts were $47,585.10, of which $34,125 was given toward the endowment fund. This makes the endowment fund of the institution $101,000 and will allow the increase in the capacity of the institution of ten beds, making its total capacity now forty beds. The institution is designed for the worthy poor tuberculosis patients, residents of Los Angeles, and the only charge made for any patient is a nominal fee of $5 per week.

## CONNECTICUT

**Health Board Organizes.**—The Hartford Board of Health held its meeting for organization May 1 and elected Dr. Thomas F. Kane, president; Dr. Charles P. Botsford, superintendent; Drs. Robert S. Starr, James F. Rooney, D. J. Molumphy and D. W. Tracy, medical inspectors, and Dr. Arthur J. Wolff, bacteriologist.

**New Officers.**—New Haven County Medical Society, April 26: president, Dr. Louis M. Gompertz; clerk, Dr. W. E. Hartshorn, both of New Haven.——Litchfield County Medical Association, one hundred and forty-eighth annual meeting, April 23: president, Dr. R. S. Goodwin, Thomaston.——Fairfield County Medical Association, one hundred and twentieth annual session: president, Dr. James Douglas Gold; secretary, Dr. Frank W. Stevens (reelected), both of Bridgeport.——Hartford County Medical Association, one hundred and twentieth annual meeting: president, Dr. Samuel W. Irving, New Britain; secretary-treasurer, Dr. Paul P. Swett, Hartford.

## FLORIDA

**New Officers.**—Hillsboro County Medical Society, at Tampa: president, Dr. J. B. Wallace; secretary-treasurer, Dr. W. M. Rowlett, both of Tampa.

**Personal.**—Dr. James Wilcox Turner, Otter Creek, is ill with typhoid in Johns Hopkins Hospital.——Dr. J. Harris Pierpont, Pensacola, has been appointed agent of the State Board of Health for Escambia County, vice Dr. Warren E. Anderson, deceased.

## GEORGIA

**Personal.**—Dr. R. V. Harris, who has been acting assistant health officer of Savannah, has resumed his duties as city physician.——Dr. O. T. Kenyon, Dawson, who has been seriously ill, is reported to be convalescent.——The office o Dr. M. Walton, Lumpkin, was destroyed by fire, April 26.

**Board Refuses License.**—The Board of Medical Examiner of Georgia has refused to grant licenses to the eleven individuals constituting the first graduating class of the Southern College of Medicine and Surgery, on the ground that three o the graduates had been allowed full credit on their terms fo two years, which each had spent in an osteopathic school, an that the other eight were students in a college not properl equipped to teach medicine and surgery. The dean of the college states that he will bring mandamus proceedings to compel the board to issue the licenses.

## ILLINOIS

**To Repair Grave of Pioneer Physician.**—A movement has been started by physicians of Madison County to recover and replace a headstone placed at the grave of Dr. Ruben Mack, the first physician to locate in Madison County, who died in 1832.

**Diphtheria at Dunning.**—At a hearing before the County Civil Service Commission, May 9, the superintendent of the Cook County Institutions, Dunning, stated that twenty patients of the institution were isolated suffering from diphtheria.

**Hospital Addition.**—An addition to St. Margaret's Hospital, Spring Valley, is planned, which will include a chapel, laundry and dormitory for nurses. Since the hospital was built three years ago, its capacity has been doubled and it is overcrowded most of the time.

**Personal.**—Dr. W. O. Bradley was elected mayor of Galesburg, May 7.——Dr. G. F. Johnson, East Moline, has disposed of his practice and will retire for a year. Dr. E. Don Taylor, Moline, will succeed him.——Dr. Stephen R. Pietrowicz announces that he will not accept the superintendency of the Dunning Institutions after July 1, when the state takes over the control of the institutions from Cook County.

**Medical School to be Independent.**—The College of Physicians and Surgeons announces that the association which has existed for fifteen years between it and the University of Illinois will be dissolved at the close of the current session. This action has come about on the initiative of the college through its refusal to renew the lease of the school to the university. The college came to the conclusion that unless the university could provide for its medical school as it does for its other departments it would be better that the college pursue its course independently along the lines of the policy already established.

### Chicago

**Personal.**—Dr. and Mrs. Frank W. Lynch have returned from Europe.——Dr. E. P. Murdock was severely injured in a collision between his buggy and an electric car, May 7.——Dr. George Mikkelsen sailed for Europe, May 7.

**Hospital for Near-Insane.**—At a meeting held May 7, it was decided to establish a new private hospital near Chicago, for the exclusive treatment of border-line insanity cases, and a cottage on a farm near the city for the use of convalescent insane patients. The hospital and cottage are to be erected and maintained by the Illinois Society of Mental Hygiene.

## IOWA

**New Officers.**—Washington County Medical Society, in Washington, April 24: president, Dr. S. W. Huston, Crawfordsville; secretary-treasurer, Dr. C. A. Boice, Washington.

**Medical Reunion and Clinic.**—The Alumni of Drake University Medical College met in Des Moines, April 16, for a two-day reunion and clinic, which had been arranged by the alumni association of the state. About one hundred were present at the reunion. At the annual banquet Dr. Charles F. Smith, Des Moines, acted as toastmaster.

**Medical Women Hold Meeting.**—The Iowa Woman's Medical Society held its fifteenth annual meeting in Burlington, May 7, and elected Dr. Georgia Stewart, Des Moines, president; Drs. Florence B. Sherbon, Colfax, and Julia M. Donahue, Burlington, vice-presidents; Dr. Clara B. Whitmore, Cedar Rapids, secretary, and Dr. Grace Yerger, Waterloo, treasurer.

**Society Opens Club Rooms.**—The new club rooms of the Waterloo Medical Society, located on the top floor of the Y. M. C. A. Building, were opened April 12, for the regular meeting of the society. The new quarters consist of three rooms, one of which is reserved for the clinic and demonstrating room, a second for recreation, and a third for a library and reading room.

**State Medical Society Meeting.**—At the sixty-first annual meeting of the Iowa State Medical Society held in Burlington, May 8-10, the following officers were elected: president, Dr. Vernon L. Treynor, Council Bluffs; vice-presidents, Drs. C. P. Frantz, Burlington, and E. E. Dorr, Des Moines; secretary, Dr. J. W. Osborn, Des Moines, and treasurer, Dr. William B. Small, Waterloo (reelected).

**Personal.**—Dr. David E. Beardsley has been appointed city physician of Cedar Rapids.——Dr. Jessie B. Hudson, assisant state bacteriologist in the University of Iowa, has resigned to become pathologist in the Woman's Hospital, Philadelphia. She has been succeeded by Dr. R. E. Echternacht.——Dr. Esther A. Ryerson, for more than two years a member of the staff of the Mount Pleasant State Hospital, has resigned and expects to settle in the West.

## KANSAS

**Tuberculosis Camp.**—A tuberculosis camp to accommodate twelve patients is to be established on the grounds of the State Hospital, Rosedale. The camp will be composed of six two-room portable houses and the state will furnish the medical treatment, provided the county from which the patient is sent will pay the cost of subsistence.

**Personal.**—Dr. W. F. Schoor has been appointed city physician of Hutchinson, vice Dr. J. W. Young.——Dr. W. E. Regier, Harper, has assumed charge of the Updegraff Hospital, Anthony.——Dr. J. C. Montgomery, Manhattan, has been reappointed health officer of Riley County.——Dr. J B. Gardner, Pittsburg, has been appointed physician of Crawford County, vice Dr. C. A. Fisher, resigned.

**State Society Meeting.**—At the forty-sixth annual meeting of the Kansas Medical Society held in Hutchinson, May 2 and 3, the following officers were elected: president, Dr. George M. Gray, Kansas City; vice-presidents, Drs. Clemens Klippel, Hutchinson, H. G. Welsh, Hutchinson, and G. A. Blasdel, Garnett; treasurer, Dr. L. H. Munn, Topeka; delegate to the American Medical Association, Dr. John T. Axtell, Newton; and councilors, Drs. C. W. Reynolds, Holton, first district (reelected); C. C. Goddard, Leavenworth, second district; W. F. Sawhill, Concordia, seventh district; O. D. Walker, Salina, eighth district (reelected), and C. S. Kenney, Norton, ninth district (reelected). Resolutions were adopted endorsing the Owen bill, and a law requiring compulsory registration with the local boards of health of all cases of venereal disease in both public and private practice.

## MARYLAND

**Personal.**—Dr. Stuart Cassard, Towson, is improving after an operation.——Dr. Charles L. Mattfeldt has resigned as president of the Catonsville Country Club.——Dr. George Y. Massenburg, Towson, has been appointed as one of the resident surgeons of the Santo Tomas Hospital, Panama, and sailed for the Canal Zone, May 15.——Dr. T. Watts Byerly, Laurel, has been reelected physician to the Maryland House of Correction.——Dr. Philip Briscoe, Mutual, has been reappointed a member of the board of State Aid and Charities.

### Baltimore

**Personal.**—Dr. Howard E. Harmon is recovering from an operation for appendicitis, performed April 23.——Dr. Roy D. McClure is ill with typhoid fever in Johns Hopkins Hospital.——Drs. Henry M. Hurd and Curtis F. Burnam have been appointed members of the Lunacy Commission.——Dr. Lillian Welsh has been appointed chairman of the committee on health of the State Federation of Women's Clubs.——Dr. Frank S. Lynn of University Hospital, has been obliged to give up practice on account of his health and will spend some time on a farm in Ohio.——Drs. Hugh Hampton Young and John M. T. Finney and their families leave for Europe in June.——Dr. Louis Virgil Hamman, in charge of the Phipps Dispensary of the John Hopkins Hospital, is ill in that institution with typhoid.

## MASSACHUSETTS

**Harvard Alumni Dinner.**—The triennial dinner of the Harvard Medical Alumni Association will be held at the Hotel Somerset, Boston, May 22. Dr. Robert M. Green, 78 Marlborough Street, Boston, is secretary.

**The Antituberculosis Campaign.**—Over 26,000 single carnations were sold in Salem by four hundred volunteer workers in the annual carnation festival held in aid of the Salem summer camp for tuberculosis patients. Over $3,000 was realized.

**Class Day Exercises.**—The class day exercises at Harvard Medical School will be held May 25. The new buildings will be open from 3 to 4; at 4 o'clock short addresses will be made by President Lowell and Dean-Elect Bradford. The Poison-Ivy oration will be given by the class speaker, and from 5 to 7 there will be a spread, with music and dancing.

**Personal.**—Dr. Robert Chambers, Jr., Woods Hole, has accepted an appointment as assistant professor of histology and embryology in the University of Cincinnati.——The director of public health and charities at Lawrence has appointed the following staff for the Lawrence Municipal Hospital:

Drs. John B. Bain, Joseph A. Dorgan, Leon G. Beeley, P. L. McKallagat, Timothy J. Daly, Charles J. Burgess, John A. Magee, Robert W. Farster, Paul R. Oeser, R. M. Birmingham, Canstant Calitri and John H. Bannon.——The following medical examiners have been appointed: Dr. George L. West, Newton Center, Middlesex County; Dr. Charles W. Bartlett, Marshfield, associate for Plymouth County; Dr. Richard Hinchey, Waltham, associate for Middlesex County, and Dr. Charles Sturtevant, Hyde Park, associate for Suffolk County.——Dr. J. W. Cahill, Worcester, sailed for Europe, April 30.

### MINNESOTA

**New Officers.**—Stearns-Benton County Medical Society, at St. Cloud, April 18: president, Dr. J. H. Beaty; secretary-treasurer, Dr. J. C. Boehm, both of St. Cloud.

**Antituberculosis Society Asks Large Appropriation.**—The State Antituberculosis Society, at its meeting in Minneapolis, April 30, outlined a legislative publicity campaign. A bill is to be presented to the legislature asking for an appropriation of $400,000, to be used in founding at least one new institution for the care of consumptives in each county in the state.

**Memorial Hospital Planned.**—As a memorial to the late superintendent of Maternity Hospital, Minneapolis, the directors plan to erect a hospital, to be known as the Martha G. Ripley Maternity, on a five-acre tract owned by the institution. The cost of construction is estimated at $100,000 and an endowment of $50,000 will be sought by subscription. The plans call for two cottages, each to cost $50,000, one to be used as a hospital and the other as a home for girls.

**Rochester Scarlet Fever Epidemic Under Control.**—Word from Rochester reports the scarlet fever epidemic, to which reference was made last week, as being under control. The physicians of St. Mary's Hospital, with the support of the physicians of the city, fifty in all, under the direction of the State Board of Health, are making every effort to stamp out the disease. Ten physicians volunteered with visiting nurses for school inspection. There are now 89 cases reported under quarantine and no mortality. The mildness of type, many patients having had no physician, is declared to be the cause of the great spread of the disease.

### NEBRASKA

**Start Work on Tuberculosis Hospital.**—Work on the new building of the State Tuberculosis Hospital, Kearney, has commenced.

**New Officers.**—Franklin County Medical Society, at Burlington: president, Dr. William H. Byerly; secretary-treasurer, Dr. H. C. Smith, both of Franklin.

**Creighton Alumni Hold Meeting.**—At the annual meeting of the Creighton Medical Alumni Association held in Omaha, April 25, Dr. M. J. Ford was elected president and Dr. Rudolph Rix, secretary-treasurer. Dr. Gustav Hahn was toastmaster at the banquet.

**Personal.**—Dr. Newell Jones, Central City, has started for Europe.——Dr. J. G. Muir, Milford, has been appointed physician of Seward County, vice Dr. J. T. Stanard, Tamora.——Dr. J. M. Gahringer, Grand Island, who was operated on recently in Rochester, Minn., is reported to be convalescing slowly.

**State Medical Association Meeting.**—At the annual meeting of the Nebraska State Medical Association held in Lincoln, May 7-9, the following officers were elected: president, Dr. I. N. Pickett, Odell; vice presidents, Drs. W. B. Kern, Ingleside, and D. T. Quigley, North Platte; secretary, Dr. James M. Aikin, Omaha; treasurer, Dr. A. S. von Mansfelde, Ashland (reelected), and librarian, Dr. A. C. Stokes, Omaha. Resolutions endorsing the Owen bill were unanimously adopted. The by-laws were amended and a committee constituting a bureau for medical education by public addresses in harmony with the plans of the American Medical Association was appointed.

### NEW YORK

#### New York City

**New Site for Hospital.**—The New York Ophthalmic and Aural Institute has purchased for a building a plot of ground on the corner of Fifty-Seventh Street and Tenth Avenue.

**Personal.**—Dr. Artistine P. Munn is convalescent after an operation for appendicitis in Johns Hopkins Hospital, Baltimore.——Dr. Joseph E. Donnelly has been appointed boarding officer at the port of New York.——Dr. A. J. Rongy has been appointed attending gynecologist to the Lebanon Hospital.

**Cartwright Lectures.**—Professor Ludwig Pick, pathologist to Professor Landau's Clinic, Berlin, and one of the best-known morphologists of Germany, has been secured to deliver the series of Cartwright lectures of the Alumni Association of the College of Physicians and Surgeons, New York City, in November.

### NORTH CAROLINA

**State Society Meeting.**—Hendersonville is to have a busy medical week in June. It begins on June 12 with a four-days' session with the State Board of Medical Examiners. On June 17 the second annual session of the North Carolina State Health Officers' Association will be held, and on June 18 the Medical Society of the State of North Carolina will convene for a three-day meeting.

**New Officers.**—Sixth District Medical Association, at Durham, April 26: president, Dr. F. R. Harris, Henderson; secretary, Dr. C. A. Woodard, Durham.——Ninth District Medical Association, at Salisbury, May 1: president, Dr. Isaac M. Taylor, Morgantown; secretary-treasurer, Dr. C. B. McNairy, Lenoir.——Second District Medical Society, at Williamston: president, Dr. W. E. Warren, Williamston; secretary-treasurer, Dr. K. P. Bonner, Morehead City.

**Medical Building Dedicated.**—On May 8, the new medical building of the University of North Carolina, Chapel Hill, was dedicated. The building is known as "Caldwell Hall," in honor of the former president of the university. A large portion of the basement is to be devoted to the care of the animals used for experimental work in the laboratories. Lecture rooms and laboratories are located on the first and second floors and the dissecting room is modern in every respect. In the center of the building is a library which contains a large number of valuable books, which have been donated, and carefully selected scientific journals.

**Personal.**—Dr. T. F. Reynolds, Canton, was operated on for appendicitis at the Biltmore Hospital, April 27.——Dr. W. J. Lumsden, Elizabeth City, is reported to be slowly recovering from the effects of injuries sustained early in January by a fall on the ice.——Dr. J. E. Smoot, Concord, underwent operation at the Whitehead-Stokes Sanatorium, Salisbury, April 9, for the removal of adhesions following an operation for appendicitis two years ago.——The governor has appointed Drs. W. S. Rankin, R. H. Lewis and John A. Farrel, Raleigh; Dr. L. B. McBrayer, Asheville, and Dr. R. S. Young, Concord, to take up the matter of securing an exhibit from North Carolina for the International Congress on Hygiene and Demography.

### OHIO

**New Officers.**—Wyandot County Medical Society, at Upper Sandusky, May 3: president, Dr. I. N. Bowan; secretary-treasurer, Dr. Frederick Kenan, both reelected.

**Money for District Nurses.**—The collection for the benefit of the District Nurse Work in Toledo, May 1, has already amounted to nearly $12,000, with several of the workers yet to report.

**Antituberculosis Workers Elect.**—At the annual meeting of the Ohio Society for the Prevention of Tuberculosis held in Dayton, May 6, the following officers were elected: president, Dr. Henry Baldwin, Springfield; vice-presidents, Dr. Samuel Iglauer, Cincinnati, and Dr. Frank Warner, Columbus; directors, Drs. Clyde E. Ford, Cleveland; Esther Tyrrell, Canton, and the vice-presidents.

**Personal.**—Dr. A. Schwagmeyer, Cincinnati, sailed for Europe, May 8.——Dr. W. H. Buechner, Youngstown, has been chosen as the representative of the medical staff of the City Hospital on the building committee for the proposed additions to the hospital.——Dr. William C. Freed, Cleveland, is reported to be critically ill at the home of his mother.——Dr. Will J. Prince, Piqua, is reported to be convalescent after an attack of appendicitis.

**Taboo Contract Practice.**—At the meeting of the Clark County Medical Society, April 28, rigid rules were adopted providing that any member found guilty of unprofessional conduct or of any criminal offense shall be expelled; that any member engaged in contract practice for any lodge, fraterna organization, factory or company, shall be guilty of unprofessional conduct; that any member found guilty of dividing fees shall be liable to expulsion.

**State Association Meeting.**—At the annual meeting of the Ohio State Medical Association held in Dayton, May 7-9, the following officers were elected: president, Dr. J. C. M. Floyd Steubenville; vice-presidents, Drs. H. Fischer, Lebanon; Henry

R. Brown, Chillicothe; J. S. Rardin, Portsmouth, and J. B. May, New Holland; secretary, Dr. J. H. J. Upham, Columbus; treasurer, Dr. Clarence D. Selby, Toledo; councilors, Drs. Charles N. Smith, Toledo, and John E. Sylvester, Wellston; delegates to the American Medical Association, Drs. C. L. Bonifield, Cincinnati; A. Rhu, Marion, and H. C. Haning, Dayton, and member of the National Legislative Council, Dr. B. R. McClellan, Xenia. Youngstown was chosen as the next place of meeting. Resolutions were adopted condemnatory of the conduct of the secretary of agriculture and deploring the conditions which led to the resignation of Dr. Harvey W. Wiley. A further report of the meeting is commenced on page 1534, this issue.

## PENNSYLVANIA

**Sanatorium Report.**—The third annual meeting of the Philadelphia Jewish Sanatorium for Consumptives was held May 5 at Eaglesville. The annual report showed an income of $33,675.94, of which $7,500 was from the state. The institution will receive an appropriation of $20.000 for the next two years. An average of fifty-nine patients a day were cared for last year, sixteen of these being children. It cost $23,684.94 to run the institution during the year, an average of $1.39 a day per patient.

### Philadelphia

**For Endowment Fund of College.**—Under the auspices of the Philadelphia Alumnæ of the Woman's Medical College of Pennsylvania, "In Fairyland," a song cycle, followed by "Trial by Jury," an operetta by Gilbert and Sullivan, will be given at the South Broad Street Theater, May 25, for the benefit of the endowment fund of the college.

**Conference Before Baby-Saving Show.**—A pre-baby-saving conference was held in the mayor's reception room at City Hall, May 6, at which addresses were made by Mayor Blankenburg, Dr. Joseph S. Neff, Director of Public Health and Charities, Dr. Samuel M. Hamill, Mrs. Martin C. Grice, president of the Home and School League, and Mrs. R. Tait McKenzie. The purpose of the conference was to awaken responsibility for infant mortality.

**Personal.**—Dr. Matthew Woods has returned from Europe. ——Dr. S. Mason McCollin was thrown from his carriage in a runaway accident, May 3, and received serious injuries which necessitated his being removed to the Medico-Chirurgical Hospital.——Drs. Henry S. Wieder, Clarence W. Schaeffer, J. Paul Austin, William T. Rees, Joseph Fleitas and Morris Cornfeld have been appointed assistant medical inspectors under the Department of Health and Charities.

**Maternity Hospital Meeting.**—The thirty-eighth annual meeting of the Jewish Maternity Hospital Association was held May 6 and an appeal was made to the Jewish community to provide funds for the erection of a larger building. The treasurer's report showed that the association had received $11.500 from the Federation of Jewish Charities, of which $1.500 was for the Seaside Home at Ventnor, N. J. The Maternity Hospital disbursements for the year were $9.959.19.

**Hospital Meeting.**—The one hundred and sixty-first annual meeting of the Pennsylvania Hospital was held May 6. The annual report of the Board of Managers showed that $171,082.64 had been expended during the year for maintenance, which was $44,162.04 more than the revenue for the year derived from all sources. During the year the hospital received additional bequests amounting to $138.989.18, and individual contributions amounting to $39,115. The institution cared for 4,803 patients. The out-patient department treated 29,261 persons, who made 62,051 visits to the hospital, making a total of 121,004 patients treated during the year. Through the influence of Dr. Morris J. Lewis, a donation of $5,000 was made to install an *x*-ray department, with also $2.000 contributed from the same source for maintenance during the first year of operation. Dr. David R. Bowen has been placed in charge of this department.

**Dr. Musser's Bequests.**—The codicils of the will of the late Dr. John Herr Musser provide that in the event of the estate exceeding $225,000 there shall be created a trust fund for an annuity for his secretary, with remainder to be given to the College of Physicians in memory of the testator's father, Dr. Benjamin Musser, "for the endowment of a lecture or a series of lectures at the discretion of the council, to be given once in every three years on subjects particularly helpful to country practitioners." Another bequest of $15,000 to the University of Pennsylvania is based on the value of the estate reaching $240.000, when such amount is to be paid to the trustees for the endowment of a fellowship in the John Herr Musser Department of Research Medicine to be known as the Robert M. Girvin Fellowship as a tribute to the late Dr. Girvin, who, the testator says in his will, "was a wise, faithful and humane practitioner and a loyal friend."

## VIRGINIA

**Must Register Births and Deaths.**—On June 1 the new vital statistics law becomes effective, after which all births and deaths in Virginia will become a matter of official record.

**Physicians Win License Fight.**—The common council of Staunton, which had proposed to make a levy of $20 on each physician of the city as a license tax, after the work that is being done by physicians had been explained to it, decided to withdraw the proposed tax.

**State Board Election.**—At a meeting of the State Board of Health, held in Richmond, April 30, Dr. William M. Smith, Alexandria, was elected president, vice Dr. Rawley M. Martin, Lynchburg, deceased; Dr. S. W. Hobson, Newport News, vice-president, and Dr. J. B. Fisher, Midlothian, secretary.

**Hygiene Congress.**—The Virginia Committee for the International Congress on Hygiene and Demography, of which Dr. Ennion G. Williams is chairman and Dr. D. S. Freeman, secretary, is asking the cooperation of the cities of Virginia in the securing of exhibits to show the progress of health work in the state during the last few years.

**Election of Professors Pending.**—At the annual meeting of the Board of Visitors of the Medical College of Virginia, to be held May 28, there will be elected a professor of diseases of the eye and ear and a professor of obstetrics and diseases of the puerperal state, to fill vacancies caused by the deaths of Drs. John P. Davidson and Daniel J. Coleman, respectively.

## GENERAL

**Medical Editors at Atlantic City.**—The American Medical Editors' Association will hold its annual meeting at the Marlborough-Blenheim Hotel, Atlantic City, June 1 and 3.

**Pediatrists to Meet.**—The twenty-fourth annual meeting of the American Pediatric Society will be held at The Homestead, Hot Springs, Va., May 29-31, under the presidency of Dr. Walter Lester Carr, New York City.

**Medical Psychologists at Atlantic City.**—The sixty-eighth annual meeting of the American Medico-Psychological Association will be held in Atlantic City, May 28-31, at the Marlborough-Blenheim Hotel, under the presidency of Dr. Hubert Work, Pueblo, Colo.

**Warning Concerning Book Agent.**—One Gustav Gebauer, formerly a reputable book seller, is said to be collecting money for books ordered by physicians in Georgia and North and South Carolina. He pretends to represent Appleton, Rebman, McMillan, Wood and Leonard.

**Young Woman Obtaining Money.**—The Journal is informed that a young woman, who claims to be but is not the daughter of Dr. Charles J. Cummings, Williamsport, Pa., has been obtaining money from physicians of Baltimore, on the plea that she is stranded and wants money to return home.

**Society for Alcohol Addictions at Atlantic City.**—The American Society for the Study of Alcohol and Other Narcotics will hold its forty-second annual meeting at the Marlborough-Blenheim Hotel, Atlantic City, June 5, at 10 a. m. The secretary, Dr. T. D. Crothers, Hartford, Conn., will furnish further particulars.

**Association of Medical Milk Commissions Meets.**—The sixth annual meeting of the American Association of Medical Milk Commissions was held in Louisville, April 30, under the presidency of Dr. Henry Enos Tuley, Louisville, who in his address stated that "Unpaid, misunderstood, accused of graft, and criticised for things done and undone, the missionaries of the gospel of clean milk, the members of the American Association of Medical Milk Commissions, have continued their work, and to-day the demand for certified milk is far greater than was ever dreamed of by Dr. Henry Coit, when he first awakened to the idea of a milk commission." There were twenty-seven out of sixty-six commissions represented by delegates, including members from California on the west, New York and New Jersey on the east, Canada and Minnesota on the north and Alabama on the south. Perhaps the most important work accomplished was the adoption of the final standards and working methods for all commissions. These standards are ideals to which all commissions must work to bring certified milk to what it really should be. They will be printed as a special bulletin by the U. S. Public Health and Marine-Hospital Service as the final report of the committee of which Assistant Surgeon General John W. Kerr was chairman.

This committee prepared and circulated a questionnaire to all commissions and as a result of the reports sent in the standards and working methods were formulated. California has enough commissions in operation to form a state association of medical milk commissions. The revision committee made a voluminous report dealing with the milk question from all viewpoints and stating that through constant municipal supervision, with certified milk as a model, market milk would be brought to a higher standard. The following officers were elected: president, Dr. Ogden M. Edwards, Jr., Pittsburgh, Pa.; secretary, Dr. Otto P. Geier, Cincinnati; treasurer, Dr. Samuel M. Hamill, Philadelphia; councilors, Drs. Ogden M. Edwards, Jr., Pittsburgh; John W. Kerr, U. S. P. H. and M.-H. Service, J. J. Thomas, Henry Enos Tuley, Louisville, and Samuel M. Hamill, Philadelphia (reelected), and Drs. John R. Williams, Rochester, N. Y., and T. C. McCleave, Berkeley, Cal.

## PARIS LETTER

*(From Our Regular Correspondent)*

Paris, May 3, 1912.

### Chronic Enteritis and Tuberculosis

Dr. Loeper, *agrégé* professor of the Faculté de médecine de Paris and Dr. Esmonet have addressed to the Académie de médecine a communication pointing out that chronic enteritis is a frequent complication of tuberculosis because the elimination of minerals from the system is accomplished chiefly through the intestinal mucosa. Still more readily does the patient affected with chronic enteritis become tuberculous, if he has to subsist on a poor diet which is not only insufficient to supply the albuminous, mineral and fatty losses of the organism but even to maintain normal nutritive equilibrium. To prevent tuberculosis in patients with enteritis, it is necessary to introduce into the organism a quantity of food and albuminous matter considerably larger than is commonly prescribed for them and not to attempt to obtain a cessation of the pain provoked by intestinal fermentation at the price of undernutrition, which is particularly dangerous under the circumstances.

### The Red Cross Stamp

The Société française de secours aux blessés militaires has decided to follow the example of several foreign branches of the Red Cross which have had great success in the use of the stamp bearing its emblem and intended to be placed on letters, packages, etc. The stamp will be sold for 5 centimes (1 cent) and the profits will be devoted to the Red Cross.

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, April 27, 1912.

### Personal

Professor Unverricht of Magdeburg died April 1, at the age of 58. He joined the faculty of Breslau in 1883, having been a pupil of the renowned internist, Professor Biermer, and was appointed director of the medical policlinic of Jena in 1886 and was made regular professor and director of the medical clinic at Dorpat in 1888. As a result of the Russianizing of the University of Dorpat, in 1892, in the course of which almost the entire German teaching force, the flower of the old university, fell victims, he left Dorpat and accepted the directorship of the municipal hospital of Magdeburg. This position he resigned about a year ago on account of sickness. His clinical work related chiefly to diseases of the lung, especially pneumothorax, and experimental and clinical research on nervous diseases, especially epilepsy.

The neurologist, Professor Seeligmüller of Halle, died about the middle of April at the age of 75.

### Institute Named in Honor of Robert Koch

The official *Reichsanzeiger* publishes the following edict from the Kaiser, dated March 29: "On March 24, 1912, thirty years had elapsed since the deceased Privy Councilor, Prof. Dr. Robert Koch, announced in the Berlin physiological society his discovery of the tubercle bacillus. With this discovery Koch initiated the battle against the severest scourge of the human race, and it has since then been carried on with unexampled success and has rendered to suffering humanity undying service. On this occasion I wish to honor the memory of the great scientist for all time by adding the name of Robert Koch to the title of the royal institute for infectious diseases in Berlin which was erected for Robert Koch and which was for twenty years his place of labor."

### Eleventh Annual Meeting of the German Orthopedic Society

The late annual session of the orthopedic society, held as usual in Berlin preceding the surgical congress, presented a number of advances worth reporting. Stoffel of Mannheim described the technic of his operation for spastic paralysis. This consists in partial resection of the motor portion of the peripheral nerves. During the operation the individual nerve paths are identified by the galvanic current. Werndorff of Vienna read a paper on osteoplasty in case of false joints. The majority of these false joints occurring in the leg heal spontaneously, even after years, by conservative motion therapy. Operation is indicated in case of marked deviation laterally and longitudinally of the fragments and consists when necessary in the removal of the bones forming the false joint up to the epiphyses and their replacement by a piece taken from the healthy tibia of the other side; the implanted piece gradually assumes the form of the normal bone. In one case he successfully implanted a peg of magnesium covered with periosteum.

Ludloff of Breslau said that after a bloodless reduction of recurrent dislocation of the hip, he has often succeeded in securing the reposition by an anterior incision. The reduction is often hindered by the shortened psoas iliacus muscle which causes outward rotation and draws the head forward. To avoid this he advises the resection of this muscle at the lesser trochanter.

Lange of Munich described the orthopedic treatment of spinal infantile paralysis. In the acute stage rest is advisable for the spine which is usually tender. During the stage of paralysis care should be taken to favor as far as possible the nutrition and regeneration of the paralyzed muscles by careful use of massage and electricity, and to prevent the recurrence of contractures by simple apparatus (rubber bands, insoles, etc.). The paretic muscles should be kept active. If after a year spontaneous regeneration seems out of the question and deformities already exist, reduction should be effected and the results secured by tendon transplantation. He prefers periosteal tendon transplantation and if necessary the insertion of strands of silk. Neuroplasty would be the ideal procedure if it were neither too early nor too late. Arthrodesis he has limited to an extraordinary degree. This operation is so serious that he undertakes it only with the full understanding of the patient and not before the age of twenty.

According to Vulpius of Heidelberg, the surgeon should not undertake tendon transplantation earlier than one year after the onset of the infantile paralysis. There is no time limit later. When deformity exists he supplements bloodless or bloody reduction by tendon transplantation or at least shortening the overstretched tendons. In total paralysis he employs arthrodesis which he prefers in paralysis of the shoulder to a plastic operation on the pectoral muscles as a rule. In case of the wrist, he usually strengthens the tendons. For the knee, tendon transplanting only is to be considered, while arthrodesis of the ankle often seems justified. He transplants tendons into tendons and endeavors to shorten the fixation period by early exercise. In regard to arthrodesis Lorenz of Vienna said that the age of the patient, the importance of the joint and the individuality of the operator should have weight in the decision for the artificial ankylosis of a joint. Ankylosis should never be undertaken before the age of twenty. The hips, knees and elbows are more useful to the paralyzed individual in the movable than in the fixed condition, even if the patients are never able to walk. Shoulder and wrist ankylosis may yield very good functional results. The foot should be fixed with artificial ligaments and the attachment of the tendons.

Förster of Breslau spoke on the treatment of spastic paralysis by resection of the posterior nerve roots. He recommends in cases of severe paralysis to cut more than four roots, but in case of operations on the cervical segment always to leave a fasciculus. In the cauda equina the distinction between the motor and sensory tracts is difficult and often can be made only by the electric current. Among over 100 patients that have been operated on by his method, death occurred in thirteen cases altogether. The person of the operator is in his opinion not without influence on the death rate. Küttner of Breslau had two deaths in twenty-seven operations; v. Eiselsberg of Vienna had no death among fifteen cases. Individuals with frequent epileptic attacks as well as those affected with multiple sclerosis are unsuitable for the operation as is shown by the experiences in two cases that terminated fatally. In athetosis the weakening of the motor nerves has sometimes proved useful, either peripherally (according to Stoffel) or centrally at the cauda equina. Förster emphasized the importance of a careful after-treatment.

## Marriages

Edgar Earl Gelder, M.D., to Mrs. Gretchen Kastner Robinson, both of Peoria, Ill., at Chicago, May 16.

William Culbert Lyon, M.D., Baltimore, to Miss Bella Eleanor Flaccus of Ben Avon, Pa., April 12.

Anthony G. Fidanza, M.D., Providence, to Miss Anna Eleanor Rice of Olneyville, R. I., April 23.

Arthur Mullin Wright, M.D., to Miss Alice B. Stanchfield, both of New York City, April 27.

George H. Putney, M.D., to Miss Hazel Maurine Rathbone, both of Ronan, Mont., April 30.

Leo Robert Roth, M.D., Chicago, to Miss Jessie Maria Cloke of Ashkum, Ill., May 1.

Edward Isadore Steinberg, M.D., to Miss Freda Spatz, both of Pittsburgh, May 5.

Edith Earle Eayre, M.D., and Frank H. Keisker, both of Philadelphia, April 27.

Israel Bram, M.D., to Miss Sadie J. Weisgold, both of Philadelphia, May 5.

John O. Gay, M.D., to Miss Ella Heiser, both of Spokane, Wash., recently.

## Deaths

**Hunt Franklin Thomas, M.D.** University of Michigan, Ann Arbor, 1868; of Allegan, Mich.; a veteran of the Civil War; a member of the legislature in 1873 and 1875; a member of Congress from the Fourth District of Michigan from 1892 to 1896; chief surgeon of the Michigan Soldiers' Home in 1907 to 1908, and thereafter a member of the State Pardon Board, from which he retired in 1910; president of the village of Allegan for two years; died at his home, April 17, from cerebral hemorrhage, aged 68.

**William Walter Root, M.D.** University of Michigan, Ann Arbor, 1862; Bellevue Hospital Medical College, 1866; surgeon of the Seventy-Fifth New York Volunteer Infantry during the Civil War; medical director of the Department of Michigan, G. A. R.; at one time a representative from Ingham County, Michigan, in the legislature; one of the county superintendents of the poor; for several terms mayor of Mason; died at his home in that place, April 22, aged 74.

**George Wragg Lamar, M.D.** Medical College of Georgia, Augusta, 1888; formerly first vice-president of the Florida Medical Association; first lieutenant and assistant surgeon, Florida state troops; a member of the Seaboard Air Line Surgeons Association, and surgeon of that road, and the Georgia, Florida and Alabama Railroad at Quincy; died at his home, April 15, aged 46.

**Julius Wenz, M.D.** University of Buffalo, N. Y., 1865; a surgeon of volunteers during the Civil War and thereafter for several years acting assistant surgeon, U. S. Army; for several years visiting physician to the Sisters' Hospital, Buffalo; first president, and thrice reelected president of the village of Lancaster; died at his home recently, and was buried April 28, aged 68.

**Herbert Cooper Rogers, M.D.** Bellevue Hospital Medical College, 1878; a member of the American Medical Association; instructor in surgery in the Long Island College Hospital and a member of the surgical staff of the Long Island College and Bushwick hospitals, Brooklyn; died at his home in that city, April 29, from pneumonia, aged 56.

**Clark Emory Spencer, M.D.** Bellevue Hospital Medical College, 1873; a member of the Michigan State Medical Society and formerly mayor of Port Huron, Mich.; local surgeon of the Grand Trunk System; formerly town clerk and president of the village of Fort Gratiot, died at his home, May 5, from cerebral hemorrhage, aged 62.

**Charles Francis Clowe, M.D.** Albany (N. Y.) Medical College, 1888; a member of the American Medical Association; for two years a medical missionary in Portuguese West Africa; formerly city physician of Schenectady, N. Y.; died at his home in that city, April 29, from cerebral tumor, aged 45.

**James Madison Gilmore Beard, M.D.** Kansas City (Mo.) Medical College, 1875; for twenty years a resident of Fruita, Colo.; died at his home in that place, April 27, from cystitis, aged 67.

**John Wordsworth Clemesha, M.D.** College of Physicians and Surgeons, New York City, 1866; McGill University, Montreal, 1867; a member of the high school board of Port Hope, Ont.; president of the Midland Loan and Savings Company and Port Hope Gas Company; died in the Toronto General Hospital, April 20, from septicemia.

**John R. Muse,** (license, Tennessee, 1889); a practitioner since 1878; a member of the Tennessee State Medical Association; for many years a practitioner of Pinson and Lexington; and health officer of Henderson County; died at the home of his brother in Lexington, April 26, from cerebral hemorrhage, aged 77.

**Oliver Hebert, M.D.** College of Physicians and Surgeons, Chicago, 1889; formerly of Milwaukee, who went to Colorado several years ago for his health; was murdered recently in his cabin on his ranch, 27 miles from Grand Junction, and his body was interred in a cemetery in that city, April 26, aged 57.

**Dwight B. Neal, M.D.** Hahnemann Medical College, Chicago, 1887; formerly president of the Arkansas State Homeopathic Society; consulting physician to the Alpha Sanitarium and physician to the Jane Kellogg Home, Little Rock; died suddenly in his office, April 17, from cerebral hemorrhage, aged 55.

**Charles L. Conaway, M.D.** Iowa Medical College, (Eclectic) Des Moines, 1883; a member of the American Medical Association and secretary of the Chase County (Kan.) Medical Society; local surgeon of the Santa Fe System; died at his home in Cottonwood Falls, April 29, aged 52.

**James Thornley, M.D.** University of Virginia, Charlottesville, 1842; surgeon in the Confederate service throughout the Civil War; afterward a practitioner of Mount Sterling and West Liberty, Ky., and Nashville, Tenn.; died at the home of his son in Nashville, April 15, aged 93.

**Martha George Ripley, M.D.** Boston University School of Medicine, 1883; formerly professor of children's diseases in the Homeopathic College of the University of Minnesota; founder of the Maternity Hospital, Minneapolis; died at her home in that city, April 18, aged 68.

**Thomas Marcus Warnock, M.D.** College of Physicians and Surgeons, Keokuk, Ia., 1884; formerly a practitioner of Tunnel Hill, Ill., and Liberty, Neb., who retired from practice and moved to Superior, Neb., and later to Sterling, Kan.; died suddenly, April 10, aged 60.

**Albert Tracey, M.D.** Queen's University, Kingston, Ont., 1862; for several years local surgeon of the Grand Trunk System at Belleville, Ont.; surgeon-lieutenant-colonel during the Riel Rebellion in 1885; died in the Belleville General Hospital, April 20, aged 76.

**Abraham Ludwig Freund, M.D.** Bennett Medical College, Chicago, 1877; a member of the Illinois State Medical Society; of Chicago; died in the Alexian Brothers Hospital, Chicago, May 5, three weeks after a surgical operation, aged 59.

**Robert L. Walker, Jr., M.D.** Western Pennsylvania Medical College, Pittsburgh, 1892; a member of the Medical Society of the State of Pennsylvania; surgeon of the Panhandle System at Pittsburgh; died at his home, April 30, aged 42.

**James A. Monahan, M.D.** Pennsylvania Medical College, Gettysburg, 1857; for several years a practitioner of Colorado and of Los Angeles, Cal.; died at his home in Coolville, Ohio, February 24, from cerebral hemorrhage, aged 86.

**Arthur C. Dunn, M.D.** Northwestern Medical College, St. Joseph, Mo., 1882; for six years postmaster of Byron, Neb., and for twenty-one years a practitioner of that place; died at his home, April 29, from angina pectoris, aged 55.

**Tonnes Thams, M.D.** University of Norway, Christiania, 1873; formerly of Minot, N. D.; a member of the North Dakota State Medical Association; died at his home in McVille, N. D., April 23, from heart disease, aged 63.

**Daniel Aloysius O'Hearn, M.D.** Harvard Medical School, 1902; a member of the Massachusetts Medical Society; a specialist on diseases of the eye, ear, nose and throat of Lowell; died at his home, May 3, from pneumonia, aged 33.

**Joseph Wesley Welker, M.D.** Chicago Homeopathic Medical College, 1887; Hahnemann Medical College, Chicago, 1905; of Mattoon, Ill.; died at the home of his nephew in Chicago, April 23, from heart disease, aged 52.

**Jacob Fais, M.D.** Medical College of Evansville, Ind., 1878; of Shawneetown, Ill.; died at the home of his brother in Louisville, Ky., April 25, from disease of the stomach, aged 73.

**Z. T. Adams, M.D.** College of Physicians and Surgeons, Keokuk, Ia., 1878; died at his home in La Grange, Cal., April 24, aged 63.

# *The Propaganda for Reform*

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

## WINSLOW'S SOOTHING SYRUP

### How a Poison Label Protects the Public

Winslow's Soothing Syrup, as every physician knows, is one of the morphin-containing "baby-killers." Before the federal Food and Drugs Act went into effect, no hint of the presence of this dangerous drug was given the purchaser. Since, however, the alcohol and morphin content has, perforce, been declared on the label.

Unfortunately, a large proportion of the people who use this preparation are not of the most intelligent kind and do not realize the menace that the word "morphin" conveys to those whose knowledge is greater. The British Pharmacy Act recognizes the lack of technical knowledge in those persons who purchase "patent medicines" and requires all preparations of this kind that contain any drugs scheduled in the act as poisons to be labeled "POISON." Winslow's Soothing Syrup, as sold in Great Britain, had to have the following statement printed on the label:

> "This preparation, containing, among other valuable ingredients a small amount of morphin is in accordance with the Pharmacy Act herewith labeled POISON."

Even the most ignorant know the meaning of the word "poison." It carries with it a warning that is understood and that holds attention. The poison label has doubtless been the means of saving the lives of many infants and, as a natural corollary, has been responsible for a much smaller sale of the nostrum than it would otherwise have enjoyed. Doubtless, the Anglo-American Drug Company, which sells Winslow's Soothing Syrup, has been forced to recognize the fact that a nostrum cannot have a large sale so long as it has to carry the word "POISON" on its label. At any rate, Winslow's Soothing Syrup, as now sold in Great Britain, contains no morphin, potassium bromid having been substituted for the opiate. Recently analyzed by the chemist of the British Medical Association, the product on the British market was reported to have the following composition:

| | |
|---|---|
| Potassium bromid ............ | 2.0 per cent. |
| Alcohol ...................... | 4.3 per cent. by measure |
| Essential oil (anise)......about | 0.1 per cent. |
| Sugar ........................ | 56.5 per cent. |

In spite of this radical and essential change in the formula, the manufacturers still publish the statement that appeared on the label before the change was made:

> "This valuable preparation is the prescription of one of the most experienced and skilful nurses in America."

To the babies of the United States Winslow's Soothing Syrup still goes with its deadly morphin. A bottle of the stuff purchased in Chicago, May 9, 1912, brought out one fact that makes for encouragement and optimism. In none of half-a-dozen of the large drug stores on State Street was it possible to purchase this vicious mixture. The druggists did not handle it. No such difficulty was encountered in the drug section of one of the department stores.

We have once more, then, a verification of the oft-declared fact that the "patent medicine" business is inherently fraudulent and dangerous and will remain just as fraudulent and just as dangerous as the public will permit. An amendment to the Food and Drugs Act, extending the list of drugs whose presence must be declared on the label and requiring further, that "patent medicines" containing such drugs shall be labeled "poison," would materially strengthen the pure food law and would do much to protect the public. Incidentally it would do much to decrease the sale of dangerous and habit-forming "patent medicines."

# *Correspondence*

## The Brain of the Late Dr. John Herr Musser

*To the Editor:*—After the death of Dr. John Herr Musser, a number of absurd statements appeared in the lay press in regard to the weight of his brain. Believing it to be only just to the memory of our distinguished and beloved colleague, I place in your possession the following facts which have just been communicated to me by Dr. Edward Anthony Spitzka, the prosector of the American Anthropometric Society, of which Dr. Musser was a member.

The brain was removed by Dr. Milton J. Greenman. Dr. Greenman stated that he did not weigh the brain, but placed it in a 10 per cent. dilution of liquor formaldehydi in which it remained for three weeks and that it was then transferred to 60 per cent. alcohol. On May 11, the brain was transferred by Dr. Greenman to the care of Dr. Spitzka. The latter furnishes the following preliminary report:

"I weighed the brain, after draining it free of fluid for about ten minutes and found the weight to be 1,595 gm. (56.26 oz. avoirdupois). The circumference of the brain at this examination was 50.1 cm. The fronto-occipital arc measures 28.5 cm., somewhat in excess of the average even in the other eminent as well as ordinary men previously measured. A striking feature in the superficial examination is the great extent of the posterior association area on the right side encroaching on the sylvian fissure, so that the latter is reduced to only 5 cm. while it is 7.5 on the left side."

F. X. Dercum, Philadelphia,
President of the American Anthropometric Society.

## The Caffein Investigations: A Reply

*To the Editor:*—While I am utterly opposed to intruding personal questions into scientific discussions I do think that the letter of Dr. Wiley in the last number of The Journal, because of its inaccuracies and of its discourteous inferences, justifies a word of reply.

First, as to my connection with the Coca-Cola Co., it is true that I did testify in their favor in the suit brought against them by the government. Dr. Wiley neglects to say, however, that I was asked to appear for the government several months before I had the remotest idea that I should be asked by the company, and that I refused because I thought the contention that caffein was a poison was absurd.

Second, Dr. Wiley casts doubts on the scientific correctness of my investigations because he cannot understand how "such tremendous increase of energy and work" can occur without secondary depression. Nowhere in my paper do I speak of "tremendous" (or any similar adjective) increase of work accomplished; my published figures show an increase of 4.6 per cent. in the work done by the frog's muscle. Further, whether Dr. Wiley can understand it or not, this increase *did* occur; the data that I reported were observed facts, not some preconceived theory of what ought to happen. Until Dr. Wiley has more evidence of the inaccuracy of my work than his mere notions he has no right as a scientist to cast aspersions at it.

Third, he says that Dr. Salant has established that "caffei is a lethal poison in not very large doses" to rabbits, guinea pigs, dogs and cats. On page 28 of the bulletin on the toxicity of caffein to which Dr. Wiley refers, Salant says that "th minimum toxic dose for the gray rabbit is about 325 mg. pe kilo and the minimum fatal dose at least 350 mg. per kilo. These quantities would correspond to a dose, for a 150-poun man, of about 350 grains for the toxic, and 380 grains for th lethal, dose; in other words, a man would have to drink in th neighborhood of 270 cups of coffee to get a poisonous dose o caffein. Yet this is what Dr. Wiley calls "not very larg doses!" On page 79 of the same bulletin Salant says (speakin in this instance of a dog): "In this case 100 to 125 mg. p kilo, given on ten consecutive days, did not cause any marke effects." It is on this work that Dr. Wiley bases his clai that caffein is a poison. If he chooses to call a substance poison which can be taken in doses of two drams a day (which would be the equivalent quantity for a man) daily for ten days without perceptible effect, I cannot agree with him.

I can easily afford to overlook the personal innuendoes of his letter, but I must object to any one pretending to scientific standing playing fast and loose with published scientific facts.

HORATIO C. WOOD, JR., Philadelphia.

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### Sanatogen

*To the Editor:*—Our attention has been called to a most unfair and unwarranted attack on Sanatogen which appears in your esteemed publication [April 20, p. 1216]. The article is such a perversion of the actual facts, and so completely—if not intentionally—misleading that we request, as a matter of common justice, that you give this reply equal publicity to your attack. The admiration and respect we have felt for your journal and our appreciation of the place it holds in the field of medical journalism, made your attack on a product like Sanatogen, representing so definitely the most painstaking and scientific research, the last thing expected. Indeed, it seems inconceivable that a journal apparently so alive to its responsibilities could publish broadcast an article so calculated to do harm, without first giving those whose interests are most at stake, an opportunity to substantiate their claims.

There never has been a time that we have not been ready to meet any request from THE JOURNAL, or the respected gentlemen composing the Council on Pharmacy and Chemistry, for all information and data concerning Sanatogen. Had we had the slightest inkling that our product—or the claims made for it—were open to question or criticism, we would gladly have submitted all of the evidence, clinical, experimental, and theoretical, on which every statement, however simple, has been based.

To make a response is difficult, because your article is not written in a fair, unprejudiced spirit. In fact, although one would expect a sober, serious consideration of a matter so fraught with importance (if your contention is right) your whole attitude is one of ridicule and jocularity. Is it right o present scientific material in such a way and show so little espect for those who have offered you no affront or done ou no injury? A little investigation would have shown you hat the statements we have made about Sanatogen are based n the experiences and opinions of such men as von Noorden, . A. Ewald, Duhrssen, Eulenburg, Neisser, Binswanger, von eyden, Krafft-Ebing, Tillmanns, Tunnicliffe, and thousands f other earnest, reputable physicians. Any one might differ vith their conclusions, but is it courteous or decent to hold hem up to ridicule and contumely?

Can a discussion thus conducted hope to solve a scientific roblem or accomplish any real good?

It would hardly seem so, and with all due respect we cannot elp but feel that the situation has its analogy in the legal octrine, "when you have no evidence, ridicule and abuse your pponent and his client."

Sanatogen is a definite organic combination of (in round umbers) 95 per cent. casein and 5 per cent. glycerophosphate f sodium. The analysis as published in THE JOURNAL fails show that this statement is untrue. The slight deviation to the amount of casein present is explained by the fact at THE JOURNAL'S figures include the moisture, while ours e on the dry substance. Inasmuch as nearly all the moisture absorbed after the product leaves the laboratories and is erefore added weight, the figures should be on the dry subance. It is hinted in the article that Sanatogen is a mere ixture of ingredients, in fact one of the gentlemen you ote openly intimates so. To this we say most emphatically at *anyone asserting Sanatogen to be a mere mechanical ixture of ingredients and not a definite chemical compound ther wilfully misstates the facts or does not know.* Sanatogen presents a new idea or discovery in the domain of invalid etetics and as such its process of manufacture as well as e product are protected by U. S. Letters Patent.

Assuredly it is the definite chemical combination found in natogen on which the special value of this product as a medicinal food and tonic depends. A mere mixture of ingredients would represent only the sum-total of their individual virtues, but a definite combination of such ingredients means the formation of a new compound with properties of its own which far transcend those of any simple mixture of the orginal ingredients.

To compare Sanatogen to cottage cheese is the height of absurdity—as it was probably intended to be. The casein of Sanatogen is perhaps the most carefully purified milk protein available, and this fact is of essential importance when considering the value of Sanatogen as a medicinal food. To compare the casein of Sanatogen with crude commercial casein or with cottage cheese is as ridiculous as to compare a crude drug with the refined element. The same applies to the matter of cost. We suggest that an attempt be made to prepare purified casein according to Hammarsten's method, if one wishes to determine what labor and expense is involved in the operation. Possibly it will be found cheaper to buy Hammarsten's casein in the open market where the price is $3.50 per pound wholesale! And it is not a proprietary product, either.

Further, to compare the economic value of Sanatogen on the basis of calories is as unscientific as it is deliberately misleading. If the calorie standard only counted, a pound of oleomargarine would be as valuable as fifty eggs, a pound of laundry soap as valuable as a pound of choice beef. Sanatogen is not intended or recommended to replace ordinary foodstuffs. It is not recommended as a caloric or heat producer, but as a food-tonic supplying the essential elements of tissue construction and cell-repair in easily and perfectly assimilable form.

Digestibility, ease and completeness of assimilation count a great deal, and are the sole determining factors in cases of illness. Again, starch and fat are not essential substances to life. Without protein we cannot live. Exclude everything else from a patient's dietary, and he will live. Exclude protein and it is only a question of time before he dies. It is evident, therefore, that to measure the value of a given food in calories only is misleading and dangerous, and an editorial in your valuable publication of November 4 last distinctly points this out.

According to the most careful and extensive experiments, covering a large number of scientifically studied cases, Sanatogen is not approached in the matter of rapidity of digestion and absorption by any other known foodstuff. That such a product does exert a definite stimulating or activating effect on the digestive and assimilative functions, thus promoting the digestion and appropriation of nutritive material has been demonstrated over and over again. That the organic phosphorus of Sanatogen is almost completely retained and assimilated has been proved beyond doubt by carefully conducted metabolism experiments. That from this, and from the stimulating action on phosphorus and nitrogen metabolism, a favorable effect on the nervous system could result, is conceivable. That such an effect does actually take place has been demonstrated clinically in literally thousands of cases.

As to our advertisements and literature: Every claim made emanates from the freely recorded statements of competent observers, checked and rechecked by men who have been absolutely free from all bias or prejudice. And these opinions, moreover, are not the superficial, passing views of a few physicians. Instead our claims are based on the voluntary, unbiased written reports of clinical experiences by over 15,000 practicing physicians—among whom a goodly proportion are members of your esteemed Association—and on over 150 published articles in the leading medical journals of the world, some of which your journal has considered of sufficient importance to present to its readers in abstract form, suppressing, it is true, all mention of Sanatogen, although thereby the original was sadly emasculated, if not actually falsified.

Among the physicians who have carefully tested Sanatogen and determined its dietetic and therapeutic properties are many men of truly international reputation, men who are as far above suspicion as was Caesar's wife. At least one of these men was the honorary guest of your Association a few years ago.

It is such men that your article holds up to contempt and dishonor when you allow the false inference to go forth that Sanatogen is a mixture of casein and glycerophosphates. It is such men's careful researches and experience that you attempt to offset by the snap judgment of men whom we claim, without the slightest intent of disparaging them, to be in the present instance unfitted to give an opinion on Sanatogen inasmuch as they—with perhaps one honorable exception—have never tested or used the product. Their lack of definite knowledge of Sanatogen is shown by their persistent references to casein and the glycerophosphates, as though these two ingredients were separate and not chemically combined. To consider Sanatogen a mixture is to lose the vital detail of its specific value.

Now after all, is this a fair, judicial spirit, is this true scientific enquiry? Are we to accept offhand judgments in preference to the opinions of those who speak from years of observation of the effects of Sanatogen? In the name of justice and fair play, is it right for the great Journal of the A. M. A. to ignore and suppress the accumulated evidence in favor of Sanatogen and cite instead the cursory opinions of men who have never seen Sanatogen, tested or observed its effect, who by the very nature of your enquiry must have been influenced subconsciously in favor of your side of the matter.

During the twelve years Sanatogen has been used, prescribed and recommended by thousands of competent physicians, it has been free from all secrecy. The truth has been told at all times. From the first we have cooperated with the profession. Never have we failed to safeguard the doctor's interests. Never have we suggested by word or inference that any person should employ Sanatogen to the exclusion of medical treatment. Not a day passes but we refer people who inquire about this or that bodily ill, to their physicians for advice.

We regret the length of this letter but feel that the scientific character of Sanatogen, its well-defined chemistry and the respect we owe to the men who have not hesitated to give their honest opinions concerning its food and tonic effects, make it imperative that we refute at once errors and misleading statements, and correct to the best of our ability the wrong impression you have allowed to go forth. The clinical reports and statements and the scientific evidence on which we have based our claims are constantly available and may be examined by any responsible person for verification or any other legitimate purpose.

We have tried to make this article temperate, fair and free from ill temper and ill feeling. We only ask for justice and feel that you will be willing—possibly anxious—to correct, so far as you can, the great wrong you have done us.

The Bauer Chemical Co.
By F. W. Heihmeyer, Resident Manager.

[Comment: We devote considerable space to the above free advertisement of Sanatogen, as The Journal does not want to be accused of being unfair, even to patent medicine venders. As our readers will recognize, the above is simply a reiteration of the statements that have been published in the advertisements of Sanatogen. The song that runs through all the advertising matter is that Sanatogen is a chemical compound, and since it is a chemical compound it therefore possesses properties not to be found in the ordinary mixture. It is the old, old story; the "synthetic" argument is as hoary as the nostrum business itself but fortunately the medical profession is no longer easily fooled by it.

As a matter of fact, even assuming for the sake of argument that the casein and glycerophosphate in Sanatogen are in chemical combination, it would be a union of the loosest kind, which on entering the digestive tract must be broken up into its more stable components, casein and glycerophosphate. To claim that Sanatogen possesses any properties not possessed by its essential constituents is a silly piece of pseudoscientific claptrap.

Of the testimonials on Sanatogen we shall at this time have nothing to say; The Journal has in the past repeatedly shown the worthlessness of this kind of evidence.

We have nothing to retract, rather we would emphasize and, had we space, enlarge on what we have already published, for we believe that a large and unfortunate portion of the public, that can ill afford it, is paying a ruinously high price for a substance having a very mediocre food value. That indigent consumptives, for instance, should be led by glittering falsehoods to squander on Sanatogen money that should go for "food tonics" of infinitely greater value, such as eggs, milk, vegetables and meats, is not only economic waste but inhuman cruelty.—Ed.]

# Association News

## ATLANTIC CITY EXCURSIONS

### Many Opportunities for Delightful Trips in Connection with the Annual Session

Many members will, as usual, take advantage of the trip to Atlantic City to enjoy excursions to other points of interest, making the meeting a part of a summer outing.

For example, one can purchase a ticket to New York or Boston and return from either of these points by sea to Norfolk. New York is eighteen hours by steamer from Norfolk, and Boston is thirty-eight hours. Steamer tickets include meals and berth. Certain roads allow stop-overs at points along their route within the final limit of the ticket.

Another return route from New York or Boston suggested is by way of Montreal, Toronto and Niagara Falls. These tickets entitle the purchaser to stop over at Philadelphia, from which point he will purchase a side-trip ticket to Atlantic City.

The following routes and rates are quoted merely as suggestions. All ticket agents will be glad to aid in arranging routes to suit the traveler.

Rail via Philadelphia to New York; returning, steamer to Norfolk, thence via Washington and Chesapeake & Ohio Railway. Rate from Chicago $36.00, and from St. Louis, $42.30.

Rail via Philadelphia to New York and Boston, thence steamer to Norfolk, and as above. Rate from Chicago, $42.75 and from St. Louis, $49.05.

Rail via Philadelphia to New York; returning, rail via Montreal, Toronto and Niagara Falls. Rate from Chicago, $39.70 and from St. Louis, $46.50.

Rail via Philadelphia to New York, thence rail to Boston returning rail via Montreal, Toronto and Niagara Falls. Rat from Chicago, $37.45, and from St. Louis, $45.45.

The Committee on Transportation and Place of Session ha previously announced (The Journal, May 4, p. 1406) th rates certain railroads offer to those who will attend th Atlantic City session. Since this announcement, the Southwestern Passenger Association has advised the committee tha tickets to Atlantic City will be on sale from practically a their territory on and after June 1 throughout the seaso good for return passage to the end of October at very lo summer tourist fares.

### EARLY ARRANGEMENTS DESIRABLE

The committee once more advises that application be ma to local agents for full and exact information concerning ra of fare, limit of ticket, extension privileges and train accommodations. It also suggests that those who make their sleep reservations early will enjoy the trip much more than t tardy ones who have to accept the remaining open train spa Already reports have been received of completely filled ca going from Kansas City, St. Joseph, Cincinnati, Des Moin as well as on the Chicago train. Many other points are arran ing for special cars. This does not mean that the railroa cannot accommodate all, but emphasizes the advantage promptly completing arrangements. These arrangeme should include a hotel reservation at Atlantic City, for wh these hotels are amply able to care for the members w attend the meeting, it is a great comfort to know just wh one is going when one leaves the train.

### Entertainments

In addition to the social events already announced are the following:

Banquet of the Section on Nervous and Mental Diseases, Tuesday, June 4, 7:30 p. m., Marlborough-Blenheim.

College of Physicians and Surgeons, Baltimore, alumni reunion. The headquarters of this school will be Young's Hotel.

Alpha Omega Alpha Honorary Fraternity will hold its third international meeting at the Seaside House, Atlantic City, Thursday, June 6. Dinner at 6:30 (to which members may invite their friends). Plates $3. Session of delegates follows dinner.

Rush Medical College alumni reunion may be arranged. Those desiring a smoker are asked to address the president, Dr. John Ritter, 32 N. State St., Chicago, or care A. M. A., Exposition Bldg., Atlantic City.

## *Queries and Minor Notes*

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### THE ACTION OF HEXAMETHYLENAMIN IN THE TISSUES

*To the Editor:*—In the Department of Therapeutics (April 20, p. 1195) you say of hexamethylenamin: "Its value lies in that it breaks up in the tissues and thus formaldehyd is liberated." In "Practical Therapeutics," Ed. 13, Hare says: "When first introduced it was thought when taken internally to set free formaldehyd in the urine; Cammidge has proved this to be incorrect." Why such inconsistent therapeutics?

C. R. Byard, M.D., Fenix, Coah, Mexico.

Answer.—The statement quoted by our correspondent from Hare's "Therapeutics" appears to be somewhat strong. The physiologic action of hexamethylenamin may be stated briefly as follows: In itself it is somewhat antiseptic but not markedly so. When taken internally it is rapidly absorbed and is excreted by the kidneys and also into the various cavities of the body, such as the cerebrospinal canal, the sinuses of the nose, the gall-bladder, etc. Casper injected hexamethylenamin under the skin of a rabbit and found formaldehyd in the blood and also was able to detect it, in some cases, in the urine of persons taking hexamethylenamin, an observation which has been confirmed by Suter and Citron. In a number of cases, however, these chemists failed to detect any formaldehyd in the urine and P. J. Cammidge could not get it at all, so that it is evident that the elimination of formaldehyd after the ingestion of hexamethylenamin is an inconstant phenomenon. It is generally held that a partial decomposition with liberation of formaldehyd takes place if the hexamethylenamin is excreted in acid (but not in alkaline) urine, it being assumed that the acid of the urine is necessary to effect the decomposition. Cushny, however, states that "formaldehyd also appears in the bile and pancreatic juice when hexamethylenamin has been administered" and has suggested its use in gall-bladder infections. ("Pharmacology and Therapeutics," Ed. 5, p. 480.) From this it would appear that its decomposition is possible in alkaline liquids. While we must admit that the decomposition of hexamethylenamin into formaldehyd and ammonia is not essential for its therapeutic action, we believe that the statement in our therapeutic department, that its value lies in the fact that it breaks up in the tissues and thus formaldehyd is liberated, is fully justified.

### ECZEMA AND OCCUPATION

*To the Editor:*—I report the following case in the hope of receiv-ng suggestions as to diagnosis and treatment:

The patient, a white American man, aged 23, runs a "pan-orium." One sister had a leg cut on a barbed wire, after which he had two or three attacks of trouble similar to that of my patient. She has not had any for the last ten years. My patient's personal history does not indicate anything of consequence, as he has had good health always with the exception of this particular illness, the first attack of which began five years ago and was very ight. The second attack began one year ago, since which time he as had nine attacks. Patient's chief complaint is an eruption ppearing on the back of the neck and hands, later covering face nd reaching above the wrists. This eruption itches and burns con-iderably; forms vesicles which break, on which the eruption sub-ides, as do all the rest of the symptoms. There is very little fever t any time; pulse and respiration normal; tongue coated white, some eructation of gas from stomach; skin rather dry; frequent urination, quantity about normal; no albumin or sugar.

When this eruption appears it resembles erythema, which goes to vesiculation but does not form pus. These vesicles break down and go on to complete recovery. After the vesicles break the itching and burning stops and all symptoms abate. This stage lasts about one week. These vesicles do not form everywhere on the skin, but are rather scattered, the eruption never getting any farther than red blotches over most of the surface. In his work, in cleaning and pressing clothes, he uses a French dry cleaner, which consists of alcohol, ammonia, green soap, borax and a small amount of ether, all of which is diluted with rain-water. He also uses ammonia, gasoline and gasoline soap. The first attack was relieved with two or three applications of a weak solution of acetate of lead and sulphate of copper. This stopped the itching and burning and the eruption disappeared the second day. In the next attack the effects of this solution were not nearly so well marked; on later attacks it did not show any effects whatever. Calcium sulphid, in 2-grain doses every two hours, was given internally; later potassium iodid, 5 gr. four times daily, was given. Warm baths with strong soda solution were recommended, but none of the above-named treatments has had much effect lately. The itching and burning in this patient is considerably more on retiring, or on being in the house where it is warm. He is fairly free from it when out in the open air.

H. L. S.

Answer.—The description of the attacks leaves little doubt that they are eczema, which is probably produced by exposure of the hands and face to local irritants. Any one of several ingredients of the solutions which the patient uses in his work might be responsible for the irritation—the alcohol, the ammonia, the green soap, the ether or the gasoline. It is probable that they are all acting to some extent in producing this irritation. Their action is probably in great part due to the extraction of fat from the skin.

It is possible that relief from the attacks cannot be obtained without avoidance of contact with these agents. Perhaps sufficient protection to prevent their irritation might be obtained by greasing the hands frequently with a bland ointment, like cold cream or petrolatum, and by wearing loose rubber gloves. When the attacks occur they can probably be relieved by avoiding contact with the irritants, by frequent bathing of the parts with a 1 per cent. aluminum acetate solution combined with an application of a bland ointment such as cold cream. Other methods of treatment for the acute outbreaks will be found in any standard text-book on dermatology under the treatment of acute eczema. Very frequently the susceptibility to such irritants as these compels change of occupation, when circumstances do not permit such a division of labor as will free the patient from the irritating part of the work.

### VACUUM SUCTION APPARATUS

*To the Editor:*—Please describe the suction bell and just how to use it as Boas does in his non-operative treatment of hemorrhoids, as described in The Journal, March 9, 1912, p. 742. Where can I get it?

C. Ulysses Moore, Carthage, S. Dak.

Answer.—The suction glass referred to by Boas is the apparatus employed to excite hyperemia according to Bier's method. These pieces of apparatus suitable for application to different parts of the body can be obtained of surgical instrument houses. Boas' article gives no illustration of the bell. Illustrations of different forms of this apparatus are shown in The Journal, March 14,1908, p. 841. Other illustrations and descriptions can be found in "Bier's Hyperemic Treatment," by Meyer and Schmieden, published by W. B. Saunders Company, Philadelphia, but Boas' treatment of hemorrhoids seems to be a new adaptation.

### SAL HEPATICA

*To the Editor:*—What is the composition of Sal Hepatica?

A. E.

Answer.—The composition of Sal Hepatica, as given in The Journal, March 26, 1910, on the authority of the *Druggists Circular* is: sodium chlorid, 13.05 parts; sodium sulphate, 26.27 parts; sodium phosphate, 29.80 parts; sodium bicarbonate, 18.0 parts; lithium phosphate, 0.04 parts; citric and tartaric acids, to make 100 parts. The matter has been reprinted in "Nostrums and Quackery," page 472, and in the "Propaganda for Reform," seventh edition, page 242.

## *The Public Service*

Journal Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

# Medical Economics

This Department Embodies the Subjects of Postgraduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

## NEWSPAPER COMMENTS ON THE PUBLIC HEALTH CAMPAIGN

The efforts to secure adequate federal health legislation and the organized opposition to the Owen bill continue to be commented on in the daily press. But a marked change has taken place in the last six months. Evidently the fallacies of the objections urged by the National League for Medical Freedom and its dupes have become apparent to the editors of the country. An editorial endorsing the attitude of the league is now rarely seen; a saner and broader view now characterizes the newspapers. We quote parts of two editorials which are fair samples of the present utterances of the press. The Council Bluffs (Iowa) *Nonpareil* says, in part:

> "Mr. ——— lectured in Council Bluffs Friday evening under the auspices of the American League for Medical Freedom. He . . . made some strictures on the medical fraternity worthy of consideration. He pointed out that members of the profession sometimes run off on tangents and become cranks on surgery and other special features. He pointed out that charges are sometimes extreme, that diagnoses are sometimes inefficient, etc. But he failed to state that these are exceptions and not the rule in the medical profession. He said nothing of the great work achieved by medical men in eradicating disease through sanitation and quarantine regulation. He said nothing of the thousands of lives saved and prolonged by antiseptic surgery. He made no mention of the fact that some surgeons who charge long prices in some cases perform other operations free of charge. . . .
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> "The impression which a hearer gets of the regular doctor by listening to an address by an agent of the medical freedom society is that he is an ignorant dispenser of drugs and nostrums, wholly unaware of the fact that there is any other way of curing people's ills. A visit to the office of any reputable physician dispels this notion. Their mission is not only to cure ills, but to drive disease from the face of the earth by teaching people how to live. What the American Medical Association seeks is not a monopoly of medical practice, but the well-being of the people of the country. Their glory is not so much in curing people as in the eradication of causes of disease as they have done in the Canal Zone, in Havana, in New Orleans, in the Philippines and all other places where the people have the good judgment to allow them to put in practice demonstrated scientific methods of sanitation. 'By their works ye shall know them,' is a test which the great body of medical men court.
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> "Regular medical men put in four years studying the anatomy of the human body and the art of materia medica. They do not deny the right of people to practice whatever form of healing they see fit, but they insist that before a man shall advertise himself as a healer that he shall qualify himself by a thorough study of the subject. If a man wants to be a mental healer it will not harm him in the least to know the anatomy of the human body as well as the nature and effect of medicine.
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> "There should be established a national health bureau and there should be medical inspection of schools. The liberties of the people should be carefully guarded, but the name of these liberties should not be used to prevent people from receiving all the possible benefits revealed by science in the art of healing."

Equally rational and fair-minded are the editorial comments of the Colorado Springs *Gazette*. Under the title "A National Department of Health," the *Gazette* says:

> "The main object of the 'National League for Medical Freedom' appears to be to oppose all governmental efforts to safeguard the health of the people in city, state and nation. In particular, the league is opposed to the establishment of a federal Department of Health, as proposed in the Owen bill. The recent meeting in this city to organize a chapter makes the question of the establishment of a federal Department of Health of present local interest."

After discussing the details of the bill the editor continues:

> "The object of the Owen bill is perfectly clear: It is to unify the efforts of the federal government in promoting and conserving the health of the people. There is no branch of the conservation movement more important than that of the conservation of the lives and health of the people."
>
> "The individuals and organizations that have appeared in support of the Owen bill are a guarantee of the expediency and desirability of the establishment of a Department of Health. . . .
>
> "The movement is strongly advocated by the American Medical Association, but it is not in any sense a movement by the medical profession or by any particular school. President Taft and Ex-President Roosevelt support the movement. Many other prominent men urge the passage of the Owen bill.
>
> "Senator Owen has received letters from, at least, twenty governors urging federal action. Numerous granges and farmers' unions, labor organizations, insurance companies, college presidents, boards of health, charity organizations, and civic associations have urged the passage of the Owen bill. The Committee of One Hundred on Public Health, with Professor Irving Fisher of Yale as its chairman, is an organization without 'an ax to grind' that is strongly supporting the bill.
>
> "The opposition to the bill is working through the National League for Medical Freedom. It has been charged that this league is supported and financed chiefly by patent medicine manufacturers. This charge has not been successfully refuted. The league has attempted to gain adherents by shouting 'our liberty is being infringed.' It is a safe guess, however, that the motives of the opposition are the same as those of food adulterators and patent medicine manufacturers who so fiercely opposed the passage of the pure food and drugs law."

## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

### Tenth Month—First Weekly Meeting

### Anatomy of the Kidney

EXHIBIT FRESH SPECIMENS

Kidney: Situation, surface markings, important relations, size, weight, surfaces, borders and extremities. Relation of structures entering hilum.

Structure: Capsule, hilum, sinus, pelvis, calyces, pyramids. Cortical portion, medullary substance.

Microscopic Anatomy: Uriniferous tubule; trace from capsule to pyramid. Structure of tubule, character of epithelium in different portions. Renal vessels; trace from renal artery to vein, three sets of veins. Difference in afferent and efferent vessels of Malpighian tufts. Relation of artery, vein and tubule in kidney.

Nerve supply of kidney. Lymphatics.

### Physiology of Kidney

Secretion of Urine: Ludwig's theory. Bowman-Heidenhai theory. Function of glomerulus, blood-pressure and pressure of urine in capsule. Effect (I) of increasing genera arterial pressure, (2) of obstructing venous outflow, (3 of obstructing ureter.

Function of Convoluted Tubule: Character of epithelium secretory or absorptive. Facts in favor of absorption, i favor of secretion.

Action of Diuretics: Due to increase of blood-pressure o direct stimulation of epithelium? Vasodilator and vaso constrictor nerves.

### Composition of Urine

Physical Characteristics: More important elements foun Nitrogen; origin, per cent. of proteid intake. I. Ure nitrogen; per cent. of total, origin, where produced, im portance. 2. Ammonia nitrogen; per cent., significanc 3. Creatinin nitrogen; origin, effect of exercise. 4. Pur body nitrogen; chemical relation of purin nucleus, hy poxanthin, xanthin and uric acid. Exogenous and endo enous origin of purin material.

Elimination of inorganic salts.

REFERENCE BOOKS FOR THE TENTH MONTH

Mitchell: Diseases of the Kidney.
Osler's Modern Medicine.
Nothnagle's Practice.
Allbutt's System of Medicine.
Text-Books on Practice of Medicine.

# Medical Education and State Boards of Registration

## COMING EXAMINATIONS

DELAWARE: State Society and Homeopathic Examining Boards, Dover and Wilmington, June 18-20. Secretary of Medical Council, Dr. Henry W. Briggs, Wilmington.

IOWA: Capitol Building, Des Moines, June 13-15. Sec., Dr. Guilford H. Sumner, State House, Des Moines.

KENTUCKY: The Armory, Louisville, June 3-5. Sec., Dr. J. N. McCormack, Bowling Green.

LOUISIANA: Regular, Tulane University, New Orleans, May 30 to June 1. Sec., Dr. A. B. Brown, 108 Baronne Street.

MARYLAND: Regular, 1211 Cathedral Street, Baltimore, June 18. Sec., Dr. J. McP. Scott, 129 West Washington Street, Hagerstown; Homeopathic, St. Luke's Hospital, Baltimore, June 13-14. Sec., Dr. O. N. Duvall, 1326 North Mount Street, Baltimore.

MICHIGAN: Ann Arbor, June 11-13. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

MINNESOTA: State University, Minneapolis, June 4. Sec., Dr. Thomas S. McDavitt, Lowry Building, St. Paul.

MISSOURI: Gymnasium of the St. Louis University, St. Louis, June 24-26. Sec., Dr. Frank B. Hiller, State House, Jefferson City.

NEBRASKA: Senate Chamber, State House, Lincoln, May 22-23. Sec., Dr. C. P. Fall, Beatrice.

NEW JERSEY: State Capitol, Trenton, June 18. Sec., Dr. H. G. Norton.

NEW YORK: June 25-28. Chief of Examinations Division, Mr. Harlan H. Horner, Department of Education, Albany.

NORTH CAROLINA: Hendersonville, June 11. Sec., Dr. Benjamin K. Hays, Oxford.

OHIO: Columbus, June 18-21. Sec., Dr. George H. Matson, State House, Columbus.

PENNSYLVANIA: Philadelphia, Pittsburgh and Harrisburg, June 24-27. Secretary of Bureau of Medical Education and Licensure, Nathan C. Schaeffer, Harrisburg.

SOUTH CAROLINA: Columbia, June 11. Sec., Dr. A. Earle Boozer, 1806 Hampton Street.

TEXAS: Austin, June 27-29. Sec., Dr. J. D. Mitchell, Fort Worth.

VIRGINIA: Richmond, June 18-21. Sec., Dr. R. S. Martin, Stuart.

WISCONSIN: Milwaukee, May 28-30. Sec., Dr. J. M. Beffel, 3200 Clybourn Street.

## New State Board Rulings in Louisiana

At a meeting of the Louisiana State Board of Medical Examiners, April 24, 1912, the board decided not to accept applicants for reciprocity who at any time have taken its examination and failed to make the required percentage. The board also decided to examine students at the end of their second year in anatomy, chemistry and physiology, providing they can present credentials from the medical college they are attending, certifying to the fact that they have passed all the examinations in the work of those years. These rulings take effect immediately.

## Iowa February Report

Dr. Guilford H. Sumner, secretary of the Iowa State Board of Medical Examiners, reports the written examination held at Des Moines, Feb. 6-8, 1912. The number of subjects examined in was 8; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 17 of whom 14 passed and 3 failed. Twelve candidates were licensed through reciprocity. The following colleges were represented.

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Chicago College of Medicine and Surgery | (1911) | 84, 85.5 |
| Bennett Medical College, Chicago | (1911) | 80.8 |
| Northwestern University Medical School (1906) 89.5; (1910) 88.5; (1911) 89.8. | | |
| College of Physicians and Surgeons, Chicago | (1911) | 80.8 |
| Keokuk Med. Coll., Coll. of P. and S. | (1903) | 89.2 |
| University of Louisville | (1910) | 90.5 |
| Barnes Medical College | (1908) | 80.2 |
| Western Pennsylvania Medical College | (1907) | 83.5 |
| Memphis Hospital Medical College | (1911) | 82.6 |
| University of Nashville | (1910) | 88 |
| Marquette University, Milwaukee | (1911) | 83.1 |

FAILED

| College | Year Grad. | Per Cent. |
|---|---|---|
| State University of Iowa, College of Medicine | (1897) | 66.8 |
| St. Louis College of Physicians and Surgeons | (1910) | *78 |
| Marquette University, Milwaukee | (1911) | 72.3 |

LICENSED THROUGH RECIPROCITY

| College | Year Grad. | Reciprocity with |
|---|---|---|
| Bennett Medical College, Chicago | (1910) | Indiana |
| Rush Medical College | (1910) | Colorado |
| University of Louisville | (1910) | Wyoming |
| Ensworth Medical College | (1910) | Missouri |
| Washington University, St. Louis | (1910) | Missouri |
| University Medical College, Kansas City | (1906) | Kansas |
| Barnes Medical College | (1908) | Missouri |
| University of Oklahoma | (1911) | Kansas |
| Jefferson Medical College | (1910) | Maine |
| Wis. Coll. of P. and S., Milwaukee | (1898) | Wisconsin |
| Marquette University, Milwaukee (1895) | (1905) | Wisconsin |

* Fell below 60 in obstetrics.

## Arizona April Report

Dr. Ancil Martin, secretary of the Board of Medical Examiners of Arizona, reports the written examination held at Phoenix, April 1-2, 1912. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 14 of whom 8 passed and 6 failed. The following colleges were represented

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Rush Med. Coll. (1899) 85.7; (1909) 82.4; | (1911) | 82.9 |
| Northwestern University Medical School | (1896) | 79.3 |
| National Medical University, Chicago | (1897) | 81.4 |
| University of Minn., Coll. of Med. and Surg. | (1900) | 77.9 |
| New York University Medical College | (1898) | 77.8 |
| University of Virginia | (1896) | 83.9 |

FAILED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Denver and Gross College of Medicine | (1909) | 73 |
| Louisville Medical College (1899) 65.5; | (1906) | 74.4 |
| Homeopathic Medical College of Missouri | (1908) | 66.1 |
| University of Nebraska | (1908) | 74.5 |
| Tennessee Medical College | (1907) | 64.2 |

## Colorado April Report

Dr. David A. Strickler, secretary of the Colorado State Board of Medical Examiners, reports the written and oral examination held at Denver, April 2, 1912. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. The total number of candidates examined was 9 of whom 8 passed and 1 failed. Seventeen candidates were licensed on presentation of satisfactory credentials, including state licenses. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| University of Colorado | (1911) | 87.4, 87.5, 88, 88.9, 90.5 |
| St. Louis University | (1904) | 83.2 |
| University Medical College, Kansas City | (1901) | 82.2 |
| Medico-Chirurgical College, Philadelphia | (1911) | 78.7 |

FAILED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Howard University, Washington, D. C | (1906) | 62. |

LICENSED ON PRESENTATION OF SATISFACTORY CREDENTIALS

| College | Year Grad. | State Licenses |
|---|---|---|
| University of Alabama | (1910) | Alabama |
| Chicago Homeopathic Medical College | (1892) | Illinois |
| Rush Medical College | (1893) | Illinois |
| Louisville Medical College | (1895) | Kentucky |
| Southern Homeopathic Med. Coll., Baltimore | (1904) | Texas |
| Hamline University | (1897) | Minnesota |
| Missouri Medical College | (1891) | Kansas |
| Omaha Medical College | (1897) | Nebraska |
| University of Nebraska | (1911) | Nebraska |
| Syracuse University | (1905) | New York |
| Medico-Chirurgical College, Philadelphia | ((1890) | Penna. |
| University of Pennsylvania | (1909) | Maryland |
| Western Pennsylvania Medical College | (1894) | New Mexico |
| University of Tennessee | (1903) | Oklahoma |
| Memphis Hospital Medical College (1887) | (1903) | Tennessee (1896) Mississippi. |

The following questions were asked:

ANATOMY

1. What differences microscopically and macroscopically are to be noted between compact and cancellous bony tissue? 2. Name the characteristic anatomic features of the first, second and ninth ribs. 3. Name the muscles attached to the upper end of the humerus. 4. Give the origin, insertion and nerve-supply of the muscles that flex the forearm on the arm. 5. Name the structures contained in a cross-section of the thigh on a level with the beginning of Hunter's canal. 6. Describe the vascular supply of the thyroid gland. 7. Give a brief description of the structures found between the layers of the broad ligament of the uterus. 8. What muscles lose their nerve-supply when the musculospiral nerve is divided in the musculospiral groove? 9. Give the relations and structure of the prostate gland. 10. Describe the pancreas, including its relations and blood-supply. Alternate question: Name the bones entering into the formation of the orbit.

PHYSIOLOGY

1. Name and give function of all principal and accessory organs of digestion. 2. (a) Locate the kidneys; (b) describe their histologic construction; (c) give their function; (d) mention the physiologic constituents of their secretion; (e) name the organs through which the urine is excreted. 3. Give two general functions of the spinal cord. 4. (a) What is the object of respiration? (b) What muscles are engaged? (c) Describe the pleuræ and give their function. 5. (a) Locate the liver; (b) describe its minute structure. (c) From whence does it receive its nutrition? (d) What vessels return its blood-supply to the circulation? (e) What does it secrete? 6.

Name the organs of special sense and the special nerve supplying each. 7. (a) Name the female organs of generation. (b) What do you understand by a graafian follicle? (c) Describe an ovum. (d) Where does fecundation take place? 8. Mention five cranial nerves that have their deep origin in the fourth ventricle. 9. Name the muscles which give motion to the eye; (b) Describe the retina; (c) give its function. (d) What and where is the blind spot? (e) In what part of the retina is vision most acute? 10. Name the valves of the heart and describe their action.

### CHEMISTRY

1. What are the chemical constituents of normal urine? 2. Enumerate the abnormal chemical substances found in urine. 3. What are the sources of albuminuria? 4. Name and describe two chemical tests for glycosuria. 5. What are the chemical constituents of the two most common forms of urinary calculi? 6. Name three common chemical disinfectants and describe their mode of action. 7. Give an illustration of a chemical reaction. 8. Give chemical formulas of three salts used in the practice of medicine. 9. Define and give an example of "chemical incompatibility," as used in reference to the prescribing of chemical salts as medicines. 10. What acids may be found in the stomach (other than ingested), and what is the significance of each?

### PATHOLOGY

1. Discuss the morbid anatomy of cancer of the stomach. 2. Give the post-mortem findings in a case of empyema. 3. Describe the regeneration of bone. 4. In what pathologic processes is the *B. coli communis* implicated? 5. Discuss briefly the morbid anatomy of congenital heart disease. 6. Discuss the pathology of arthritis. 7. Discuss briefly the pathologic processes which may result from cholelithiasis. 8. In what conditions do we find edema of the eyelids? 9. How does a tubercle differ from a gumma? 10. What is the best method of opening a heart for demonstration post mortem?

### TOXICOLOGY

1. From a medical standpoint define toxicology. 2. Give symptoms of poison by chloroform internally administered. 3. Give treatment of poison by chloroform. 4. Post-mortem appearance of one poisoned by chloroform. 5. Give symptoms of one poisoned by oxalic acid. 6. Give treatment of poison by oxalic acid. 7. Give post-mortem appearance. 8. Give signs of death by drowning. 9. Give treatment. 10. Give symptoms, treatment and post-mortem appearance of one poisoned by acetate of lead.

### SYMPTOMATOLOGY

1. Discuss abdominal distention as a symptom of disease. 2. What are "tube casts?" What are their kinds? What do they indicate? 3. How many red blood-corpuscles are there in a cubic millimeter of blood? How many white corpuscles? In what diseases is variation of this ratio found? 4. What are the causes of displacement of the apex of the heart to the left? 5. Describe the area of liver dulness. What conditions determine alterations in this area? 6. What are the symptoms arising from an excess of thyroid secretion and from a deficiency of it? 7. What are the symptoms of epidemic cerebrospinal meningitis? 8. Describe the course of a case of small-pox. 9. What are the symptoms of acute transverse myelitis? 10. What are the symptoms of paralysis agitans?

### SURGERY

1. Give differential diagnosis between fracture of the neck of the femur and traumatism of the hip. 2. Give the symptoms and prognosis of chronic catarrhal appendicitis. 3. Describe a case of tuberculous peritonitis. 4. Give the diagnosis of renal tuberculosis. 5. Describe a case of talipes equinovarus. 6. Give the symptoms of acute osteomyelitis. 7. Give the symptoms of osteosarcoma of the upper part of the femur. 8. Give the prognosis of fracture of the upper third of the shaft of the femur. 9. Give the local and constitutional causes of non-union of fractures. 10. Describe malignant tumors.

### OBSTETRICS

1. Give the successive changes that take place in the ovum after fecundation and during its passage to the uterus. 2. Name and describe the five movements in the mechanism of an L. O. A. 3. Give the differential diagnosis between placenta prævia and abruptio placenta. 4. Give the causes, diagnosis and treatment of uterine inertia. 5. Give the indications and conditions requiring cesarean section and describe Sanger's modification. 6. Give indications and describe in detail manual aid. 7. Name indications, conditions and give technic in the use of low forceps. 8. Mention the varieties of hemorrhage that may affect the pregnant woman, the parturient woman and the puerperal woman. 9. What is placenta prævia? Give its causes, varieties, symptoms and treatment. 10. Give in outline form the manner in which you would go about to make a diagnosis of the position of the child.

## Rhode Island April Report

Dr. Gardner T. Swarts, secretary of the Rhode Island State Board of Health, reports the written examination held at Providence, April 4-5, 1912. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 80. The total number of candidates examined was 11 of whom 9 passed and 2 failed. The following colleges were represented.

| PASSED<br>College | Year Grad. | Per Cent. |
|---|---|---|
| George Washington University | (1906) | 89.2 |
| Georgetown University | (1910) | 80 |
| Baltimore Medical College | (1911) | 88.1, 88.8, 90.7 |
| Boston University | (1910) | 84 |
| Jefferson Medical College | (1908) | 90.9 |
| University of Vermont | (1911) | 86.2 |
| McGill University, Montreal | (1910) | 88.7 |
| FAILED | | |
| Harvard Medical School | (1908) | 76.5 |
| University of Vermont | (1910) | 69 |

# Book Notices

Die Experimentelle Pharmakologie als Grundlage der Arzneibehandlung. Von Dr. Hans H. Meyer, Wien, und Dr. R. Gottlieb, Heidelberg, Professoren der Pharmakologie. Second Edition. Paper. Price, $3.50 and postage. Pp. 554, with 65 illustrations. New York: Rebman Company, 1911.

This German work is divided into eighteen chapters, of which each author prepared nine, the authorship being indicated in each case. The following subjects are considered: pharmacology of the motor nerve endings, central nervous system, sensory nerve endings, vegetative system (i. e., the autonomic nervous system of Langley, or the vegetative of the author of this chapter, of which the autonomic is classified as a part), the eye, digestion, genitalia, circulation, respiration, kidney function, sweat secretion, metabolism, muscles, blood, antipyretics, irritants, agents directed against the causes of disease (including serums, antiseptics, parasiticides, anthelmintics), and a final chapter added in the present edition and treating of the conditions for the actions of drugs. The somewhat arbitrary arrangement necessitates reference to many of the pharmacologic agents in more than one part of the book, and it even requires the repetition of the same statement concerning a given drug in some instances, but this is never made an occasion for padding, and the arrangement facilitates the consideration of the drugs of any given group.

As usual with text-books of pharmacology, the physiology of the organs on which the drugs act is discussed briefly before taking up the mode of action of the drugs. The history of the drugs is considered in many cases, but this occupies much less space than in many of the older text-books. Marginal notes are employed freely to indicate changes of subject, attention being directed to the most important agents of a group by heavy black-faced type, while those of lesser importance are indicated by black-faced type, and small italics are used for the unimportant drugs. Those who prefer first-hand information will find the work of especial value by reason of the extensive and well-selected bibliography, embracing more than 2,000 references; these are given with a greater degree of accuracy than one usually finds in such works. These references include many which bear dates but little preceding the publication of the book.

The American practitioner will be surprised to find scant mention, or none at all, of many drugs with which he is quite familiar, and which have a wide use among us, such as aconite, colchicum, cactus, hydrastis and many other well-known drugs of doubtful value, besides a great many proprietary preparations. Aconite is dismissed with a very few lines as one of those drugs which the modern physician employs but little. This statement will be received with a variety of opinions by those who believe that aconite possesses certain well-defined therapeutic uses, though it would be difficult to explain its usefulness with a full knowledge of its pharmacologic and toxic actions. Colchicum is wholly omitted, probably with greater reason than is found for the scant consideration of aconite, but one would think that the toxicology of colchicum would suffice to insure its notice. The omission of cactus is certainly quite proper, for it has absolutely no known pharmacologic or therapeutic actions.

The very slight attention given to the host of proprietary preparations with which the American market is flooded deserves the careful attention of American physicians because these authors are in an excellent position to form a correct estimate of the value of these preparations and of the testimony concerning them.

While it is impossible to take up the subject-matter in detail, it is interesting to note the authors' views concerning alcohol, to which the index contains fifty-two references, but it is not to be understood that there are so many separate accounts of its action. What has just been said serves to illustrate the nature of the index, which is admirably arranged to facilitate reference to any particular action of a given drug.

The authors tend to consider the pharmacology of the various drugs with especial reference to such amounts as are used in therapeutics—a tendency foreshadowed in the title of the book. This makes the subject less confusing to the general reader than is the case with those works in which the attempt is made to detail the actions of drugs when used in all grades of dosage.

It is regrettable that the work has not been translated into English, for it is so clear and so comprehensive, so far as the real essentials are concerned, that its use could not fail to improve the practice of therapeutics in the United States, and it is safe to say that we have no work of the kind which is at once so concise, comprehensive and representative of the most recent pharmacologic ideas.

Observations on the Natural History of Epidemic Diarrhea. By O. H. Peters, M.D., D.P.H. Cloth. Price, $2.25 net. Pp. 177. New York: G. P. Putnam's Sons, 1911.

This is an interesting study of an epidemic of diarrhea which occurred in Mansfield, England, during the summer and autumn of 1908. While the area studied and reported on only includes two districts, the careful manner in which the investigation was carried on makes it a valuable contribution to the literature on the subject.

Peters first presents a statistical study of age, prevalence, fatality, etc., afterward taking up the clinical features of the disease and the influence on the epidemic of social relations, including houses, occupations, school attendance, condition of yards, streets, etc., domestic sanitation, and condition of the food-supply, including water. He then discusses at length the epidemiologic features, discussing various theories as to the causation of epidemic diarrhea, the methods of transmission, the factors governing epidemic prevalence, the influence determining the mortality and morbidity, etc. A carefully considered chapter on prevention and treatment summarizes the experience obtained in the epidemic under consideration. Peters gives a careful summing up of his conclusions, of which only the positive findings are noted here.

Regarding prevalence, he found the disease to be a veritable scourge in some midland towns, attacking 10 per cent. of the population during the season. Under clinical features, he regards the incubation period as from six to thirty hours, the duration of the attack depending on the susceptibility of the patient. The mortality is largely confined to infants and is in direct ratio to the previous ill-health of the patient. Occupation and school attendance were not regarded as important factors in the spread of the disease, but the sharing of yards in common by several families seemed to have a marked influence on the extent of the infection. General dirtiness of the house, yard and surroundings was found to increase the prevalence of the disease. The milk-supply apparently plays no part in its production, infection within the house being the commonest method, and it being frequently found where milk is altogether excluded.

While regarding the fly as an important factor in transmission, the author does not attempt to determine its exact importance in this connection. Regarding prevention, isolation of all cases is advised, also general cleanliness in the household, the public disinfection of all polluted matter, breast-feeding for infants and proper care of food materials.

Bibliographic references are numerous and valuable, and the book as a whole constitutes an excellent example of modern, scientific sanitary methods, and of the opportunities for work which may be found by any health officer who has the necessary training and discernment.

Statische Gelenkerkrankungen. Von Dr. Georg Preiser, Hamburg. Paper. Price, 10 marks. Pp. 278, with 272 illustrations. Stuttgart: Enke, 1911.

In describing the static diseases of the joints the author starts out with the assertion that each extremity, upper as well as lower, forms a static unit and that any static disturbance affecting primarily only one joint or one bone must have its effect extended to all of the bones and joints of that extremity. The primary change consists in an incongruence of the joint-surfaces, either of an anatomic or of a habitually functional nature. A joint becomes incongruous, as the author terms it, when, as for instance, in a hip a part of the cartilaginous surface at the head of the femur, as a result of pathologic or habitual rotation changes, fails of contact with the cartilaginous surface of the acetabulum. When such a condition exists in any joint for a sufficiently long time serious consequences follow.

The author considers the above as the basis of those changes which take place in the bones and joints and which he denominates static. The conditions are then taken up in detail, beginning at the pelvis and the hip and extending downward to the foot and then the changes found in the upper extremity are discussed in the same general order. In presenting this theory Preiser particularly emphasizes the necessity of studying, not simply reading, what he terms the dry part of the subject, namely, the changes which take place in the bones and articulations. The work is unusually well illustrated with numerous *x*-ray plates and diagrams and the whole subject is presented in such a clear manner that the reader is sure to be convinced that the author has much on his side of the argument.

Rural Hygiene. By Henry N. Ogden, C.E., Professor of Sanitary Engineering in College of Civil Engineering, Cornell University. Cloth. Price, $1.50 net. Pp. 434, with 78 Illustrations. New York: The Macmillan Co., 1911.

This book represents an effort to present to the rural population information on those subjects popularly known as hygiene. Being written by a civil engineer, it discusses the structural side of hygiene rather than the purely medical side and is intended to supplement the physician and not to eliminate him. Books of this sort are needed, as it is recognized that the essential factor in the problem of keeping our country districts populated and productive is to make country life more attractive and living conditions in the country more sanitary. Ogden discusses such practical questions as the location of the house, the composition of soils and the construction of houses and barns with reference to healthfulness, the best methods of constructing damp-proof basements and cellars for houses and barns, ventilation, water-supply, including the quantity required, the source of the supply, the desirable qualities and the best methods of securing and distributing it. Sewage disposal is given a chapter by itself containing a discussion of sewage beds, subsurface tiling, septic tanks and other methods. Preparation and care of foods and beverages, and methods of disinfecting houses, stables and other buildings are also discussed. Seven chapters are devoted to personal hygiene and infectious diseases, including tuberculosis, pneumonia, typhoid, children's diseases, parasitic diseases, small-pox, diphtheria and tetanus. These diseases are considered entirely from a hygienic standpoint, no effort being made to discuss them clinically. For instance, in the chapter on typhoid, the death-rate for New York, the death-rate among the rural population and the annual financial loss sustained by the people of the state are discussed, also the method of transmission, illustrative cases showing the factor of polluted water, as well as milk and food, and the factor of fly transmission.

This book is one of the Rural Science Series, and can be cordially recommended to physicians for use in families not only in the country, but in towns and cities as well.

The Mortality of Alcohol. A Statistical Approximation of the Deaths in the United States in Which Alcohol May Figure as a Causative or Contributory Factor. By Edward Bunnell Phelps, M.A., F.S.S. Cloth. Price, $2. New York: Thrift Publishing Co., 1911.

This is a statistical study in which the question is discussed from the standpoint of the statistician and actuary rather than from the standpoint of the physician. The figures are taken from the mortality reports of the United States Bureau of the Census, for the registration area for 1908. A tabulation of these reports shows that in the registration area in 1908 there were 18,337 deaths of males between 20 and 74, in which alcohol may have been an important factor, and 13,664 deaths between the same ages and in the same territory, in which alcohol may have been a minor factor. When to these figures are added 852 deaths between the same ages in which alcohol was neither a primary or secondary cause, but may have been a harmful contributing factor, a total number of male deaths between 20 and 74 amounting to 32,853 is obtained in which alcohol may be regarded as having had some influence in determining the mortality. This is equal to 16.5 per cent. of all deaths between these ages. These figures were secured by averaging the estimates of the medical directors of three of the leading life-insurance companies. As is to be expected, the author found that the lack of reliable statistics for a large portion of the country made it necessary to approximate the mortality for the United States. The registration area for 1908 included seventeen states, and seventy-eight cities in non-registration states and the District of Columbia. Estimating the total mortality in the entire United States in 1908 to be 1,282,746, Mr. Phelps estimates that about 66,000 deaths in the continental United States, or one in every thirteen deaths at adult ages, were due directly or indirectly to alcohol. While under present conditions such estimates can at the best be only relatively correct, they are of the utmost interest and illustrate the necessity and importance of securing adequate registration of the causes of deaths for the entire country as soon as possible.

Second Report of the Lake Michigan Water Commission. President, George B. Young, Health Commissioner of Chicago. Paper. Price, $1. Pp. 204.

This report comprises the minutes, papers read and discussions had at the fifth, sixth and seventh meetings of the commission in 1909 and 1910, covering various phases of the water-supply and the sewage disposal questions as related to Chicago and other cities along the Great Lakes, together with a number of papers on sewage disposal in Indiana, disposal of starch-factory wastes and a number of plates and tables relating to all these subjects. Dr. George B. Young, the president of the commission, discusses the dissemination of typhoid fever by lake vessels and recommends the protective vaccination against typhoid of all employees in the lake navigation service.

These papers are valuable as studies of the important question of the water-supply of the large and growing cities surrounding the lakes. The commission, as announced some time ago, may be discontinued or merged with the Great Lakes Basin International Pure Water Association, formed in Chicago in 1911.

Blood-Vessel Surgery and Its Applications. By Charles Claude Guthrie, M.D., Ph.D., Professor of Physiology and Pharmacology, University of Pittsburgh. International Medical Monographs. Cloth. Price, $4. Pp. 360, with illustrations. New York: Longmans, Green & Co., 1912.

This work is one of a series of international medical monographs. The general editors say they "hope to issue in this series of international medical monographs contributions to the domain of medical sciences on subjects of immediate interest made by first-hand authorities who have been engaged in extending the confines of knowledge." So far as the subject of blood-vessel surgery is concerned it would be hard to find any one better qualified to write on it than the author of this monograph.

The technic of blood-vessel surgery is described with the greatest care as to details. In the experimental work on animals the technic is so perfect that, as Guthrie says, the same description applies to the human subject as well.

In this connection it might be of interest to some of the sentimental antivivisectionists to read what the author has to say about the great care and attention which he gives to his animals. He says: "But since no pains have been spared to avoid discomfort to the animals, it follows that the surgical measures employed are of the same character as those practiced on man in modern hospitals. In all cases animals are entitled to, and receive, the best possible treatment. Unkindness to an animal in the laboratory in any form would not be permitted."

When the success of blood-vessel surgery became assured from the technical side of the subject, the imagination of some ran far ahead of the facts, and the most impossible things were predicted. The author is very careful to keep within the facts and to disclaim all sensational and as yet impossible results.

While the limb of one animal has been grafted to the stump of another animal successfully, so far as the mechanical part of uniting the blood-vessels is concerned, yet, as the author says, no one has seen such a limb functionate nor is it likely that anyone will see it, at least in the very near future. Nor can it be said that the transplantation of any of the organs is yet physiologically successful for any great length of time. The cells slowly but inevitably undergo destructive absorption, showing that many of the problems of cell-life still remain unsolved. Many of the questions of physiology of cell-life are discussed by the author in a most interesting manner.

It is a common belief that the various saline solutions are practically harmless to cell-life, but the author's experiments show conclusively that all of the artificial solutions thus far proposed have a decided harmful effect on living cells.

Aside from the technic of blood-vessel surgery this little volume is very interesting from the many related physiologic and biologic problems which are discussed therein.

Diseases of the Skin and the Eruptive Fevers. By Jay Frank Schamberg, A.B., M.D., Professor of Dermatology and Infectious Eruptive Diseases in the Philadelphia Polyclinic and College for Graduates in Medicine. Second Edition. Cloth. Price, $3. Pp. 573, with Illustrations. Philadelphia: W. B. Saunders Company, 1911.

The present edition presents the valuable features of the first edition, viz., the prominence given to the eruptive fevers and their diagnosis from other forms of skin disease and the excellent illustrations of all forms of skin disease. Some new chapters have been added and the chapter on pellagra considerably enlarged to correspond with the increasing interest in the disease. The section on the treatment of syphilis has been entirely rewritten to include treatment by salvarsan and a chapter on the Wassermann reaction added. The clear style, systematic arrangement and convenient size will commend the work to general practitioners.

Handbook of Physiology. By W. D. Halliburton, M.D., LL.D., F.R.C.P., Professor of Physiology, King's College, London. Tenth Edition (Being the Twenty-Third Edition of Kirkes' Physiology). Cloth. Price, $3. Pp. 923, with 592 illustrations. Philadelphia: P. Blakiston's Son & Co., 1911.

Halliburton's well-known book has been again revised to bring it up to the minute in the rapidly growing knowledge of human physiology. The newly-determined facts concerning the ductless glands, the pituitary, etc., and the brain, have necessitated the restatement of many things, which has been done in this tenth edition. This is likewise true of the function of digestion and its chemistry. Many new illustrations have been added, a number of them being colored.

Manual of Operative Surgery. By John Fairbairn Binnie, A.M., C.M. (Aberdeen). Fifth Edition. Cloth. Price, $7. Pp. 1153, with 1365 Illustrations. Philadelphia: P. Blakiston's Son & Co., 1911.

The two volumes of previous editions of this work are now combined in one volume of convenient size, which makes it more acceptable as a text-book. The excellency of the text is maintained, although many changes and additions have been made. One of the notable commendatory features of the book is the large numbers of diagrammatic illustrations, which, although not artistic, certainly elucidate the text as well as can be desired.

Urologischer Jahresbericht. Einschliesslich der Erkrankungen des Männlichen Genitalapparates. Redigiert von Prof. Dr. A. Kollmann in Leipzig und Dr. S. Jacoby in Berlin. Literatur 1910. Paper. Price, 20 marks. Pp. 485. Leipsic: Dr. Werner Klinkhardt.

This year-book is published in connection with the *Folia Urologica* and is furnished to subscribers at an increase of 25 per cent. in the subscription price of that journal. It contains the bibliography of urology with copious abstracts from the principal articles that appeared during the year 1910. As the *Folia Urologica* does not contain abstracts, this year-book is practically a supplement to this periodical.

Minor and Emergency Surgery. By Walter T. Dannreuther, M.D., Surgeon to St. Elizabeth's Hospital and to St. Bartholomew's Clinic, New York. Cloth. Price, $1.25 net. Pp. 226, with 32 illustrations. Philadelphia: W. B. Saunders Co., 1911.

This is an excellent book for the purpose for which it was written, and contains an abundance of wheat and little chaff; many practical hints of value to any one dealing with emergency surgery, and illustrations made for the book and not abstracted from the literature of the middle ages. The author has emphasized points of importance in practical work, and has abstained from giving unnecessary details.

# Medicolegal

## Enhancement of Injury By Unsuccessful Medical Treatment

*(Fields vs. Mankato Electric Traction Co. (Minn.), 133 N. W. R. 577)*

The Supreme Court of Minnesota holds that where a person is injured by the wrong or neglect of another, and he is not himself negligent in the selection of a medical attendant, the wrongdoer is liable for all the proximate results of his own act, although the consequences of the injury would have been less serious than they proved to be, if the attendant had exercised proper professional skill and care. The court says that, as a result of falling or being thrown to the ground while alighting from a street car, the plaintiff received injuries consisting in part of a straining and rupturing of the muscles and ligaments of the hip and the fracturing and crushing of the neck and head of the femur or thigh bone. She was given immediate medical treatment at her home. Three physicians were in attendance, and after attempting, without success, to keep the hip in place, they determined that an operation was necessary. The day following the accident she was taken to a hospital, and the crushed portion of the thigh bone and the head of the bone were removed. The resulting wound did not heal. At the time of the trial the plaintiff's physical condition was greatly impaired. The defendant offered to prove that the medical treatment given the plaintiff was unskilful; that the operation performed was unnecessary, and was not sanctioned by the recognized and approved practice of physicians and surgeons; that the unnecessary and improper operation greatly aggravated the plaintiff's injury, and caused the plaintiff's impaired physical condition at the time of the trial. The offer did not include any evidence tending to show negligence on the part of the plaintiff in selecting physicians or in submitting to their treatment. There was no error in excluding the evidence offered. Under the facts established, the negligence of the defendant was the proximate cause of the impaired physical condition of the plaintiff. The finding of the jury determined that the defendant's negligence in the operation of its car caused the plaintiff to fall therefrom. It was conceded that the plaintiff received a severe injury in so falling from the car. Such injury required expert medical treatment. The necessity for the attendance and services of physicians was created by the defendant. The plaintiff, without negligence on her part, obtained the attendance and services of physicians so made necessary. The risks incident to submitting to treatments and operations were thus incurred through the fault of the defendant, not through the fault of the plaintiff. Whether the physicians skilfully or unskilfully performed the necessary services, the plaintiff not being in fault in any matter, her impaired physical condition at the time of the trial followed in unbroken casual sequence the negligence of the defendant in handling the car.

## Expenses of Quarantined Indigent Persons

*(Inhabitants of Eden vs. Inhabitants of Southwest Harbor (Me.), 81 Atl. R. 1003)*

The Supreme Judicial Court of Maine holds that Section 51 of Chapter 18 of the revised statutes of that state of 1903, which provides that the "nurses and other assistants and necessaries" furnished a quarantined person shall be "at his charge, or that of his parent or master, if able; otherwise at that of the town to which he belongs," was not repealed in 1909, but only the last clause changed. The court says that the right of action named in said section was provided for at the organization of the state, and it has come down through the various revisions in essentially the same form, except that prior to 1887 the municipal officers were charged with the duty which since that time has devolved on the local board of health. It has never been one of the pauper statutes, enacted for the relief of the poor. The assistance rendered and the expenses incurred were in no sense pauper supplies. They need not be applied for by the pauper himself nor by some one authorized by him, and no notice need be given to the town where the patient has his pauper settlement. The municipal officers and later the local board of health had full power to act when the emergency arose, and it was outside the jurisdiction of the overseers of the poor. The effect of Chapter 25 of the laws of 1909 is simply to change the last clause of Section 51, touching those persons who may not be able to pay, the indigent persons, and to make the town where such persons fall sick liable for all expenses, including those designated to prevent the spread of the disease and those for the comfort of the patient, "or such part thereof as the board may determine." Without that clause, the town furnishing the supplies would be liable for all the expense, but, with it, the effect is to give the local board the power to charge a part or the whole to the town of settlement. In other words, under the old statute expenditures for food for indigent persons were chargeable to the town of settlement, but expenditures for protection of the public health must be borne by the town supplying them. Under the new statute, all kinds of expenditures for indigent persons are grouped together, and it is left to the board of health to decide how much shall be borne by the town of settlement, and how much by the town where found. The new act does not restrict the power of the board under Section 51 to remove the sick and place them in quarantine. Nor does it abridge its power to collect all the expenses from the person himself if able. But Chapter 55 of the public laws of 1909 provides that for antitoxin furnished an indigent person the town furnishing shall be reimbursed. That is, antitoxin shall be charged to the town of settlement, but all other expenses shall be charged according to the determination of the board of health.

## Failure of Counties to Furnish Medical Aid to Foreign Paupers

*(Wood vs. Boone County (Ia.), 133 N. W. R. 377)*

The Supreme Court of Iowa holds that a county is not liable in damages for failure to furnish adequate and timely medical aid and assistance to a foreign pauper who may transiently be within its borders. The court says that it is committed to the doctrine of absolute immunity in the performance of this governmental function to both the county and its officials. A county is an instrumentality of government, and the furnishing of aid to the poor is a governmental function. The necessity for and the extent of such relief is largely, if not wholly, a matter of discretion, and is quasi or somewhat judicial in character. The relief which may be granted a foreign pauper is temporary in character, and such persons may be prevented from acquiring a settlement in the county where found. Before one is entitled to relief under section 2234 of the Iowa Code, he must satisfy the overseer of the poor within a city that he is in such a state of want as requires relief at public expense, and even then this section does not require that such relief be furnished. Moreover, not only the overseer of the poor must be so satisfied, but the board of supervisors are also to look into the matter, and inquire as to the necessities of the case. It is a general rule that, where a governmental duty rests on a state or any of its instrumentalities, there is absolute immunity in respect to all acts or agencies.

# Society Proceedings

## COMING MEETINGS

American Medical Association, Atlantic City, N. J., June 4-7.

American Academy of Medicine, Atlantic City, May 30-June 2.
Amer. Assn. of Genito-Urinary Surgeons, Philadelphia, June 7-8.
American Association of Medical Examiners, Atlantic City, June 3.
American Climatological Association, Hartford, Conn., June 10-12.
American Dermatological Association, St. Louis, May 23-25.
American Gastro-Enterological Association, Atlantic City, June 3-4.
American Gynecological Society, Baltimore, May 28-30.
American Medico-Psychological Association, Atlantic City, May 28-31.
American Neurological Association, Boston, May 30-June 1.
American Ophthalmological Society, Atlantic City, June 12-13.
American Orthopedic Association, Atlantic City, May 30-June 1.
American Otological Society, Atlantic City, June 10-11.
American Pediatric Society, Hot Springs, Va., May 29-31.
American Proctologic Society, Atlantic City, June 3-4.

American Society of Tropical Medicine, Atlantic City, June 3.
American Surgical Association, Montreal, May 29-31.
American Therapeutic Society, Montreal, May 31-June 1.
Connecticut State Medical Society, New Haven, May 22.
Illinois State Medical Society, Springfield, May 21-23.
Maine Medical Association, Portland, June 12-13.
Massachusetts Medical Society, Boston, June 11-12.
Missouri State Medical Association, Sedalia, May 21-23.
Nat. Assn. for Study and Prev. Tuberculosis, Washington, May 30-31.
National Association for Study of Epilepsy, Vineland, N. J., June 3.
New Jersey Medical Society, Spring Lake, June 11-13.
North Carolina Medical Society, Hendersonville, June 18-20.
Rhode Island Medical Society, Providence, June 12-13.
South Dakota State Medical Association, Mitchell, May 22-24.
Wisconsin State Medical Society, Wausau, May 22-24.

## OHIO STATE MEDICAL ASSOCIATION

*Held at Dayton, Ohio, May 7-9, 1912*

### Public Health the Preeminent Problem

At the first session of the Sixty-Seventh annual meeting of this association, at which were registered nearly seven hundred members, Dr. A. H. Lane, president of the Montgomery County Medical Society, welcomed the Association to the city, and introduced the president, Dr. Horace L. Bonner, of Dayton. In his address, Dr. Bonner contended that it was now time to fight the evils that imperil the nation. He stated that the causes of much trouble, misunderstanding and wrongful attacks on the health interests of the public were the general apathy of physicians toward important matters, the commercial spirit among the people and the profession, and the failure of medical men to appreciate the gigantic function of the profession. Political action was recommended where it is directed toward the preservation of health. He said that medical societies should not confine their action to technical or academic work, but should endeavor to secure public health educational measures. Law is effective only as it reflects public sentiment.

### Owen Bill Endorsed

Dr. R. H. Grube, Xenia, offered a resolution endorsing the Owen bill. This was adopted unanimously, following strong pleas by Dr. John B. Murphy, president of the American Medical Association, and Dr. George H. Simmons, editor of The Journal of the American Medical Association. Dr. Murphy said that there were many forms of opposition to this bill, and that an unusual force was required to influence Congress to pass it. Dr. Simmons reiterated the statements of Dr. Murphy and said in addition that the National League for Medical Freedom had been promoted by "patent-medicine" interests, and that Senator Works' recent speech against the Owen bill had been an insult to the intelligence of the American people. In response to an inquiry, Dr. Simmons stated that the Owen bill, as amended, was satisfactory to the Association, although it fails to provide cabinet officers.

A resolution was adopted which pledges delegates to the A. M. A. to work for the tariff reduction on chemical glassware and optical instruments and to seek an amendment to the customs rules whereby a physician may import optical instruments under the category of "tools of his trade," as is applied to other trades and professions.

A resolution was adopted to the effect that societies in counties where there is no public school inspection are directed to present the matter of school inspection to school teachers' institutes in order that inspection may be secured.

### The Influence of the Nose on Pulmonary Râles

Dr. L. C. Grosh, Toledo: While not every deviation of the normal lung-sounds should be interpreted as a serious disease condition, even though occurring in the apices, the frequency of tuberculosis and the importance of an early diagnosis make even a slight deviation from the normal sounds over the apices worthy of consideration. An abnormally soft inspiratory murmur over the apex is suggestive of disease, but it abnormally occurs not only in tuberculous subjects, but also in persons who live in dusty atmospheres, as stone-cutters and miners.

Marked roughening must not be accepted as a pathologic sign too hastily, especially in children. A simple accentuation of inspiration is common in normal lungs. Bronchial breathing suggests an infiltration, and a marked accentuated bronchial expiration is usually interpreted as due to a tuberculous change; but the dividing line between the normal and the diseased condition is hard to designate, for these signs have all been found in people who are at least not tuberculous.

There is a class of cases in children and young adults in whom râles suggestive of tuberculosis occur in the apices, the previous history of which cases is usually the same; every spring and fall during the changeable weather these patients have usually bad colds, manifested by change in the chest, cough, expectoration and frequent shortness of breath. These manifestations are usually tolerated during the day, but become more severe at night and often interfere with sleep. The patients are usually of fair nutrition, with temperature seldom above normal. Tuberculin, if used, is not followed by characteristic or general reaction. Examined radiographically the apices are found negative. No abnormality is revealed except in the respiratory tract. Over the right apex, seldom over the left, the breathing is vesicular in character, roughened inspiration and lengthened expiration whether the mouth be open or closed. Distinct medium sized moist and dry râles are constantly present. The sputum is usually present and is found free from tubercle bacilli. In the nasopharynx hypertrophied adenoids, alone or associated with similar conditions in the tonsils, deviations of the nasal septum, intumescence or hypertrophy of the turbinates, obstructed outlets of the accessory sinuses, or polypi, are frequently found. A thorough cocainization of the nasopharynx is frequently followed by a temporary cessation of the abnormal respiratory sounds of the chest, and when these abnormalities are corrected the lung signs disappear permanently, unless the nasopharyngeal trouble recurs, as it frequently does, when a recurrence of the râles in the chest follows.

These chest signs may be due to a nervous reflex from the branches of the fifth nerve in the nasopharynx to the vagus roots, thereby stimulating the vagus filaments in the lung and causing contraction of the bronchioles and vasomotor changes in them. The matter is valuable from a diagnostic standpoint and cocainization of the nasopharynx is worthy a trial as a means of differentiation of râles in the apices.

#### DISCUSSION

Dr. L. F. Roush: As a diagnostic point of differentiation, the ordinary catarrh that produces râles does not have any rise in temperature unless acute, when it is only temporary, while in tuberculous trouble there is always some rise of temperature sometime in the twenty-four hours.

*(To be continued)*

## MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND

*One Hundred and Fourteenth Annual Meeting, held in Baltimore, April 23-25, 1912*

The President, Dr. H. H. Young, in the Chair

The list of officers elected for the ensuing year was given in The Journal, May 4, page 1383.

The House of Delegates adopted a resolution urging the American Medical Association to publish a magazine to be devoted to public instruction in matters of health, this work to be conducted under the auspices of the Council on Health and Public Instruction of the American Medical Association.

The John M. T. Finney Fund of $10.000 was presented to the society through Dr. Harry Friedenwald, chairman of the committee. It will be devoted to the advancement of surgery through the establishment of a lectureship, the purchase of books and periodicals on surgery, etc.

### Medical Legislation in 1912

Dr. H. H. Young, Baltimore: The condition of the insane in this state was in many counties deplorable. Two years ago the lunacy commission secured the enactment of a law for the state care of the insane, and obtained a bond issue for $600,000 with which buildings were built at various asylums and a new hospital for the negro insane started. The legislature of 1912 passed an additional bond issue of $800,000, which is thought to be sufficient now to put the whole state of Maryland on the state-care basis. The tuberculous of

Maryland have also received attention from the law-makers, a splendid sanatorium having been provided for the treatment of incipient cases, and its further usefulness provided for by a considerable appropriation. The city of Baltimore is about to begin a hospital for more chronic cases, and has instituted the visiting nurse system which has already brought wonderful results. The State Board of Health has also accomplished great things by its educational work and by the distribution of sputum cups and other material for house disinfection. The last legislature also greatly assisted the State Board of Health by the passage of several very important laws, one of which was for the improvement of vital statistics, which will now place Maryland in the front rank in this regard. The increased appropriation will also make it possible to establish a department of sanitary engineering, to increase the tuberculous work, and also the milk inspection. The recent public health conference of the Medical and Chirurgical Faculty was a very great success, extending over a period of one week. At night prominent lecturers were secured to talk on various public health problems to large audiences. During the day demonstrations were made by numerous physicians of a splendid collection of public health exhibits. Particularly exhaustive and inspiring was the exhibit of the United States Public Health and Marine-Hospital Service. The legislature appropriated $5,000 for the continuance of this public health work during each of the next two years.

### The Rôle of Fat in Surgery

Dr. J. M. T. Finney, Baltimore: The wide distribution throughout the body of adipose tissue makes it a subject of general interest to all medical men, and especially to surgeons. Fat may have a beneficial and conservative function. On the whole, however, the effect of fat is deleterious rather than beneficial to the work of the surgeon. It is a tissue feebly resisting bacterial invasion. It does not heal readily; it is soft and pliable and easily torn and injured, leaving particles of fat or oil globules between the adjacent surfaces of the wound, thereby interfering with healing. When present in large amounts in the adominal wall it interferes with the manipulations of the surgeon and may necessitate a considerable lengthening of the abdominal incision. The very presence of fat in excessive quantities makes patients unfavorable subjects for an anesthetic and interferes with respiration and heart action, thereby producing cyanosis, venous stasis and increased hemorrhage, and thus adding to the duration and shock of the operation. The very condition of adiposity has given rise to certain surgical procedures, such as the lipectomy advocated by Kelly.

The question of fat embolism also deserves attention. Nonsurgical traumatism, especially of a crushing nature, affecting bones, fatty livers, or any other accumulation of fat may lead to embolism of the pulmonary capillaries, less often those of the heart, brain and kidney. Surgical traumatism leading to fat embolism may be nothing more than the division of a thick panniculus, the omentum or mesentery, but usually it is far more forcible, and most frequently the cause is too energetic handling of the tissue, as in manipulations of the joints, particularly *braisement forcé*.

### Cause of Death in Intestinal Obstruction

Drs. H. B. Stone, B. M. Bernheim and G. H. Whipple, Baltimore: The occlusion of high loops of intestine in such a manner that they contain no bile, food material, pancreatic or gastric secretion, leads to the rapid death of the animals, although the continuity of the alimentary tract has been reestablished. This has suggested that the cause of death in intestinal obstruction may be sought in the contents of these loops. The loops contain nothing but the secretion of the mucous membrane of the intestine and bacteria. This fluid is highly toxic to normal dogs on intravenous injection, after infiltration. The chemical study of this is not yet complete, but it is probable that the chief factor in the toxin production is the secretion and not the bacteria. Circulatory disturbances are not necessarily an important factor in death from this form of obstruction, as they may be experimentally eliminated and death will still result.

DISCUSSION

Dr. Frank Martin, Baltimore: The most plausible theory attributes death in intestinal obstruction to auto-intoxication, and certainly there is much in favor of this view.

Dr. C. F. Davidson, Easton: Free drainage of the fluid in the intestinal canal is of the greatest importance in cases of intestinal obstruction. In a case of obstruction following an appendicitis operation in which I did this recently, I felt that this procedure saved the life of the patient, who appeared to be moribund at the time of the operation.

Dr. Randolph Winslow, Baltimore: I have been especially impressed with the fact that obstruction in the upper portion of the bowel is practically always fatal.

Dr. Guy Hunner, Baltimore: Not enough attention is paid to lavage of the stomach in these cases. This is often a trying ordeal to the patient, but the good results furnish a justification for its employment.

### Technic of Resection of Rib Under Local Anesthesia

Dr. Charles Bagley, Jr., Baltimore: General anesthesia does not seem to be altogether safe. The lung, which has perhaps been the seat of pneumonia, is now mechanically compressed by the accumulation of pus in the pleural cavity. In addition, air is allowed to enter the cavity during operation as the pus escapes, possibly causing serious difficulty. Local anesthesia, if it can be successfully produced, seems to be the proper method of protecting these patients against the severe pain of the operation. The patient is placed on the side opposite the disease. The field of the operation is prepared either in the usual manner or by the iodin method. The eighth rib is selected and the area infiltrated with Schleich's solution, beginning just to the inner side of the apex of the scapula and then extending 3 inches outward in the direction of the rib, care being taken to inject this solution into the true skin. An incision is then made from within a half inch of the outer extremity. The fibers of the latissimus dorsi muscle are now exposed and infiltrated with the solution, then divided. On retraction the periosteum will be exposed and may be anesthetized by vigorously rubbing in powdered cocain on an applicator, or injecting Schleich's solution under the surface, both methods seeming to act well. An incision is then made in the periosteum in the direction of the rib, an inch and a half long, and midway between the upper and lower border. From either end of the incision a cross-incision is made, extending from the upper to the lower border of the rib entirely through the periosteum. A periosteal flap is then formed above and below and is dissected from the outer surface of the rib. A pledget of cotton in a small mosquito forceps is dipped into the powdered cocain and the exposed surface of the rib vigorously rubbed until it is insensible to pain. Care must be taken that the wound is dry in order that blood and serum may not cause the cocain to flow along the lower portion of the wound and be absorbed. When the rib is partially cocainized the separation of the periosteum is again undertaken with a periosteum elevator. After final cocainization, the bone is divided by Liston's forceps, only the point of the blade being used, the instrument being held in a vertical position. When about one inch of the bone is removed a glistening surface is seen underneath. This is injected with Schleich's solution and an incision as large as desired made in the direction of the rib. Drainage-tubes are inserted and a couple of tucks of gauze placed at the angle of the wound, all secured by a safety-pin. Sutures are omitted—to save time and because of the importance of securing primary union in the presence of infection.

DISCUSSION

Dr. F. J. Kirby, Baltimore: In the majority of cases I believe that general anesthesia is preferable. In those in which it is not necessary to use pronounced pressure, however, cocain may be employed.

Dr. G. C. Ney, Baltimore: I have used this method in two cases with satisfaction. One was a case of empyema and the other a case of encysted abscess of the chest wall. Both children were very ill, but in neither case did the local anesthesia produce any bad effects.

### Preeclamptic Toxemia and Eclampsia

**Dr. J. M. H. Rowland**, Baltimore: This is the most frequent variety of toxemia of pregnancy. It occurs in, perhaps, 5 per cent. of all cases in sufficient degree to cause definite symptoms, although the occurrence of severe toxemia and eclampsia is, of course, much less than this. Most writers state that eclampsia may develop suddenly. This is true, but I do not believe that it comes without warning. I have never seen or known this to occur. Careful inquiry will always give a history of such symptoms as lassitude, loss of appetite, slight headache, later becoming more severe, giddiness, disturbance of vision and edema, especially of the face. The puffiness of the eyelids is quite characteristic. The characteristic symptoms of preeclamptic toxemia and eclampsia are headache, albuminuria and disturbances of vision, and the characteristic convulsions. The number of the latter may vary from one to very many. I have seen more than fifty in one fatal case. Statistics would seem to indicate that the intrapartum convulsions are more frequent, the antepartum and postpartum following in order. The characteristic and constant pathologic change is found in the liver. The maternal majority seems to be about 20 to 25 per cent.; the fetal from 30 to 50 per cent. Prophylaxis is of great importance and includes all the measures usually adopted in the care of pregnant women, such as fresh air, reasonable exercise, regulation of the diet, avoidance of constipation, drinking of plenty of water, and a close supervision of the patient as to the occurrence of neuralgic pains, edema, disturbances of vision and albuminuria. The treatment of preeclamptic toxemia includes purgatives, especially calomel, administration of salt solution under the skin, or into the bowel, hot packs, morphin, bread and milk diet, usually milk alone, and induction of labor either by rupture of the bag of waters, or by the introduction of a balloon. The treatment of eclamptic attacks includes medicine to control the convulsions, to promote eliminations and to empty the uterus. Under the first head may be mentioned morphin, veratrum viride, venesection and chloroform. In the second group may be mentioned purgation, preferably with croton oil or calomel, followed by salines, hot packs and salt solution. The uterus may be emptied by rupture of the bag of waters, by dilatation of the cervix and the introduction of a dilatable balloon, or by cesarean section, either vaginal or abdominal.

#### DISCUSSION

**Dr. Hiram Woods**, Baltimore: There are two classes of eye troubles associated with pregnancy: First, the total blindness which precedes an eclamptic seizure. In these cases the ophthalmoscope shows no lesions and the prognosis is good, although I have seen two cases in which permanent hemianopsia occurred. Second, the disturbances which may occur from the fifth to the ninth month are associated with failing vision, floating spots before the eyes, etc. The ophthalmoscope shows white spots in the retina, the picture being suggestive of albuminuric retinitis. The prognosis in cases of the latter disease is bad, death usually occurring within eighteen months from the chronic nephritis with which the condition occurs. In the case associated with pregnancy, without nephritis, however, recovery is the rule.

**Dr. T. C. Routson**, Frederick: It is usually stated that eclampsia occurs most frequently in cold weather, but most of the cases which I have seen have occurred during the hot months.

**Dr. E. B. Claybrook**, Cumberland: In the city the obstetrician is usually engaged a considerable time before the confinement, but this is much less frequently the case with a country practitioner. Thus it is difficult to exercise the proper supervision over the patient, which is so necessary to prevent eclampsia.

### Overeating as a Cause of Appendicitis

**Dr. Emil Novak**, Baltimore: Within the past few years I have encountered quite a number of cases in which an attack of acute appendicitis followed very closely on overeating. No satisfactory explanation having been offered as to the mechanism involved in these cases, I was stimulated to inquire into the subject. Anatomic studies impressed me first of all with the relationship between the stomach and the superior mesenteric vessels, which ultimately supply the appendix. The artery arises from the abdominal aorta behind the stomach and passes from left to right between it and the vertebral column, arching under the greater curvature into the mesentery. The vein accompanies the artery for a distance, but before joining the splenic to form the portal, diverges from it somewhat, being placed on the right side of the vertebral column. An overdistended stomach is undoubtedly capable of causing pressure on surrounding structures, and especially, it would seem, on the superior mesenteric vessels. The normal capacity of the stomach in moderate distention is from 5 to 8 pints, or, rating a pint as a pound, 5 to 8 pounds. What is the effect of such compression on the superior mesenteric vessels? The resulting circulatory disturbance, whether it be an arterial anemia or a venous congestion, in either case, according to Mall and Salvioli, excites violent peristaltic movements in the small intestine. These explain the pain in the upper abdomen which usually inaugurates an attack of appendicitis. The appendix is made up of lymphoid tissue which is poorly resisting to infection. Furthermore, it is in relation with the cecum, a portion of the intestinal canal especially rich in microorganisms. As a result of the disturbances in the superior mesenteric circulation, this weakly resisting organ is made even less resistant to the action of the organisms always present in the cecum, especially the *B. coli communis*. The virulence of the latter is thereby relatively increased to a marked degree, the appendix falling an easy prey to its activity and a more or less severe type of appendicular inflammation ensuing.

*(To be continued)*

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## COLLEGE OF PHYSICIANS OF PHILADELPHIA

*Meeting held April 3, 1912*

The President, Dr. George E. deSchweinitz, in the Chair

### An Epidemic of Epithelioma (Molluscum) Contagiosum, With Some New Observations Concerning the "Molluscum Bodies"

**Dr. M. B. Hartzell**: A most extensive epidemic of epithelioma (molluscum) contagiosum occurred in a large institution for young men. There were several hundred cases extending over a period of four years. Apart from the extent and duration of the epidemic, many of the cases presented more or less unusual clinical features. The number of lesions in many cases was unusually large, in some instances amounting to a hundred or more, and in many cases marked itching was present. The disease was almost certainly transmitted by the towels in the gymnasium and swimming pool. In sections of a tumor fixed and stained according to the method of Levaditi some new features were found, such as the partial inclusion of cells, and forms of cells not previously described. Some of the cell-forms were undoubtedly the result of degeneration of the rete cells, but as to others, the evidence was not sufficiently convincing to exclude other possibilities entirely.

#### DISCUSSION

**Dr. F. C. Knowles**: I had an opportunity of seeing these cases. They were excedingly interesting in that the lesions were found on the trunk and not, as usual, on the face near the eyelids. I have seen two cases in which the scalp was involved and a few in which there were lesions on the penis and some on the scrotum. The contagiousness of the disease is either comparatively slight or takes a long time to act. In a home with which I was connected, I saw fifty-nine cases of molluscum contagiosum in about 400 children in six years. In one instance I was successful in obtaining inoculation on the skin producing the typical lesion of this disease. Usually itching is a very rare symptom.

### Partial Gastrectomy in a Case of Multiple Carcinoma of the Stomach

**Dr. John H. Gibbon**: The patient, a man, aged 48, was operated on Jan. 27, 1912. He had had no gastric symptoms prior to June, 1911, when he began to have attacks of vomiting. He was very anemic and had lost weight very rapidly. The history, blood examination, gastric analysis and physical examination indicated gastric cancer. A skiagram showed two lesions in the stomach along the greater curvature. No tumor could be felt. When the abdomen was opened, two distinct hard cancerous areas were found along the greater curvature at the points indicated in the skiagram. A partial gastrectomy was done. The patient made a satisfactory recovery and has gained 12 pounds in the past three weeks. Examination of the two ulcerated areas, which were separated by healtny mucous membrane, shows one to be an adenocarcinoma and the other a medullary carcinoma. The interesting points in the case are the short duration of the gastric symptoms, when considered in connection with the extensive, hard ulcers found in the stomach; the different histologic structures of the two growths, indicating that each is primary; and the fact that the growths were so situated that implantation by contact was impossible.

#### DISCUSSION

Dr. W. M. L. Coplin: It is an interesting question whether or not the cylindric cell or adenocarcinoma involving a glandular mucosa is or may be a preliminary or early stage of spheroidal or round-cell carcinoma, so-called. A possibility that has not, so far as I know, been urged, is that in glandular mucosa possessing cylindric cells, the initial stage of cancer is cylindric cell in type, and that following the rapid proliferation of invading cylindric epithelial cells a transformation gradually takes place, spheroidal cells eventually predominating. If such a view be correct, then instead of regarding these growths as essentially distinct primarily, it might be better to assume that one has either reached a later stage of invasion and evolution or is growing with such rapidity that the typical cylindric cell is not produced, and that the distinction is one of cell evolution rather than the presence of two essentially dissimilar types of growth. Morphologically, the two growths in this case are clearly distinct, and I have not seen in the sections evidence of intermediate stages. One would never for a moment suspect when looking at the two growths that they were from the same organ, much less that they were closely approximated.

### The Importance of Remembering That Not All Pulmonary Physical Signs Are Those of Tuberculosis

Dr. H. A. Hare: The physical signs of early tuberculosis of the lungs were well studied and thoroughly understood long before the bacillus of Koch was discovered. There is a tendency to regard all abnormal physical signs in the lungs as indicative of tuberculosis unless the symptoms are so indicative of other affections that tuberculosis is manifestly ruled out. I am not seeking to make light of the importance of the early diagnosis of tuberculosis, but rather to point out that some cases are not tuberculous, although thought to be so, and to emphasize the fact that there are no physical signs to be found in the chest which cannot be produced by lesions which are not tuberculous in origin. Nearly all of the cases of dulness and absence of vesicular breathing at the base of the lungs result in the diagnosis of "consolidation" or "pneumonia." In severe bronchitis, in whooping-cough and after operations in the upper abdominal segment the real state is often found to be atelectasis. The bronchial lymph-nodes are often the cause of marked physical signs. My point is not to deny that they are often tuberculous, but to state that they may be infected by other organisms than the tubercle bacillus, and that many physical signs thought to have their origin in the lung tissues are due to partial bronchial occlusion by pressure. The *x*-ray is valuable in clearing up this question. My object is not only to insist that we be always on guard against the ever-present possibility of pulmonary lesions, but also to emphasize the fact that every subacute or chronic pulmonary lesion presenting impaired resonance, prolonged expiration and, for a short time, febrile movement is not tuberculosis. We must be careful that the predominance of tuberculosis does not cause us to commit the patient to the constant woe of worry and alarm until we have excluded the conditions which produce physical signs in the chest similar to those of tuberculosis.

Dr. James Tyson: I meet cases of this kind every year. In addition to the fact of the untold misery from the supposition that a person has tuberculosis, the matter of statistics is very seriously interfered with. Also, the curability of consumption is exaggerated by such interpretations. Many of these doubtful cases are cleared up by examination for bacilli.

### The Treatment of Persistent Pain of Organic Origin in the Lower Part of the Body by Division of the Anterolateral Column of the Spinal Cord

### Experimental Work on the Function of the Anterolateral Column of the Spinal Cord

These two papers, by Drs. William G. Spiller and Edward Martin, and by Drs. Williams B. Cadwalader and J. E. Sweet, respectively, are published in this issue of The Journal.

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## LOUISIANA STATE MEDICAL SOCIETY

*Thirty-Third Annual Meeting, held at New Orleans, April 23-25, 1912*

The President, Dr. R. O. Simmons, Alexandria, in the Chair

A list of the newly elected officers was published in The Journal, May 4, p. 1382.

### Pharyngeal Ulcer

Dr. John L. Scales, Shreveport: Without the Wassermann I consider a diagnosis a matter merely of conjecture. There is nothing in the family history of my patient to justify the assumption of previous infection; the diagnosis would have rested on the judgment of the diagnostician. The results following a single injection of salvarsan were marvelous. In less than twenty-four hours the patient said that his throat felt much better; within four days he was able to eat anything he desired, and gained 5 pounds; at the end of two weeks he had gained 15 pounds, and considered himself entirely well. He received no local treatment. The ulcer was syphilitic. I have never seen a therapeutic result more prompt, striking and gratifying.

#### DISCUSSION

Dr. William Scheppegrell, New Orleans: In such a case, in which there is a possibility of syphilis, it is always well to give some form of specific treatment, particularly salvarsan. I remember distinctly of having a case of tonsillar infection brought to me, with ulceration of the mouth, in which the microscopist reported epithelioma. The history was negative. As the patient was a clergyman, the question of syphilitic infection was not considered very much, but in spite of this fact he was given the proper antisyphilitic treatment, with recovery.

Dr. Otto Joachim, New Orleans: In a case of large pharyngeal ulcer, which has existed for six weeks, particularly where there is a loss of tissue, I would never omit the administration of antisyphilitic treatment in some form or another.

### The Prevention of Deafness

Dr. William Scheppegrell, New Orleans: A large number of cases of deafness arise in childhood, although the results may not be apparent for many years afterward. Scarlet fever and measles are especially likely to affect the middle ear and cause deafness. The neglect of proper examination and treatment at this time may result in conditions which will impair the hearing for life. The prevention of deafness by maintaining a normal condition of the middle ear really means the establishment and maintenance of a healthy condition of the nose and throat. So intimately is the middle ear associated with these parts that it is rare to find a nose or throat diseased for any considerable time in which an abnormal condition of the ear and a consequent defect of hearing has not developed. The most common cause of deafness in adult life is sclerotic otitis media, the so-called dry catarrh of the middle ear. Pain is very rarely present in this disease, and head noises do not usually develop until a late stage. It is insidious in its development, and so gradual is the loss of hearing that months and even years pass before the patient is aware that he is losing his hearing. Every safeguard should be placed around this valuable sense, and not only should early symptoms of ear disease be given careful attention, but also affections of the nose and throat on account of their influence on the organ of hearing.

DISCUSSION

Dr. Otto Joachim, New Orleans: When a child is affected with whooping-cough, or with scarlet fever, ear trouble may be a complication, and careful attention should be given to the ears and to the nose. Both of these organs should be kept free, so that severe and far-reaching complications can be prevented. We know that in other complications in connection with diseases of children careful attention given to the ear may prevent much harm to the ears and prevent much of the deaf-mutism which we see in children after the diseases mentioned.

### The Importance of Prompt Recognition and Treatment of Laryngeal Diphtheria

Dr. G. C. Chandler, Shreveport: In laryngeal cases, do not wait to give antitoxin until you are absolutely sure that the patient has diphtheria. Give it and make cultures and microscopic examinations later. It is never too late to intubate or to perform tracheotomy. Never let the patient smother to death. Every country practitioner should always have on hand one or more packages of antitoxin. He is certain to need it some time. Where there is gradual increase of obstruction in respiration, unless the cause is clear, give antitoxin. Do not be misled by the apparent improvement during the relaxation following the struggle from a spasmodic increase of the obstruction. Remember, the membrane is still there and will steadily increase until, in 95 per cent. or more of cases, the patient will die unless antitoxin is used. Do not mistake the absence of retraction of the abdomen, and the easy movement of the chest accompanying the exhaustion following the desperate effort for an improvement in respiration. Put the ear on the chest and ascertain if the air is entering the lungs.

DISCUSSION

Dr. Arthur I. Weil, New Orleans: One condition which is most apt to be mistaken for laryngeal diphtheria is probably the anomalous condition of catarrhal or spasmodic croup. We have seen children who were attacked suddenly in the middle of the night with marked dyspnea, and the question comes up, is this true diphtheria of the larynx, or is it a catarrhal or spasmodic condition? When this condition occurs suddenly, we are apt to consider the case to be one of catarrhal croup so-called, that is, there is edema or inflammation of the larynx. Catarrhal croup has a tendency to be worse at night and to get better the next morning. If the child shows marked improvement, it is safe to wait a little for developments before administering antitoxin.

Dr. William Scheppegrell, New Orleans: I agree with Dr. Chandler that if antitoxin is given within the first twelve hours in a case of diphtheria, we will rarely have to resort to intubation. Quite recently I was called to see a case in which a physician had made a probable diagnosis of diphtheria, but as there was some doubt about the case, and in order to be on the side of safety, he requested me to see the case with him. I did so, and in examining the larynx I at once saw a white patch. We gave antitoxin at once, and in the meantime had a culture made. The next morning a report came in that the culture was positive, but the patient in the meantime was convalescing. We have a great advantage in doing intubation, in that we have no difficulty in persuading the parents to allow us to do it.

### Recurrent Vomiting

Dr. J. A. Storck, New Orleans: Recurrent vomiting is not infrequent. I have seen twenty cases in the past thirty months. The ages ranged from 28 months to 14 years. The greatest number of cases (fourteen) occurred between the ages of 4 and 11 years, four occurring above and two under this period. Nervous phenomena were well marked in sixteen of the cases, ten of which were in girls. All except four of the cases were from so-called neurotic families, one or both of the parents coming under this designation. In two of the older children, the aura of epilepsy occurred at times. Among the neurotic cases family histories of joint-involvement were obtained, called by some rheumatism. I want to emphasize two main points, namely, first, the use of an alkali in the treatment, especially bicarbonate of sodium, and, second, the presence of diacetic and oxybutyric acids and acetone in the urine in a large number of these cases. While I do not think that these substances account for all cases, still their presence is a strong point in diagnosis. The disease is probably due to some fault in digestion or metabolism.

### Abdominal Cesarean Section in Eclampsia and Central Placenta Prævia

Dr. Espy M. Williams, Patterson: I wish to report two cases, one of eclampsia, in which the child was delivered by abdominal section; the other a case of placenta prævia, in which delivery was likewise accomplished by abdominal section. Vaginal cesarean section opens the cervix quickly, but the child must subsequently be either turned or delivered with forceps. If there is slight pelvic contraction, and the life of the child be rightfully considered, then in addition to vaginal section a pubiotomy or symphyseotomy must be done, which is additionally prejudicial to the mother. In the classical cesarean section the danger to the mother is far less than in high forceps or version. There is greater possibility of obtaining and maintaining asepsis, and the morbidity is consequently less. To the child, there is less danger in delivery by this method than lies in normal labor. I believe that the abdominal route is the ideal one in all cases in which convulsions begin shortly before term, with a viable child, with cervix not obliterated, labor not begun, and no previous attempts at delivery made. Delivery by cesarean section is advantageous because, first, it is more rapidly done, and is attended with less shock and the giving of less anesthetic; second, the opportunities for asepsis are greater; third, hemorrhage can be as well controlled, and perhaps better so, since the uterus may be removed, if necessary, after a reasonable attempt at hemostasis has failed. The majority of cases of placenta prævia will not be amenable to this method of treatment.

### Diagnosis of Aneurysm of the Thoracic Aorta

Dr. Isaac I. Lemann, New Orleans: Thoracic aneurysm is much more common than is usually thought. Percussion of the space at the base of the heart should be included in the routine percussion of the heart outlines. Percussion is of all the methods of physical examination the one that gives the earliest information of the mediastinal changes. Fluoroscopy and skiagraphy should be practiced in all cases showing suspicious phenomena. Pains in the precordial region, intercostal neuralgia and arm pains should cause us to examine the mediastinum most carefully. The pains may be referred pains. The neuralgias may be pressure neuralgias.

### The Determination of the Functional Activity of the Liver as Indicated by the Presence of Urobilinogen in the Urine

Dr. Allen Eustice, New Orleans: The presence of the aldehyd reaction in the urine denotes lack of liver function, cirrhosis, carcinoma, etc., the degree of loss of function being denoted by the intensity of the reaction. In a case of icterus, in which there has been an absence of the aldehyd reaction, this suddenly reappears, which denotes reappearance of bile in the intestines, or the overcoming of the obstruction. In cases of diagnosed cholelithiasis, in which for some reason operation is deferred, and in which the aldehyd reaction has been present, but has disappeared and persists negatively for several days, immediate operation is indicated to avoid rupture of the gall-bladder.

### Mastitis

Dr. Robert A. Strong, New Orleans: In the treatment of mastitis the best method is undoubtedly the use of Bier's suction apparatus, which relieves pain, hyperemia, removes the milk, and soon softens the glands. In addition, the cosmetic effect is far better than incisions, which leave cicatrices. The best method of procedure is that which is advocated by Sigmund Strassmy, who applies the cup three or four times a day, for twenty to thirty minutes, and suggests that the air be let in every five minutes and the suction renewed. Hartman advocates the cups and emphasizes that the bell should embrace the whole gland. This method gives the best results in the clinic of Bardenheuer.

### Paratyphoid Cholecystitis; Report of a Case

Dr. J. B. Guthrie, New Orleans: This is the only case, so far as I can learn from a search of the literature, diagnosed as acute paratyphoid cholecystitis, which went on to recovery without operation. I believe there are many more such cases, and their existence should be borne in mind when the question of deciding on operation arises. I believe that we are safe in postponing operation indefinitely, if the fever, tenderness and rigidity disappear, and if no subsequent digestive or other symptoms result, or the patient is not a carrier. This is in opposition to the opinion of some pathologists, that there is no such thing as spontaneous recovery of a gall-bladder infection with the bacillus of typhoid or kindred organisms.

### Essential Hematuria

Dr. A. Nelken, New Orleans: Decapsulation is often efficient. Most operators combine fixation of the kidneys with decapsulation when operating for hematuria complicating nephritis. The operation of choice in undiagnosed bleeding from the kidney is polar section, preferably through Broedel's line. This operation gives an opportunity for careful examination of the kidney and the kidney pelvis, and nephrectomy can be done if the indications are clear. The chief objection to splitting the kidney is the danger of secondary hemorrhage. We know that this is not infrequent after operation for stone, and it has happened following exploratory section. When this occurs, nephrectomy is usually necessary. Removal of the kidney should rarely, if ever, be undertaken as a primary operation, and should be reserved for those cases in which simpler measures have failed to stop a hematuria which endangers life. The operation should never be undertaken until a careful test of kidney function has satisfied the surgeon that the remaining kidney is probably able to carry out the demands of renal excretion.

### Comparative Value of Abdominal and Vaginal Examination in the Diagnosis of Fetal Presentation and Position

Dr. W. D. Phillips, New Orleans: The diagnosis of fetal presentation and position constitutes an important part of obstetric work to-day and should always, if possible, be made before labor begins. The more common means of accomplishing this may be classed as follows: (1) abdominal examination, which includes abdominal palpation and auscultation; (2) vaginal examination; and (3) combined abdominal and vaginal examination. How shall we determine the probable time at which delivery will take place? The extent of engagement can be determined by deep abdominal palpation, and the following facts will also assist in determining this: (1) whether or not the woman is a primipara or multipara; (2) the character, intensity and duration of the pains; (3) the bulging of the perineum as seen during a pain, and also the pressure symptoms on the bladder and rectum might be taken as an indication of delivery. I would urge the more general use of abdominal examination for the diagnosis of fetal position and presentation, believing it to be more safe, and in the majority of cases for practical purposes more satisfactory.

### Intravenous Ether Anesthesia

Dr. E. L. Sanderson, Shreveport: I used this method of anesthesia in twelve cases. My experience with the method is too brief to venture an opinion as to its safety, but with proper care in carrying out the details there should be no more danger than that met with in the open-cone method. It requires more skill and care, and the attention of two anesthetists. The raising of the vein is annoying to nervous patients. Anesthesia is produced with great ease and rapidity. Some of the patients fall asleep without a murmur and breathe and look like one in natural sleep. There is seldom any stage of excitement, and bronchorrhea and nausea are practically eliminated if the solution is not oversaturated. There is an increase of blood-pressure in patients who have a subnormal pressure. But even when almost a gallon has been given there is no perceptible rise of blood-pressure. Postanesthetic vomiting has not been seen in our cases in which the details were right. Cases in which a supersaturated solution was used showed about the same symptoms observed in cases of open-cone anesthesia.

### Intramuscular Injections of Mercury in the Treatment of Syphilis of the Nervous System

Dr. L. L. Cazenavette, New Orleans: The advantages of this method over other methods of administering mercury are such that in cases of syphilis, when it is desired to produce prompt action on the existing lesions, this method should be given the preference. The chief advantages are: 1. The treatment is entirely in the hands of the physician. 2. The amount of mercury administered is small, the dosage small. Salivation is infrequent, and the amount absorbed into the system is definite. 3. There is no liability to disturbances of the alimentary canal.

### Surgical Treatment of Puerperal Infection

Dr. C. Jeff Miller, New Orleans: Investigation has established several valuable points: 1. Septic thrombophlebitis occurs oftener than was formerly suspected. 2. The mortality can be fairly estimated to be between 80 and 100 per cent. when patients are treated expectantly. 3. In several cases the process has been arrested by ligation of the involved veins. 4. In chronic cases the diagnosis can be made with a fair degree of certainty. 5. Pyemic cases stand operative measures surprisingly well. 6. The cases of pure septic thrombophlebitis treated surgically have shown a satisfactory reduction in mortality. 7. In acute pyemia the mortality has not been influenced by operation, but in chronic cases the results are now hopeful. It will require a large number of cases and careful discrimination to establish the true value of surgery in puerperal pyemia.

## *Current Medical Literature*

### AMERICAN

Titles marked with an asterisk (*) are abstracted below.

#### Journal of Indiana State Medical Association, Fort Wayne

*April 15, V, No. 4, pp. 153-194*

1 Symptoms and Diagnosis of Ptosis of Organs of Upper Abdominal Zone. C. R. Sowder, Indianapolis.
2 Pulmonary Thrombosis Following Surgical Operations. B. Van Sweringen, Fort Wayne.
3 Typhoid Perforation and Its Surgical Treatment. G. G. Graessle, Seymour.
4 Cause of Hypertrophied Prostate. F. R. Charlton, Indianapolis.
5 *Criminal Insane. P. E. Bowers, Michigan City.

**5. Criminal Insane.**—After a careful review of the subject, Bowers arrives at the conclusion that the true criminal is a degenerate; so defective in his physical and mental make-up that he falls in a class below the normal man in his reversion to type. He is out of harmony with the existing times and is unable to adjust himself to modern conditions, because of his defective organization. When this type of individual comes in conflict with the law and is subject to confinement he exhibits his organic and inherent defects, and active insanity is oftentimes developed. A startling per cent. of this type is apt to be found in any prison population. In the Indiana State Prison, whose population is 1,080, approximately 135 are insane. Bowers urges that a hospital for the insane should be a part of the equipment of every large penal institution. In the hospital for the criminal insane the following persons should be cared for: those criminals who become insane while serving sentences in prison; those persons whose acts are violations of the law of peace and safety, but are acquitted on the grounds of insanity; and those persons confined in ordinary psychopathic hospitals who commit dangerous acts. The law governing the commitment of persons to a hospital for the criminal insane should be so constructed that its constitutionality cannot be questioned. It should be so drawn that while the individual will receive all due protection, society shall also be protected from the person mentally responsible but who seeks to evade the responsibity of criminal acts by a plea of insanity.

### Military Surgeon, Washington

*April, XXX, No. 4, pp. 369-484*

6 Medical Department of Army in Civil War. Battle of the Wilderness. L. C. Duncan.
7 Constabulary vs. National Guard. R. W. Montelius, Pa. N. G.
8 Venereal Prophylaxis. D. C. Howard, U. S. Army.
9 Report of U. S. Army Board for Study of Tropical Diseases as They Exist in Philippine Islands, Quarter Ending June 30, 1911. W. P. Chamberlain, E. B. Vedder and J. R. Barber, U. S. Army.

### Virginia Medical Semi-Monthly, Richmond

*April 26, XVII, No. 2, pp. 29-52*

10 Hydrophobia in Man. G. T. Vaughan, Washington, D. C.
11 *Splanchnoptosis of Viscera of Chest and Abdomen. H. E. Jones, Roanoke.
12 Treatment of Shock Due to Hemorrhage. G. W. Norman, Pomona, N. C.
13 Exophthalmic Goiter. W. F. M. Sowers, Washington, D. C.

11. **Splanchnoptosis of Viscera of Chest and Abdomen.**—Jones puts on record a case of splanchnoptosis of the viscera of the chest. The chest was asymmetrical and flat; the supraclavicular fossae were very deep, unusually so, and would hold about half a cup of water; interspaces between the first, second, third and fourth ribs were very distinct. Low down on right anterior aspect of chest over region of liver the chest was markedly flattened. There was resonance on percussion over the entire area, without normal dulness; in fact, over the upper portion of chest and low down on right side over the hepatic region there was hyperresonance. On auscultation there were no abnormal sounds, no râles except that from the third rib up the respiratory sounds were very indistinct; neither were there evidences of bronchitis or tuberculosis, though the patient's general appearance indicated the latter condition. By ordinary physical examination the heart was found to be abnormally low, but the sound showed no irregular action; rhythm regular, force decreased, no murmurs, no edema, cyanosis or dyspnea; respiration, when quiet, fifteen. The only chest symptoms present were pains over front of chest, radiating upward and outward to shoulders and down the arms to elbows. Abdominal symptoms were those of dyspepsia, slight pains with dragging, heavy feeling. Patient had some pain in small of back. He was nervous, depressed and could not sleep more than three or four hours a night unless he was given a hypnotic.

The radiograph showed entire absence of lung tissue on both sides as low as the lower edge of the third rib. The arch of the aorta was displaced to the left, its upper border being on a line with the lower border of the third rib. The heart was almost central, its center being immediately beneath the ensiform appendix. The anterior attachment of the diaphragm was on a line with the vertebral attachment of the twelfth rib. The upper margin of the liver was only about 2 inches above the umbilicus. The stomach, almost vertically placed, was to the left, and its upper edge about 1 inch above the umbilicus. The pyloric end was behind the pubic arch. The colon was coiled in irregular folds deep in the pelvis.

### Journal of Iowa State Medical Society, Clinton

*April 15, I, No. 10, pp. 525-588*

14 *Dysmenorrhea and Some Popular Errors Pertaining to It. C. F. Wahrer, Fort Madison.
15 Prognosis of Some Eye Cases. G. F. Harkness, Davenport.
16 Atropia in Delayed Labor from Rigid Cervix. E. H. King, Muscatine.

14. Abstracted in The Journal, July 29, 1911, p. 420.

### Journal of Kansas Medical Society, Kansas City

*April, XII, No. 4, pp. 121-166*

17 Importance of Laboratory Diagnosis. H. M. Conner, Topeka.
18 Measles. L. A. Clary, Elbing.
19 Errors of Refraction Causing Neurasthenia and Epilepsy. C. P. Johnson, Coffeyville.
20 Scarlet Fever. W. L. Welsh, Hazelton.
21 Dietetic Treatment of Chronic Interstitial Nephritis. P. B. Matz.

### Archives of Pediatrics, New York

*April, XXIX, No. 4, pp. 241-319*

22 Is There Any Valid Objection to Vaccination? C. W. Banks, East Orange, N. J.
23 *Contact Infection in Contagious Diseases. B. Van D. Hedges, Plainfield, N. J.
24 Prevention of Commoner Contagious Diseases of Infancy and Childhood. R. S. Haynes, New York.
25 *Duty of Community to Its Backward and Defective Children. I. T. Smart, New York.
26 Outdoor Life for City Children. W. L. Carr, New York.
27 Diagnosis of Atypical Scarlet Fever. D. J. M. Miller, Atlantic City, N. J.
28 *Rumpell-Leede Phenomenon of Scarlet Fever. M. Michael, Chicago.
29 *What New Jersey is Doing for the Epileptic. D. F. Weeks, Skillman, N. J.

23. **Contact Infection in Contagious Diseases.**—While admitting the possibility of infection from fomites and air in certain isolated cases, Hedges claims that the danger is far less than is commonly supposed. Contact infection and the danger to the community from "missed" and "carrier" cases he regards as the most potent factors in the spread of these diseases. The danger incurred by the physician or attendant in transferring the disease to others is reduced to a minimum—by observing the simple laws of personal cleanliness, by scrupulously cleansing the hands and nails after contact with these patients.

25. **Backward and Defective Children.**—After considering the child of defective mentality Smart sums up the duty of the community as follows: 1. The gaining of personal information concerning the approximate number of aments in city, county and state. 2. To endeavor to use present laws in so far as they cover the problem. 3. To seek to obtain further legislation which will more effectually deal with the needs in caring for these afflicted children. 4. To demand that it shall be unlawful to issue a marriage permit to any person or persons who have at any time been declared to be mentally defective, or, when such evidence does not exist, and there is any doubt about the mental habits of either of the contracting parties, a certificate of mental fitness to be produced from a reputable physician in good standing.

28. **Rumpell-Leede Phenomenon of Scarlet Fever.**—This phenomenon consists of hemorrhages in scarlet fever which can be produced into the skin of the elbow by application on the arm of a Bier's stasis bandage. It is claimed that the longer the disease is established the slighter is the tendency to hemorrhages, so that during the third week a pressure of 50-60 mm. is necessary to cause them, and then only after being applied fifteen minutes. Two series of tests were made by Michael. In the first, 100 children, forty-eight boys and fifty-two girls, were examined. They varied in age from 4½ to 14 years. In this group, pressure was exerted with an ordinary muslin bandage. The Bier stasis bandage, as suggested by Leede, was tried, but it was found that pressure could be better regulated with the muslin one. This was placed half way up the arm, drawn tight enough to produce a decided blue discoloration of the forearm and was left in place from three to eight minutes. At the end of this time, in ninety-eight of the children petechiæ appeared on the anterior surface of the elbow joint. Sometimes it was neccessary to repeat the experiment a number of times before positive results were obtained. This happened more frequently at the beginning of the tests than later, when practice was gained in the amount of pressure to be exerted. The picture produced was a fairly constant one. The space between the lower edge of the bandage, and sometimes even beneath the bandage of the lower border of the anterior surface of the elbow, was dotted with hemorrhagic spots, varying in size from a pin-point to a small split pea. In some instances there were but two or three, in others the spots were too numerous to count. They could be more plainly seen after the bandage had been removed and when the skin was held taut for a second or two. They appeared quite suddenly, usually all at once. Some of the children complained of pain just before the hemorrhages appeared. They faded gradually in twenty-four to forty-eight hours. Boys reacted more readily than girls. Age made no difference; older children reacted as readily as the younge ones.

In the second group of children the same amount of pressure was exerted as Leede used in his scarlet fever patients namely, 60 mm. pressure. The arm band of the Riva-Rocc blood-pressure apparatus was adjusted. The pressure raise to 60 mm. and kept at this height for ten minutes. In orde to compare results, the same children as in the first group wer examined. Of the fifty tested, thirty-two, or 60 per cent.

gave positive findings. In this group, however, the number of hemorrhages were fewer and their size smaller. Two or three pin-point petechiæ were the usual findings, though in a few instances they were rather numerous. From this study Michael concludes that hemorrhages can be produced into the anterior surface of the elbow joint in practically all normal children by applying sufficient pressure around the arm. Therefore a positive Rumpell-Leede phenomenon cannot be regarded as a diagnostic sign of scarlet fever.

29. **What New Jersey is Doing for the Epileptic.**—Weeks' discussion of this subject shows that the State of New Jersey is providing a home where the epileptic may earn part of his maintenance and be protected, as far as possible, from accidents incident to his disease; a place where he may have hospital care, daily medical advice, dental treatment, education, amusement, recreation and religious service, together with the investigation of his heredity and the psychologic study of his disease; thus relieving the family, friends and society of the dread and danger of his presence.

### Laryngoscope, St. Louis

*March, XXII, No. 3, pp. 165-296*

30 Lymphatics of Nose and Nasopharynx with Consideration of General Lymphatic System. H. J. Hartz, Detroit, Mich.
31 Lymphatic Apparatus of Nose and Nasopharynx in Its Relations to Rest of Body. C. Poli, Genoa, Italy.
32 Idem. A. L. Turner, Edinburgh.
33 Idem. J. Broeckaert, Ghent, Belgium.
34 Model Reconstructing Canals of Right and Left Labyrinths. E. R. Lewis, Dubuque, Iowa.
35 After-Treatment of Radical Mastoid Operation, with Special Reference to Subject of Packing. W. C. Phillips, New York.

### Pennsylvania Medical Journal, Athens

*April, XV, No. 7, pp. 515-596*

36 *Ocular Symptoms of Hypophysis Disease and the Results of Treatment. G. E. deSchweinitz, Philadelphia.
37 Early Diagnosis of Cancer. W. L. Rodman, Philadelphia.
38 Salvarsan in Treatment of Syphilis. J. Daland, Philadelphia.
39 Small Round-Cell Myosarcoma of Orbit, with Extension into Eyeball. W. C. Posey, Philadelphia.
40 Indications for Operation in Suppurative Diseases of Labyrinth. S. M. Smith, Philadelphia.
41 Technic and Results of Operation on Labyrinth. E. W. Day, Pittsburgh.
42 *Chronic Appendicitis and Lane's Kink. W. Davis, Wilkes-Barre.
43 Home Laboratory Work for Physicians. J. G. Wilson, Montrose.

36. **Ocular Symptoms of Hypophysis Disease.**—The follow-
ng cases are reported by De Schweinitz: Case 1. Tumor of
he pituitary body; complete blindness lasting twelve days
n the right eye and six weeks in the left; complete restora-
on of vision of the right eye and nearly complete restoration
f the vision of the left eye under the influence of large doses
f thyroid extract associated with inunctions of mercury.
ase 2. Moderate choked disk with complete blindness of the
ght eye lasting one week and partial blindness of the left
e with loss of nasal field; complete restoration of visual
nctions under the influence of the administration of thy-
id extract associated with inunctions of mercury. Case 3.
itemporal hemianopsia with contraction of the preserved
lds and an area of faint preservation of light perception in
e center of the dark area of the right temporal field; par-
al optic nerve atrophy.

42. **Chronic Appendicitis and Lane's Kink.**—When marked
nstipation, gas troubles in the small intestines and colicky
in in the right lower quadrant are prominent symptoms
vis would beware of the diagnosis of chronic appendicitis.
examines most carefully for signs of splanchnoptosis and
present adopts thorough dietetic, mechanical and medical
atment. There is no immediate necessity for operation.
these symptoms are present, no matter for what cause the
lomen is opened, he examines the ileum for Lane's kink.

### American Journal of Urology, New York

*April, VIII, No. 4, pp. 171-228*

4 Experimental Study of Effects of Ureteral Obstruction on Kidney Function and Structure. E. Beer, New York.
5 Urolithiasis; Etiology and Chemistry. F. E. Sondern, New York.
6 Diagnosis of Urolithiasis. H. G. Bugbee, New York.
7 Surgery of Urolithiasis. J. B. Squier, New York.
8 Sexual Neurasthenia. N. P. Rathbun, Brooklyn.

### Old Dominion Journal of Medicine and Surgery, Richmond, Va.

*April, XIV, No. 4, pp. 205-283*

49 General Anesthesia, with Reference to Local Anesthesia in Major Surgical Operations. F. Martin, Baltimore.
50 Treatment of Inebriates. T. R. Crothers, Hartford, Conn.
51 Dilatation of Aorta. A. G. Brown, Richmond, Va.
52 Some Commoner Gynecologic and Obstetric Conditions. F. W. Griffith, Asheville, N. C.

### Northwest Medicine, Seattle, Wash.

*April, IV, No. 4, pp. 101-132*

53 *Congenital Dislocation of Hip. F. J. Fassett, Seattle, Wash.
54 Derangement of Knee Joint. C. F. Elkenbary, Spokane, Wash.
55 Diagnosis of Brain Tumor. W. House, Portland, Ore.
56 Surgery of Urolithiasis. G. S. Whiteside, Portland, Ore.
57 Infections of Maxillary Antrum and Appliance for Drainage. H. VanCott, Salt Lake City, Utah.
58 Eye-Strain Among Public School Children. E. Bates, Ogden, Utah.
59 Roentgen-Ray Diagnosis of Urinary Calculi. R. C. Walker, Portland, Ore.

53. **Dislocation of Hip.**—Of two patients operated on by Fassett a the age of 11½ neither showed any substantial improvement. Of two patients operated on at the age of 6½ years, one gave a very easy reduction and a permanent cure, and the other a very difficult reduction and a marked improvement following the first operation, but was operated on again and is still in plaster. Of the five operated on at the age of 4 and under, none showed any especial difficulty in reduction. Two appear to be permanent cures; one was so improved that the parents believed the reduction to be real and two are still in plaster. An operation at the age of 11 years and one at 6 years called for the use of great force and were followed by considerable surgical shock. The reduction at the age of 3 or 4 years was easily accomplished with little shock. But the shock was the least, the reduction was the easiest of all and the radiograph shows a practically normal development of the bones in the case operated on when the child was less than 2 years old. From these facts Fassett concludes that the results are best if the operation can be done in infancy and that the gravity of the operation is much less at that time. Therefore, of whatever credit accrues to the medical attendants in such a case, no small share belongs to the family physician who makes an early diagnosis, or brings about an early examination.

### Canadian Medical Association Journal, Toronto

*April, II, No. 4, pp. 269-364*

60 Establishment of Treponema Pallidum as Causative Agent of Syphilis and Cultural Differentiation Between This Organism and Certain Morphologically Allied Spirochetes. H. Noguchi, New York.
61 Salvarsan: a Year's Experience. R. P. Campbell and F. S. Patch, Montreal.
62 Clinical and Pathologic Notes on Certain Subtropical Diseases. F. B. Gurd, Montreal.
63 Physiologic Aspects of Referred Pain. D. F. Harris.
64 Intraperitoneal Route in Operations on Ureters. R. E. McKechnie, Vancouver.
65 Gastric Carcinoma. W. J. Macdonald, St. Catharines.

### Illinois Medical Journal, Springfield

*April, XXI, No. 4, pp. 399-536*

66 Prevention of Blindness and Conservation of Vision. T. A. Woodruff, Chicago.
67 Dangerous Infections of Eye. W. H. Wilder, Chicago.
68 Conservation of School Children's Eyes. F. Allport, Chicago.
69 Illumination and Vision. J. R. Cravath, Chicago.
70 Prevention of Blindness. W. O. Nance, Chicago.
71 Prevention of Injuries to Eyes in Steel Mills. R. J. Young, Chicago.
72 Cost of Preventable Blindness to Nation. H. Cohen, Chicago.
73 Midwives and Blindness. C. Hedger, Chicago.
74 *Immunity in and Specific Treatment of Pneumonia. E. C. Rosenow, Chicago.
75 *General Management of Pneumonia. R. H. Babcock, Chicago.
76 Diseases of Heart and Blood-Vessels. J. Y. McCullough, Casey.
77 Ingrowing Nails; Etiology and Treatment. F. S. Lower, Chicago.
78 Diagnostic and Therapeutic Uses of Gonococcus Vaccine (Bacterin) and Antigonococcic Serum. V. D. Lespinasse, Chicago.
79 *Treatment of Fractures with Lane's Plates. W. Bartlett, St. Louis.
80 Demonstration of Method of Manufacturing Sera and Vaccines. P. McKenzie, Chicago.
81 *Do Autogenous Vaccines Mitigate Distressing Symptoms of Pulmonary Tuberculosis? C. W. Leigh and L. J. Tint, Chicago.
82 Histologic Pathology of Tonsils Requiring Removal. J. C. Beck, Chicago.
83 *Nature of Wassermann Reaction. F. Baumann, Chicago.

74. **Bacterins in Pneumonia.**—Rosenow has succeeded in separating from virulent pneumococci a large part of the toxic material which goes into solution on autolysis and have left in the pneumococci that part which stimulates antibody formation more promptly and more energetically without first producing a negative phase. The number of "detoxicated" or autolysed pneumococci inoculated can now be much greater than those merely killed by heat. When this material is inoculated within forty-eight hours after the onset of an attack of lobar pneumonia the course of the disease is often seemingly much modified. The temperature comes down within twenty-four or thirty-six hours and the patient recovers promptly; when given later, as would be expected, the effect is less pronounced. In a series of cases at the Cook County Hospital last winter, fifty treated and fifty alternate untreated cases, used as a control, the mortality of the former was 32 per cent., while in the latter it was 50 per cent.

75. **Management of Pneumonia.**—Nitroglycerin or other nitrite preparations, Babcock says, should never be ordered as a routine practice. The effect of pneumococcus poisoning on blood-pressure seems to vary in different cases. Consequently the sphygmomanometer should be used daily if possible and the use of vasodilators and heart tonics governed by the readings of the instrument. Should cyanosis become unusually pronounced and according to the experiments of Romberg and Paesler indicate threatening capillary paresis from the toxic effect of the poison on the vasomotor center in the cord, then vasodilators are distinctly contraindicated and adrenalin or cardiac stimulants, as digitalis, are to be used and used freely. This indication Babcock believes is especially urgent if Gibson's danger sign is present, namely, a pulse-rate whose figures are higher than those of the blood-pressure. Death may not supervene in all such instances, but this condition calls for prompt and vigorous treatment. Pain is in some cases so distressing as to demand special measures for its mitigation lest it rob the patient of rest and augment his exhaustion.

When local applications do not relieve, Babcock does not hesitate to administer a hypodermic of morphin since, unless plainly contra-indicated by diffuse bronchitis it is likely to do far more good than harm. Insomnia is another symptom which in some instances is so persistent as to constitute a veritable complication of evil influences in prognosis. It is Babcock's conviction, therefore, that an opiate, by preference a hypodermic of morphin, not only induces sleep but exerts a salutary and calmative influence on the nervous system and thus favorably affects the course of the pneumonia. When insomnia is due to fever it is rational to endeavor to induce sleep by reducing the temperature.

Tympanites is another symptom that at times proves a very serious complication. Occasionally meteorism is a manifestation and result of toxic paresis of the intestines and is a formidable condition. In some instances it resists all attempts at its relief, but Babcock recommends, so soon as this form of tympanites is suspected, the use of an enema of asafetida made by rubbing up 75 grains of the drugs in 3 ounces of yolk of eggs. This emulsion thrown high up into the colon often acts as a powerful stimulus to contraction of the bowel. In addition to the injection of the emulsion of asafetida, heat to the surface and a drink of hot coffee, hypodermics of musk and, perhaps, of camphor are highly serviceable. So great is his faith also in musk as a cardiac stimulant that he always keeps it in reserve in cases of pneumonia.

The formula for its preparation is as follows: Good Tontine musk, 1 gm., benzoate of sodium 0.5 gm. and distilled water 15 c.c., of which the dose is 15 to 30 minims (1 to 2 grains of the musk) injected beneath the skin. In urgent cases this remedy is injected hourly and in Babcock's hands has proved a powerful cardiac stimulant. He does not approve of nitroglycerin in this condition or of whisky or brandy on account of their high alcoholic content, since arterial tension is already low and what is needed is a remedy that acts directly as a cardiac stimulant instead of indirectly through relaxation of the vascular system.

79. **Lane's Plates for Fractures.**—The number of plates in which secondary removal was necessitated, forces Bartlett to the conclusion that smaller and lighter plates must be used if a tissue tolerance to them is to be cultivated. However, removal of a plate is a matter of comparatively slight significance when restoration of anatomic and functional perfection are considered. He has not had to remove wires, nails or plates where aseptic healing had been effected. Nothing short of absolutely perfect approximation in his opinion justifies an open operation for fracture. By this is meant a union so exact that no fracture line can be seen by spectators a few feet away from the field. An ideal result is possible even when Lane's plates are used in the presence of pus, as shown by one case.

81. **Autogenous Vaccines and Pulmonary Tuberculosis.**—The authors noted that the reactive symptoms after the injection of the vaccine were local hyperemia and tenderness at the place of injection, the symptoms being greatly relieved by the application of hot compresses. The latter also prevented the persistence of the hard, indurated nodules which are common after bacterin injection. Not only was local pain persistent in places where the local lesions were in progress, but tenderness was elicited in areas of a former pleuritis. In a few days the cough became productive, the mucopurulent expectoration was replaced by a serous-like material which was expectorated with ease. Respirations, which were labored and wheezy, grew easier and gradually became normal. The patients were able to rest comfortably, night sweats ceased, appetite improved, and gain in weight was noticed. Cases with marked exhaustion showed no reactive symptoms until one or two days after the first injection, or only after the second or third injection. In far-advanced cases with cavity formation, the distressing symptoms did not entirely cease, but some relief followed. The intervals between the coughing spells were prolonged and expectoration was easier. They were able to rest for longer periods without the use of narcotics, or the use of the various expectorants. With cessation of digestive disturbances the appetite greatly improved.

83. **Wassermann Reaction.**—Baumann believes that the complement is a ferment and not a substance that can be bound by an "amboceptor," as Ehrlich and Wassermann contend. His reasons for this conclusion are: 1. Complement is destroye at a temperature at which we would expect a ferment to perish 2. He found accidentally that the activity of an ambocepto could be increased by adding a slight amount of acid. It therefore, occurred to him that there might be some analog of action between rennet, pepsin and complement. The forme two can be activated by hydrochloric acid. He found that dilution of 1:20,000 hydrochloric acid in physiologic salt solution would not have any hemolytic action itself, but woul activate complement, and could be used in the hemolytic system instead of an "amboceptor." 3. The activity of the complement in a given solution of sensitized antigen does no depend on its absolute quantity as it would have to if Eh lich's side-chain theory were applicable to this reaction. Th amount of complement needed to perform the reaction and th amount of complement actually used up are not the same the amount varies according to temperature, and the lengt of time needed for the reaction. The percentage of complemen used is larger in slow reaction, taking place at relatively hig temperature, than in a quick reaction, taking place at relativel low temperatures. 5. Other conditions being the same, th activity of complement depends on the concentration and n on its absolute amount present. Complement, therefore, ac according to its concentration, like ferment, such as renne used in the making of cheese, but not like a substance th is bound in certain definite proportions by a second substan 6. Every other factor being constant, two units of a patien serum do in their reaction with antigen destroy less comp ment than one unit does. This fact, again, is entirely contra to what we would have to expect if the relation of facto entering this reaction were quantitative. 7. Complement w not be deviated in a mixture of syphilitic serum and lip substances if the latter have been heated for a certain leng of time above 70 C. 8. The degree of activity of guinea-pi blood as a complement can be reduced to one-half of original value within a week if the hygiene and sanitary c dition of the animal are changed for the worse; this spea more for it being a ferment than a simple chemical bo

### Journal of Oklahoma State Medical Association, Muskogee

*May, IV, No. 12, pp. 485-536*

84 Typhoid. W. L. Capshaw, Norman.
85 Etiology, Pathology and Treatment of Infantile Paralysis. L. E. Andrews, Oklahoma City.
86 Practical Obstetrics in Country Practice. F. R. Wheeler, Manford.
87 Treatment of Meningitis. A. C. Hirshfield, Norman.
88 Serotherapy of Cerebrospinal Meningitis. S. H. Landrum, Olustee.
89 Treatment of Morphinism by Lambert Method. G. W. Robinson, Kansas City, Mo.
90 Vestibular Nystagmus. E. F. Davis, Oklahoma City.
91 Unprofessional Conduct, License Revoked, Precedents to be Established. T. A. Blaylock.
92 Primary Metastatic Carcinoma of Omentum Following That of Breast. C. N. Ballard, Oklahoma City.

### Denver Medical Times and Utah Medical Journal, Denver

*April, XXXI, No. 10, pp. 399-448*

93 *Ideal Charity for Dependent Tuberculous in Colorado. A. S. Taussig, Denver.
94 *Case of Splenomegaly Complicated by Pregnancy. C. A. Ferris, Denver.
95 *Some Practical Relations of Blood-Pressure in Study and Treatment of Disease. E. C. Hill, Denver.
96 Subversion of Medical Ethics. M. Anon.
97 Hereditary Criminality and Asexualization of Criminals. C. Bell.
98 History of Syphilis. C. S. Scofield, Richford, Vt.

93. **Charity for Tuberculous in Colorado.**—Taussig recommends a union of all bodies that come in contact with tuberculosis, a realization of the difficulties and a future plan of work; second, a personal contact with the individual consumptive, assistance that shall be carefully supervised and relief that shall not make him a constant charge.

94. **Splenomegaly Complicated by Pregnancy.**—Besides being pregnant and suffering from splenic anemia Ferris's patient also had rough calculi in the gall-bladder although there was not at any time any pain in that region; also a large calculus in the pelvis of the left kidney and several smaller ones scattered through the organ. The patient never complained of pain in that region, and contrary to expectation, they produced no albuminuria. Deposits in both of these viscera resembled rusty iron in appearance, and it occurred to Ferris that they might be a deposit resulting from the superabundance of iron ingested as a remedy for the anemia. When first seen, the patient, aged 28, was so anemic as to appear like a waxen image, and she was voiceless from sheer exhaustion, the result of an unsuccessful effort to carry through to term the product of her first conception. She was in labor, and, with slight assistance, was delivered of an eight months' fetus, which presented the appearance of having been dead for some time. The subsequent history from the obstetric viewpoint was uneventful, except for irregular elevations in the temperature, which, however, proved not to be due to the local conditions. Involution occurred in about two weeks, but there was not the slightest sign of milk in the breasts. On applying the obstetrical binder, a hard mass was noticed in the left side of the abdomen, which was at first mistaken for the uterus, but on trying to move it into the median line, it was found to be an enlarged spleen, occupying the greater part of the abdomen, and extending down to the pelvic brim. Singularly enough, he patient had never discovered this tumor-like enlargement, nor known of its existence, until her attention was called to t at that time. She had been under the care of many different physicians practically all her life, and, although she was aware hat any attempt to wear anything slightly close-fitting had or years made her short of breath, she had never discovered he hard mass in her side before. The patient died about a month later from exhaustion.

95. **Relations of Blood-Pressure.**—Therapeutic indications ained from the scientific study of blood-pressure, Hill says, re of the utmost practical value. Though it is not always easible, or even advisable, to reduce high blood-tension to the ormal limits of health, since, as in chronic interstitial nephritis, uch of this hypertension is compensatory, yet we may safely ct whenever subjective symptoms are prominent, and it is markable what great relief may be obtained from headache, rtigo, etc., by depressing the blood-pressure only a few points. o this end elimination with calomel and salines or other xatives is nearly always in order. For direct vasodilator tion sodium nitrite, in doses of ½ grain and upward, in distilled water, four times a day on an empty stomach, has served Hill's elderly patients well. Younger subjects with hypertension are often markedly benefited by the prolonged administration of tincture of aconite (10 minims or 20 drops three or four times a day), or tincture of veratrum (dose, 15 minims or about 30 drops). When hypertension accompanies dilated heart, tincture of strophanthus is generally preferable to digitalis as a cardiant. For puerperal eclampsia, morphin, chloroform, fluid extract of veratrum intramuscularly, phlebotomy if need be, and best of all, emptying the womb, are the cardinal indications.

For too low blood-pressure Hill has tried many medicines (caffein, quinin, hydrastinin, ergot, strychnin, etc.), mostly with but little curative effect. The one specific remedy in these cases is epinephrin in full doses (up to 100 grains daily if need be) or the solution of adrenalin chlorid in corresponding dosage. Other means of proved efficacy in this connection are the relief of constipation (cascara, senna, phenolphthalein, etc.), moderate exercise (not to point of fatigue), and the cool salt sponge bath every morning.

### Journal of Michigan State Medical Society, Battle Creek

*May, XI, No. 5, pp. 267-326*

99 Erysipelas: Symptoms, Etiology and Pathology. C. E. Hooker, Grand Rapids.
100 Erysipelas. A. P. Biddle, Detroit.
101 Eclampsia. J. J. Lyons, Sault Ste. Marie.
102 Treatment of Eclampsia by Vaginal Cesarean Section. R. G. Leland, East Leroy.
103 Ectopic Gestation. I. N. Brainerd, Alma.

### Monthly Cyclopedia and Medical Bulletin, Philadelphia

*April, XV, No. 4, pp. 193-256*

104 Graphic Methods and Instruments in Diagnosis of Cardiac Affections. T. E. Satterthwaite, New York.
105 Action of Corpus Luteum and of Pineal Body. I. Ott and J. C. Scott, Philadelphia.
106 Causation of Psychopathic Maladies. B. Sidis, Portsmouth, N. H.
107 *Ductless Glands in Surgical Therapeutics. C. E. de M. Sajous, Philadelphia.

107. **Ductless Glands in Surgical Therapeutics.**—All the facts submitted are summarized by Sajous as follows: Thyroid (including parathyroid) preparations, owing to their power to increase the opsonins and enhance the germicidal and antitoxic power of the blood, are indicated in surgical diseases, septicemia, pyemia, erysipelas, etc., and in suppurative processes wherever situated, the organs of special sense included. Being endowed with the property of enhancing calcium metabolism, besides acting as stimulants of the defensive process, thyroid preparations are also indicated in diseases of the osseous system (including those due to the tubercle bacillus in the spine and hip-joint), osteomyelitis, rachitis, etc. Thyroid preparations are also indicated in those cases of larval myxedema in which convalescence after operation is slow and the tendency to infection is great, owing to inefficiency of the patient's defensive mechanism. The fact that the parathyroids are the main source of opsonins, and that the latter increase the activity of the defensive process, emphasizes the importance of always conserving these organs when removing the thyroid, or of restoring them at once after their accidental removal. The adrenals, as co-workers of the thyroid apparatus in the defensive process and in sustaining oxidation, metabolism and nutrition, seem to offer a new clue to the pathogenesis and treatment of cancer that is worthy of further inquiry. The adrenal secretion, especially when obtained from regions in which it occurs in organic combination, the stomach, the spleen and the pituitary for example, powerfully excites, as hormone, the contraction of unstriped muscular tissue. Hence the activity of the splenic hormone and pituitary body in postoperative paresis of the intestine and cardiovascular adynamia.

### Colorado Medicine, Denver

*April, IX, No. 4, pp. 103-128*

108 Diagnostic Value of Wassermann Reaction. P. Hillkowitz, Denver.
109 The County Society. H. R. McGraw, Denver.

### Lancet-Clinic, Cincinnati

*April 27, CVII, No. 17, pp. 451-478*

110 *Influence of Stricture of Urethra on Development of Hypertrophic Changes in Prostate. H. Cabot and G. G. Smith, Boston

111 General Management of Tuberculosis. T. D. Coleman, Augusta, Ga.
112 Artificial Immunity to Spermatozoon of Same Species in Guinea-Pig. L. K. Hirshberg, Baltimore.

110. Abstracted in The Journal, November 4, 1911, p. 1557.

### Journal of Experimental Medicine, New York

*May, XV, No. 5, pp. 429-546*

113 Correlation of Histologic and Chemical Changes in Spleen During Necrosis and Autolysis. H. J. Corper, Chicago.
114 *Complete Balance Studies of Nitrogen, Sulphur, Phosphorus, Calcium and Magnesium in Intestinal Infantilism. F. H. McCrudden and H. L. Fales, New York.
115 *Effect of Fat and of Carbohydrate Diets on Excretion of Creatin in Cases of Retarded Development. F. H. McCrudden, New York.
116 Pure Cultivation of Spirocheta Refringens. H. Noguchi, New York.
117 Effects on Titrations of Inequality of Sensitization of Corpuscles. C. H. Bailey, New York.
118 *Nuclease in Carcinoma. E. H. Goodman, Philadelphia.
119 Immunochemical Studies with Peptones. A. A. Epstein.
120 *Experimental Studies on Administration of Salvarsan by Mouth to Animals and Man. J. A. Kolmer and J. F. Schamberg, Philadelphia.
121 Production of Foreign Body Giant Cells in Vitro. R. A. Lambert, New York.
122 Permanent Life of Tissues Outside of Organism. A. Carrel, New York.
123 Albuminolysins and Their Relation to Precipitin Reactions. H. Zinsser, New York.

114. **Balance Studies in Intestinal Infantilism.**—In two cases of infantilism studied by the authors there was poor absorption from the intestines of nitrogen, sulphur, phosphorus, calcium and magnesium. The excretion of these elements in the urine was low. The excretion of calcium in the urine was so small as to be negligible. The excretion of calcium into the intestines was increased. The complete balance experiments showed that while other elements were retained, calcium was lost.

115. **Effect of Fat on Excretion of Creatin.**—In two cases of infantilism of the type of Herter, in one case of achondroplasia, and in one case of cretinism studied by McCrudden creatin was constantly present in the urine and was increased in amount when the ingestion of carbohydrates was increased.

118. **Nuclease in Carcinoma.**—The results of Goodman's experiments offer proof of the presence of nuclease in carcinomata. In flasks containing sodium nucleate and carcinoma juice, a greater amount of the purin bases was present than in those containing cancer juice that was allowed to autolyze without the addition of nucleic acid, and these flasks contained greater amounts of the purin bases than the flasks in which the ferments had been destroyed by boiling. Goodman infers that while the cancer is still growing in the human organism, the nuclease of the cancer is active. This is indicated by the presence of the purin bases in the flasks that contained boiled cancer juice, for the action of the ferment in the cancer was inhibited by cold immediately after the removal of the tumor from the body, and the ferment was later destroyed by heat. The purin bases in these flasks must, therefore, have been produced while the tumor was growing on its host. The nuclease continues its activities in the incubator. Having found a nuclease in carcinomatous tissue Goodman intends to search for it in the blood and urine of patients suffering from cancer, and in the gastric secretion of cases of gastric neoplasms. Should nuclease be at all concerned in the malignancy of carcinoma, he thinks injection of it into tumors should hasten their growth, and perhaps its injection into lower animals might reveal phenomena bearing on the cancer question.

120. **Administration of Salvarsan by Mouth.**—The authors found that salvarsan can be administered in pills, in capsules and in solution to lower animals in dosage of 0.02 to 0.03 of a gram per kilo of body weight, without producing toxic symptoms. A dog received 0.57 of a gram of salvarsan in pill and capsule form in the course of twenty-nine days without any disturbing effects. After the oral administration of salvarsan, arsenic is found in the bile and urine at the end of twenty-four hours, but it disappears by the end of seventy-two hours. Twenty-four hours after the oral administration of salvarsan to cats, the number of bacteria in the intestinal tract appears to be reduced, the reduction being most striking in the lower end of the ileum. Salvarsan administered by mouth and likewise intravenously to rabbits in doses approximating those employed in human subjects, does not produce, at least within ninety-six hours following its administration, any appreciable microscopic changes in the important viscera. With the exception of a little vomiting and diarrhea in some cases, salvarsan can be given by mouth up to 0.6 of a gram to human subjects without producing toxic symptoms. Thus administered, the drug exerts a therapeutic influence, but this influence is too feeble to warrant its use by this route.

### Public Health Journal, Toronto

*April, III, No. 4, pp. 169-232*

124 Cheese Factory and Farm Well Waters. W. T. Connell, Kingston, Ont.
125 Work for Women as Sanitary Inspectors. E. Hurlbatt, Montreal.
126 Vaccines and the Common Cold. C. Laidlaw, Ottawa.
127 Insanitary Areas. J. Roberts, Hamilton, Ont.
128 Factors in Spread of Acute Intestinal Infections. H. W. Hill, Minneapolis, Minn.
129 Sanitation in Railroad Camps. H. G. Nyblett, Macleod, Alberta.
130 Ideal Waterworks System for Small Town. F. McArthur, Saskatchewan.
131 Six Weeks of Early Spring Bloom. R. R. Todd, Toronto.
132 Farm Water-Supply. F. T. Shutt, Ottawa.
133 Sanitary Inspection of Villages. H. O. Boyd, Bobcaygeon.

### Boston Medical and Surgical Journal

*May 2, CLXVI, No. 18, pp. 651-686*

134 Influence of Antivivisection on Character. W. W. Keen, Philadelphia.
135 Dr. Samuel Sheldon Fitch, New England Consumption Specialist of Seventy-Five Years Ago. H. F. Stoll, Hartford, Conn.
136 *Cerebrospinal Meningitis Caused by Acid in Blood. D. G. Hall, Dallas, Texas.
137 Series of One Hundred Cases of Vaginal Hysterectomy for Uterine Fibromata. C. G. Cumston, Boston.
138 Medical Gymnastic Treatment in Certain Circulatory Disturbances. G. Sundelius.

136. **Cerebrospinal Meningitis.**—Seven out of nine patient examined by Hall showed acid saliva. He says it is onl reasonable to suppose, if the blood in meningitis is over charged with acid, the best way to ward off the disease is t keep it alkaline, as in its normal healthy condition. Hall als claims that the germ of each disease thrives in blood whic contains an abnormal amount of acid. If the meningococcu thrives in blood which is highly charged with acid, and th same organism is also found in the excretions of a health person is it not logical to suppose these latter owe thei immunity from the disease to the fact their blood is alkaline It is well known, after a person has once had inflammator rheumatism, and has fully recovered, if the blood agai becomes charged with acid, after many months or years, ther may be a relapse of the disease. Is it not fair to suppos the relapse in meningitis is due to the same cause? The fac that the blood in meningitis contains an excess of acid doe not in the least prove the disease may not be infectious, bu it seems hardly probable a person could become infected unle his blood were acid and the germ could be able to find a sui able feeding ground. An excessive fondness for sweets, sug and syrup, is held responsible for this acid condition of t blood. What, then, should be a physician's advice to h patients to guard them against contracting meningitis?

First, Drink large quantities of good water.

Second, Eat no sugar or syrup.

Third, If the urine is highly colored, take some alkali diuretic, such as one-half teaspoonful of sodium bicarbona morning and night, dissolved in a glass of water. In rega to the treatment of meningitis, it seems to Hall that it wou be advisable to prescribe in addition to the "serum inocu tions," the free use of some mild alkaline drink, to bring t blood back to its normal condition as soon as possible.

### American Medicine, Burlington, Vt.

*March, VII, No. 3, pp. 127-178*

139 Thyroid Modification and Therapy. H. Stern, New York.
140 Impressions of Panama Canal. D. W. Montgomery, S Francisco.
141 Heart Diseases and Epigastric Symptoms. M. Manges, N York.
142 Commitment of Insane. W. Steinach, New York.
143 Cholecystitis. W. H. Ross, Brooklyn.
144 Morbific Processes Controlled by Hypodermic Use of Ase Chemical Solutions. J. B. White, New York.
145 Detection of Ureteral and Renal Calculi by Radiograp P. S. O'Donnell, Chicago.

### Ophthalmology, Seattle, Wash.

*April, VIII, No. 3, pp. 307-460*

146 Rupture of Descemet's Membrane Due to a Blow from a Blunt Object. J. L. McCool, Portland, Ore.
147 Cataract Operations in Congenital Aniridia. J. Fejer, Budapest, Austro-Hungary.
148 Operative Treatment of Conical Cornea. S. S. Golovine, Moscow.
149 Simple Sclerectomy in Glaucoma. Bettremieux, Roblax, France.
150 Iridectomy and Sclerectomy in Glaucoma. Bettremieux, Roblax, France.
151 Hemorrhagic Glaucoma, Sclerectomy. M. A. Terson, Paris, France.
152 Multiple Lacrimal Puncta. E. F. Chase, North Yakima, Wash.
153 Light Hood for Electric Ophthalmoscope. C. W. LeFever, Philadelphia.

### Journal of Abnormal Psychology, Boston

*April, VII, No. 1, pp. 1-88*

154 Short Study in Dislike. W. D. Tait, Montreal.
155 A Forgotten Dream. E. Jones, Toronto.
156 Poetry and Dreams. F. C. Prescott, New York.
157 Physiognomical Reflex. S. Baker, Utica, N. Y.

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## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### Lancet, London

*April 20, I, No. 4625, pp. 1042-1108*

1 Modern Views on Significance of Skin Eruptions. H. G. Adamson.
2 Mosquitoes and River Vessels. A. Balfour.
3 *Radium Emanation in Mineral Waters. T. P. Lowe.
4 *Vaccine Therapy in Rheumatoid Arthritis. T. J. Horder.
5 Recurrence of Adenoids. T. Guthrie.
6 Volvulus of Spermatic Cord. A. A. McConnell.
7 Treatment of Early Stages of Senile Cataract. H. Smith.

3. **Radium Emanation in Mineral Waters.**—Lowe reports a case of cirrhosis of the breast in a woman of 75, which, he says, "was cured by exposing it to the gas emanating from a spring. The ulcerated surfaces were exposed for ten minutes daily, and after twelve applications all the ulcers had healed and some of the surrounding induration had disappeared."

4. **Vaccine-Therapy in Rheumatoid Arthritis.**—The point is made by Horder that he discusses not "the vaccine treatment of rheumatoid arthritis," but "vaccines in the treatment of rheumatoid arthritis." Every case of "rheumatoid arthritis" should, he says, be considered on its own merits. He prefers the term multiple arthritis, of which, after all, "rheumatoid arthritis" is only a specialized form. The proper examination of the case, he continues, entails two separate investigations: (1) a critical analysis of the symptoms and signs, as referable to changes in joints, muscles, nerve tissues, blood and general nutrition; and (2) an examination which has for its special object the discovery of one or more foci of infection. In this second part of the examination careful attention is paid to the mouth, the fauces, the nose, nasopharynx and nasal sinuses, the respiratory tract and the uterus. Any lesion in one or more of these situations is carefully noted and a thorough examination is then made of the bacterial flora connected with it. Due consideration is then given to the nature and numbers of the microorganisms obtained and the special evidence of affinity between them and the arthritis.

In dealing with the infective focus, if such is found, it must constantly be remembered that the first principle in treatment is to secure efficient drainage. Unless this is established all vaccine treatment is vain. Local treatment, therefore, should always precede inoculation. If the local treatment involves surgical procedures, such as the extraction of several septic teeth, the excision or curetting of an ulcer, or the removal of an infected tonsil or polypus, it is sound treatment to protect the patient against a temporary exacerbation of his infection by giving him two or three preliminary inoculations with the appropriate vaccine. This is more by way of prophylaxis than as curative treatment. But to subject the patient to a prolonged course of vaccine therapy and to leave the local focus of infection to look after itself, Horder says, is to reverse the order of common sense procedures. All vaccine therapy should be held in reserve for at least fourteen days after surgical measures have been undertaken, for as a result of these measures the patient is very apt to inoculate himself, and this forms a definite contra-indication to the addition of fresh antigen or bacterial toxin while the temporary auto-inoculation is proceeding.

Assuming, then, that all the points in the general management of the case are receiving thorough attention, and that the infective focus brought to light is also receiving local treatment, Horder proceeds cautiously to raise by specific means the level of the patient's immunity against the residual infection going on at the site of the original invasion or against secondary foci in the body which cannot be dealth with directly. The means available are: (1) immune sera, by which it may be possible to supply temporarily a degree of passive immunity; and (2) vaccines, by which it is hoped to stimulate the patient to a more permanently useful degree of active immunity.

### Clinical Journal, London

*March 20, XXXIX, No. 24, pp. 369-384*

8 Nasopharynx and Its Relation to Other Regions. M. Yearsley.

*March 27, XXXIX, No. 25, pp. 385-400*

9 Selection for Early Operation of Fractures of Long Bones. C. H. Fagge.
10 Some Diseases of Nose and Maxillary Antrum, with Illustrative Cases. W. Stuart-Low.
11 *Tuberculin Treatment. H. V. Barber.

*April 3, XXXIX, No. 26, pp. 401-416*

12 Hernia in Children. H. S. Pendlebury.
13 *Cardiac Disease in Children. R. O. Moon.
14 Dilatation of Bronchial Tubes in Children. T. Fisher.
15 Surgical Cases in Children. E. M. Corner.

*April 17, XL, No. 2, pp. 17-32*

16 Enlargements of Liver. F. Taylor.
17 Intrinsic Cancer of Larynx: Plea for Early Diagnosis and Treatment. H. Tilley.

11. **Tuberculin Treatment.**—In London, three tuberculin dispensaries have now been established, at Kennington, Battersea and Greenwich; while provincial branches have been opened in Aldershot, Street (Somerset), Portsmouth, Aberdeen, Inverness, Leith, Irvine (Ayrshire) and Naas (Ireland). The experience gained in Edinburgh is instructive. Writing from the Public Health Office, Charlotte Street, Leith, in June, 1911, Dr. Wm. Robertson, Medical Officer of Health, says that tuberculin administered in progressive doses has in Leith given results that they were never able to achieve by mere open-air methods. These had been in operation for nine years. After carefully weighing the pros and cons he arrives at the conclusion that tuberculin offers far more help to the consumptive than sanitarium treatment alone. An association called "The Tuberculin Dispensary League" has been established for the purpose of making the tuberculin treatment more widely known, and of raising funds with the object of creating a vast network of tuberculin dispensaries all over the United Kingdom to help stamp out the great "white peril" that is devastating the land.

13. **Cardiac Disease in Children.**—In children, heart disease presents many differences from the same affection in adults, so that it is worth while considering it separately. Then, too, the early recognition of a cardiac lesion in childhood, together with its careful and judicious treatment, may go far to minimize some of the worst aspects of heart disease as we know it in later life. In children the causation of heart disease is much simplified by the fact that it is unnecessary to consider all those degenerative changes of the myocardium, valves and coronary arteries comprehended under the term "arteriosclerosis" which are such grave features of heart disease in later life. For in childhood cardiac disease is the result of inflammation and not of degeneration, the vast majority of cases which present themselves to us being the result of an acute or subacute endocarditis.

There is no difficulty about the diagnosis, provided we make a rule of always examining the hearts of children who are brought to the doctor for indefinite symptoms, pointing to malnutrition. For the fact is, says Moon, that the heart, when affected in children, tends to produce a condition of malnutrition and wasting which is not often seen in adults; this is quite generally realized in the case of congenital heart disease, but is not so well known in connection with an acquired cardiac lesion. Of course, when the case comes with obvious cardiac symptoms, such as shortness of breath, periodical pain and attacks of palpitation, which are less frequent than in the case of adults, there is no excuse for not making the diagnosis. Other common symptoms of chronic valvular disease in children are headache, cough and epistaxis.

In cases of chronic valvular disease, which is well compensated, one does not so much require treatment as guidance. Plenty of fresh air, good food and hygienic surroundings are of the first importance. Special care should be taken to guard against a fresh attack of rheumatism; the child should have woolen clothing next its skin, and not go out too readily in cold damp weather. Where it is possible to choose a climate, one should select a dry and bracing place with plenty of sunshine and a house on gravel soil with a southerly aspect. The meals should be small, and in particular all excess of starchy foods and sweets must be avoided, which so readily give rise to flatulence and acidity; there is no objection to nitrogenous food being taken by children in ordinary quantities.

Exercise in moderation is undoubtedly good, but certain forms of it must be absolutely forbidden; thus swimming, and games which involve much running must be ruled out. On the other hand, there is no objection to bicycling, if the patient will walk up the hills; riding, rowing, skating and also cricket are all permissible in moderation. It is often well, in Moon's opinion, even for those cases of compensated heart lesions, to lie down for half an hour every day. With the first sign of failing compensation as shown by shortness of breath, palpitation of the heart or pulmonary congestion, rest becomes imperative; it need not, perhaps, be absolute, but it will certainly mean lying down for the larger part of the day. It may then be necessary to employ specific heart tonics, children taking digitalis very well; often this is suitably combined with an aperient, and a useful prescription of Dr. Eustace Smith's is to give 1 dram each of infusion of digitalis, senna and calumba for a child of ten years. At the same time Moon has generally found in these early stages of failing compensation that small doses of arsenic and iron act extremely well. When compensation has completely broken down with pulmonary edema and ascites then there is no material difference in the treatment of a child and an adult.

## Australasian Medical Gazette, Sydney

*March 16, XXXI, No. 11, pp. 261-292*

18 Lister: His Life and Work. A. A. Lendon.
19 Practical Significance of Use of So-Called "Four Reactions" for Diagnosis of Syphilitic Organic Nervous Diseases. M. Nonne.
20 Case of Cornual Pregnancy. R. Worrall.

*March 23, XXXI, No. 12, pp. 293-320*

21 Reminiscences of the Late Lord Lister. R. H. Marten.
22 Surgery in 1911. C. MacLaurin.
23 Romance of Medicine. J. W. B. Bean.

## British Medical Journal, London

*April 20, I, No. 2677, pp. 873-932*

24 Tuberculization and Detuberculization. R. W. Philip.
25 *End Results of Operation for Cancer of Tongue. A. R. Short.
26 Estimation of Calcium Metabolism. W. B. Bell.
27 Case of Osteitis Deformans in which Fracture of Femur Took Place as Result of Stooping. T. W. Parry.
28 Tests of Intelligence. W. A. Potts.
29 Arrest of Severe Epilepsy in Child Aged Four. J. S. Mackintosh.
30 *Radium Emanations in Mineral Waters. T. P. Lowe.
31 Effect of Unsuitable Neck Clothing on Health. W. G. Walford.
32 *Tincture of Digitalis: Its Potency and Keeping Properties. A. Goodall.
33 *Lateral Curvature of Spine (Scoliosis). P. B. Roth.
34 Left-Sided Subphrenic Abscess Due to Perforated Duodenal Ulcer. C. R. Box.
35 Operation for Decompression; Recovery. R. W. Mullock.

25. **Operation for Cancer of Tongue.**—This study by Short is based on the case histories of thirty-eight patients operated on for cancer of the tongue at the Bristol Royal Infirmary during the years from 1902 to June, 1911. It has been possible to obtain subsequent information in twenty-nine cases. The glands were removed two or three weeks after the excision of the growth in the tongue. In five cases it was necessary to divide the jaw. Four of these recurred, three of them locally; another patient died soon after the operation. In several cases the patient was apparently cured for some considerable time, and then the disease recurred, in one instance in the neck, in another in the mouth. These two men were free for nearly three years after the original operation. Two patients died of the operation, one of septic absorption and the other of gangrene of both lungs following a profuse secondary hemorrhage due to the foul state of the mouth. Short's figures bring out the superiority of the operation where glands are removed as compared with the older procedure of leaving them if they were not noticeably enlarged.

Thus, only one patient was cured out of twelve in whom the glands were left, but perhaps as many as six out of the seventeen in whom the glands were excised. Moreover, even of the remaining eleven cases in this group there is evidence that the patient was given more chance of relief. Two of them were well and free from recurrence for nearly three years, and another died of cancer of the spine ten months later. In several instances careful sectioning of the glands excised showed no cancer cells. In two such cases the growth nevertheless recurred in the neck (in the submental region and behind the sterno-mastoid, respectively).

The cancerous growth was preceded in three cases by a dental ulcer. In one of these the ulcer was excised and reported by a pathologist to be innocent, but a malignant gland appeared eighteen months later, and the patient died. In another case a papilloma had been removed two years before. One man had extensive leukoplakia and syphilitic fissures, which he used to rub with silver nitrate. Many of the patients had leukoplakia.

30. See abstract No. 3.

32. **Tincture of Digitalis.**—During the last three years Goodall examined twenty-three samples of tincture of digitalis, freshly made by chemists of repute. The standard employed was that 3 minims of the tincture should kill a frog weighing 20 gm. within four hours. Of the twenty-three samples twelve were of average potency, six were under the average and five were over the average strength. The actual strength of each may be indicated by stating the dose equivalent to the maximum pharmacopeial dose of 15 minims. Goodall says that since these varying results are obtained by manufacturers who are anxious to produce drugs of standard potency it would be of interest to know what kind of tincture is made by firms who aim at nothing more than keeping within the letter of the law as laid down in the pharmacopeia. It was noted that, in the case of tincture freshly made by firms of repute, the greater danger is likely to arise from the drug being too strong. Tincture of digitalis probably retains its full activity for one year, but after that period deterioration of its potency to an important extent is likely to take place.

33. **Lateral Curvature of Spine.**—An analysis of 2,000 consecutive cases of scoliosis has been compiled by Roth from the notes of cases treated in private practice from July, 1885, to June, 1899, by his father, Mr. Bernard Roth. There were 1,721 females and 279 males. In 89 per cent. the deformity was first noticed between the ages of 6 and 20, and in 72 per cent. between the ages of 6 and 15. Five hundred and seventy-three patients, or 28.5 per cent., had blood relations also suffering from scoliosis. Particulars were obtained of ninety-three families in whom three or more members were affected; in twenty-three of these, four or more members were affected. Viewing the spine from behind, six varieties of deformity were met with: Ordinary C, 1,085 cases; reversed S, 618 cases; ordinary S, 123 cases; reversed C, 122 cases; ordinary ipsilon, forty-eight cases; reversed ipsilon, four cases. In 916 cases pain was present; slight in 282, moderate in 250, severe in 384. Flat-foot was present in 1,225 cases. In 933 of these cases the arch was not so restored; that is, they were cases of severe flat-foot.

## British Journal of Children's Diseases, London

*April, IX, No. 100, pp. 145-192*

36 *Congenital Dyschesia. A. F. Hertz.
37 Hereditary Syphilis and Its Treatment by Salvarsan. J. L. Bunch.
38 Purpura Fulminans as Sequela of Scarlet Fever. T. McCririck.
39 Family with Membranous Discharge from Nose. A. M. Gossage.
40 *Case of Median Dermoid Cyst of Nose. M. Yearsley.

36. **Congenital Dyschesia.**—All cases of constipation are divided by Hertz into two classes: in the first, which he calls intestinal constipation, the passage of feces through the intestines is delayed, while defecation is normal; in the second class for which he adopted the name dyschesia, there is no

delay in the arrival of feces in the pelvic colon, though their final expulsion is not adequately performed. It is extremely important to recognize these two classes of constipation, as their treatment is entirely different: diet, abdominal massage and aperients, which are appropriate for intestinal constipation, are quite useless in dyschesia, attention to the hygiene of the bowels and reeducation of the defecation reflex by means of graduated enemata being the correct treatment. The dyschesia soon leads to secondary retention of feces in the pelvic colon, and in severe cases in still higher parts of the large intestine, as, unless enemeta are given, the rectum is never empty, and in spite of its dilated condition there is insufficient room for all the retained feces.

The irritation caused by the retained feces is likely to give rise to catarrhal colitis, and in the case of a girl of eight with congenital dyschesia, retention occurred as far back as the cecum, giving rise during the last four years to repeated attacks of typhlitis, with pain, tenderness, vomiting and pyrexia, which were at first diagnosed as appendicitis and were only recognized to be something different when five further attacks occurred after the removal of the appendix eighteen months ago. Roentgen-ray examination after the colon had been emptied showed that there was no delay in the passage of feces as far as the rectum, but that severe dyschesia was present.

40. **Median Dermoid Cyst of Nose.**—Yearsley's patient, a girl, aged 5 years, presented herself with a swelling in the median line of the nose, which had been first noticed two years earlier and was said to be increasing in size. It measured 1 inch by ¾ inch in its widest part, and was soft and elastic to the touch, with a feeling of bogginess on pressure. There was no sign of any fistula in the neighborhood. The cyst was removed through a median incision. On dissecting it out, it was found to be attached to the nasal bones close to their junction with the lateral cartilages. It contained a grayish, putty-like material and was lined with fine white hairs. The wound was drawn together by two fine horse-hairs and quickly healed. On section the cyst wall showed a lining of skin with hair-follicles and sebaceous glands.

### Glasgow Medical Journal

*April, LXXVII, No. 4, pp. 241-319*

41 Keratitis as Cause of Myopia. J. A. Wilson.
42 Concomitant Squint Following Injury to Head and Eye. A. J. Ballantyne.
43 *Two Cases of Tuberculosis of Uterus. M. J. Stewart.
44 Plague as Factor in History. J. P. Granger.

43. **Tuberculosis of Uterus.**—Stewart's patient complained of swelling of the abdomen, with pain in the hypogastric region of about eight weeks' duration, and with increasing weakness and pallor of one year. Menstruation was always irregular, and finally ceased about a year ago. When the abdomen was explored by operation a large inflammatory tumor was found in the pelvis, firmly adherent in front to the uterus and right broad ligament and tube. A portion of the mass about the size of a turkey's egg was removed and the cavity drained. Death took place a week later. Microscopically, the mass removed at operation consisted of a loose cellular granulation tissue, with numerous thin-walled blood-vessels; while scattered irregularly throughout it were many typical tubercules with giant cells and central caseous foci.

### Australian Medical Journal, Melbourne

*March 9, I, No. 34, pp. 369-380*

45 Complete Rupture of Uterus with Escape of Fetus and Placenta into Peritoneal Cavity. A. W. D. Robertson.
46 Case of Retained Tracheotomy Tube and Laryngeal Stenosis. P. S. Webster and S. W. Ferguson.
47 Maternal Impression. T. Rowan.

*March 16, I, No. 35, pp. 381-392*

48 Some Anatomic Considerations of Joint Fixation. W. Mackenzie.
49 Acute Nephritis with Aphasia and Imbecility. W. F. Brownell.
50 Ophthalmoscopic Appearance of Arteriosclerosis. J. W. Barrett and W. F. Orr.

### Bulletin de l'Académie de Médecine, Paris

*April 2, LXXVI, No. 14, pp. 289-304*

51 Heredity and Feeding as Factors in Tuberculosis in Calves. (Sur la part de l'hérédo-contagion et de l'allaitement dans la tuberculose du veau. Indications rélatives à la pathologie humaine.) M. Chausse and H. Benjamin.

### Lyon Médical, Lyons

*March 31, XLIV, No. 13, pp. 701-756*

52 Atypical Zona. J. Minet.

### Presse Médicale, Paris

*April 10, XX, No. 29, pp. 289-296*

53 Idiopathic and Symptomatic Genu-Valgum. (Genu-valgum essentiel et genu-valgum symptomatique.) E. Kirmisson.
54 *The Cerebrospinal Fluid in Pellagra. (Le liquide céphalo-rachidien dans la pellagre.) P. Boveri (Pavia, Italy).

*April 13, No. 30, pp. 297-308*

55 *Sprained Ankle and Tuberculosis of the Foot. (Entorse et tuberculose du pied.) A. Broca.
56 Clinical Examination of Cardiovascular System. (Valeur respective des diverses méthodes modernes d'exploration du système circulatoire.) A. Martinet.
57 *Small Chest and Large Abdomen with Emphysema. (Le petit thorax et le grand abdomen de malades dits emphysémateux.) G. Caussade and G. Leven.
58 *Preliminary Serotherapy by the Mouth and in Local Application. (Sérothérapie antistreptococcique par voie buccale et en applications locales.) A. Darier.

54. **The Cerebrospinal Fluid in Pellagra.**—Boveri says that pellagra occurs exclusively among the poor, that is, among the peasants working in the fields on insufficient nourishment. Pellagra is not encountered in cities, he asserts, and the link connecting pellagra and the insufficient nourishment is a too exclusive corn diet. The pellagrins in Italy seem to be all of this class. He found the cerebrospinal fluid always limpid but occasionally under high pressure, with an increase in the albumin and slight lymphocytosis, but the fluid was always apparently sterile. The patients with the fluid under high pressure all presented the typhoid form of pellagra. The localization of the disturbances in pellagra is ascribed by Boveri to a local predisposition afforded by the excessive use of certain muscles; in men accustomed to agricultural labor the lower segments of the spinal cord are generally first and predominantly affected while the upper segments are comparatively spared.

55. **Sprained Ankle and Tuberculosis of the Foot.**—Broca does not agree with those who regard Pott's disease and other surgical tuberculous lesions as of traumatic origin. He is convinced that the trauma occurs because the part is already the seat of a tuberculous affection; it is the effect rather than the cause in the large majority of cases. A traumatic origin should be accepted only when the trauma was well defined and the local signs followed close on it. This only rarely occurs; the mother seeing a swelling says the child must have had a fall, and what child does not have falls every day and what workman does not bruise some joint now and then! Investigation will reveal some slight functional disturbance in the region long before the alleged trauma; the child with the "traumatic" Pott's disease has complained of "neuralgia," the workman has limped a little at some time. Even if no history of the kind can be elicited, do not forget the cases so often encountered in which the family says that the large hump or dislocated hip-joint dates from a few days only.

57. **Pseudo-Emphysema.**—Caussade and Leven have found that a certain number of patients presenting the symptoms of emphysema yet have in reality nothing of the kind and the syndrome is readily curable in their cases. The trouble with them is that the chest is small and the lungs are compressed by gases in the stomach and intestine plus air swallowed into the stomach, while the abdominal wall is distended and taut, lined with a thick layer of adipose tissue, for these patients are always fat or obese. The small chest and big abdomen are characteristic, while the respiration index is small as with true emphysema. The lung is reduced in size, the chest cavity abnormally small, while in true emphysema both the lungs and the chest cavity are abnormally large. Radioscopic measurements, study of the diaphragm excursions, and the prompt benefit from treatment addressed to the pseudo-emphysema readily differentiate the condition.

58. **Preliminary Serotherapy by the Mouth.**—Darier advocates administering at once, without waiting for bacteriologic control, diphtheria antitoxin by the mouth in every case of infection of whatever nature, but especially streptococcus affections. He prescribes the formula: diphtheria antitoxin 20 c.c.; syrup of lemon or raspberry 30 gm., and water 130

gm., and has the patient take a tablespoonful of this every hour until bacteriologic examination decides the nature of the infection and the indications for specific serums or vaccines. He calls this paraspecific serotherapy, and states that in five or six years' experience with it he has found it extremely useful and effectual in all forms of infection except actual diphtheria. It is given at the very first symptoms and hence begins to exert its influence before the intoxication has become very intense, while the body needs only slight assistance to rouse the resisting powers of all the tissues. He cites recent experimental research by Ruppel and Mayer showing the efficiency of serotherapy by the mouth or in local application for streptococcus affections when applied early in the process. The antitoxin he uses is the regular Paris (Roux) product.

### Archiv für Gynaekologie, Berlin

*XCVI, No. 2, pp. 217-403. Last indexed April 6, p. 1043*

59 Mode of Spread of Genital Tuberculosis. (Die Ausbreitungswege der Genitaltuberkulose.) A. Bauereisen.
60 Toxicity of Urine During Pregnancy and Puerperium. (Verhalten der Harntoxizität in der Schwangerschaft, Geburt und im Wochenbett.) R. Franz.
61 Deformities of the Skull. (Zur Kenntnis einiger Schädelanomalien der Neugeborenen; Schaltknochen und Defekte der Schädeldeckknochen.) R. Meyer.
62 Intra-Abdominal Pressure. (Ueber intraabdominalen Druck.) L. Kaiser.
63 *Vaccine Therapy of Gonorrhea in the Female. (Die Vaccinebehandlung der weiblichen Gonorrhoe.) B. Slingenberg.
64 *Thrombosis and Embolism in the Puerperium. R. Junge.
65 Varices in Esophagus Responsible for Melena in New-Born Infant. (Fall von Melaena neonatorum, hervorgerufen durch Blutung aus angeborenen Phlebektasien des Oesophagus.) F. Vorpahl.
66 Experimental Research on Septic Thrombosis. E. Duffek.

63. **Vaccine Therapy of Gonorrhea in Women and Girls.**—Slingenberg reports from the university clinic for women at Amsterdam, in charge of Treub, the application of a course of polyvalent vaccine inoculations in vulvovaginitis in girls and women and with chronic tumors of the ovaries or tubes. They were all out-patients so that temperature control was not always possible. He gives the details of a number of cases in which the treatment was very successful. In others the patients reacted with great intensity to minute dosage, in others only with a weak reaction to large doses. In some the reaction was so intense as to be very disagreeable, so that caution is imperative. A diagnostic course of inoculations with progressive doses, which fail to induce any reaction, can be accepted as excluding gonorrhea.

64. **Puerperal Thrombosis and Embolism.**—Junge found signs of varices of the legs in 26.8 per cent. of the 10,056 women delivered at the Strasburg maternity during the last ten years. This included 28 per cent. primiparæ and 71.8 per cent. multiparæ. During this period there were eighty-one cases of puerperal thrombosis, a proportion of 0.8 per cent., involving 26 per cent. primiparæ and 74 per cent. multiparæ. In twenty-three of the eighty-one cases of thrombosis there was a pre-existing infectious process, due to the gonococcus in one, the colon bacillus in two and the streptococcus in the others. In nine cases there were signs of heart disease, and in thirteen there had been excessive loss of blood. Embolism occurred in only four cases, fatal in one. Study of all this material from various standpoints shows, he says, that injury of the endothelium of the wall of the vessels, in addition to disturbances in the circulation, is the main factor in puerperal thrombosis. A single occurrence predisposes to new attacks. There is usually a slight rise in temperature, and thrombosis of the femoral vein is generally accompanied by fever, yet there is no absolutely reliable premonitory symptom. Thrombosis of the saphenous vein has almost always a good prognosis; with deeper lying veins there is more danger of embolism, although this is rare.

### Berliner klinische Wochenschrift

*April 1, XLIX, No. 14, pp. 629-676*

67 Acquired Sensitization of the Skin. (Erworbene Ueberempfindlichkeit der Haut.) F. Sauerland.
68 Radium in Therapeutics. (Moderne Radiumtherapie.) P. Lazarus.
69 Anaphylatoxin and Bacterial Toxin. (Weitere Untersuchungen über Anaphylatoxin und Bakteriengift.) H. Aronson.
70 Influence of the Glands with an Internal Secretion on the Psychic Sphere. (Ueber die Einwirkungen der Blutdrüsen auf den Ablauf psychischer Funktionen.) A. Münzer. Commenced in No. 13.

### Deutsches Archiv für klinische Medizin, Leipsic

*CV, Nos. 5-6, pp. 449-628. Last indexed April 6, p. 1046*

71 Causal Connection Between Pylorospasm, Hypersecretion and Motor Disturbances. K. Fujinami.
72 *"Pure" Mitral Stenosis Endocarditic in Origin. P. Hampeln.
73 *Rachitis and the Blood-Producing Organs. II. (Das Blut bei Rachitis.) E. Aschenheim.
74 *Diabetes Mellitus. (Zur Theorie und Therapie des Diabetes mellitus.) F. Rolly.
75 *Pathogenesis of Asthma. A. Chelmonski.
76 *Primary Colon Bacillus Pyelitis. (Ueber primäre Colipyelitis.) F. Meyer-Betz.
77 Graphic Registration of the Heart Sounds. (Zur Registrierung der Herztöne nach O. Frank.) A. Weber and A. Wirth.
78 *Fat in the Stools. (Untersuchungen über Fettstühle.) H. von Roesslin and T. Kashiwado.
79 Case of Hemorrhagic Neuritis with Purpura. H. Eichhorst.

72. **Mitral Stenosis.**—Hampeln regards pure mitral stenosis as an independent valvular defect which generally develops between the ages of 10 and 30 as a result of endocarditis. It may be congenital or functional but only in the rarest cases. The female figure, especially when there is a tendency to weakness and hypoplasia, seems to favor the development of this form of valvular defect. It consequently occurs mainly in girls and is distinguished by its relative harmlessness, although the patients rarely live to an advanced age. No certain case of congenital pure mitral stenosis has ever been encountered at necropsy, although Hampeln himself had a case of pure congenital "ostial" stenosis, the mitral valves proper being normal. The orifice was only 5.5 cm. in circumference.

73. **The Blood in Rachitis.**—Aschenheim studied the blood of a number of healthy children to obtain a standard for comparison with the rachitic, and gives in tabular form his findings in both categories. Slight anemia is the rule with rachitis and the blood findings on the whole are typical, although he does not venture to decide whether the changes are primary or secondary. The leukocytes are slightly increased in number, all the mononuclear forms are increased and show many atypical shapes. Myelocytes are found in the severe forms and the nucleated reds may reach extremely high proportions. The blood changes do not parallel the severity of the rachitis.

74. **Diabetes Mellitus.**—Rolly's experimental research and clinical experience all confirm the assumption that there is no essential difference between the various forms of starch in the diet of diabetics. By varying them and interposing vegetable days a useful variety can be imparted to the diet. The two flour days should be preceded and followed by three of four vegetable days. The menu on the flour days is 250 or 300 gm. flour, 200 or 300 gm. butter, with or without from 50 to 100 gm. of vegetable albumin or from two to six eggs. Rye-flour soup is especially liked by Rolly's patients. It is important to refrain from all meat albumin on the flour days as the combination of meat with the flour counteracts all the favorable influence of the flour diet. He has been conducting research on the respiratory interchanges and metabolic findings in general with a special apparatus of which he gives an illustrated description. His aim was to learn the special differences between the action of animal and vegetable protein on the diabetic and normal organism. Some of the points thus ascertained confirm the necessity for restricting the intake of meat albumin, as part of it is eliminated as sugar in the urine, unutilized, while the fixation of glycogen is impeded by the presence of meat albumin so that the glycogen already in the body is mobilized and eliminated also as sugar in the urine. He asserts that human diabetes should never be compared with experimental pancreas diabetes in dogs, as they differ essentially.

75. **Origin of Asthma.**—Chelmonski gives the details of thirteen typical cases of asthma in all of which roentgenoscopy revealed the presence of swollen lymph-nodes encircling the bronchi. The lymph-nodes were the largest in the cases in which the asthma was most severe. The constancy of this finding shows that this is an essential, hitherto undescribed symptom of asthma, and possibly a causal factor, the compression or irritation of the corresponding nerves possibly being the origin of the attacks of asthma, exacerbations from congestion or other factors explaining the periodicity of the attacks.

76. **Primary Colon Bacillus Pyelitis.**—Betz reports extensive research in cases of this kind and on means of treatment. He has found that the thin, weakly acid urine with pyelitis is the most favorable culture medium possible for the colon bacillus, while it is unable to proliferate in very acid, concentrated urine. Consequently the diet should be regulated to keep the urine in this condition, both acid and concentrated. He gave for that purpose phosphoric acid in the form of a lemonade (10 per cent. phosphoric acid, 50 gm.; syrup of raspberry, 50 gm.; distilled water to 1,000 gm.). The amount of pure $H_3PO_4$ was thus 5 gm. a day. The diet was meat, milk and no vegetables or fluids except the above lemonade. By this means the urine was rendered very acid and by having the patients sweat by a long, hot-air sweat bath in bed, the concentration was increased. After subsidence of the first high fever, this method of treatment can be applied for weeks without harm except that in old, severe cases the sweating may be contra-indicated for fear of circulatory disturbances, or the patient may not be able to sweat freely. This method of managing pyelitis is exactly the reverse of the routine method of ordering a mild diet and copious drinking. Vaccine therapy and drugs may be necessary besides. The colon bacillus rapidly acquires resisting power to a medicine, consequently the drugs taken internally to disinfect the urine should be changed frequently. An intermittent course of various drugs, plus the increase in acidity and in the concentration of the urine by the above measures, offer, he thinks, the best prospects in treatment of primary pyelitis from the colon bacillus.

78. **Fat in the Stools.**—This article is based on the findings in eight cases; they suggest that the soaps in the stools are generally calcium and magnesium soaps. The benefit from large doses of calcium in diarrhea with jaundice is emphasized.

### Deutsche medizinische Wochenschrift, Berlin

*April 4, XXXVIII, No. 14, pp. 633-688*

80 *Treatment of Diphtheria. (Behandlung der Diphtherie.) E. Feer.
81 Pseudoleukemia. (Ueber die sogen. Hodgkinsche Krankheit.—Lymphomatosis granulomatosa.) E. Fraenkel.
82 Spontaneous Tuberculosis in Rabbits. (Studien über spontane Kaninchentuberkulose.) F. W. E. Rothe.
83 *By-Effect of Hormonal. (Ueber Nebenwirkung des Hormonals.) F. A. Hesse.
84 *Lead Poisoning. (Medizinisches über die Bleivergiftung.) F. Blum.
85 Salvarsan in Early Treatment of Syphilis. (Zur Kasuistik der Frühbehandlung der Syphilis mit Salvarsan.) P. Mülzer.
86 Addition of Sodium to Salt Solution in Wassermann Reaction. (Ueber die Verwendung sodahaltiger physiologischer Kochsalzlösung bei der Wa. R.) A. Pöhlmann.
87 Wire Reenforcing Sphincter in Treatment of Prolapse of Anus and Rectum. P. Herz.
88 *Advantages of Local Scarification of Uterine Cervix. (Die Skarifikation des Uterus in der Hand des praktischen Arztes.) E. Engel.

*April 11, No. 15, pp. 689-736*

89 *Climacteric Disturbances in Women. (Behandlung der klimakterischen Beschwerden des Weibes.) P. Jung.
90 Uncontrollable Vomiting of Pregnancy as Sign of Intoxication. (Hyperemesis als Schwangerschaftsintoxikation.) L. Seitz.
91 Experimental Epidemic Poliomyelitis. (Experimentelle Poliomyelitis acuta.) M. Neustadter and W. C. Thro.
92 Familial Paralysis. (Zur Kenntnis der familiären Paralyse.) Vorbrodt.
93 Psychiatric Diagnosis. (Ueber die psychologischen Hilfsmittel der modernen psychiatrischen Diagnostik.) G. Voss.
94 *Treatment of Gastric Hypersecretion by Reduction of Chlorids. (Zur Frage der Chlorentziehung bei Hypersekretion des Magens.) H. L. Richartz.
95 Technic for Dosage of Tuberculin. (Ueber die Dispensierung des Tuberkulins.) K. Meyer.
96 Foreign Bodies in Urethra. (Eine Ausgipsung der Urethra.) Waelli.
97 New Infection After Abortive Treatment of Syphilis. H. Hecht.
98 Present Status of Treatment of Syphilis in General Practice. (Zur Frage des jetzigen Standes der Luesbehandlung in der Praxis.) R. Lenzmann.

80. **Treatment of Diphtheria.**—Feer remarks in the course of this general lecture on diphtheria, that primary diphtheria of the larynx occurs more frequently than is usually recognized. It should be suspected when hoarseness in a child is constantly increasing and stenosis and aphonia develop in from one to three days. Primary diphtheria of the nose also is often overlooked. He insists that every febrile coryza with enlargement of the glands and impairment of the general health is suspicious, especially when the discharge is thin and purulent, with traces of blood. The nasal variety may run a very mild protracted course and its true nature may not be suspected until contacts develop diphtheria of a severer type. Infants are exceptionally prone to primary and isolated diphtheria of the nose. In his clinical experience diphtheria of the throat has scarcely ever spread down into the larynx since serotherapy has been introduced. He injects the antitoxin into the muscles of the thigh as a rule, but in urgent cases, when a vein is prominent, he injects it into a vein. Local treatment is of subordinate importance although with the nasal form insufflation of bolus alba sometimes does good service, as also in ordinary coryza. More important than local measures is the supervision of the cardiovascular system, with stimulants if the pulse grows fast and weak. The danger of anaphylaxis renders him very cautious in regard to prophylactic injections of antitoxin. He advocates them only for exposed, quite young children in the home, especially when they already have a cold in the head. In hospitals he advises a prophylactic injection for children with coryza, measles or scarlet fever that have been supposedly exposed to diphtheria. He endorses Meyer's suggestion to use in prophylactic injections an antitoxin made from sheep, reserving the horse antitoxin for treating actual diphtheria. His experience confirms that of others that no means is known to clear the throat of diphtheria bacilli after recovery. Established diphtheria should be combated the more vigorously the younger the patient; with an older child with merely slight symptoms he defers the antitoxin treatment until sure of the diagnosis, but with young or frail children he injects it on mere suspicion; the delay of even a day or so may prove fatal in such a case.

83. **By-Effects of Hormonal.**—Hesse reviews the literature on hormonal to date and reports a case which he says testifies against the alleged harmlessness of hormonal. It was a case of apparent ileus from an eight days' incarcerated hernia in a rather frail woman of 43. The adhesions were detached and the hernia reduced without trouble, but the bowel functioning did not start up well and the abdomen was still much distended. Conditions seemed particularly favorable for the use of hormonal, according to the claims made for it, the bowels not being actually paralyzed as some stool had been passed after a mild purgative (compound licorice powder). An intravenous injection of 20 c.c. of hormonal was then made, but collapse followed at once, before the injection was quite finished. The patient became unconscious, the respiration deep and slow, interrupted by pauses; the pulse became imperceptible, the pupils dilated, with no reaction, and for a half a minute or a minute there were clonic spasms of the entire body, but the face and lips retained their normal tint. Under camphor the patient gradually recuperated. The pupil reaction returned in ten minutes and the patient regained consciousness twenty minutes later. The temperature was taken every half hour but did not reach 38 C. until the next day. By the fourth hour after the injection the patient had entirely recovered, with no injurious consequences from the collapse. The bowels moved freely two hours after the injection and castor oil the next day completed the cure. The hormonal consequently had the desired action on the bowels, Hesse says, but the severe by-effects observed suggest great caution in its use. It might be wise to test the blood-pressure of the patients beforehand, and if the pressure is abnormally low, refrain from the use of the hormonal. Or, he suggests, it might be possible to combine some pressure-raising substance, such as epinephrin, with the hormonal to reduce its pressure-reducing property, provided this did not interfere with its specific peristalsis-inducing action. For the present, however, he warns the general practitioner against the use of hormonal as such a collapse as he encountered, if occurring in the home, in the presence of the patient's family, might have very unpleasant consequences for the physician. In any event, the practitioner should inform the family of the possibility of some complication of the kind, and for the present recommend and use hormonal only in the most urgent cases. Hesse gives the literature on hormonal, a total of twenty-eight articles.

84. **Lead-Poisoning.**—Blum discusses the nature and diagnosis of lead-poisoning, emphasizing the diagnostic importance of numbers of granulated red corpuscles and the great prognostic importance of a high blood-pressure. The latter warns

of impending contracted kidney as the result of lead-poisoning. If the blood-pressure is found regularly above 130 mm. mercury, the patient must be regarded as in extreme danger. The high blood-pressure is more dangerous in persons with lead-poisoning than in others, as their blood-vessels have suffered from the action of the lead and are peculiarly fragile. This explains the predisposition to cerebral hemorrhage which is so frequent among persons with high arterial tension from lead-poisoning. The elimination of the lead is peculiarly slow and tedious in the sclerotic vascular system of such patients. In regard to treatment, he remarks that the old reputation of potassium iodid for aiding in the elimination of the lead is not sustained by actual facts. Light baths, sweating procedures and electricity are of not much more use in aiding to expel the lead from the body. Purgatives have a more efficient action in this respect. At least they may keep the lead in the intestines from becoming reactivated. Whether there are any means of attracting into the bowels the lead from elsewhere in the body is still an open question. But purgatives should not be given too freely; they are contra-indicated with threatening or existing colic, in which they are an additional torment for the patient. Here are indicated opiates, belladonna or atropin, and at most an enema of oil or of hot chamomile infusion. Restriction of salt in the diet is useful with all forms of contracted kidney and high blood-pressure, and is particularly valuable when these are due to lead-poisoning. Blum asserts that a high blood-pressure under all circumstances calls for restriction of salt or absolute abstention. The paucity of the means of curing lead-poisoning at our command lends additional importance to prophylaxis. Even minute amounts of lead may be dangerous. He relates the history of a man with blood-pressure of 180 mm. mercury who dyed his beard. He had never had anything to do with lead before, but he soon developed toxic optic neuritis, followed by a condition of vasoconstriction and the eyes suffered from the long neuritis and the ischemia. Blum advises quarterly or semi-annual examination of persons exposed to lead-poisoning, and absolute prohibition of the trade involved as long as there are signs of lead-poisoning or the blood-pressure is above normal.

88. **Scarification of the Uterine Cervix.**—Engel reports eight instructive cases from his extensive experience to illustrate the prompt benefit that may be realized in certain forms of pelvic disease from scarification of the cervix, making from two to four shallow incisions, only 0.5 cm. deep, in the anterior or posterior lip of the cervix. The procedure is absolutely painless; he rinses then with a liter of cold water and applies a tampon impregnated with 20 per cent. ichthyol solution, the patient removing the tampon herself the next day. Women of 30 or 40 who have headaches, dizziness, oppression in the lower abdomen, sacral pain and hot flashes, should be examined for possible metritis, and when such is found the scarification always relieved and cured completely in his experience. It proved equally effectual also in curing dysmenorrhea disturbances of many years' standing.

89. **Menopause Disturbances.**—Jung comments on the lack of a causal treatment for these disturbances, but adds that much can be done by hygiene and dieting. The directions for a suitable diet must be explicit, as general directions are usually disregarded. As the disturbances are principally of vasomotor origin, the patients must avoid everything tending to raise the blood-pressure, especially alcohol and coffee. Lemonade, mineral waters or milk should be the beverages, with possibly weak tea, cocoa or a cereal coffee. All highly seasoned, salted or peppery articles of food should be avoided. Lemon juice should be used in place of vinegar in salads. Meat should be eaten sparingly, eggs and vegetables being given the preference. No purgatives should be allowed, but the bowels kept regular with a diet rich in waste, and one or two hours in the open air every day, light work in the field or garden and mild sports, but much physical exertion should be carefully avoided. Hydrotherapy is very useful for its sedative effects. A moist pack for two hours in the evening will ensure a good sleep, or a bath before retiring. Cold rubs in the morning, returning to bed for an hour or so afterwards, are useful. Narcotics should be avoided as they lead so easily to addiction; if drugs are necessary some harmless one like valerian should be used. It is often difficult to convince the patients that they have no organic heart disease. No certain benefit, he remarks, can be realized from commercial ovarian extracts except by the manufacturers. Their action on the patients is very uncertain, but they can be tried. If no benefit follows the taking of a hundred tablets, better drop this method of treatment. The tendency to obesity can be combated by restricting the number of calories in the food and by diligent out-of-door exercise. Thyroid extract should be tried only under constant medical supervision, and it should be abandoned at the slightest signs of injury of the heart, as it may bring on heart attacks and even sudden paralysis of the heart. He emphasizes the indispensable necessity for curetting the uterus in case of uterine hemorrhage. This is the only means to exclude cancer of the body of the uterus, while the curetting alone may arrest the tendency to hemorrhage. If the hemorrhage recurs later, medical measures should be tried, gelatine in the form of puddings, etc. If all these fail, then the uterus will have to be removed unless roentgenotherapy is given a trial. His experience with it for women in the forties has been quite favorable. Cystitis is exceptionally common at and following the menopause, and although it generally yields to the usual measures, yet recurrence is frequent and it often becomes chronic in elderly women.

94. **Restriction of Intake of Salt in Treatment of Gastric Hypersecretion.**—Richartz says that it is logical to reduce the intake of the elements from which the gastric juice is to be made when the juice is being secreted in excess. He applied this in a case of hypersecretion rebellious to all other measures. The patient was a college professor, 60 years old, who was on the point of resigning his lectureship as he had become so debilitated from the loss of sleep from the almost incessant pains in his stomach. The only way in which they could be suppressed even transiently was with enormous doses of an alkali. Richartz put him on a diet rich in fat, rinsed out his stomach once or twice a day, and had him take a course of mineral waters, supplemented by electrotherapy. No benefit followed and after two weeks salt was dropped from his food, all beverages forbidden except water with brandy or tea. The stomach was rinsed out systematically about two and a half hours after the chief meal of the day. A little water was left in the stomach after the lavage. The patient always felt relieved and he was then given another meal like the one that had been pumped out. By this means the pain-free periods were much lengthened and by the third day of the salt-poor diet marked improvement became evident and rapidly progressed. He kept up the salt-poor diet for three months, with a weekly lavage of the stomach, and since then he has been entirely well, so that now after twenty-one months the cure may be considered complete. This treatment was equally successful in eight other cases. The patients feel the deprivation of salt less when they are allowed to use a little sodium bromid in its place at meals. Leo in 1904 suggested this method of treating hypersecretion, but soon abandoned it as he did not find it promising. Richartz thinks that his superior results are due to his systematically repeated lavage of the stomach as an adjuvant to the salt-poor diet. The same treatment might apply also to nephritic edema and similar disturbances in which restriction of the intake of salt seems indicated; not more than 3 or 5 gm. of sodium chlorid are allowed during the twenty-four hours.

## Deutsche Zeitschrift für Chirurgie, Leipsic

*March, CXIV, Nos. 1-3, pp. 1-300*

99 Mutation Tumors in Man. (Zur Frage der Geschwulstmutation beim Menschen auf Grund der Histogenese eines sarkomatösen Harnblasendivertikelpapilloms.) S. G. Leuenberger.
100 Fibrous Ostitis with Cysts in Bones. (Zur Kenntnis der Ostitis fibrosa mit ausgedehnter Cystenbildung.) Fujii.
101 *Operative Treatment of Ascites. T. Mori.
102 Etiology of Hallux Valgus. P. Ewald.
103 Teratomas and Mixed Tumors of the Testicles. (Teratome, teratoide Geschwülste und Mischtumoren des Hodens.) A. Vecchi.
104 Osteoclasis in Treatment of Congenital Talipes Equinus in Adults. (Behandlung der kongenitalen Klumpfüsse bei Erwachsenen, unter ausführlicher Schilderung der Behandlungsmethode mittels der Osteoklasten Schultze I und II.) E. Crone.

105 Ileum Graft in Large Intestine. (Ein durch Resektion geheilter Fall von Gangrän des Dickdarms im Gebiete der A. mesenterica inferior nebst einem Verfahren die Kontinuität des Darms durch ein Stuck Ileum wiederherzustellen.) R. Faltin.
106 Behavior of Oxygen in Blood During Bier's Passive Hyperemia. (Verhalten des Blutsauerstoffes bei der Bierschen Stauung. Spektrophotometrische Untersuchungen.) F. Gangitano.
107 Deformity of Thorax. (Zur Kasuistik seltener kongenitaler Thoraxdeformitäten.) F. Erkes.
108 Operative Treatment of Fractures. (Blutige Behandlung der Knochenbrüche nach Lambotte.) H. Frankenstein.
109 Chronic Inflammatory Abdominal Tumors. (Ueber chronisch-entzündliche Geschwülste am und im Bauche.) R. Morian.
110 Spontaneous Hemorrhage in Vicinity of Kidney. (Das sogenannte perirenale Hämatoma.) F. Schlichting and G. Ricker.

101. **Operative Treatment of Ascites.**—The aim should be to promote collateral circulation in every possible way and Omi advocates for this omentopexy, splenopexy or nephropexy or all combined, seeking in this way to bring the abdominal organs into closer contact with each other and the abdominal wall. Moti here reports the application of this principle in three cases. In one case of cirrhosis of the liver of malarial origin the outcome was successful; a laparotomy later, undertaken solely on scientific grounds, showed ample adherence between omentum, mesentery, kidneys and abdominal wall with direct transmission of the blood through the posterior parietal peritoneum and indirectly through the kidneys into the vena cava, thus preventing the development of ascites. The two other cases teach the necessity for applying operative treatment as soon as the cirrhosis of the liver is positively diagnosed; the outlook for surgical measures is much less promising when the patient has long suffered from the effects of the cirrhosis.

### Medizinische Klinik, Berlin

*April 7, VIII, No. 14, pp. 553-594*

111 *Injuries of the Knee. (Ueber Knieverletzungen.) F. König.
112 *False Chlorosis in Young Women. (Chlorose und Pseudochlorose nebst Untersuchungen über accidentelle Herzgeräusche.) F. Rolly and K. Kühnel.
113 *Atypical Gastro-Intestinal Cancers. (Ueber atypische Carcinome des Verdauungskanals.) H. Friedrich.
114 The Nose in Relation to Pathology of Other Air Passages. (Die Beziehungen der Nase zur Pathologie des Kehlkopfs und der tieferen Luftwege.) E. Barth.
115 Toxic Substance in Blood of Gravid Rabbits. (Experimentelle Untersuchungen zur Frage der Schwangerschaftstoxämie.) K. Grube and K. Reifferscheid.
116 *Heart Disturbances in Neurasthenics from Distention of Stomach. (Ueber die durch abnorme Magenspannung hervorgerufenen Herzbeschwerden der Neurastheniker.) Roemheld.

111. **Internal Derangement of the Knee.**—König comments on the change in the last few years in the treatment of traumatic effusion or hemorrhage in the knee. Now it is often advised to remove the fluid at once, with immediate active exercise of the joint, even walking with it. He has repeatedly discovered adhesions when the joint had to be exposed on account of disturbances persisting long after the accident had apparently healed, and this finding certainly speaks for the necessity of modifying the old method of treatment by long immobilization. His own practice is now to immobilize the joint in a splint with a compressing bandage permitting massage of the thigh from the first day. The sixth day thereafter he applies general massage of the thigh, leg and knee, with gentle exercise of the leg in bed, then compression again and superheated air. When the effusion has disappeared the patients are allowed to get up, with a bandage. He does not puncture until he finds that the effusion still persists by the end of a week. He has witnessed even old effusions subside under this treatment. He has the patient wear a knee-cap for some weeks longer. If these measures fail, then the trouble is more than a simple tear of the capsule. Some complication in the bones or ligaments is rendered certain by abnormal movability of the joint, a localized tender point, or a characteristic swelling on each side of the anterior ligament. A displaced cartilage may sometimes be reduced by direct pressure, with the knee flexed. Arthrotomy is generally necessary in old chronic cases. In one case a hemorrhagic effusion caused disturbances for months until the split internal cartilage was removed, which cured at once. Kroiss has reported 51 per cent. cured and 31 per cent. materially improved in 246 operative cases. In one of König's cases a scrap of bone torn where the crucial ligaments were attached long caused serious trouble in a man of 46. The knee was immobilized for six weeks, while massage was applied, and the injury healed without the least impairment of function. Operative treatment is unavoidable if the roentogram shows the torn-off scrap of bone still loose. In one case of this kind the patient was still unable to use her limb three months after the accident. Not until the joint was opened wide and the patella sawed through was it possible to find and remove the loose body. Complete recovery followed, but König's experience has shown that conservative measures in the recent cases generally answer the purpose quite as well. Isolated rupture of the lateral ligaments requires a splint with a hinge at the knee when the joint is still loose after two week's or a month's conservative treatment.

112. **Chlorosis and Pseudochlorosis.**—Rolly and Kühnel have frequently encountered in women from 15 to 25 years old a group of symptoms similar to those of chlorosis but without the characteristic blood-picture. This pseudochlorosis may accompany various other affections, especially incipient tuberculosis, but it is often the only morbid condition to be detected. They ascribe it to the internal secretion of the ovaries, spontaneous or the result of some latent disease. The altered secretion acts on the vasomotor or sympathetic system either directly or through the thyroid. In their sixty-two patients they found accidental systolic murmurs in the heart, generally audible over the apex but most distinct over the orifice of the pulmonary artery. These murmurs are not distinguishable from organic murmurs. They cannot be explained by enlargement of the heart or changes in the composition of the blood as the heart and blood were normal in these cases. The altered ovarian secretion evidently reduces the blood-pressure and renders it unstable, but this cannot be the only factor in these accidental murmurs, as even when the blood-pressure was raised by various measures the murmurs did not always subside.

113. **Atypical Cancers.**—Friedrich reports among his experiences in this line the case of a merchant of 26 who suddenly developed symptoms suggesting gastric ulcer; no improvement was realized from treatment on this assumption and he died in four months, the gastric tumor having run an acute malignant course. Another case was distinguished by the unusually slow course of a cancer at the sigmoid flexure. The patient, a man of 68, lived nearly five years after the microscopic diagnosis of the inoperable cancer, and he lost only 6 pounds in four years. In three other cases of gastric cancer there was no secretion of hydrochloric acid but there was excessive secretion of fluid in the stomach. In two other cases a tumor in the rectum was so soft that the suspicion of cancer was averted for a time. Friedrich warns that the soft cancers are generally peculiarly malignant. In another case of advanced carcinoma of the anterior wall of the stomach, profusely discharging through a perforation, a remarkable turn for the better was observed as the apparently moribund patient, a man of 50, was vaccinated with the other inmates of the hospital on account of casual exposure to small-pox. The fistula healed, the tumor shrank to two-thirds of its former size, and the patient felt comparatively well for four months when he succumbed to exacerbation of the malignant disease. The surprising improvement in this case resembles that sometimes observed after intercurrent erysipelas in malignant disease. Such occurrences suggest that the same principle might be applied in treatment, but attempts in this line have not led to any results worth mentioning to date.

116. **Heart Disturbances from Distention of the Stomach.**—Roemheld refers to dyspeptic conditions accompanied by accumulation of gas below the left diaphragm, pushing up the heart. Pal has recently emphasized the injury therefrom in heart disease, but he believes that a normal heart is not disturbed by it. Roemheld on the contrary thinks that in the neurasthenic with sound hearts, the heart, which is generally abnormally movable in this condition, is most seriously affected by this distention of the stomach. He has observed threatening attacks in patients of this class, the disturbances to be explained only by temporary kinking of the vessels. The phenomena observed from the abnormally irritable heart being encroached on by the stomach are more serious than

can be ascribed to reflex or toxic influences alone. The distended stomach pushes the heart into a more horizontal position, the aorta is pushed forward and to the right, the blood-pressure rises, and the first sound becomes impure or there may be a murmur at the apex—all of which subside as soon as the gas in the stomach is expelled. Contrary to the experience with the organic cases, exercise, climbing and deep breathing seem to be the best remedy. Roemheld is convinced that these heart disturbances on a neurasthenic basis, if not recognized in time and warded off, may become permanent and entail organic heart and vascular disease.

### Monatsschrift für Kinderheilkunde, Leipsic

*X, No. 11, pp. 579-648*

117 Experimental Research on Action of Different Kinds of Sugar. (Vergleichende Untersuchungen am Hunde über die Wirkung verschiedener Zuckerarten.) G. Sainmont.
118 *Psychic and Organic Impediments to Removal of Trachea Tube. (Ueber psychisch bedingt Hindernisse für das Dekanülement und die Extubation.) I. Wickman.
119 *Secondary Intubation for Organic Stenosis. I. Wickman.
120 Conditions of Irritation in the Sympathetic Nervous System in Infants. (Anteilnahme des sympathischen Nervensystems an den Erkrankungen des Säuglings. I.) F. Bosehau.
121 The Pains as Symptom of Epidemic Poliomyelitis. (Die Schmerzsymptome der Heine-Medinschen Krankheit.) E. Tezner.

118. **Spasm Interfering with Removal of Tracheal Tube.**—In three of the four cases reported by Wickman a psychic spasm of the glottis followed the coughing out of the tube or its removal. In the fourth case the tendency to suffocation following removal of the tube was due to actual organic stenosis. The children did not display unusual sensitiveness to the electric tests. He ascribes the trouble to a "conditional reflex" action. In another case and in one reported by Variot this proved fatal, nothing being found at necropsy to explain the sudden attack of suffocation coming on not long after extubation. He knows of no analogous fatal phenomena in children while they are still wearing the tube. Replacing the tube seems to be the only means at our disposal to cure the disturbances. It may be necessary to remove the tube finally under general anesthesia. Measures to tranquilize and train the child, to relieve it from the dread of suffocation, may prove useful in any event.

119. **Secondary Intubation for Organic Stenosis.**—The young woman wore the tube for two and a half years in Wickman's case before she was finally relieved from it. Several operations were done in the meanwhile. The tube was worn uninterruptedly for nine months after the last operation. The intubation had been done first for membranous croup and a gangrenous process in the larynx compelled tracheotomy; the various operations afterward aiming to restore normal conditions were finally successful. In conclusion Wickman cites with approval Thost's suggestion to dilate gradually organic stenosis in the upper air passages by means of a series of metal rods of different sizes introduced through the fistula, without interfering with the tracheal cannula which is specially constructed for the purpose. The patients bear the dilatation by way of the tracheotomy orifice much better than by way of the mouth. The treatment by this means can be individualized better, and institutional care or constant oversight is not necessary.

### Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

*April, XXXV, No. 4, pp. 409-534*

122 *Endogenous Infection in the Puerperium. (Zur Frage der endogenen Infektion im Wochenbett.) K. Baisch.
123 Fibroma and Retroflexion of Gravid Uterus Past Term. (Uterus gravidus mensis X., wegen Retroflexio partialis, bedingt durch subseröses Fibrom, abdominal totalexstirpiert.) C. U. von Klein.
124 Laceration of Umbilical Vein Inside the Abdomen. (Fall von Zerreissung des abdominalen Teiles der Vena umbilicalis.) H. Edelberg.
125 *Rupture of Ovarian Cysts. (Beobachtungen an rupturierten Eierstockscysten.) O. Schaeffer.
126 *Specific Diagnosis of Gonorrhea in the Female. T. H. van de Velde.
127 Salpingitis. (Zur Pathologie und Therapie der Salpingitis.) L. Fraenkel.

122. **Endogenous Infection in the Puerperium.**—Baisch discusses whether a parturient under exclusively physiologic conditions, not interfered with from without, can develop severe and fatal infection by spontaneous endogenic agents. He declares that the question can be solved only by careful post-mortem examination in cases suggesting this possibility. Only when it is possible to exclude disease elsewhere in the body are we justified in calling the case an endogenic infection. Büttner has reported an epidemic of unusually severe puerperal infection occurring in conjunction with an epidemic of tonsillitis.

125. **Ruptured Ovarian Cyst.**—In the case described a virgin of 33, always menstruating regularly, was awakened in the night by a violent pain passing across the lower abdomen. Three months later she was again awakened at night by an attack of pain; this time it radiated to the left hip and upper sacral region. Each attack was accompanied by vomiting. A third attack came on later in the same way but lasted for a week and the physician then consulted removed a left ovarian cyst which had become adherent, with torsion of the pedicle. The retrogressive diagnosis showed that the first attack must have corresponded to a process of necrosis in the cyst wall, with reaction of adjacent tissues, internal hemorrhage in the cyst and rupture on the right side. The second attack corresponded to the strangulation of the pedicle and rupture into the pouch of Douglas. The pains at the third attack were the result of renewed internal hemorrhage in the cyst and traction on the adhesions that had formed each side and on the pedicle.

126. **Diagnosis of Gonorrhea.**—An unusually low opsonic index generally speaks for gonorrhea and a diagnostic vaccination will decide the matter in dubious cases, although van de Velde warns to extreme caution with the latter. He has found ascites-agar a great help in obtaining pure cultures of the gonococci. Old inflamed ovaries or tubes swell and grow more tender during the negative phase after the vaccination. Recent inflammation forbids the diagnostic vaccination, as exacerbation of the lesions might cause serious trouble. He suggests to begin with a small test vaccination, controlling the findings with the opsonic index. By this means valuable information may be derived without peril to the patient.

### Münchener medizinische Wochenschrift

*April 2, LIX, No. 14, pp. 737-792*

128 *Radium and Mesothorium in Treatment of Cancer. (Behandlung bösartiger Geschwülste mit Mesothorium und Thorium X.) V. Czerny and A. Caan.
129 *Radium Emanation in Internal Medicine. (Behandlung innerer Krankheiten mit Radiumemanation.) W. Falta and E. Freund.
130 *Roentgenotherapy in Gynecology. F. Weber.
131 *Roentgenotherapy in Chronic Metritis. B. Kelen.
132 Improved Technic for Blood Examination. (Der Keilhämometer. Ein Blutkörperchenzählapparat ohne Zahlnetz.) P. v. Grützner.
133 Carbonated Baths with Heart Block: Three Cases. (Kohlensäurebäder bei atrioventrikularen Block.) T. Groedel.
134 Thrombosis in Arm Veins After Repeated Application of Recklinghausen Cuff. (Thrombose von Armvenen durch Blutdruckmessungen.) R. Mohr.
135 *Treatment of Febrile Abortion. (Zur Behandlung des infizierten Abortes.) A. Häberle.
136 Case of Addiction to Scopomorphin. (Fall von Skopomorphinismus.) Franek.
137 *Operative or Roentgen-Ray Treatment of Myoma? (Operationskastration oder Röntgenbehandlung der Myome.) B. Krönig and C. J. Gauss.

128. **Treatment of Cancer with Thorium.**—Czerny is director of the institute for cancer research at Heidelberg and has had 250 mg. of highly radio-active substances, including 90 mg. of radium bromid, at his disposal during the last seven months, and relates his experiences with them in treatment of 106 patients with cancer, six with angioma and eight with lupus. He found that the mesothorium salt was fully as active as the radium salt, and in some cases seemed to be more active in treatment of superficial tumors. A radiogram of a zinc perforated screen taken with mesothorium bromid with a five seconds' exposure is much more distinct than the radiogram of the same taken under identical conditions with radium bromid. He regards this new method of treatment as promising. The angiomas and the lupus were favorably influenced in every case by the mesothorium, but the eight lymphosarcomas showed no benefit. In four of ten patients with carcinoma of the esophagus, direct application of the salt to the lesion improved conditions so that gastrostomy was rendered unnecessary. In one case of carcinoma of the cheek the mesothorium exposure was apparently responsible for propa-

gation of the malignant disease, three operations for recurrence having become necessary during the three months since the exposures.

129. **Radium Emanation in Treatment of Internal Disease.**—Falta and Freund report from the university clinic at Vienna in charge of von Noorden that radium emanation has been applied there during the last year to 192 patients with various internal affections. They state that the effect was unfavorable on neuroses of the vegetative nervous system, and that any tendency to hemorrhage contra-indicates this treatment. Improvement is recorded in seven of sixteen cases of primary chronic rheumatism with effusion, and in fourteen of thirty cases without effusion. The benefit has been permanent in this latter group. No effect was apparent in eleven and the condition became aggravated in two.

130. **Roentgenotherapy in Gynecology.**—Weber reports eighteen months of experience with roentgenotherapy of gynecologic affections at the university clinic at Munich in charge of Döderlein. The best results are attained with this method in climacteric hemorrhages, all but one of the forty-nine patients thus treated being cured thereby. The action is prompter the nearer to the normal menopause. In all these cases the hemorrhages had resisted other measures perseveringly applied. He regards the effect of roentgenotherapy of uterine myoma and of climacteric disturbances as the most brilliant achievements of roentgenotherapy to date, all the hopes first raised by this method of treatment having been realized. It is a close competitor of operative treatment, and has the advantage over the latter of being absolutely free from danger to life.

131. **Roentgenotherapy of Chronic Metritis.**—Kelen writes from the university clinic at Budapest in charge of Barsony to report the application of the Roentgen rays in thirty-eight cases of chronic enlargement of the uterus. In ten cases the treatment has been too recent or the women did not complete the course, but in all the others, with a single exception, a woman with prolapse, the treatment was more or less successful. In fifteen cases the reduction in the size of the uterus after two or three exposures was striking. Three patients required a six months' course of treatment but the subjective relief was pronounced usually after four or five weeks. He found that an abnormally dilated vagina shrank under the influence of the exposures so that the contemplated colporrhaphy became unnecessary. The exposures seemed to have an action preventing conception for about a year. This he says is a favorable factor in treatment of metritis as it gives the uterus time to recuperate. There has been a slight return of hemorrhage in three cases but this tendency was promptly arrested by two or three additional exposures.

135. **Infected Abortion.**—Häberle declares that the results were decidedly better in the cases of febrile abortion in Hofmeier's service when treatment was on the old established principle of prompt evacuation of the uterus. In thirty-three cases the curet was used: in sixteen only the fingers. In two of the thirty cases with temperature over 38.5 C., the women died and three of the sixty-eight with temperature only slightly above normal. Among the ninety-three women dismissed in good condition there were complications later in three, slight thrombophlebitis, slight effusion around the uterus or pyosalpinx in one case each. In 50 per cent. of the cases the temperature returned permanently to normal after the emptying of the uterus: in 33 per cent. after from one to three days, and there was high fever in only one case.

137. **Operative Versus Roentgen-Ray Treatment of Myoma.**—Krönig and Gauss have had extensive experience with roentgenotherapy of uterine myoma and have lately been reexamining the women anew. They state that in four cases a single exposure sufficed for a myoma reaching above the umbilicus. No permanent injurious by-effect is known in any of the women during their four years of experience with this treatment. They remark in conclusion that the breach made in the wall of operative treatment of myoma by the introduction of roentgenotherapy is so wide that it can never be built up again. They add that an incomparably larger proportion of the women sent to them for roentgenotherapy are from physicians' and surgeons' families. The article on the whole is a reply to von Herff's communication on the same subject, summarized in The Journal, February 10, 1912, p. 448.

### St. Petersburg medizinische Zeitschrift

*March 28, XXXVII, No. 6, pp. 79-98*

138 Operative Treatment of Suppurative Pelvic Disease. (Ueber die Leistungsfähigkeit der Laparotomie bei eitrigen Prozessen der inneren Geschlechtsorgane des Weibes.) T. Dobbert.
139 Pathology of Old Age. (Das Greisenalter.) R. v. Engelhardt.
140 Diagnosis of Typhoid from Temperature, Pulse and Leukocyte Curves. (Lässt sich die Diagnose des Abdominaltyphus aus dem Verlaufe der Temperatur und dem Verhalten des Pulses ableiten?) D. Orudschiew.

### Therapeutische Monatshefte, Berlin

*April, XXVI, No. 4, pp. 237-308*

141 Present Status of Treatment of Diabetes. (Neuere Ergebnisse der Therapie des Diabetes mellitus.) L. Blum.
142 Medicinal Transient and Permanent Rise in Blood-Pressure. (Ueber die Frage der blutdruckherabsetzenden Wirkung von Vasotonin und Guipsine nebst Beobachtungen über vorübergehende und bleibende Blutdrucksteigerung.) J. Leva.
143 *Serotherapy of Scarlet Fever. (Behandlung des Scharlachs mit Moser-Serum.) B. Schick.
144 *Treatment of Rumination in Infants. (Zur Therapie der Rumination im Säuglingsalter.) E. Mayerhofer.
145 Acute Hemorrhagic Nephritis in Robust Young Sailor After Intravenous Injection of Salvarsan. K. Justi.
146 *"For External Use." (Signa "Aeusserlich.") W. Heubner.
147 *Pharmaceutical Manufacturers and the Council on Pharmacy and Chemistry of the A. M. A. (Arzneimittelfabrikanten und Council on Pharmacy and Chemistry in Nordamerika.) W. Heubner.

143. **Serotherapy of Scarlet Fever.**—This communication from the children's clinic at Vienna in charge of Pirquet, where Paul Moser is privat-docent, reviews the experiences of over seven years with serotherapy according to Moser's technic. Schick states that they have been disinclined to publish their further experiences as their report in 1905 met with such a chilly reception, but, he adds, those who have treated the largest number of scarlet fever patients with the Moser serum speak most favorably of it, especially the Russians. Egis-Langovoy has reported that the mortality in 400 cases in which this form of serotherapy was applied has dropped from 74.4 to 16.1 and Fedinski with 317 cases found the influence so distinct and pronounced that he cannot understand how any one can be skeptical, on the basis of a small material. Schick says that the serum is made without passage through animals; strains of streptococci from the heart blood of numerous scarlet fever cadavers are cultivated from bouillon and living bouillon cultures are injected into the horses. The great drawbacks of the Moser serum are that it does not keep well and that 200 c.c. are required for an injection; only children under 12 or 18 months are given as little as 100 c.c. The serum cannot be standardized on animals, and hence only the application to scarlet-fever patients determines its relative value. All the ordinary measures are applied as usual in addition. In the mild cases no serotherapy is needed, so it is reserved for the very dubious or malignant cases. The third day of the disease is the latest on which any success from it can be anticipated. The cases best suited for it are those of toxic scarlet fever with only moderate or no involvement of the throat. He gives an example to show the possible benefit in the severe toxic cases in which we are otherwise impotent, but remarks further that this serotherapy does not positively prevent complications although Moser has noticed that the proportion of cases with nephritis seems to be unusually small. No statistics beyond the above are given.

144. **Treatment of Rumination in Infants.**—Mayerhofer calls attention to his prompt cure of the tendency to rumination which was leading to serious inanition in a nervous seven-months' infant. As soon as the usual fluid diet was changed to a thick gruel, the anomaly was corrected at once and the child began to thrive.

146. **"For External Application."**—Heubner calls attention to the paradox that fluids for injection into a vein or under the skin, for enemas and for eye waters, etc., come under the heading "for external use," although nothing gives such an intense *internal* action as when a drug is injected into a vein. This contrast between the actual aim of the medication and the instructions to the druggist for putting up the prescription is comical but unavoidable.

147. **The Council on Pharmacy and Chemistry.**—Heubner says that "The Council of the A. M. A. exerts a strict control over the pharmaceuticals advertised in America. . . . The Council has a sympathetic and appreciative backing, as is shown by the editorial from the *Journal Indiana State Medical Association*, quoted in The Journal, Feb. 17, 1912, p. 501." Heubner quotes it in full and adds: "It is high time that we German medical men should do more of the dictating ourselves, instead of being dictated to."

### Wiener klinische Wochenschrift, Vienna

*April 4, XXV, No. 14, pp. 513-550*

148 *The Eyes in Tabes. (Tabes und Auge.) E. Fuchs.
149 *Pathogenesis of Catarrhal Jaundice. (Zur Pathogenese des Icterus catarrhalis.) H. Neugebauer.
150 Interposition of Fascia Flap in Correction of Ankylosed Joints. (Zur Verwendung ungestielter Lappen aus der Fascia lata bei der Mobilisierung ankylosierter Gelenke.) D. Pupovae.
151 *Cancer of the Esophagus. (Ueber Exstirpation von Oesophaguskarzinomen am Halse.) J. R. v. Winiwarter.
152 *Direct Sunlight in Therapeutics. (Zur Frage der Heliotherapie.) E. Zadro.

148. **The Eyes in Tabes.**—If the ocular symptoms of tabes show marked fluctuations and changes, they are probably the work of the syphilis itself and hence the prospects of benefit from specific treatment are more encouraging than when the disturbances are due to a parasyphilitic affection—this is beyond the reach of our therapeutics to date. Myosis and reflex rigidity of the pupils speak for tabes, while total rigidity of the pupils or dilatation of the pupil with paralysis of the accommodation apparatus are more likely to be signs of syphilis and hence indicate specific treatment. Simple atrophy of the optic nerve is very frequent with tabes while it is exceptional with syphilis. With tabes the papilla is blanched from the first, while in true syphilis the blanching comes on gradually after the visual disturbances are installed. This opposite course is due to the fact that the trouble in true syphilis is a descending atrophy, generally secondary to syphilitic basal meningitis. The papilla also looks different in this case, showing signs of the inflammatory origin of the atrophy. Benefit from measures addressed to the syphilis differentiate the disturbances as of direct syphilitic origin. The ophthalmologist frequently is the first to discover the tabes. Fuchs adds to the above that tabes develops only in patients whose syphilis ran a mild course; those who have frequent recurrences of symptoms from their syphilis escape tabes. Signs of syphilitic iritis or perforation of the palate are practically never found in the tabetic. Fuchs adds that reflex rigidity of the pupils is one of the earliest and most frequent symptoms of tabes and likewise in many cases of progressive paralysis. This symptom may precede the ataxia by ten or fifteen years. Its special value lies in the fact that it is only exceptionally encountered in other nervous affections. He warns that this symptom may be deceptively simulated by conditions during recovery from ordinary peripheral oculomotor paralysis, but in this case the symptom subsides as recovery progresses.

149. **Pathogenesis of Catarrhal Jaundice.**—The details of forty-five cases are tabulated in full and the mechanism and diagnosis are discussed. Neugebauer thinks that the main factors are insufficiency of the liver plus some mechanical obstruction to the outflow of bile. The liver trouble is generally traceable to some acute or chronic infectious disease in childhood or adult life, venereal affection or possibly abuse of alcohol, heart disease or pregnancy. In 31.57 per cent. of the forty-five cases tabulated the Wassermann reaction was positive. Over 83 per cent. of the forty-five patients reacted positively with galactosuria to ingestion of 40 gm. galactose in tea, fasting. The influence from some digestive disturbance is generally the last straw. The assumption that catarrhal jaundice is due merely to extension of a gastroduodenitis into the common bile duct is untenable, as severe gastroduodenal inflammation may run its course without jaundice. Another reason is that the general symptoms are often too severe to be explained by a simple inflammation of the bile duct alone. He does not discuss the treatment, but his views as to the pathogenesis of the affection indicate the general principles that should inspire it

151. **Cancer of the Esophagus.**—Three cases are described by von Winiwarter and the advantages emphasized of making an opening into the stomach before the operation and feeding the patient through this for as long a time as possible to exclude risk of infection of the field of operation. In the thirty-three cases on record, including the above, seventeen patients died in connection with the operation and twelve from recurrence; the outcome is unknown in three other cases and only one patient was living at last accounts, a year and a half after the operation. The operations evidently were not radical enough; a better outcome would probably be realized if the trachea and regional lymph-nodes were removed too. The lymph-nodes involved are those at the bifurcation of the carotid and in the supraclavicular fossa, in the angle between the jugular vein and the subclavian; the latter are easily reached through a transverse incision.

152. **Heliotherapy.**—Zadro gives the details of thirty-eight cases in which surgical tuberculous affections were exposed systematically to the sunlight. He writes from a seaside sanatorium and states that open lesions healed remarkably promptly and thoroughly under the heliotherapy but that torpid, deep-seated bone or joint lesions did not seem to be influenced by it.

### Zeitschrift für Geburtshülfe und Gynäkologie, Stuttgart

*LXX, No. 1, pp. 1-372. Last indexed Feb. 17, p. 525*

153 *Importance of Rupture of the Membranes During Labor. (Bedeutung der Blasensprengung bei der Geburt.) P. C. T. van der Hoeven.
154 *Pituitary Extract in Differentiation of Pregnancy and Labor. (Wirkung des Hypophysenextraktes zur Differentialdiagnose zwischen Schwangerschaft und Geburt.) W. Benthin.
155 Technic for Gynecologic Laparotomies. (Schnittführung und Nahtmethode bei gynäkologischen Laparatomien.) A. Sippel.
156 *Biologic Sugar Solution Treatment in Gynecology and Obstetrics. IV. (Oertliche Verwendung von Zucker in der Gynäkologie und der Geburtshilfe.) F. Kuhn.
157 *Operative Technic for Vesicovaginal Fistula. (Zur Technik der Blasenscheidenfisteloperationen.) W. Beckmann.
158 Clinical and Bacteriologic Study of Laminaria Dilatation of the Uterus. B. Strauss.
159 *Outcome of Vaginal Operative Treatment of Retroversion of the Uterus. W. Weibel.
160 *Laparotomy in Treatment of Peritoneal Tuberculosis. E. Heimann.
161 Sarcoma of Uterine Cervix. (Das Sarkom des Gebärmutterhalses.) O. Vertes and P. Zacher.
162 *Vaginal Douches During Pregnancy. (Bakteriologische Untersuchungen über die Wirkung von Vaginalspülungen bei graviden Frauen.) P. Esch and F. Schröder.
163 Thyroid Tissue Tumor in Ovary. (Zur Kenntnis der Struma ovarii.) G. Trapl.
164 *The Kidney Functioning in Eclampsia. (Ueber die Nierenfunktion Eklamptischer.) A. Zinsser.
165 Bacteriologic Research on Febrile Labor. (Bakteriologische Untersuchungen beim Fieber während der Geburt.) E. Sachs.
166 Subfebrile Temperature Usual Premonitory Symptom of Puerperal and Postoperative Thrombosis and Embolism. H. Michaelis.
167 *Prophylactic Method of Treating Eclampsia. W. Stroganoff.

153. **Rupture of the Membranes During Labor.**—The importance of the bag of waters for delivery is emphasized by van der Hoeven and the necessity for its rupture at exactly the proper moment. His experience has convinced him that in 50 per cent. of all cases the rupture occurs too soon, in only 25 per cent. at the proper time, and in 25 per cent. too late, while obstetricians do not realize the aid at their disposal from control of the moment of rupture. Among the arguments he pleads for this, is the fact that when the uterus contracts at the sides, the opposite side opposes resistance while the contraction of the fundus above meets with no opposition at the os, if the membranes have been ruptured, and consequently the expelling forces have a free field here which is not the case if the bag of waters is intact. The principles he advocates in normal labor free from complications and the fetus in good position, are to rupture artificially the membranes when the os is dilated to 4 cm. It should always be done during a pause between the uterine contractions and with the woman in the lateral recumbent position, which she must retain afterward to prevent danger of prolapse of the cord. He has managed labor on these principles in 620 of 1,310 primiparæ and 1,827 of 4,236 multiparæ and found that delivery was accelerated, expulsion following in an hour or hour and a half in 50 per cent. of the cases; forceps were required in only 1.1 per cent. of the 4,607 births. He compares these figures

with those from a long array of other maternities, the proportion of forceps deliveries ranging with them from 1.04 to 7.9 per cent., only one showing figures below and one the same figures as his. The artificial rupture of the membranes did not cost the life of mother or child in any instance and cervical tears were rather less numerous and less severe than under other conditions.

154. **Action of Pituitary Extract on Uterine Contractions.**—Benthin states that the extract of the hypophysis starts the uterus to contract and if the pregnancy has reached term it may prove a useful oxytocic, maintaining the labor contractions. But if the pregnancy has not reached term, the extract has but a transient action and additional doses have no effect. He says that by this means it is possible to differentiate actual labor from pains occurring in the course of the pregnancy.

156. **Sugar Solution Treatment in Gynecology and Obstetrics.**—Kuhn's claims for the remarkably favorable biologic action of sugar solution in local application were abstracted in The Journal, Oct. 28, 1911, p. 1499. He here discusses its application in treatment of vaginitis and puerperal fever, saying that the sugar transforms conditions to such an extent that germs which otherwise generate alkaline products become generators of acid. The presence of sugar checks the destruction of albumin by bacteria while no injurious products develop in consequence of the presence of the sugar. Diabetic women seem to escape puerperal fever much more constantly than others. The therapeutic introduction of sugar into the upper birth passages is logical and seems destined to prove an efficient therapeutic measure in incipient puerperal fever. The sugar deposit insures that the birth passages are continually bathed in a stream of sugar and acid which renders all alkaline decomposition impossible and thus prevents and cures infection. He is now working out the technic and remarks that there is no reason why it might not be feasible to fill the uterus with a concentrated solution of sugar as a prophylactic measure after delivery. A 25 or 50 per cent. solution of grape sugar might be used to induce secretion as a kind of self-rinsing. The solution has a prolonged action, antiseptic, antitoxic and cleansing.

157. **Vesicovaginal Fistula.**—Beckmann states that these fistulas are very frequent at St. Petersburg, no less than eleven such patients having required his care during last year. The various technics devised and modified to meet various conditions are described as he applied them in eight typical cases.

159. **Vaginal Operative Treatment of Retroversion of the Uterus.**—Weibel reports 162 patients recently reëxamined after operative treatment of the retrodeviation some time ago; 138 other patients had been lost sight of in the interim. The communication issues from Wertheim's clinic at Vienna. Recurrence was observed in 18.5 per cent. of the cases, but in only 15 per cent. of the cases of movable retrodeviation. The operation was by shortening the ligaments with or without fixation. In the cases in which the uterus is not movable, the trouble is a chronic perimetritis with possibly lesions in the adnexa, and hence the conditions demand more radical measures.

160. **Laparotomy for Peritoneal Tuberculosis.**—Heimann reviews his experiences with fifty patients with peritoneal tuberculosis under observation for years after a therapeutic laparotomy. Of the patients with serious disturbances at the time of the operation, 50 per cent. have since died; only 16.6 per cent. are still self-supporting, in good health; the remaining six patients, although still living, are in much impaired health. Of the thirty-two patients who had no or slight disturbances before the operation, only 22.2 per cent. have died since; 38 per cent. are in good health, while 16.6 per cent. have improved and 22.2 per cent. still have symptoms. The longer the interval since the laparotomy the smaller the proportion of patients free from symptoms. The whole material, Heimann remarks, shows that the hope of curing patients by a laparotomy has not been realized in practice, while the complications, fistula, sepsis, etc., render the measure too hazardous for the advantages gained. Reports of series of cases in which laparotomy has been done are of value only when years have elapsed since, in order to ascertain the ultimate outcome. In any event, he adds, patients with objective findings in the lungs, fever and all forms of peritoneal tuberculosis except that with serous effusion, should be excluded from this method of treatment.

162. **Bacteriologic Research on the Effects of Vaginal Douches During Pregnancy.**—Esch and Schröder conclude that the douche should be given before and not after internal examination, and before any operative intervention. By preceding it with the douche the vagina has had so many of its germs washed away that the danger of their transportation inward is much reduced. On the other hand, germs that have been introduced from without are more likely to be carried farther in by a following douche while the chances for their mechanical removal are comparatively slight. They advise further repetition of a gentle douche every ten hours during protracted labor, and for vaginal douches in general they prefer physiologic salt solution.

164. **Prognosis from Kidney Functioning in Eclampsia.**—Zinsser has been studying conditions in regard to retention of chlorids in thirty-one patients with puerperal eclampsia. In all the fatal cases he found a sudden marked decline in the output of chlorids in the urine while with approximately normal findings in regard to the chlorids, even with very severe clinical symptoms, the patients all recovered.

167. **Prophylactic Treatment of Eclampsia.**—Stroganoff states that 800 patients with eclampsia have been treated by his method now in Russia and elsewhere, and that the mortality in his own 400 cases has been only 6.6 per cent. When the method has not been strictly applied the mortality ranged from 9 to 12 per cent. (Described in The Journal, July 3, 1909, p. 86.)

### Zentralblatt für Chirurgie, Leipsic

*April 6, XXXIX, No. 14, pp. 457-496*

168 Instruments for Resection of Stomach and Intestines. (Eine Magen-Darmquetschzange und instrumentelle Behelfe für die Querresektion des Magens.) E. Payr.

169 Periosteum Flap to Reenforce Herniotomy. (Zur Sicherung grosser Bruchpforten mittels Transplantation freier Periostlappen.) D. G. Zesas.

### Zentralblatt für Gynäkologie, Leipsic

*April 6, XXXVI, No. 14, pp. 417-456*

170 Diagnosis and Operative Treatment of Pelvic Disease in Insane Women. (Diagnose und operative Behandlung der Genitalkrankheiten der weiblichen Irren.) B. S. Schultze.

171 The Electrometrogram. A. Theilhaber.

172 Pregnancy Lines. (Ueber Schwangerschaftsstreifen.) C. H. Stratz.

173 Attempt at Criminal Abortion with Tubal Pregnancy. (Abtreibungsversuch bei Tubargravidität.) C. Knoop.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*April 2, XXXIII, No. 40. pp. 417-424*

174 *The Tourniquet Sign. (Interno al segno del laccio.) U. Morandi.

*April 7, No. 42. pp. 433-448*

175 Hemolytic and Serum Reaction. (Intorno alla emo e sieroreazione.) B. Vasoin.

*April 11, No. 44. pp. 457-464*

176 Effectual Serotherapy in Malta Fever. (Caso di febbre di Malta curato col siero Trambusti.) A. Tomaselli.

177 Foreign Bodies in the Eyes. (Diagnosi e trattamento dei corpi estranei-intra-oculari.) E. Rollet.

174. **The Tourniquet Sign of Scarlet Fever or Hemorrhagic Disease.**—Morandi has been examining 100 patients with various affections to determine the diagnostic value of the minute hemorrhages in the skin which develop below a ligature applied to the arm. This sign was not positive in healthy controls but was found positive in heart disease, bronchitis, pneumonia, acute hepatitis and nephritis, cerebral hemorrhage, typhoid and puerperal fever and tabes. These findings deprive the sign of any specific diagnostic value. It has been published as pathognomonic of scarlet fever, but it seems to be merely a manifestation of diminished resistance in the walls of the smaller blood-vessels. The claims made for this *signe du lacet* by Frugoni after four years of study were summarized in The Journal, Feb. 18, 1911, p. 545.

### Policlinico, Rome

*April 14, XIX, No. 16, pp. 557-592*

178 Intravenous Injection of Iodoform in Pulmonary Tuberculosis. One Case. (Iniezioni endovenose di iodoformio per la cura della tisi polmonare?) A. Cerioli.

### Riforma Medica, Naples

*March 30, XXVIII, No. 13, pp. 337-364*

179 Active Immunization of the Goat Against Malta Fever. (Sulla immunizzazione attive delle capre contro la febbre mediterranea.) V. Panto.
180 *Lympho-Adenitis in the Iliac Fossa. (Adeniti e adeno-flemmoni della fossa iliaca.) V. Brun.
181 Traumatic Aphasia in Man of 35. E. Tarozzi.

*April 6, No. 14, pp. 365-392*

182 Action of Tonics on Heart in Fatty Degeneration. (Azione dei cardiocinetici—digalen, digitale, digitoxina, strofantina—sul cuore in degenerazione grassa.) D. Scalfati.
183 Normal Gastric Functioning Nearly Three Years After Cholecystogastrostomy. (Colecisto-gastrostomia per occlusione cronica del coledoco.) C. Mariani.

180. **Suppuration in the Iliac Fossa.**—Brun reports ten cases in which the suppuration originated in lymph-nodes in children under 10, including two young infants. When the trouble is merely a lymphadenitis, bed rest and weight extension of the leg, as for hip-joint disease, are generally sufficient, with perhaps an ice bag or painting with iodin. Constant supervision is necessary to detect a purulent suppuration. When there is a true phlegmon, it should be evacuated and drained with care not to leave the drain in contact with any vessel. The weight extension should be kept up for a long time, if only at night. The colon bacillus was responsible in the majority of his cases but the *Staphylococcus aureus* was found in one and the streptococcus in the one fatal case, the adenitis in this instance having followed a slight injury to the foot; there was extensive suppuration after ten days. The child died of operative shock.

### Brazil Medico, Rio de Janeiro

*March 15, XXVI, No. 11, pp. 101-110*

184 *Congestion of the Kidneys. (Congestão renal.) J. M. Gesteira.
185 Pyelonephritis. A. Novis.

*March 22, No. 12, pp. 111-120*

186 *Nephrolithiasis. (Lithiase renal.) G. Moniz.

184. **Congestion of the Kidneys.**—Gesteira discusses the causes, forms and consequences of renal congestion and emphasizes the necessity for measures to restore the balance in the cardiovascular system, with restriction to a milk diet, or better still, to a salt-free diet, supplemented by diuretics according to individual indications.

186. **Urinary Calculi.**—Moniz says that the pains with a tendency to nephrolithiasis are more or less vague and inconstant, generally occurring in both lumbar regions, with headaches and lassitude, while the local pain from a calculus is characteristic. While expatiating on the necessity for general hygiene and dietetics, he warns against severe exercise, inducing sweating, as this increases the production of uric acid while it diverts the fluid from the kidneys to the skin. Moderate exercise, Swedish movements, billiards, stimulation of the skin with dry or alcohol rubs and hot baths are useful. Excessive intellectual work and worry favor the lithiasis. He cites authorities to show that the mineral elements in meat render the urates less soluble, while those of vegetables have the opposite effect. Too large proportions of vegetables, however, induce oxaluria. Tea, coffee and chocolate, beer and wine all aggravate the tendency to stone production and pure water or a mineral water should be the preferred beverage, with at most a little Rhine or Bordeaux wine. Water should be drunk freely, mainly between meals; when the urine is extremely concentrated it may be wise to take some diuretic hot infusion or Luff's "imperial drink," which is a teaspoonful of cream tartar in a half-liter of water. Diuresis is generally effectually stimulated by sipping slowly one or two glasses of hot water containing a little lemon juice, the first thing in the morning and the last at night. Drugs liable to injure the kidneys should be carefully avoided, and no one drug should be used for long at a time. He adds that in case a course of mineral waters is deemed advisable, it is best to go to the springs so as to have the advantage of the radioactivity of the waters.

### Semana Medica, Buenos Aires

*March 7, XIX, No. 10, pp. 449-500*

187 *Echinococcus Disease of the Female Pelvis. (Los quistes hidaticos de la pelvis en la mujer.) J. Salvador.
188 *Stenosis of the Pylorus in Infants. (Estenosis pilorica en el lactante.) M. F. Cotignola.

187. **Echinococcus Disease of the Pelvis.**—Salvador's article is based on seven cases of hydatidiform cyst in the female pelvis. Two of the women were under twenty and thirteen cysts were removed by the abdominal or vaginal route or both. The absence of venereal disease or other pelvic trouble, the slow development of the tumor and its characteristics, readily distinguishing it from other pelvic tumors, permitted the correct diagnosis, especially as echinococcus disease is frequent in Argentina. When the cyst was in the pouch of Douglas the vaginal route was found most effectual. In one case the woman was pregnant but removal of five cysts, three in the lower end of the omentum and two free in the pelvis, did not interfere with the course of the pregnancy.

188. **Stenosis of the Pylorus in Infants.**—Cotignola was able to save by an operation an infant two months old with hypertrophy of the pylorus, but two others died of inanition notwithstanding a gastro-enterostomy in one case and introduction of a tube through the mouth in the other. When the symptoms persist unmodified by medical measures there is generally organic hypertrophy. If the operation is deemed necessary it should be done promptly, before the infant has grown too weak to stand any operation.

### Hospitalstidende, Copenhagen

*April 3, LV, No. 14, pp. 389-420*

189 *Pituitary Extract in Obstetric Practice. (Pituitrin som Ekbolikum.) E. Hauch and L. Meyer. (Pituitrin som vedrivende Middel.) M. Brammer.

189. **Pituitary Extract in Obstetric Practice.**—The therapeutic value of extract of the hypophysis is discussed by these authors on the basis of considerable personal experience as well as recent literature on the subject. They did not observe any unfavorable by-effects except that there was a slight transient infiltration around the point of injection in one case. Two of the women and four of the children died in Meyer's thirty-six cases, but he says that these deaths have scarcely any connection with the injections, although there is a possibility in one case that the increase in the blood-pressure after the injection may have cooperated in bringing on the eclampsia, the first symptoms of which appeared an hour and a half after the injection. The woman was delivered at once but died five hours later. She had kyphoscoliosis and nephritis. The case warns, however, to be cautious with a patient showing a tense pulse or any sign of impending eclampsia. The extract seems to be generally effectual in inducing contractions of the uterus at term and expulsion of the fetus, and it may render forceps delivery unnecessary. Its action before term is uncertain. Hauch declares that the extract may permit a more active management of birth in some cases while in others it will permit expectant treatment to be carried to greater lengths, knowing that we now have this effectual oxytocic to fall back on at need. He obtained such good results with it in four cases of partial placenta prævia that he thinks it may prove of great assistance in such cases, as it aids in arresting the tendency to hemorrhage. Brammer reports his experience with it in twelve cases of which he gives the details. He says that when all goes well the obstetrician feels that his dreams are being realized, but that the action of the extract is irregular and it may induce such violent contractions as to endanger the fetus. Nausea and vomiting were observed in one case five hours after the injection. The contractions may become so violent that a little chloroform may be needed. These and other reasons confirm the necessity for the physician's remaining with the patient for at least an hour afterward. The only contra-indications seem to be an abnormally high blood-pressure from arteriosclerosis or nephritis, and possibly a tendency to nervousness or hysteria as these may magnify the influence on the uterus and lead to too violent contractions.

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## *Books Received*

Journal Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

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# OPERATIVE TREATMENT OF FRACTURES

## REPORT OF FIFTY-FIVE CASES IN WHICH LANE BONE PLATES AND SCREWS WERE EMPLOYED

WILLIAM O'NEILL SHERMAN, M.D.
PITTSBURGH

The question as to whether operative procedure is indicated in fractures depends on a variety of circumstances and conditions. It may be necessary to fix the fractured parts immediately, or at some future time, to correct faulty or delayed union. The indications for operation are:

1. Certain simple fractures which cannot be treated satisfactorily by means of splints, extension, etc., i. e., oblique fractures of the leg or forearm in which both bones are fractured.
2. Compound fractures.
3. Fractures which are irreducible, i. e., certain serrated fractures or those in close proximity to joints.
4. Fractures which show abnormal position where accurate reposition has not been secured and in which there is fibrous, delayed or faulty bony union.

The question of operation is a much-debated point, some very able surgeons going so far as to advocate operative procedure in fractures of all long bones, regardless of the position of fragments. This is a rather radical procedure and one that is not justifiable in the great majority of fractures. No fracture should be compounded if it can be properly reduced and kept in reduction. Operative measures in these cases are to be considered seriously and the same precautions must be used to eliminate sepsis as in abdominal surgery. There is often great bruising and trauma to the soft parts, with free extravasation of blood; this, with the trauma inflicted by use of heavy instruments, is sufficient to lower the resisting power of the parts, making them more susceptible to infection.

I employ the *x*-ray, both for diagnostic purposes and to ascertain results of treatment. Too much dependence must not be placed on this procedure, as it is often very deceptive and misleading. I favor the stereoscopic plates, as this gives one a more accurate idea of the existing relations. It has been my practice to have *x*-ray plates made (wherever practical) on admission of patient, after the parts are reduced and before discharge, so that I may have a check on the case; also to note if any degenerative processes have taken place.

In the patients treated I have not observed any evidence of loosening of the screws. Some of the plates and screws were removed three or four months after insertion. It was found necessary to unscrew with the screwdriver, the thread in the cancellated structure being almost intact and holding the plate in perfect position.

All fractures should be compounded if it is found that reduction cannot be accomplished by other means. It is impossible to obtain accurate approximation in a certain class of cases, notably, the oblique fractures of both bones of the leg and forearm, also the patella and olecranon. It is difficult to secure accurate apposition in fractures of the femur, the end result usually showing shortening. I believe in compounding fractures of the femur in which the *x*-ray shows an overriding or lateral displacement.

There are as many different treatments for fractures of the femur as there are surgeons employing them. The fact that there is such a diversity of opinion and methods of treatment is sufficient evidence of its failure to obtain satisfactory results. I refer to the treatment by means of splints, extensions, etc.

While it is advisable that one should not be too radical along these lines, the fact remains that many fractures of the femur have been badly treated in the past. It is well to bear in mind the possibility of sepsis and failure to carry out the after-treatment of these cases, either of which might result disastrously. I prefer to operate after the first week or ten days for following reasons:

1. Clotting in the vessels has begun, the lymphatics showing a cofferdamming, the chance for sepsis being less as the local resistance and local leukocytosis are greater.
2. There is less hemorrhage, thereby diminishing the necessity of a drain, which, however, is seldom used.
3. Fractured parts are more readily reduced and drilled, making apposition more accurate.
4. There will be less contraction of the muscles, making it easier to keep the parts in good position by means of extension or splints.
5. The operation can be done with greater facility.

If operation is delayed for from four to six weeks, the ends of the bones become "rounded off" with callous or fibrous tissue. This makes the tendency to displacement greater, even where mechanical devices are used.

### ADVANTAGES OF STEEL PLATES AND SCREWS

The advantages of steel plates and screws are: (1) great ease and rapidity with which the plate and screws can be applied; (2) accurate approximation of parts; (3) reduction in disability by restoring parts to normal.

Objections have been made to the insertion of a foreign body, in that it sets up an irritation accompanied by a rarefaction of the bone, the screw acting as a mere plug. I cannot agree with this opinion, as the *x*-ray plates show the screws in good position. It has been an agreeable surprise to find the thread intact after being *in situ* for six months. Granted that the screws do cause some rarefaction, they can readily be removed after union has taken place, nitrous oxid and oxygen anesthesia being sufficient to use in the removal of the great majority of plates, if it is found necessary to do so. It is generally admitted that clean compound wounds heal more slowly than similar wounds which are not compound; the cause not being very clear, unless it should be due to the greater trauma inflicted.

During the past year it has been my routine practice to compound all simple fractures of the long bones, in which I was unable to restore the fragments to their normal relationship, introducing a Lane bone plate with screws. The same procedure has been followed in all compound fractures in which there was faulty position.

The advantages to be gained are:

1. Shortening of the duration of illness and convalescence, in that union is practically by first intention, very rapid and satisfactory.

2. Restoration of the injured parts to normal, establishing the best continuity, which is most essential.

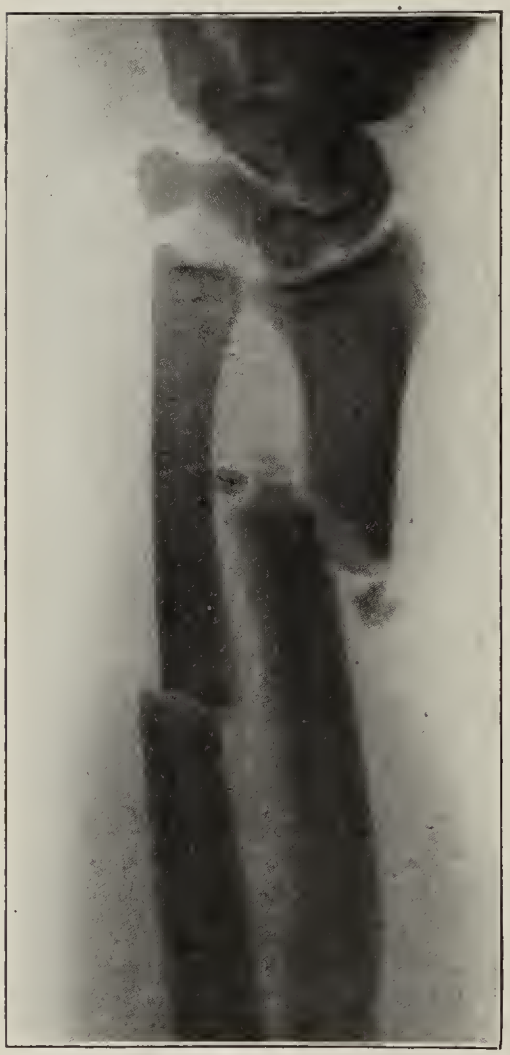

Fig. 1.—Anteroposterior view of fracture of both bones of the forearm in the author's Case 24.

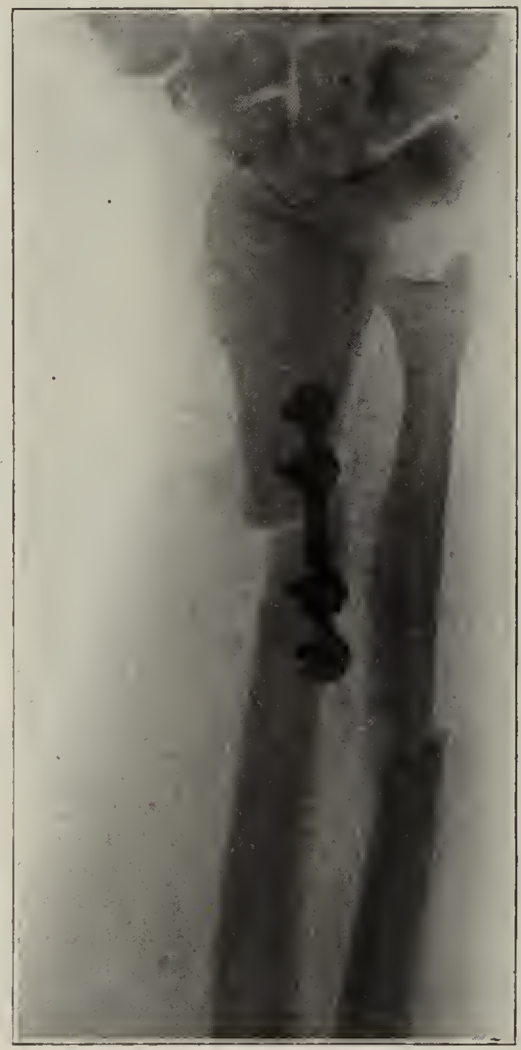

Fig. 2.—Anteroposterior view of fracture shown in Figure 1 with Lane bone plate applied to the radius.

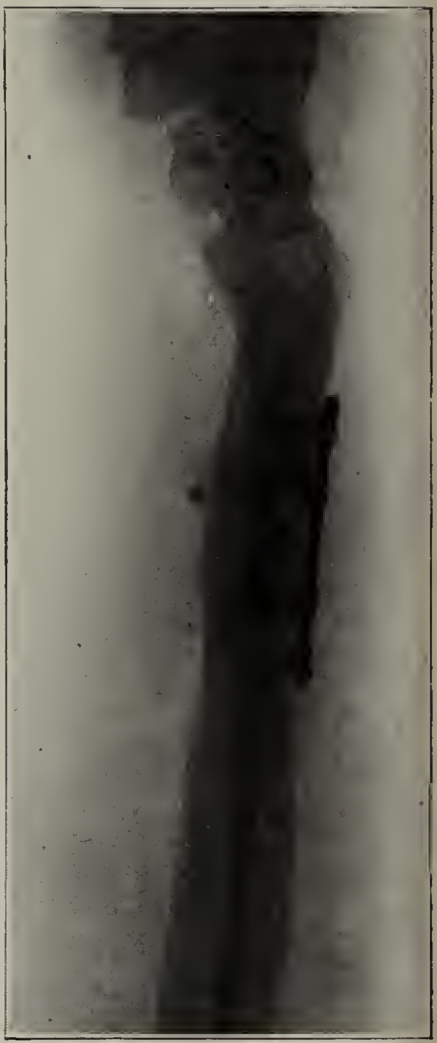

Fig. 3.—Lateral view of the fracture shown in Figures 1 and 2, showing perfect alignment from this aspect. The functional result in this case was perfect.

3. Relief of pain and discomfort, which is due to the movements of the fractured parts on one another, and the extravasation and transudation of blood and serum into surrounding tissues, causing increased tension.

4. Lessening physical disability by restoring the parts to their former anatomic position.

It may be that in some few cases of simple fracture, non-union results from some cause which could not be eliminated by operative treatment. These cases, however, are rare; it is seldom that one sees a case in which union would not have resulted if efficient measures had been adopted.

Ununited fracture is a rather common occurrence. We frequently hear surgeons make assertions as to the proper treatment of fractures, which they possibly believe to be accurate, but which give every reason to be received with suspicion. I have in mind one surgeon of ability who made the statement that he treated fractures of the femur by immediately placing in a plaster cast, to be retained for ten weeks. He stated that he never had any bad results, and that good, firm, bony union always resulted. It is unnecessary to discuss further such an assertion. Statistics by different authors vary greatly. One stated that non-union took place once in a total of 446 cases. Another states that it does not exceed one in 500, and thinks this a rather high estimate. These statistics are not accurate.

I do not think the surgeons of to-day any less competent or successful than their predecessors in obtaining union, as practically the same crude methods were employed by both.

The discovery of the *x*-ray has unquestionably aided in the scientific and accurate diagnosis of all fractures. The probability is that the earlier observers, Liston, Hamilton, Agenew and Gross, were less careful in their examination of results; hence the difference between their observations and statistics and those of the present-day observers. Should there be any truth in these published statistics, it would be difficult to account for the number of cases reporting for treatment.

The treatment of fractures is a great source of worry and unnecessary alarm to the great majority of practitioners. This should not be so, providing an accurate and definite diagnosis has been made, which has been proved by *x*-ray pictures. There would be fewer cases of non-union if the fractured parts were properly reduced and kept in accurate approximation.

### THE OPERATIVE TECHNIC OF SIMPLE FRACTURES

The operative procedure is comparatively safe and easy in the great majority of cases, provided the patients are operated on before the formation of callous or fibrous tissues. It is necessary that a most rigid and thorough technic be enforced, and every precaution taken to prevent infection, as a great amount of metal must be left in the wound. The skin must be thoroughly cleansed. It is sometimes found necessary to scrape it. The skin should be excluded from the field of operation. Specially constructed instruments should be used, i. e., drills, screw-drivers, bone-forceps, bone-clamps, bone-elevator, plates and screws.

The best means of retaining a fracture in apposition is by means of screws and steel plates. I find that it is a mechanical impossibility to secure accurate apposition with silver wire, should there be a force tending to displace the fragments by exertion. It has been demonstrated many times that the wire forms a loop, and it must be borne in mind that there is always a tendency for the wire to break or twist. A screw is the most dependable and efficient means of securing and retaining in accurate position fracture parts. The Lane bone plate with screws is a most valuable asset to our present surgical armamentarium.

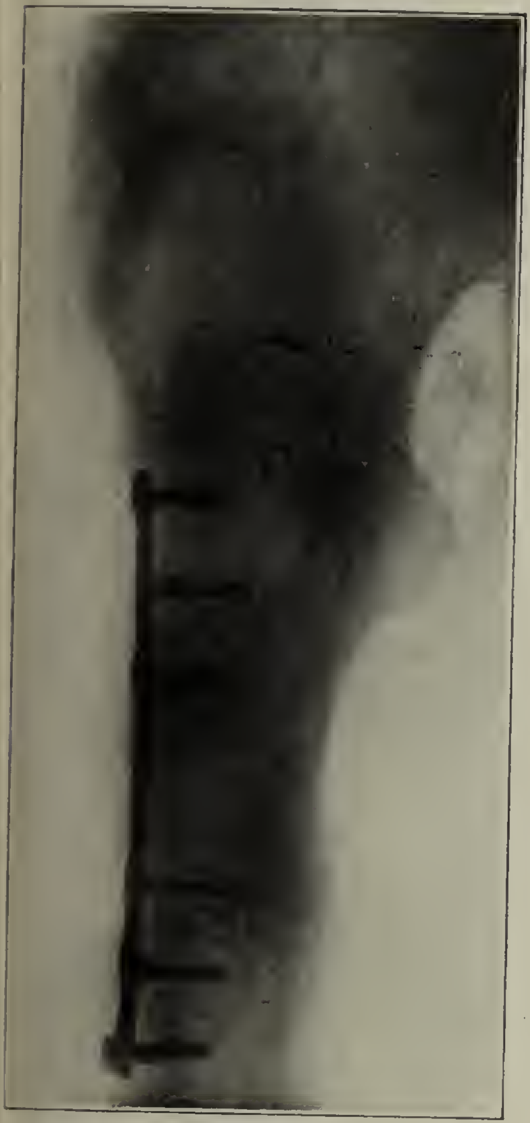

Fig. 4.—Fracture of the femur within the upper third in author's Case 18, showing long Lane bone plate applied. Radiogram taken four months after operation.

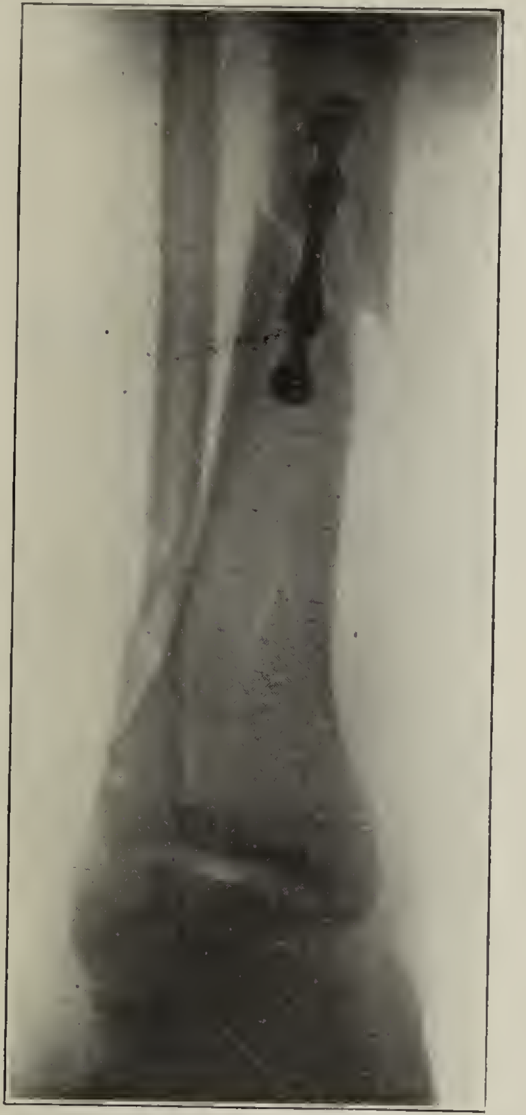

Fig. 5.—Fracture of both bones of the leg in the lower third in the author's Case 62; anteroposterior view showing vanadium steel bone plate applied to the tibia with self-tapping machine screw.

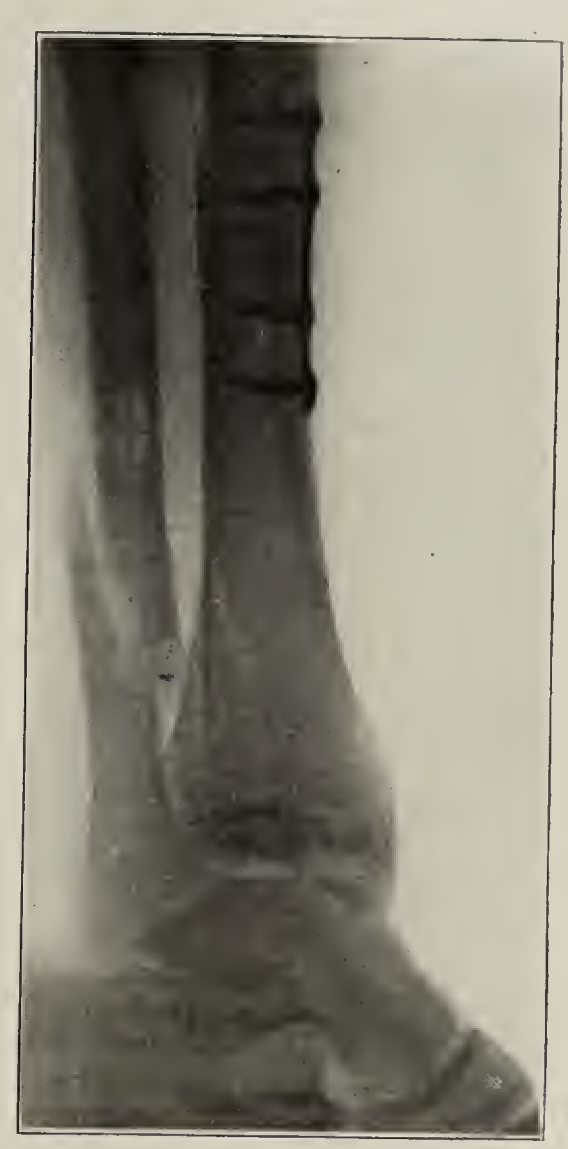

Fig. 6.—Lateral view of fracture in author's Case 62 with vanadium steel bone plate applied. The fibula is not plated, as it falls into fairly good apposition on the adjustment and fixation of the tibial fragments.

The Lane steel bone plate is perforated so that the screws can be inserted as desired. These plates are made in many different sizes with screws to fit the plate. The plate should be so placed that it does not project or cause pressure on the skin, as this is likely to cause pain, and would necessitate removal. In long bones like the humerus and femur, where there are soft parts enough to cover the plate, little or no difficulty is encountered from this cause. A thin plate should be employed wherever possible, and small screws. The smaller the amount of foreign body the better. If a thick plate is found necessary, it can readily be removed at some future time. It has been stated that rarefying osteitis has been caused by the use of screws and plates. This is probably due to the failure of the mechanical appliance to immobilize the parts. The hopelessness of any surgery other than operative will be illustrated by the skiagrams. These prove the mechanical advantages gained, and cast doubt on the truth of statements that are made as to the results obtained by treatment of these conditions by other than operative methods. A good deal might be said of the inaccuracy of these statements. A skiagram affords evidence and speaks for itself.

In fractures of the femur, I find it necessary to employ screws of sufficient strength, there being strain exerted on the fracture in both the active and passive movements of the patient. It is also necessary to perforate the fragments and institute a mechanical device which will secure apposition. Encircling wires have been advocated by some writers. This, however, is absolutely hopeless and affords no efficient obstacle to the separation of fragments.

### PREPARATION OF THE PATIENT AND THE FIELD FOR OPERATION

An operation is usually scheduled for 8:30 in the morning. On the day previous, light diet for dinner, liquids without milk for supper; water may be given within four to six hours before operation; at 9 p. m., castor-oil, 2 ounces, and a glass of beer are administered. In the morning simple enemata are given until the fluids return clear. The patient is catheterized if unable to void before going to the operating-room.

After thorough scrubbing of hands, the nurse must remove the hair from the part by applying a depilatory paste. The composition of this paste is as follows:

| | |
|---|---|
| R. Barium sulphid | 25 parts |
| Pulverized soap | 5 parts |
| Talc | 35 parts |
| Triticum | 35 parts |
| Benzaldehyd | q. s. |

Directions: Dissolve 1 dram of powder in 3 drams of water and apply with a shaving-brush; after four or five minutes, moisten with water. Five minutes later deluge the parts with water at 100 F., then dry.

The evening before operation the field is prepared in the following manner, using gauze sponge for scrubbing: tincture of green soap followed by water, five minutes; alcohol (phenolized), two minutes; mercuric chlorid (1-2,000), two minutes. The field is then covered with dry gauze to remain in position until removed in the operating-room. Before the operation a 7 per cent. solution of tincture of iodin is painted on the skin with a small sponge or brush. Thick skin found on the hands or soles of the feet may require scraping or a 50 per cent. soap poultice for three to six hours. One-half hour before operation a hypodermic of morphin sulphate, 1/6 grain, and atropin, 1/150 grain, is administered. It is necessary to disinfect the entire limb thoroughly. The objections to shaving is that the scratches and breaks in the skin are favorable points for the development of colonies of staphylococci. The most frequent source of infection is from contaminated skin which has not been cleansed.

### OPERATION

The anesthetic used is nitrous oxid and oxygen as a preliminary, to be followed by ether, by the drop method. Heavy rubber gloves are to be used by the operator and assistant. A free incision is made at the most accessible point, bearing in mind the avoidance of important structures. The fractured parts are exposed, and, if necessary, freshened with a curet or chisel, the parts being approximated and held by the assistant or by a bone clamp. The plate is placed in position, the proximal cancellated structure being drilled, the drill going through to the medullary canal; the screw is then inserted. This is performed on the distal fragment. The proximal fragment is then treated in the same manner. After the plate is thus secured on the fractured parts, it is made more secure by the insertion of two or three more screws, as the case may necessitate. It is not necessary to scrape or remove any of the periosteum. The plate can be placed immediately over the periosteum and the screws inserted very readily. The more traumatism to the periosteum, the more is the blood-supply to the part interfered with. The drills must be made to fit the screw; unless this precaution is observed, great difficulty will be encountered in inserting the screws. The drill-hole will be either too large, not giving proper support, or too small, which will comminute the bone. The muscles and fascia are sutured with catgut, skin closed with horsehair or silkworm-gut or linen. If necessary, a small rubber tissue drain is inserted and the parts placed in a plaster-of-Paris mold or wire splint.

### COMPOUND FRACTURES

The wound is packed with plain gauze, until the gauze lies even with the skin; every effort is made to secure perfect asepsis. The skin is scrupulously cleansed, gauze removed and wound enlarged to allow free cleansing, the tissues being cauterized with phenol (carbolic acid), followed by alcohol. The wound is never irrigated for fear of carrying infection or foreign material into the recesses. Probing for diagnosis is never allowable. The parts are thoroughly cleansed and dried and iodin applied to the skin. After seven to ten days the same operative procedure is followed as in simple fracture.

I prefer the adjustable wire splint to plaster for the immediate dressing, for the following reasons:

1. It is more comfortable to the patient.
2. It allows swelling of the parts without any danger of pressure circulatory interference.
3. It can be removed with ease for inspection.
4. It can be sterilized and more easily kept clean.

When the swelling subsides a plaster mold is applied, which should be bivalved on the second day, so as to permit frequent inspection. In fractures of the leg or thigh, Buck's extension is applied to separate or keep apart the articular surfaces of the knee-joint, thus reducing the possibility of ankylosis. This is very essential in the treatment of fractures of the femur. The necessity of this procedure has been ably presented and emphasized by Murphy and should be adopted as a routine measure.

### POSTOPERATIVE TREATMENT

The patient is returned to bed, surrounded with an electric blanket and electric warming-pads. The molds or splints are reinforced by sand-bags. Dressings are not removed for ten days, unless there should be some reason for doing so, at which time sutures are removed. Passive motion, electricity and massage are started the third week. The patient is allowed on crutches at the end of ten days or two weeks, if the fracture is below the knee, the parts being enclosed in plaster mold, reinforced by buckled tape.

Following the operation, the patient usually has a slight rise of temperature for two or three days. The pain is very slight. The wound is inspected in seven to ten days. Any rise of temperature or great discomfort is an indication for inspection. Oozing and staining by blood are to be expected.

### CLINICAL FINDINGS AND RESULTS

Of the fifty-five fractures operated on, there were four of the clavicle, three of the humerus, two of the radius (both radius and ulna being fractured), fourteen of the femur and thirty-two of the tibia, twenty-five of which showed a fracture of both tibia and fibula. There were twenty-eight compound cases—one humerus, two femurs and twenty-five tibias. There were no deaths. In fifty-three cases there was healing by first intention, there being two infections. The first infection was in a compound, comminuted, complicated fracture of the middle third of the leg in which both bones were fractured. There was a very extensive traumatism and laceration of the soft parts. This case was a border-line case, and it was not known at the time whether an amputation would have to be performed later or not. The patient made an attempt to walk ten days after the operation, causing the plate to become loose. The infection was due to the *Bacillus aerogenes capsulatus.* Multiple incisions were made and drainage employed, the wounds finally healing, with good bony union. The second infection was in a compound fracture of the femur which was allowed to heal by granulation, the fragments being in good apposition, there being but slight overlapping. The patient had a very low resisting power; at the end of ten weeks the wound had completely healed, with non-union. Operation was performed twelve weeks after admission. Following the traumatism of the muscles, there developed a streptococcus infection of the muscles, which had existed prior to the closing of the primary wound. Free drainage was established, the pus being quickly evacuated. The wound healed by granulation, the patient making an uneventful recovery. The wounds in the remaining cases healed by first intention, with good, firm bony union. In five cases there was an excess of callus, which caused pain, the patients requesting that the plates be removed. Fifty cases have been traced, the end-results being very satisfactory. In the cases in which both the tibia and fibula were fractured, I have found it necessary to plate only the tibia. There were three cases in which the fibula was broken in two different places. If the tibia is correctly approximated, the fibula will usually be found in reduction. Of the seventeen cases in which it was found necessary to remove the plate, eleven were compound fractures of the tibia, two, simple fractures of the tibia, two on the femur, and two on the clavicle. Where the plate can be buried and well covered with muscles, few plates will necessitate removal. In three cases (femur), the plate broke at the junction of the bar and first screw hole. The condition was early recognized in two cases, the bones being replated, no injurious effect resulting. In the third case, the plate broke some time after the seventh day, the condition not being recognized until the tenth week. There was an angular deformity, with large callus, with good bony union. There was slight interference of function. I have been able to collect twenty cases in which the plate has broken. In order that this mechanical and structural weakness may be overcome, a new vanadium steel plate, patterned after the standard eye-bar (used in bridge construction), has been designed. This plate will withstand, without breaking, any reasonable strain placed on it.

### CONCLUSIONS

1. Fractures of long bones should be treated by the open method and the bones plated, if it is found that reasonably accurate approximation cannot be secured by splints, extension and other mechanical appliances.
2. There is no evidence to justify the assertion that the presence of a foreign body is the exciting cause of rarefying osteitis.
3. There would be fewer cases of non-union if the faulty approximation were early recognized and corrected.
4. It is very necessary to have the proper operating equipment and to exercise a most rigid technic. The periosteum should be preserved and tissues handled with delicacy. The operation should be done quickly; thoroughness, however, should not be sacrificed for speed.
5. The uncertainty of continuous approximation during convalescence, caused by restlessness, delirious patients, or accidents, is obviated by the use of plates.
6. It will be found necessary to remove the plates and screws in the majority of the compound cases, the plate causing sufficient irritation to allow of the persistence of a small sinus.

I firmly believe that there is a large field of usefulness for the steel bone plate. Its use will have to be delegated to those whose experience renders such operative work reasonably safe and certain, in order to prevent many of the failures which have happened in the past, and which were a reproach to the profession. They have been forgotten or excused because no better results were obtainable. This excuse will not hold good to-day. The question of operation must be based on personal experience and judgment.

With the advent of the stereoscopic *x*-ray plates, we have learned many of the shortcomings of the former method of interpreting plates. The accurate reduction of fractures is becoming more exact and we, as a profession, will be held responsible for many of the defects due to faulty judgment and treatment, if the present treatment is not kept abreast of modern surgical advances.

Recent experiments prove beyond all doubt the superiority of vanadium steel over the high carbon steels formerly used in the manufacture of bone plates. I have collected reports of twenty cases in which the high carbon plates have broken at the weakest point, i. e., junction of cross-bar and first eye.

A new vanadium steel bone plate has been designed which overcomes the mechanical and physical weakness of the old plates. It combines maximum strength with minimum of steel.

A self-tapping machine screw should be used in place of the wood screws heretofore used, on account of the added strength and mechanical advantages gained. Many of the failures of bone-plating operations have been due to lack of consideration of the mechanical features involved.

Note.—Since the above article was written, twenty-one additional patients have been operated on with uniformly good results, making at total of seventy-six cases.

Carnegie Building.

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## A CASE OF ASTHENOBULBOSPINAL PARALYSIS (MYASTHENIA GRAVIS)

ALLAN McLANE HAMILTON, M.D., F.R.S.E.
NEW YORK

That rare disease known as myasthenia gravis is one in which there is a curious train of symptoms, the chief characteristic being a peculiar exhaustion which is confined to the voluntary muscular system, and which is aggravated by repetition of functional acts, the asthenic muscles being those that have generally been used the most.

This species of weakness does not necessarily end fatally, unless it be due to some serious lesion, but the prognosis on the whole is bad. There are some patients who have been apparently rapidly cured, although this sometimes seems incredible when we take into account the general and appalling disturbance of function; and it is probable that when lost sight of they have relapsed.

There are several forms of myasthenia gravis, the most common and important of which is the bulbar variety.

As Mills[1] has pointed out, certain cases have been described as "asthenic bulbar paralysis," and others as "asthenobulbospinal paralysis" with reference to the relative predominance of symptoms due to the exhaustion of the bulbar or spinal motor centers. He refers to such examples as does Paul,[2] who reports an interesting history. To the same form of disease Sir William Gowers,[3] in 1902, applied the term "myasthenia bulbaris," presenting three well-described cases.

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[1] Med. Fortnight., St. Louis, June 26, 1905.
[2] Boston Med. and Surg. Jour., clxii, 281.
[3] Brit. Med. Jour., May 24, 1902.

Naturally there is a difference in the onset of symptoms in the two forms, there being ophthalmoplegia, paralysis of the levator palpebrarum, and orbicularis, the masseters, zygomatic and risorius muscles, as well as those of the palate, which symptomatize the bulbar variety, while the spinal is ushered in by an asthenic condition of the muscles of the trunk and extremities.

Such paralysis is rarely symmetrical, and there may be a great variation in the susceptibility to overexhaustion. In most of the important cases the bulbar symptoms are coexistent with those presented elsewhere, or closely follow them.

Variable and inconstant manifestations consist in the behavior of the reflexes, and the muscular susceptibility to electrical stimulation. In a fair proportion of the cases the electrical reactions described by Jolly may be observed, and these consist in the lessened irritability of the muscle after moderate electrical tetanization, or the failure to contract after repeated contact. So far as the reflexes are concerned there are some cases in which the activity of the knee-jerks is either diminished or absent, but as a rule they are unaffected or even exaggerated. In more than one example the cremasteric and abdominal reflexes were absent. It has been found when the reflexes were present that repeated local tapping had no effect in diminishing their activity.

Such negative symptoms as absence of fundal changes, conservation of pupillary activity, absence of anesthesia and other sensory phenomena are to be regarded. Atrophy is never found, nor is muscular fibrillation, and of course there is no reaction of degeneration. Ankle-clonus and Babinski symptoms are absent, while there is no paralysis of parts supplied by the levator labii superioris, the hypoglossus, vagus and glossopharyngeal nerves. There is an absence of hysterical symptoms in true cases, although the latter have been occasionally found in connection with myasthenia gravis, and Mills has reported such symptoms in one case. Paul regards the regurgitation of fluids as a symptom only of the true disorder, and he thus distinguishes it from hysteria.

Up to recent times little has been known regarding the morbid anatomy of myasthenia gravis, but we are indebted to the interesting investigations of Mandelbaum and Celler,[4] who have collected and analyzed the reported cases of a number of observers, among them Senator, Oppenheim, Burr and McCarthy, Link, Fujoni, Liefman, Eisenlohr, Jolly, Hun, Buzzard, Marburg, as well as many others.

The first-named assert that the disease is due more often to a neoplasm or other lesion of the thymus gland which probably gives rise to toxemia, while in nearly all well-observed cases there is a lymphocytic infiltration of the muscular fibers, the adrenals, liver, kidneys and thyroid, which is not the result of an inflammatory reaction. In one case there was chromatolysis of cells in the medulla and pons, but it would seem as if the affection had really some direct association with lesions of the thymus.

The following case is one which is of interest because of the improvement that followed treatment with the thymus gland.

*Patient.*—J. L., a girl, aged 14, was brought to me by her father during the spring of 1903. She was a native of the island of San Domingo and her parents were double first cousins. She was one of four children, one of whom died at the seventh month from gastro-enteritis, while the second died in her sixth year, probably from acute ascending paralysis. There is no family history of alcoholism, tuberculosis, or disease of the nervous system; the father appeared to be a healthy, vigorous man.

*History.*—The patient, who was large for her years, was quite well until two years previously, and had had no infantile disorders of moment. About this time her present trouble began in the lower extremities, there being difficulty in flexing the right thigh, and at the same time there was some weakness of the upper extremities. The child, who was precocious and somewhat of a composer and pianist, a few months later found difficulty in striking the keys of the piano. The third and ring fingers of the right hand were first affected so that she could not extend them. Six months later both arms became weak, and at the same time there was some return of power in the right lower extremity which at present is not so weak as the other side. In the beginning there was drooping of both upper eyelids, and a history of pain in the back of the head, and in both arms and legs. These pains now occasionally recur but seem more in the nature of an ache. There is no anesthesia of any kind.

*Examination.*—At the time of her visit there appeared to be a general weakness manifested in the performance of every voluntary act, which increased with repetition, but on the right side it predominated. The left hand was unaffected except that it was impossible to adduct the thumb. There had for a year past been some weakness of the orbicularis oris and the masseters. This condition and embarrassment in the use of the tongue which seemed to be moved awkwardly and with difficulty, although it was not paralyzed, produced a difficulty in eating. Another result of this weakness was that her speech was clumsy and ataxic. There was some drooping of the lower lip so that there was slight escape of saliva and when she swallowed it was common for liquids to escape from her nose. When the tongue was protruded it deviated slightly to the right side. The facial muscles were atonic, and there was no play of expression; she could not whistle and when she attempted to smile there was some weakness more apparent on the right side and depression of the corners of the mouth. There was distention of the alæ nasi. The double ptosis gave the patient a sleepy expression, and when she slowly opened her eyes, or they were opened by others, the left eyeball was found to be drawn upward and inward; there was at times diplopia. Her voice was more feeble than formerly. When lying down or sitting she could not arise without assistance, all the muscles of the back appearing to be the seat of weakness, while the weakness of shoulder muscles was shown in her inability to bring her hand to her face; in fact, she sometimes could not raise either arm. She could walk but a short distance and rapidly tired. It was noticeable that the muscles used most were those soonest fatigued. There appeared to be weakness of the right anterior tibial muscles, and some apparent spasm of the right soleus, and of the left to some extent. There was resulting spasticity of both legs and a titubating walk, the patient making contact with the ball of the feet; this disappeared at times. There did not appear to be any muscular hypertrophy or atrophy of the lower extremities, but there was a suspicious flatness of both deltoids, suprascapulæ and triceps; both knee-jerks were gone, superficial reflexes present, no ankle-clonus; other organic functions were unimpaired; no myasthenic electrical reaction; no reaction of degeneration. The pulse was always quick, ranging from 70 to 90.

*Treatment and Course.*—After her return to the West Indies, I from time to time received reports from the patient's father which were not altogether encouraging, although on the whole her condition was greatly ameliorated by treatment, which was more or less empirical.

I had at first prescribed thyroid extract with very bad results, but after taking into consideration the theory that the disease was due to some affection of the thymus, in 1907 I prescribed 5 gm. of thymus extract thrice daily with apparent immediate improvement and this was continued. The report on April 10, 1910, showed that she was able to walk 150 yards, but that in exceeding that distance she became fatigued, her hands and feet became cold, and there was some palpitation. She could raise her arms naturally and could dress her own hair. The movements of the shoulder are perfect. Her eyes are more open than before treatment, except that when she focusses them to read or write she feels pain in the right eye. The fingers are better. She can play the piano, but not with the ease she had before her illness. She has occasional pain in the neck and back of the head, and when she walks she has pains all through the body. She still has difficulty in masticating and swallowing, but less than before. She is less tired than she used to be. She retains her saliva. Her tongue is straight; expression normal; voice stronger. She is still lame; and again feels occasional pains in the head (not always). She often has cold feet and hands, and pains in the body on awakening.

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[4] Jour. Exper. Med., 1908, x.

She sent me a sonata composed by herself and wrote a well-expressed and legible letter. It may be stated that at no time has she shown any mental deterioration; on the contrary she has been a precocious, bright young woman and speaks two or three languages. I have had no occasion to suspect hysteria, but the complication of minor sensory symptoms and the spasticity even on the first occasion suggested an unusual syndrome.

It will be seen that the patient has survived for eleven years and has improved; I know of no case of the kind.

It would appear that a sister of J. L. died of undoubted acute ascending paralysis, and this may have some significance. That the latter malady is due to a toxemia, there can be no doubt, and it is possible, although I have not heard of such findings, that there may be some hypertrophy or disease of the thymus. I have reported elsewhere[5] an example of a recurrent endogenous toxic psychosis, and since its publication the patient died from a well-marked Landry disease which was observed as well by the late E. G. Janeway, and by Gilman Thompson. Unfortunately, no autopsy could be made, so that I was unable to confirm my suspicions.

The variations and recurrence of symptoms in many of these cases, and the behavior of my own case under the administration of an extract of thymus gland, naturally raises the question whether the disease may not have had such an origin.

950 Madison Avenue.

# "GAS ON THE STOMACH" *

## THOMAS WRAY GRAYSON, A.M., M.D.

PITTSBURGH

The subject of this paper is in quotation marks, for this popular but inelegant phrase comes as near expressing my subject as any I can find.

In the beginning, let us consider what gas or gases are found in the stomach, although this has been investigated and the knowledge gained has resulted in little or no good. Observations have identified carbon dioxid, hydrogen, methane and acetylene, but in a vast majority of instances simple atmospheric air alone is present. It is only in the presence of true fermentation that carbon dioxid and other gases are found, and this fermentation takes place only when stasis is present.

Usually the gas, as I say, is atmospheric air swallowed with food, and this is its source in nine cases out of ten—yes, in ninety-nine out of a hundred. It is still a common practice among physicians to allow patients o think that food lies in the stomach and ferments and hat this is the cause of the gas. At any rate, this is nvariably the belief of our patients.

As result of ten years' observation of this condition the following is, to my mind, more nearly the case. In the first place, one cannot help swallowing a good deal of air with his food and drink. As a result of peristaltic action of the stomach and of the breaking down of the food by the gastric juice this air is liberated and accumulates in the upper or cardiac end of the viscus. Now, in a healthy person with normal muscular tone the cardiac orifice is not tightly closed and is easily forced open by a small accumulation of gas. This gas rises through the esophagus and finds its way out of the mouth or nose, attracting little or no attention even from the subject himself.

Some of this air may be absorbed through the walls of the stomach, although this is probably not the case. A small part of it may also pass through the pylorus with the food and be absorbed through the intestinal walls.

The above is the course of things in a healthy person. Now, when belching is a symptom of gastric or general disease, the course of things is entirely changed. I do not believe any more gas enters the stomach than in the healthy person, nor do I believe any more is expelled. In a vast majority of these cases a nervous hyperchlorhydria exists and these two words will explain the whole thing. The oversupply of hydrochloric acid in the stomach juice irritates the walls of the organ. In fact, this symptom begins to trouble the patient as soon as an excess of hydrochloric acid appears after a meal, and probably at first it is this discomfort (of the excess of acid) which is thought to be caused by the presence of gas.

This annoying symptom very rarely occurs except in nervous patients. The nervous or muscular hypertension holds the cardiac and pyloric openings tightly closed, the stomach-walls being irritated by the presence of the excess of the free acid. Hence, the cardiac opening will not relax easily and an accumulation of air takes place in the upper end of the stomach, as I have said above. Because this is in the bony chest it quickly gives rise to disagreeable symptoms, crowding of the heart, palpitation and sense of fulness and dyspnea.

In most cases, also, the presence of gas in the stomach is evident by percussion over the organ and the fulness and pressure symptoms in the epigastrium.

When this accumulated air forces its way through the cardiac sphincter it naturally attracts the patient's attention, both because of its quantity, and especially because the subject has his mind on his digestive tract and is ready to notice every symptom—just as the neurasthenic often notices and is annoyed by a perfectly normal beating of his heart.

Fearsome as it may be, this accumulation of gas is in no way dangerous, except in elderly patients in whom arteriosclerosis, some heart lesion, or some other serious condition exists and is complicated by the flatulence. Then we may have a fatal case of "acute indigestion."

I do not consider all cases in which we have much "gas on the stomach" as having this explanation. There are, of course, many cases of stenosis of the pylorus with stasis, and dilatation of the stomach in which the food lies in the stomach and ferments (even in the presence of hydrochloric acid); but I believe these cases are much rarer than we think, and when we encounter this symptom there is no true fermentation as a usual thing.

In some diseased conditions of the stomach or the neighboring organs we have the discomfort attributed by the patient to gas on the stomach, and then efforts to get rid of it are made. Of course, belching is a voluntary act, and I have sometimes suspected that in the efforts to excite belching the air may be drawn into the pharynx or esophagus only and then expelled.

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[5] Hamilton: Tr. Med. Soc. London, 1896, xix.

[*] Read before the College of Physicians of Pittsburgh, March 4, 1912.

If we can liken a physician's mind to a vast store house of partially classified materials which he uses in his work, he must acknowledge that many of these imposing heaps which once served us so well (and which still awe our patients) should be searched over with an up-to-date lantern and for the most part discarded. I have tried to show the worn-out condition of one fact in the storeroom devoted to digestive diseases, although it is centuries old.

Another such, but more recent, is "gastric atony." The gas does not accumulate in the stomach because the walls are too atonic to expel it, but rather because the cardiac and pyloric gates are too tightly shut to permit its escape.

Now a few words as to treatment. Of course we want to relieve this distressing symptom as soon as possible. For this purpose I have used the alkalies (especially the laxative magnesia preparations) with great success. As this condition is so often the result of hyperchlorhydria the alkalies are indicated, and, of course, a suitable diet.

As I have tried to show above, it is not atony, but rather irritation which causes the accumulation of this gas in the stomach, therefore mild irritants or carminatives should not be given. They may temporarily relieve the symptoms (or rather the akali with which the carminative is combined may do so), but in the end would do harm rather than good. Sometimes this symptom is the chief complaint of a nervous patient, and the condition cannot be fully cured until the general health is restored.

To sum up:

1. Slight eructation of air after meals is perfectly normal.
2. True fermentation may be present in stasis, but this is comparatively rare.
3. It is unusual accumulation instead of excessive production of gas in the stomach which gives rise to this annoying symptom commonly called "gas on the stomach."
4. When gas on the stomach annoys a patient he usually is nervous and has too much acid. (Give him alkalies, proper diet and general treatment.)
5. Disease of neighboring organs may cause a full feeling, wrongly interpreted as "gas on the stomach."

Westinghouse Building.

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# GONORRHEA IN GIRLS: TREATMENT OF THREE HUNDRED CASES

LOUISE MORROW, M.D.
AND
OLGA BRIDGMAN, M.D.
GENEVA, ILL.

The average number of commitments per year to the State Training School for Girls in Geneva, Illinois, is 200, and of this number approximately 55 per cent. are infected with gonorrhea at the time of their entrance. This, of course, gives a very large total of cases, and, at the same time, affords an excellent opportunity for trying various treatments and estimating their relative values. The cases of gonorrhea which come to us show all degrees of severity, from the generally mild innocent infections to those virulent and often obstinate cases seen in the prostitute and habitual masturbator.

Immediately, on admission, a thorough physical examination is made of each girl, and a microscopic examination of the vaginal and cervical secretion or discharge. Slides are prepared and stained immediately with methylene-blue. They are then examined and if there is the slightest doubt as to the diagnosis another specimen is prepared and stained by Gram's method, and if morphologically typical Gram-negative diplococci are found in pus-cells the diagnosis of gonorrhea is made and treatment begun at once. Microscopic examinations are made of the discharges of these girls at least once a month, from the time treatment is begun until it is discontinued. Girls are kept under treatment for two months after all of the gonococci have disappeared from the discharges, so that we may be sure that the absence of germs from the slide is not simply accidental. After the discontinuance of the treatment, examinations are made once a month as long as the girls remain in the institution, and written records of the findings are kept.

Several methods of treatment and combinations of various methods have been used with these 300 cases. The majority of cases are subacute or chronic, and the infection is most frequently a cervicitis. A few of the girls have borne children, but they present no special feature except that the infection is a little more obstinate and has a much more marked tendency to extend into the tubes.

In giving the treatment, the speculum is used whenever possible; the work can be done much more thoroughly in this way. The smaller girls, and some of those with an undoubtedly innocent infection, cannot be treated in this manner, and it is these cases which present the greatest difficulty. Formerly these children were treated either with douches, hot saline or containing some antiseptic solution, as potassium permanganate or bichlorid of mercury, or with instillations of argyrol, or a 1 per cent. silver nitrate solution.

Here a word about the use of douches in general will not be out of place. After having used daily douches over long periods of time in many cases, our conclusion is that they are not only useless, but worse than useless. When used as the sole treatment, the infection lasts for many months and in several cases the condition was worse after this treatment than before. When used in connection with other treatments, douches effectually prevent the action of the other medication. The results seem to be the same regardless of what solution has been used in the douche. The little girls and those with innocent infections we now treat with vaccine alone, and except for a thorough daily cleansing of the labia no local treatment is given.

Instillations of argyrol and of 1 per cent. silver nitrate by means of long medicine droppers were not much better than the douches. For example, one 6-year-old child, a virgin, with what was known to be an innocent infection had been treated for sixteen months with semiweekly instillations of 20 per cent. argyrol, after this for fourteen months with similar instillations of 1 per cent. silver nitrate, with no apparent improvement. Five months' use of the gonococcus vaccine caused the germs and the discharge to disappear entirely. For six months no germs could be found at any time and after that there was a mild recurrence which we are now treating with vaccine again. This child is an habitual masturbator. This and other similar cases, in which no effectual local treatment could be used, have demonstrated that for such cases vaccine is by far the best treatment we have at hand.

The local treatment in those cases in which the speculum has been used is a thorough cleansing of the vagina and cervix with a cotton swab, followed by the application of the solution employed. This is repeated twice a week. The solutions made use of at various times have been silver nitrate, 4 per cent. pure ichthyol and silver nitrate, 25 per cent. to the cervix and 10 per cent. to the vagina, followed immediately by an application of petrolatum. The last-mentioned treatment proved too strong for many patients, so for one of the semiweekly applications a paste of iodoform in glycerin, 25 per cent., has been substituted. This last treatment, that is, silver nitrate 25 per cent. to the cervix and 10 per cent. to the vagina once a week, and the iodoform-glycerin application once a week, has proved to be the best of all the methods tried, and is the one used for all cases now under treatment. Silver nitrate, 4 per cent., and pure ichthyol applied to the cervix were found to be practically useless; some cases were treated continuously for two years without the germs being absent at any time from the discharge. Gonococcus vaccine when used alone did not prove entirely satisfactory; there seemed to be a general tendency to a recurrence after the use of the vaccine was discontinued. Vaccine when used in combination with either the 4 per cent. silver nitrate or with pure ichthyol gave the same general results as vaccine used alone, and the same tendency to a recurrence was present.

It might be well to add here that vaccine was used in all of our cases having a joint involvement with most excellent results.

TABLE SHOWING THE RESULTS IN THE TREATMENT OF 300 CASES OF GONORRHEA IN GIRLS

| Treatment Used | No. Cases Treated | Time Required for Germs to Disappear | | |
|---|---|---|---|---|
| | | Least (Months) | Greatest (Months) | Average (Months) |
| 4 per cent. silver nitrate... | 120 | 2 | 24 | 11 |
| Vaccine alone ........... | 17 | 1 | 5 | 4 |
| Vaccine and ichthyol...... | 101 | 1 | 8 | 4 |
| Vaccine and 25 per cent. silver nitrate .......... | 30 | 17/30 | 4 | 2 |
| 25 per cent. silver nitrate. | 32 | 10/30 | 4 | 2 |

In all, 300 cases have been treated in the last three years: 120 with 4 per cent. silver nitrate alone; seventeen with vaccine alone; 101 with a combination of vaccine and a local treatment of pure ichthyol; thirty with a combination of the 25 per cent. silver nitrate and vaccine; and thirty-two with only the strong silver treatment.

When the vaccine is used in combination with the strong silver nitrate (25 per cent.) the results are excellent, and in no case has there been a recurrence while the girl was under observation, this observation being never less than three months and frequently extending into years. Whether this is really a cure and will be permanent it is impossible to say; the chances are that the glands of Bartholin still harbor latent gonococci and that any unusual irritation will cause them to become active. We have, however, no definite and accurate information as to this. In those cases in which a vigorous local treatment alone has been used, the results have been exactly as satisfactory as when this treatment has been combined with the vaccine, and as the use of vaccine is very expensive, this fact is an important one, as it makes a thorough treatment much cheaper and correspondingly more likely to be given.

## CONCLUSIONS

1. For cases in which the speculum can be used, semiweekly treatments, once with 25 per cent. silver nitrate to the cervix and 10 per cent. to the vagina followed by an application of petrolatum, and once by a 25 per cent. paste of iodoform in glycerin have given the best results. This treatment is not improved by the use of gonococcus vaccine.

2. For little girls and in virgins with an innocent infection, local cleanliness and the use of gonococcus vaccine give the best results. Because of the tendency to recurrence of the infection, however, this is not entirely satisfactory.

3. Vaccine is of the greatest use in cases with joint complications. Here it is almost invaluable.

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# ABDOMINAL PAIN AS AN INITIAL SYMPTOM IN TYPHOID, WITH SOME STATISTICS ON ITS CAUSATION

HERBERT SWIFT CARTER, M.D.
Attending Physician, Lincoln Hospital; Assistant Attending Physician, Presbyterian Hospital; Associate in Medicine, Columbia University
NEW YORK

One occasionally hears the statement that typhoid may have abdominal pain as its initial symptom, but I have never seen any amplified discussion of this interesting and important fact, or any definite statement as to the causation of the pain.

It is with this in view that the following report is made on the subject of abdominal pain as an initial symptom, especially with reference to its presence in affections of the gall-bladder, complicating typhoid.

The chief painful complications which may first call attention to the typhoid are: (1) acute catarrhal cholecystitis; (2) typhoid appendicitis; (3) intestinal perforation; (4) simple colic from gaseous distention (unimportant).

## I. CHOLECYSTITIS

In the last 1,815 cases of typhoid occurring in the medical services of the Presbyterian Hospital, between 1897 and 1911, there were twenty-four cases of complicating, acute, catarrhal cholecystitis. In two of these the initial symptom of the typhoid was acute abdominal pain, which, together with two cases occurring in the practice of Dr. E. H. Pershing of Woodmere, L. I., one of which I saw in consultation, made a total of four cases in which pain was the initial symptom.

Before giving the general statistics of the entire series in which the gall-bladder was first involved, it seems worth while to give short case histories of the cases in which pain was the initial symptom.

CASE 1.—P. D., aged 43, was apparently in usual health when he began rather suddenly to have pain referred to right hypochondrium where there was also tenderness. This continued throughout entire course of the typhoid which dated from the onset of the pain. Gall-bladder was only indefinitely made out on account of rigidity of muscles. Liver was enlarged.

CASE 2.—D. K., aged 11, was perfectly well and went swimming; while in the water he was seized with severe abdominal pain in right hypochondrium. He was then ill at home with fever for fifteen days before he was admitted to the hospital. Gall-bladder was not felt. Liver was not enlarged. Pain lasted twenty-three days, severe at first, later less always accompanied by tenderness. Case ran a typical typhoid course.

Case 3.—F. B., aged 21, had been in usual health, but keeping irregular hours for sleeping and eating. He pushed a roller over the tennis court one morning and on his way to the house, directly after, was seized with severe abdominal pain which was referred to left anterior lumbar region and upper abdomen. Pain and exquisite tenderness soon localized over region of liver and gall-bladder; here it persisted throughout a mild typhoid and a relapse. A short period of anuria, followed by urine in which were a few red cells, makes it seem possible that the lumbar pain was due to renal colic. The diagnosis of cholecystitis was first suggested in this case by Dr. Forbes Hawkes. The temperature apparently began only at time of seizure. Gall-bladder and liver were both enlarged and tender. Leukocytes varied from 8,000 to 12,000 per cubic millimeter. The initial symptoms were so severe that a diagnosis of perforating duodenal ulcer was considered.

Case 4.—Reported by Dr. E. H. Pershing. C. S., had been perfectly well when he was suddenly taken with very severe pain in the upper abdomen, was almost in collapse. He was seen by the late Dr. A. J. McCosh in consultation, who first diagnosed acute perforating duodenal ulcer. As some of the symptoms were a little confusing it was decided to wait a few hours before operating. The pain soon localized over gall-bladder and patient went through a typical typhoid course.

All of these patients made a perfect recovery.

The summary of the points of interest about the twenty-six cases of acute cholecystitis occurring in the course of typhoid is as follows:

1. Ages range from 11 to 62 years. Eleven males and thirteen females.
2. No patients gave definite history of previous trouble. One had had a feeling of epigastric fulness after meals, with indigestion and vomiting two months before; another gave the same history sixteen months before. There was no tenderness in either.
3. Sixteen were classed as mild, eight as severe, two as moderate.
4. Pain was the initial symptom in four cases.
5. In the other twenty-two cases the pain with evidence of gall-bladder involvement came on from the seventh to sixty-fifth day of the typhoid. Average on the nineteenth day.
6. The symptoms lasted from two to fifty-four days, most of them for only a few days. i. e., two to four days.
7. In all, the pain was referred to the region of the gall-bladder and in practically all there was local tenderness.
8. In eleven cases the gall-bladder could be definitely palpated, in five it was uncertain and in the remainder it was not palpable.
9. In the eleven positive cases all but two had enlarged and palpable livers as well, apparently a distinct association.
10. There was jaundice in four cases.
11. As to fever, cases in which the cholecystitis came on during the febrile period showed little additional elevation of temperature except in some of the severe cases. Those that developed the complication during convalescence showed a distinct rise, in most of the cases, from 1.5 to 3 F.
12. In nine cases in which the leukocytes were counted when the complication developed during the typhoid, seven showed no change in leukocytosis. Two showed a rise to 10,000 and 20,000, although these were classed as clinically mild cases.
13. Four patients were operated on with the following results:

A. Hydrops with stone in cystic duct. (No previous history of trouble.)

B. Distended gall-bladder and adhesions to stomach. (No previous history of trouble.)

C. Gall-bladder enlarged, not opened.

D. Gall-bladder enlarged, aspirated, no culture made.

Patient A died. The patient in another case died of hemorrhage and showed inflamed gall-bladder with calculi in it.

### II. APPENDICITIS

In this series there were three cases of complicating acute appendicitis, in one case of which the abdominal pain from this cause was the initial symptom. Two other similar cases were reported orally to me by Dr. F. P. Solley, of St. Luke's Hospital, New York, making a total of five cases.

In the five cases of acute appendicitis there were no diagnostic points of especial interest. In three of the cases the inflammation of the appendix was the initial symptom, two of them being operated on. after which they proceeded regularly with their typhoid. The third was milder.

In the other two, one developed acute symptoms on the thirtieth day and the other on the forty-first day of their typhoid, showing that it is an early and late possible complication.

### III. INTESTINAL PERFORATION

In the 1,815 cases of typhoid fever referred to there were twenty-six complicated by perforation of the intestines. In no one of these was the perforation the initial symptom of the disease, although one occasionally finds the statement in text-books that such perforation may be the first recognized symptom, particularly in the ambulatory type. This is undoubtedly true, but of rare occurrence.

66 West Fifty-Fifth Street.

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## NEW OCCLUDING URETERAL CATHETER AND CYSTOSCOPES FOR FUNCTIONAL RENAL TESTS

EDGAR GARCEAU, M.D.
BOSTON

The instruments were devised by me to collect the total output of urine from each kidney during an examination to test the capacity for work of each.

The catheters heretofore employed for this purpose have not been satisfactory. Those with bulbous enlargements at the ureteral end do not always succeed in entering the canal and they do not always completely plug it even when they do enter. Those having a small inflatable rubber balloon at the ureteral end which can be inflated after the catheter is in position are open to the objection that the rubber soon deteriorates.

The commonest method has been to pass, with a cystoscope, two No. 8 French catheters, one on each side, and to trust that there will be no leakage alongside the instrument. Leakage is detected by means of a catheter laid in the bladder. Larger double catheterizing cystoscopes which might take larger catheters are not feasible on account of their size. With a No. 8 French catheter in each ureter leakage alongside the instrument occurs in 48 per cent. of the cases. It amounts to 20 c.c. or less in 21 per cent.; 20 to 50 c.c. in 8 per cent.; 50 to 100 c.c. in 3 per cent., and 100 c.c. or more in 16 per cent. These figures are for the two-hour polyuria test in which the catheters remain *in situ* during that length of time.[1]

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[1] In the sixteen cases in which the leakage was 100 c.c. or more the figures were: 134 c.c., 204 c.c., 107 c.c., 162 c.c., 220 c.c., 250 c.c., 128 c.c., 132 c.c., 312 c.c., 158 c.c., 150 c.c., 180 c.c., 134 c.c., 116 c.c., 208 c.c., 134 c.c.

The importance of collecting the total output of urine from each kidney cannot be overestimated in functional renal examination. If we would deduce anything of value from delicate tests we must have the exact amount. It is sufficient for our purpose if we can be sure that we can collect the total amount from a single kidney, for by laying a catheter in the bladder we shall get the urine from the other side. This will be especially appreciated in those cases in which, from pathologic, anatomic or congenital causes, but one ureter can be catheterized. I have known a single ureter to be catheterized in a case of single kidney; leakage has occurred alongside the catheter; the urine found in the bladder was taken for urine from the opposite kidney; the only kidney was removed and the patient promptly died.

The catheter devised by me[2] has a length of 90 cm. It has a caliber of No. 11 French at its outer end and this caliber is maintained to within 20 cm. of the opposite end. From this point it tapers gradually and progressively to the tip of the instrument where it has a caliber of only No. 6 French. This end is open and has a flute tip; below the tip there are two additional openings through which urine may enter. It is easy to see that, once introduced, the catheter fits into the ureter exactly like a conical cork into the neck of a bottle and completely plugs the canal, so that all the urine coming from the kidney must go through the instrument. A catheter laid in the bladder collects the urine from the opposite side. There are three more decided advantages attained by the use of this catheter: 1. The capacity of the renal pelvis may be exactly determined by injecting measured liquid into it through the catheter. 2. Strictures of the lower end of the ureter may be safely and easily dilated. 3. A rapid diagnosis of the following conditions can be made: (a) solitary kidney, (b) kidney inactive from former disease, (c) blocked ureter. Solitary kidney is diagnosed by finding urine on the catheterized side and none in the bladder; we should expect no history of renal pain or other symptoms on the side in question; we should also not be surprised at a smooth bladder without an opening in the spot where normally the ureteral orifice is found. A kidney, inactive and non-secreting, is diagnosed by the previous history. If the patient has had renal pain, if there has been tumor, and especially if there has been abundant pyuria in former times, we may diagnose some suppurative process, very commonly tuberculosis, which has gradually destroyed the kidney and has rendered it inactive. Blocked ureter may be of the acute or the chronic variety. The active form is usually due to stone. Here the fulminating symptoms, colic, general disturbance and local tenderness leave no doubt as to the diagnosis. In the chronic form, also generally due to stone, the *x*-ray will be of assistance; also a history of previous pain in the kidney, together with other localizing symptoms.

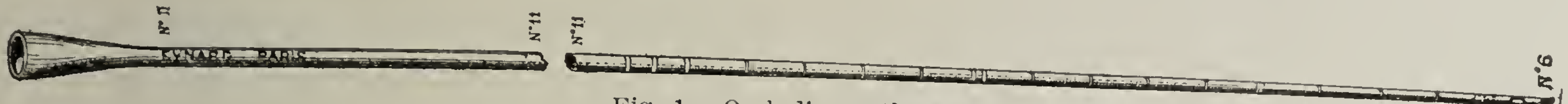

Fig. 1.—Occluding catheter.

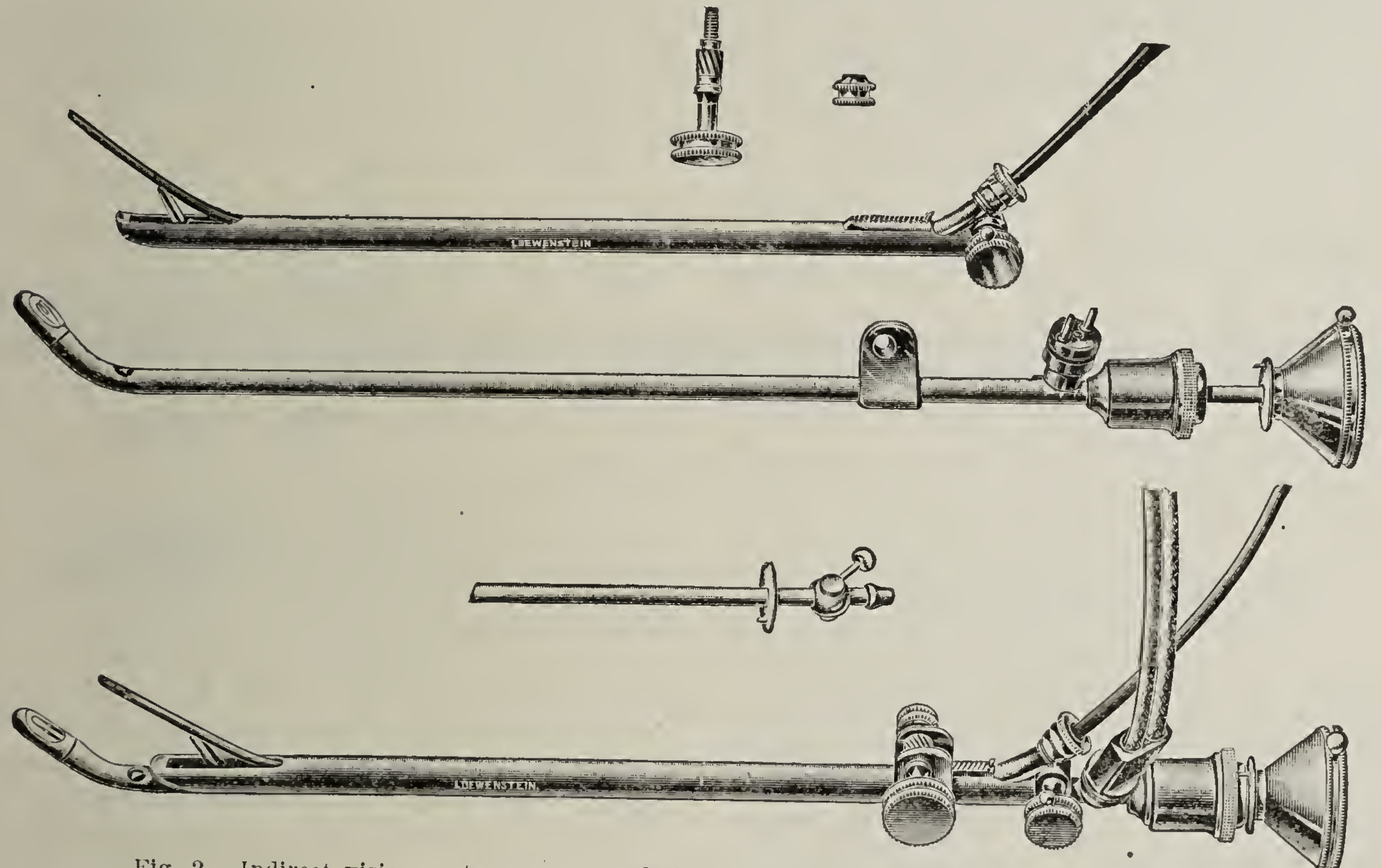

Fig. 2.—Indirect vision cystoscope, as made by L. and H. Loewenstein of Berlin, Germany.

When the occlusive catheter was first devised it was thought that it could be advantageously used by adopting Albarran's method of first introducing into the ureter a small flexible whalebone bougie, and subsequently slipping the catheter over this as a guide after removing the cystoscope. In my experience this was not satisfactory for the reason that it was not possible to see what was going on in the bladder; the catheter would not enter the ureter and buckling occurred; there was consequently danger of lacerating the mouth of the ureter. This scheme was abandoned and it was thought best to devise special instruments to take the No. 11 French occlusive catheter.

The first instrument was made by Collin, of Paris.[3] It is nothing more than a Brenner instrument slightly modified by me. The catheterizing tube is made to take a No. 13 French catheter and it is further modified by having a smaller beak and a removable elbow at the ocular end of the catheterizing tube which serves to deflect the catheter as it enters the lumen. In the original Brenner model the catheter tube is straight and this brings the catheter close to the face as it is being introduced. With my instrument, which has a caliber of No. 29 French in one diameter and No. 17 French in the other, or about No. 23 French over all, one can enter practically all urethras, male and female. I have used it with success in both sexes. It is, however, particularly adapted to the female, though it can be used in the male provided there is no abnormality in the bladder such as hypertrophied prostate, etc. It will not prove serviceable in female bladders in which there is pronounced relaxed outlet with cystocele. It is easy of introduction and catheterization is very simple.

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[2] See Boston Med. and Surg. Jour., 1910, clxii, 745, and Berl. klin. Wchnschr., June 6, 1910, No. 23, p. 1091.

[3] See Presse méd., 1911, No. 10, p. 91.

In order to overcome the objections of the first instrument I devised an indirect vision cystoscope,[4] with which one can catheterize any ureter. The instrument, as shown in Figure 2, consists of two parts, the upper part being the catheterizing apparatus, the lower the optical. The under surface of the catheterizing tube is grooved and the groove fits tightly into the lower optical part when pressed into it. The two pieces together form a single instrument. There is a toothed wheel working on a toothed plate which is soldered onto the catheter tube. By turning this wheel the upper or catheterizing part is made to slide at will on the lower or optical part in either direction.

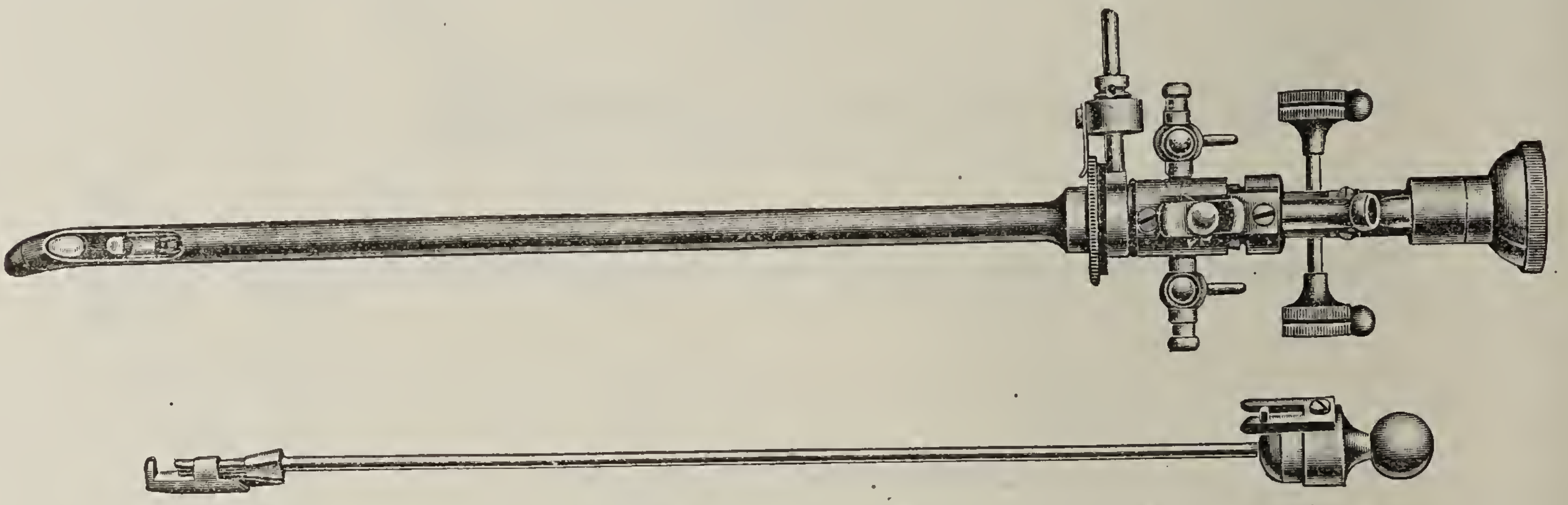
Fig. 3.—Catheterizing cystoscope, as made by the Wappler E. M. Company, New York.

When the instrument is to be introduced into the bladder the upper tube is made to slide by means of the screw toward the beak of the instrument as far as it will go; this makes its introduction into the bladder an easy matter. Once in the bladder, however, the screw is turned in the opposite direction; this causes the upper tube to slide toward the operator, and uncovers the prism in the optical part which is situated near the beak in the usual place. The field of vision is large, there being no obstruction to the rays of light from the sides of the cystoscope, as the whole catheterizing tube slides away from the lens below.

Catheterizing is performed in the usual way, by introducing the catheter into the catheterizing tube, which takes No. 11 French, and by causing the tip of the catheter to be deflected by means of the shutter, which has a separate screw for opening and shutting it, differing not at all from that in the latest models of cystoscopes. If desired, fluid in the bladder can be changed by removing the optical telescope and irrigating through the lower tube. The cystoscope as a whole is of No. 25 French in one diameter and No. 15 French in the other, making it about 20 French over all. It is easy of introduction in any normal urethra, male or female. Cleansing of the instrument is readily done by separating it into its component parts. One of the chief features of the instrument is that when the upper tube or catheterizing apparatus is removed from the optical part, the latter constitutes in itself a complete irrigating examining cystoscope of No. 15 French.

The last instrument to be described is one devised by the Wappler Company to take my catheters. It consists of two parts, an outer sheath, and a catheterizing and optical part combined; the latter fits into the former. The novel features of the instrument are these:

The vesical lens is at the heel of the instrument and not on top as in most indirect cystoscopes; this lens points directly downward toward the base of the bladder; the image is thus an indirect one, but it is made direct by appropriate lenses so that the observer sees the bladder exactly as it is; the shutter which deflects the catheter is likewise situated on the under side of the instrument, at the heel, instead of on top, as it is in most instruments, thus giving a great advantage over other cystoscopes because the catheter does not have to be deflected very much; by a system of rubber caps which fit on the end of the catheterizing tube just below the external ocular, either a single large occlusive catheter of No. 11 French can be introduced, or else two No. 7 French ureteral catheters of the usual design can be introduced, one into each ureter; irrigation is possible with the catheters *in situ*. To manipulate the instrument the catheterizing apparatus is removed from the sheath and an obturator introduced which closes the aperture at the heel. The cystoscope is now passed into the bladder, the obturator withdrawn, and the catheterizing apparatus armed with the catheter introduced. The ureteral opening is found and the catheter shoved into it. The catheterizing piece is now removed from the sheath and a small-sized simple catheter is passed into the bladder through the sheath to collect the urine from the opposite kidney. The sheath is withdrawn, leaving the ureteral and the vesical catheters in place.

I have used this instrument with satisfaction. It will serve to catheterize not only easy ureters, but difficult ones as well. It will be found excellent for prostatic cases, for the shutter will deflect the catheter so that it will enter at any angle. The lenses are such that they will reflect an image even when the object is directly on the vesical lens; it is thus an excellent urethroscope.

In the female there is no difficulty in introducing these catheters directly into the ureter by means of the ordinary tubular cystoscopes such as the Kelly, Pawlik, Garceau, Luys, etc. In the male, however, this is not very feasible.

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[4] Berl. klin. Wchnschr., 1911, xlviii, 716.

I have tested these catheters and cystoscopes in fifteen different cases and have not failed to get the total output of urine from the kidney catheterized in any instance. The method of procedure in these experimental cases was as follows: An occluding ureteral catheter was passed into the ureter by means of one of the cystoscopes described. The catheter was gently and not too forcibly pushed into the lumen so that it fitted snugly in the canal. An ordinary rubber or metal catheter was laid in the bladder after the removal of the cystoscope. I have found it an advantage to have the vesical catheter perforated with many holes at the vesical end so as to collect the vesical urine with greater assurance. In the male a rubber or gum elastic catheter must be used. The catheter remained *in situ* a variable length of time, from a half hour to two hours and a half. In all cases at the conclusion of the test and before the catheter was removed, an injection of indigocarmin in strong solution, in amounts varying from 6 c.c. to 15 c.c., was made up into the kidney, and careful observation made of the ureteral orifice with a cystoscope, in order to see if there was a reflux of colored urine.

There was no reflux in any of the cases except one, and that was in the case of a woman who had had both ureters dilated some time previously for stricture in each. In a subsequent experiment in this same case a No. 11 French catheter was laid in each ureter and a control catheter laid in the bladder; no urine was collected by the control catheter in two and one-half hours, while an equal amount of urine was collected from each side by the ureteral catheters. This experiment shows how severe a test is the indigocarmin test for leakage. A No. 13 French occlusive catheter in one ureter would have given the same result in the case just mentioned, for it would have completely plugged the dilated ureter. In one of the cases there was "golf-hole" ureter due to long continued suppuration in the kidney above. It was the largest "golf-hole" I have even seen. A No. 13 French occlusive catheter completely plugged the ureter and gave the total output of urine from this side. It proved to be the better side, for almost no urine was obtained from the opposite kidney in which there was a large hypernephroma. Previous attempts to lay a catheter in this hypernephromatous side were unsuccessful, owing to an obstruction a few centimeters above the ureteral orifice in the bladder.

### SUMMARY

I may fairly claim the following for the instruments:

1. The cystoscopes will take Nos. 11 and 13 French occlusive catheters.
2. With the No. 11 French occlusive catheter the total output of urine will be collected from one kidney when the ureteral orifice is normal. When the orifice is enlarged the No. 13 French occlusive catheter may be tried.
3. The capacity of the renal pelvis may be measured with accuracy with the catheter, this being the only instrument which will do this unfailingly.
4. It is possible to dilate with the catheter, on account of its conical end, strictures of the lower end of the ureter.
5. It is possible to diagnose with rapidity and ease, (a) solitary kidney, (b) kidney inactive from former disease, (c) blocked ureter.

397 Marlborough Street.

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# MEDICINE AS DEPICTED IN ENGLISH LITERATURE BEFORE THE EIGHTEENTH CENTURY *

MORTIMER FRANK, B.S., M.D.
CHICAGO

The very richness and inexhaustible nature of the literature from which material may be had, the innumerable subjects connected with medicine from which selection may be made, the various ways in which these may be treated have all contributed to render this dissertation one of more than ordinary intricacy.

Perhaps at the beginning a short digression may be permitted so as to review hastily the preparation of English literature preceding Chaucer's time. It was not until the fourteenth century that the language of English literature becomes so like the English of to-day that it can readily be understood. Before that time books were written in different kinds of English which are as strange as a foreign tongue, others in Latin and some in Norman-French. While Chaucer, who lived in the latter half of the fourteenth century, is thought of as the one author beginning this more modern period we must not forget that the literature of England stretches back six hundred years before his time.

Chaucer lived in a period full of interest and change just preceding the Renaissance, when England along with the rest of Europe was beginning to throw off the yoke of medievalism. In the "Canterbury Tales" we have one of the most interesting pictures of life and manners of this time painted in all its breadth and variety. The work is a collection of separate stories, supposed to be told by pilgrims who journey together to the tomb of Thomas à Becket at Canterbury. There rides the knight always honored for his bravery and after him the squire, then the English yeoman and so on until the pilgrim, "Doctour of Phisik," is thus described:

Ther was also a Doctour of Phisik,
In al this worlde was ther non him like
To speke of phisik and of surgerye;
For he was grounded in astronomye.
He kepte his pacient wondrously and wel
In al houres by his magik naturel.
Wel coude he gesse the ascending of the star
Wherein his patientes fortunes settled were.
He knew the cause of every maladye,
Were it of cold, of hete, or moyst, or drye,
And where they engendred, and of what humour;
He was a very parfit practisour.
The cause once knowen and his right measure,
Anon he gaf the syke man his cure.
Ful redy hadde he his apothecaries,
To send him drugges, and electuaries,
For eche of them made the other for to wynne;
Their frendshipe was not newe to begynne.
Wel knew he the old Esculapius,
And Deiscorides, and eek Rufus;
Old Ypocras, Haly, and Galien;
Serapyon, Razis, and Avycen;
Averrois, Damascen, and Constantyn;
Bernard, and Gatisden, and Gilbertyn.
Of his diete mesurable was he,
For it was of no superfluitee,
But of gret norishing and digestible.
His studie was but litel on the Bible.
In blue he clad was al and in sangwyn
Lyned with taffata and silke thin.
And yit he was but esy in dispence;
He kepte that he won in pestilence.

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* Read before the Society of Medical History of Chicago, March 14, 1912.

For gold in phisik is a cordial;
Therefore he loved gold in special.

Chaucer's description of the English physician of the fourteenth century is not at all flattering. According to him he was a man addicted to astrology and magic, which entered very largely into his practice and brought him big fees, glib of speech with abundant assurance, in league with the apothecary to make the most out of his patients, indifferent in religious matters, avaricious to acquire and eager to keep. In his portrait of the "Doctour of Phisik" a good notion of the library of a medieval physician is given. The catalogue is a formidable one showing, if it is to be taken literally, that Chaucer's own knowledge of such literature was, for a layman, not inconsiderable, as we see the Greeks, the Arabians and the moderns or "neoterics" all represented. The closing couplet is a masterpiece of Chaucerian humor and refers to the prescribing of "gold" in sickness in ancient times. In the "Knight's Tale" a knowledge of drugs is shown when Palamonn, a gallant young knight, escapes from a seven years' stay in prison by drugging the jailer:

That soone after the mydnyght, Palamoun
By helpyng of a freend brak his prisoun,
And fleeth the citee fast as he may go,
For he had given drinke his gayler so
Of a spicerie and of a certeyn wyn,
With narcotykes and opie of Thebes fyn,
That al night though that men wolde him shake,
The gayler sleep, he mighte nought awake.

Spicerie was a wine made of spices and herbs used to disguise the taste of drugs. Evidently the gallant knight must have given his jailer a large dose. The opium of Thebes (*opium thebaicum*) was used a great deal in the thirteenth and fourteenth centuries and was prepared from the expressed juice of the poppy-heads. The older property of opium under "meconium" which was still in use consisted of an extract of the whole plant. Later in the tale is related a sharp encounter between two bands of knights:

Al were they sore hurt, and namely one,
That with a spere was pierced his brest bone.
To other woundes, and to-broken armes,
Some hadden salves, and some hadden charmes,
Drugges of herbes and sage the doctours gave
To drinken, for they wolde their lyves save.

The carrying of salves and ointments to battle was always done by the Roman legions and no doubt originated with them. The same thing was done by these valiant knights, although some of them trusted to their charms or amulets. Others relied on the garden herbs and their decoctions. We are here reminded of the supposed healing efficacy of many plants by their popular names. Thus the Druids called the mistletoe "all-heal"; and the common yarrow was formerly termed "knyghton milfoil" and "soldiers-wound wort" because it was supposed to cure the wounds inflicted by a spear. Mention is made of sage as having special healing virtue. Evidently none of these remedies helped the dying knight, not even venesection, for a little farther on we read:

That neither veyne blood, ne any cutting,
Ne drynk of herbes may be his helpyng.

Nothing escapes Chaucer's satire, not even the failure of medicine to cure:

And certeynly where nature wil not wirche,
Farwel phisik; go bere the man to chirche.
This is the end; that Areyte moste dye.

In Chaucer's time belladonna was evidently used as a narcotic. That its properties of producing sleep were known at this period may be gathered from a passage in the "Reeve's Tales":

To bed wente the doughter right anon;
To bedde goth Aleyn, and also Jon,
Ther nas no more, hem neede no dwale.

Dwale was an old name for deadly nightshade and was grown extensively in the monkish herb-gardens of medieval days.

In the "Nonne-Prestes Tale" Chaucer has left a faithful picture of the domestic medicine of the period in the character of Dame Pertilote. He tells us how in his time people took care of their health by attention to diet; how, when people were sick and doctors not handy, nor medicines to be had at the apothecary, the wise women were asked to prescribe and supply the requisite herbs and simples from their own store or garden:

A pore wydow, somewhat stooped in age,
Was whilom duellying in a narrow cotage,
Bisyde a grove, stondying in a dale. . . .
Hir dyet was according to hir cote.
Repletion had made hir never sik;
Ful modest diet was al hir phisik,
And exercise, and labour and singyng.
The goute stayed hir not in hir daunsyng,
The apoplexie shooke not hir heed;
No wyne drank she, neither whit ne reed; . . .
Now, sir, quoth she, whan we flee fro thise beemes,
For Goddis love, tak thou som laxatyf;
On peril of my soule and of my lyf,
I counsel you the best, I wil not lye,
That bothe of coloure, and of malencolye. . . .
Though in this toun is non apotecarie,
I shal myself with herbes phisik you,
That shal be for youre helth I dar avow;
And in oure yerd the herbes shal I fynde,
The whiche have of her proprette by kynde
To purgen you bynethe, and eek above.
Forget not this, for Goddis owne love!
Ye be ful colerik of complexioun.
Beware the sonne in his ascencioun
Finde yow not replet in humours hote;
And if it do, I dar wel lay a grote,
That ye shal have a fever terciane,
Or elles an agu, that may be your bane.
A day or tuo ye shall have digestives
Of wormes, ere ye take your laxatives,
Of lauriol, century, and fumitory,
Or elles of elder berry, that growith thereby,
Of catapus, or of dogwood berrys,
Of yvy in our yerd, that mery is;
Pike hem up right as they growe, and et hem in.
Be mery, housbond, for your fader kyn!
Drede fo dremes; I can say no more.

For many centuries the apothecary got his stock in trade from the country about him, although a few of his compounds were imported from foreign lands. Denunciation of the introduction of foreign drugs was made by many of the early English writers. Conradus Herebachius, in his "Foure Bookes of Husbandry, as newely Englished by Burnaby Googe," sees in it not merely the greed of the merchant man, but the dire necessity of the druggist's shop. He writes:

Nature hath appoynted remedyes in a redynesse for al diseases, but the craft and subteltie of man for gaine hath devised Apothecaries Shoppes, in whiche a man's Lyfe is to be solde and bought, where they fetche their medicines from Hierusalem, and out of Turkie, whyle in ye meane time euery

> poore man hath the ryght remedyes growing in his Garden: for yf men would make theyr Gardens theyr Physitions the physicions craft wold soon decay.

In the villages his place was generally filled by a so-called "wise-woman" with a suspicion of witchcraft, or at least of uncanniness, clinging to her, who made all kinds of potions and infusions from the plants of the field or her own herb-garden. The patient here has consulted this kind of country housewife. He is threatened with fever and she gives him rational treatment by dosing him first with digestives and afterward with laxatives. An infusion of cherry-laurel leaves was an old digestive tonic and centaury, a common plant, was often used. Several of our plant-names have classic associations and this one was called after the centaur Chiron, who was famous for his knowledge of medicinal herbs and who instructed mankind in their uses. Fumitory was used as a tonic and in jaundice and the elder-berry still takes a place in domestic medicine. Catapuce—the old name for spurge—which has a bitter milky juice, was formerly used as a purgative, while gaitre or dog-wood-berries and the herb-ivy were likewise used as laxatives and liver stimulants.

During the fourteenth century the apothecaries were incorporated with the grocers, but it was not until 1617, however, that they formed a distinct company under the control of the College of Physicians. The apothecary was merely a compounder of prescriptions and a vender of drugs. He had no training and his knowledge was gained by experience. How little the public esteemed him can best be judged from the figure he makes in Shakespeare's plays.

During the latter years of the fifteenth century and the early years of the sixteenth there was a universal awakening to important reforms. The practice of medicine was taken out of the hands of the priesthood, especially in England, by the institution of the Royal College of Physicians in London, in 1518. From that time there grew up a distinct profession whose members were compelled to undergo some kind of a preparation for the practice of medicine. If quacks and empirics still abounded, it was the fault of a credulous public who had ample means of detecting the invalidity of their claims. The surgeons in this era formed a distinct class from the physicians. They were incorporated, it is true, with the Barbers' Company, in 1540, but they had no statutory power like the physicians. The latter could by law practice surgery but the surgeon was not allowed to give internal medicines, even to promote the cure of external wounds. The bitter disputes between the physicians and the surgeons lasted for centuries, although gradually the line of demarcation between the two was obliterated. Nevertheless these were the days of the renaissance of arts and science. Great seats of learning had arisen at Bologna, Padua, Pisa, Montpellier, Paris and Naples. Anatomic inquiry made active and vigorous progress and such men as Vesalius, Fallopius, Sylvius and Fabricius became famous. The sixteenth century was a century of epidemics and pestilences and the great plague which swept over England and all Europe left the countries prostrated. In the cities and towns of England and Europe the very elements of sanitary science were unknown or neglected. A most realistic presentation of the visitation of the plague is given in Pepys' diary, the evidence of an eye-witness and a contemporary. The following selections will give some hint of the striking events of this terrible catastrophe:

> June 7th, 1665—The hottest day that ever I felt in my life. This day, much against my will, I did in Drury Lane see two or three houses marked with a red cross upon the doors, and "Lord, have mercy upon us" writ there; which was a sad sight to me, being the first of the kind that to my remembrance I ever saw.
>
> July 19th—Walked to Redriff, where I hear the sickness is, and, indeed, it is scattered almost everywhere. My Lady Carteret did this day give me a bottle of Plague water home with me.

On August 30 he writes:

> I went forth and walked towards Moorfields to see (God forgive my presumption!) whether I could see any dead corpse going to the grave; but, as God would have it, did not. But Lord! how everybody looks, and discourses in the street of death, and nothing else, and few people going up or down, that the town is like a place distressed and forsaken

During the height of the plague, on September 6, by order of the Lord Mayor, great fires were kindled in all the streets, but a heavy rain fell and extinguished them:

> September 6th—To London, and there I saw fires burning in the streets through the whole city, by the Lord Mayor's order. Thence by water to the Duke of Albemarle's (at Whitehall): all the way fires on each side of the Thames: and strange to see in broad daylight, two or three burials upon the Bankside, one at the very heels of another: doubtless all of the Plague; and yet at least forty or fifty people going along with every one of them.

The next day Evelyn notes in his diary:

> September 7th—I went all along the city and suburbs from Kent to St. James's, a dismal passage, and dangerous to see so many coffins exposed in the streets, now thin of people; the shops shut up, and all in mournful silence, as not knowing whose turn it might be next: there perishing nearly 10,000 poor creatures weekly. I went to ye Duke of Albemarle for a Pest-ship, to wait on infected men, who were not a few.

A grimmer picture than his entry of October 16 is difficult to conceive:

> October 16th—Walked to the Tower; but Lord! how empty the streets are and melancholy, so many poor sick people in the streets full of sores; and so many sad stories overheard as I walk,—everybody talking of this dead, and that man sick, and so many in this place, and so many in that. And they tell me that in Westminster, there is never a physician, and but one apothecary left, all being dead: yet there are great hopes of a great decrease this week. God sent it!

Against these pestilences medical science was virtually powerless until some centuries later. While it will be agreed that the sixteenth century was a century of epidemics it was also the century in which the science of medicine made its greatest progress. The pall of superstition was lifted, the world was astir and in Elizabethan England the same new feeling of life is the motive power back of the greatest creative period of her literature.

Without the foregoing summary of the state of medicine in the sixteenth century it would be difficult to form a good conception of what the characters of physician and surgeon mean in the Elizabethan dramas. In the dramas written by Shakespeare and his predecessors the physician and surgeon are often represented.

Elizabethan literature is rich in little treatises on subjects connected with health, diet, remedies or medicine in general. From one of these, the "Book of Simples," by William Bullen, a few specimen passages will suffice to give one an idea of the curious compounds used as therapeutic measures:

> *An Embrocation.*—℞. Of a decoction of mallows, violets, barley, quince seed, lettuce leaves, one pint; of barley meal, two ounces; of oil of violets and roses, of each, an ounce and a half; of butter, one ounce; and then seethe them all together

till they be like a broth, putting thereto at the end four yolks of eggs; and the manner of applying them is with pieces of cloth, dipped in the aforesaid decoction, being actually hot.

*A Precious Water.*—Take nutmegs, the nut called Doronike [doronicum, or Great Leopard's bane], setwall, galangal, mastike, long peper, the bark of pomintron, of mellon, sage, bazel, marjorum, dill, spiknard, wood of aloes, cubebe, cardamon, called graynes of Paradise, lavender, peniroyall, mintes, sweet catamus, germander, mulacampana, rosemary, stichades [stoechas?] and quinance, of each lyke quantity; saffron, an ounce and a half; the bone of a harte's heart grated, cut and stamped; and beate your spyces grossly in a morter. Put in ambergrice and musk, of each half a drachm. Distil this in a simple aqua vita, made with strong ale, or sackeleyes and aniseedes, not in a common styll, but in a serpentine; to tell the virtue of this water against colde, phlegme, dropsy, heaviness of minde, consuming of melancholy, I cannot well at thys present, the excellent virtues thereof are sutch, and also the tyme were too long.

In the "Castle of Helth," by Thomas Elyot, Knight (1541), we may lightly glance at the virtue of venesection:

Concernynge the lettynge of bloudde, these thynges folowynge, wolde be had in contynuall remembraunce, and be afore thought on.—The tyme of the yere must be specially marked. For in the begynnynge of sprynge tyme, it is beste lettynge of bloudde, as Oribasius saythe, and so doth continue, after the opinyon of Arnolde, unto the eyght calendes of June. Ætius affirmeth, that in wynter, or in a colde countrey, or where the persone is of a very colde nature, the veynes shuld not be opened.

Lastly, in an extract from "A Newe Booke entitled the Governement of Healthe . . . reduced into the forme of a dialogue for the better understanding of the unlearned," there is much that is profitable:

*John.* I pray thee, friend Humfrey, what is Physic? . .

*Humfrey.* Hippocrates in his book of Winds or Blasts, sayeth of Physic or Medicine, [that it] is but a putting into the body that which it lacketh, or taking from the body things superfluous. And although our life be short, yet the art of Physic is long, because great numbers of things be in it, and requireth much study, labour and practice; and, first of all, it requireth much contemplation or knowledge, in studying good books, which is called Theorie. Secondly, the very effect of contemplation or study is *practica* or *activa*, which is doing of the things that learning has taught us repairing, amending, or preserving the bodies of men, women, and children, etc.

*John.* It seemeth to be a goodly science.

*Humfrey.* Herodotus saith: they greatly err that call it a science, for it is an excellent art in *doing* of notable things. And Science is but to *know* things.

That Shakespeare was fully acquainted with many of the popular notions prevalent in his day respecting certain diseases and their cures cannot be doubted. His many allusions to drugs and herbs and their uses, to anatomy and surgery is proof that he had read widely in the medical literature of the period. Whether some of this knowledge was gained after his daughter's marriage to John Hall, a physician, would make an interesting subject of inquiry. At all events, he has left many interesting particulars relating to medicine and drugs of bygone times which are very valuable in that they help to illustrate the history of medicine in past centuries. We have already shown that, at the outset, the position of the apothecary was a very humble one. He was simply a vender of drugs, of the properties of which he had but an imperfect knowledge. The description of the poor apothecary of his time in "Romeo and Juliet" testifies to Shakespeare's faithful observation of detail:

*Romeo.* I do remember an apothecary,—
And hereabouts he dwells,—which late I noted
In tatter'd weeds, with overwhelming brows,
Culling of simples; meagre with his looks,
Sharp misery had worn him to the bones:
And in his needy shop a tortoise hung,
An alligator stuff'd, and other skins
Of ill-shap'd fishes; and about his shelves
A beggarly account of empty boxes,
Green earthen pots, bladders, and musty seeds,
Remnants of packthread, and old cakes of roses,
Were thinly scatter'd to make up a show. *Act v., Scene 1.*

Such a man was as ready to sell groceries as drugs to his patients. The stuffed alligator was a part of an apothecary's shop until a recent period. Romeo enters after making considerable noise to rouse the old starved apothecary, and offers a bribe for the poison. He makes little secret of the purpose for which he wants it.

*Romeo.* Come hither, man.—I see that thou art poor:
Hold, there is forty ducats: let me have
A dram of poison; such soon-speeding gear
As will disperse itself through all the veins,
That the life-weary taker may fall dead,
And that the trunk may be discharg'd of breath
As violently, as hasty powder fir'd
Doth hurry from the fatal cannon's womb. *Act v., Scene 1.*

In Romeo's demand for a rapid poison that "will disperse itself through all the veins," the opinion does not seem to exist, as yet, that these rapid poisons could act on the nervous system.

The apothecary's reply:

Such mortal drugs I have; but Mantua's law
Is death to any he that utters them.

would show, on the contrary, that the poet's idea of the law respecting the sale of poisons was a severe one and much in advance of his time. The law in England then as regards the selling of poisons was extremely lax.

The touching for the "king's evil," as described in "Macbeth," was first performed by Edward the Confessor. The "king's evil" was a common name for scrofula in years gone by, because the sovereigns of England were supposed to possess the power of curing it without medicines, save only by touch. The doctor in "Macbeth" represents many famous physicians of the Elizabethan age in the belief that the king possessed this miraculous therapeutic power. Whether this was a true belief, merely politic or ignorance one can hardly say:

*Malcolm.* Comes the king forth, I pray you?
*Doctor.* Ay, Sir: there are a crew of wretched souls
That stay his cure: their malady convinces
The greatest assay of art: but, at his touch,
Such sanctity hath heaven given his hand,
They presently amend.
*Mal.* I thank you, doctor.
*Macduff.* What's the disease he means?
*Mal.* 'Tis called the evil:
A most miraculous work in this good king;
Which often, since my here-remain in England,
I have seen him do. How he solicits heaven,
Himself best knows: but strangely-visited people,
All swoln and ulcerous, pitiful to the eye,
The mere despair of surgery, he cures;
Hanging a golden stamp about their necks,
Put on with holy prayers: and 'tis spoken,
To the succeeding royalty he leaves
The healing benediction. With this strange virtue,
He hath a heavenly gift of prophesy;

And sundry blessings hang about his throne,
That speak him full of grace. *Act iv., Scene 3.*

This reference has nothing to do with the progress of the drama but, no doubt, was intended by Shakespeare as a compliment to King James, who believed himself possessed of Edward's miraculous powers. One of the many forms of medical quackery was the practice of prescribing from the simple inspection of the urine. These charlatans were known as "water-casters" or "piddle-doctors," and by an old statute of the College of Physicians any member of the college was forbidden to give advice by this method until he had also seen the patient. Numerous broadsides and books were written condemning the practice in very strong terms. An allusion to this vulgar error occurs in the "Two Gentlemen of Verona," where reference is made to the urinal through which Speed supposes that all Valentine's symptoms are transparently visible:

*Val.* Are all these things perceived in me?
*Speed.* They are all perceived without ye.
*Val.* Without me they cannot.
*Speed.* Without you? Nay, that's certain, for without you were so simple, none else would: but you are so without these follies, that these follies are within you, and *shine through you like the water in an urinal, that not an eye that sees you but is a physician to comment on your malady.*
*Act ii., Scene 1.*

Shakespeare gives a further reference to it in "2 Henry IV" (Act I. Scene 2), where Falstaff asks the page, "What says the doctor to my water," and again in "Twelfth Night" (Act III, Scene 4), Fabian, alluding to Malvolio, says: "Carry his water to the wise woman." This custom of "water-castings" is of ancient date and arose long before Shakespeare's time from a ban put on the medical vocations of the priesthood which prohibited them from making personal visits to their patients. The expedient of diagnosing and prescribing from simple inspection of the urine was thus resorted to. The present-day method of so-called "absent treatment" of the Christian Scientist goes the "water-caster" one better, for nothing is needed in the way of examination.

Before modern research placed at the service of the physician plants of healing virtue from every quarter of the globe, our forefathers made an immense use of the flora of their own land. The drugs and herbs mentioned by Shakespeare are mostly those cultivated by the housewife in her own garden or obtained from the hedgerows and the banks of streams, marshes, meadows and woodland glades. Her skill and experience were always at the service of her household and of dependants for miles around. The effects of some of these plants were sometimes disastrous to the fools who swallowed them, but the herbs most relied on had no such dangerous properties, and to this day are in use among the few herb-doctors who obtain a scanty livelihood in obscure corners of our cities.

The dialogue in "Cymbeline" between the queen and Cornelius the physician gives evidences of our poet's knowledge on the subject of poisons:

*Queen.* Whiles yet the dew's on ground, gather those flowers;
Make haste; Who has the note of them? . . .
Now, master doctor; have you brought those drugs?
*Cornelius.* Please your highness, ay; here they are, [madam:
But I beseech your grace, (without offence—
My conscience bids me ask:) wherefore you have
Commanded of me these most poisonous compounds,
Which are the movers of a languishing death;
But, though slow, deadly?
*Queen.* I wonder, doctor,
Thou ask'st me such a question: Have I not been
Thy pupil long? Hast thou not learn'd me how
To make perfumes? distil? preserve? yea, so,
That our great king himself doth woo me oft
For my confections? Having thus far proceeded,
(Unless thou think'st me devilish,) is't not meet
That I did amplify my judgment in
Other conclusions? I will try the forces
Of these thy compounds on such creatures as
We count not worth the hanging, (but none human),
To try the vigour of them, and apply
Allayments to their act; and by them gather
Their several virtues and effects.
*Cor.* Your highness
Shall from this practice but make hard your heart:
Besides, the seeing these effects will be
Both noisome and infectious. *Act i., Scene 6.*

The physician distrusts his old pupil and suspecting her wicked intentions gives her a drug which will stupify and dull the senses for a time, but will not prove poisonous.

*Cornelius.* I do not like her. She doth think she has
Strange lingering poisons: I do know her spirit,
And will not trust one of her malice with
A drug of such damn'd nature: Those she has
Will stupify and dull the sense for a while:
Which first, perchance, she'll prove on cats and dogs;
Then afterwards up higher; but there is
No danger in what show of death it makes,
More than the locking up the spirits a time,
To be more fresh, reviving. *Ibid.*

The queen's scientific ideas were in advance of the age she lived in when she states her desire to try the physiologic effects of these deadly compounds on animals; but Cornelius saw through the apparent spirit of research and gave her less powerful drugs.

In the familiar pages from Shakespeare we find Henry IV addressing words of wise counsel to his son, Prince Thomas of Clarence:

*King Henry.* Learn this, Thomas,
And thou shalt prove a shelter to thy friends;
A hoop of gold, to bind thy brothers in;
That the united vessel of their blood,
Mingled with venom of suggestion,
(As, force perforce, the age will pour it in,)
Shall never leak, though it do work as strong
As aconitum, or rash gunpowder. *Act iv., Scene 4.*

Aconitum, or acointe, also known as monk's-hood from the peculiar shape of its blue flowers, and helmet-flower, or wolf's-bane, from its poisonous properties is a familiar plant in an herbaceous border. Its poisonous properties have long been known and the ancients poisoned their arrows with this venomous plant. On account of its rapid and deadly action, Shakespeare compares it to gunpowder. It is probably, too, alluded to in the following passage already quoted from "Romeo and Juliet," where Romeo says:

Let me have
A dram of poison; such soon-spreading gear
As will disperse itself through all the veins,
That the life-weary taker may fall dead,
And that the trunk may be discharg'd of breath
As violently, as hasty powder fir'd
Doth hurry from the fatal cannon's womb. *Act v., Scene 1.*

A plant frequently mentioned in the plays and involved in quite a cloud of myth and fable is mandrake or *mandragora.* The fancied resemblance of its root to the human figure and the accidental circumstance of *man* being the first syllable of the word was responsible for the belief that no one could pull it from the ground without fatal consequences. An inferior degree of animal life was assigned to it and when uprooted it uttered a groan like a human being in pain.

Its virtues as a soporific were well known in early times and an allusion to them is made by Shakespeare in "Antony and Cleopatra," when the latter pathetically says:

> Give me to drink mandragora.
> *Charmian.* Why madam?
> *Cleopatra.* That I might sleep out this great gap of time
> My Antony is away. *Act i., Scene 5.*

In "2 Henry VI" it is supposed to cause death:

> *Suffolk.* Would curses kill as doth the mandrake's groan?
> *Act iii., Scene 2.*

And Juliet speaks of

> shrieks like mandrakes torn out of the earth,
> That living mortals hearing them run mad. *Act iv., Scene 5.*

This penalty was evaded if a string was attached to the root and the other end round a dog's neck and the dog hunted about until the root was extracted. Immediately afterward we are assured the fatal groan would discharge its whole malignity on the dog and the animal died.

The popular superstition as to bleeding dates back many centuries before Shakespeare's day. The doctrine of good and evil days was prevalent in the time of the Anglo-Saxons, and their manuscripts display the attributes of the days of the lunar month as connected with it, influencing either diseases or their remedies. Theodore, Archbishop of Canterbury, taught that "it is very dangerous to let blood on the fourth day of the moon, because both the light of the moon and the tides are on the increase." Hippocrates, in Section 6 of the forty-seventh aphorism, says: "Persons who are benefited by venesection or purging should be bled or purged in the spring."

This curious old tradition is alluded to by King Richard II:

> *King Richard.* Wrath-kindled gentlemen, be rul'd by me;
> Let's purge this choler without letting blood:
> This we prescribe, though no physician;
> Deep malice makes too deep incision;
> Forget, forgive; conclude, and be agreed:
> Our doctors say, this is no month to bleed. *Act i., Scene 1.*

In the sixteenth century bleeding and purging were usually the first therapeutic measures in case of fever and many other diseases. The well-known purgative properties of senna leaves were held in great repute by the old apothecaries. The drug was introduced by the Arabs into Europe about the ninth or tenth century and soon attained a reputable position in medical practice. Macbeth, in speaking to the Scotch physician, asks him:

> What rhubarb, senna, or what purgative drug,
> Would scour the English hence? *Act v., Scene 3.*

The foregoing will suffice to show that Shakespeare was fully acquainted with many of the popular notions of medicine prevalent in his day. It seems almost impossible for a modern mind to realize what was the condition of medical science before Harvey's discovery of the circulation of the blood. The man of science was more or less of an alchemist and the physicians were dealers in charms and love potions. If a man wanted bleeding he went to a barber-surgeon and if he required medicine he consulted an apothecary. The medicine of Shakespeare was the medicine as practiced by the physicians contemporary with him. In short, it was a medicine filled with teachings of Hippocrates, Galen and Paracelsus and not one based on clinical experience and anatomic knowledge.

We can hardly afford the time to dwell on Chapman, Middleton, Massinger and Marlowe, Shakespeare's fellow-playwrights, although there is no dearth of characters representing the medical profession in the plays of these better-known Elizabethan dramatists. Nevertheless, reference must be made to Ben Jonson, who after Shakespeare's death became the most prominent man of letters in England. Unlike Shakespeare, Jonson was not content to show the world of men and women as it actually existed, but thought that the poet's business was to point a moral and reform society and so ridiculed the abuses and fashionable follies of the time.

Mountebanks flourished in England during Jonson's time and in company with their attendant clown or zany, as he was called, traveled about the country in great state. Their chief object, however, was not to provide a free entertainment but to dispose of their nostrums to crowds which the entertainment brought together. Jonson gives a description in his comedy of "Volpone, or The Fox" of one of these itinerant "Merry Andrews," a title derived from the charlatan Andrew Boorde, the physician of Henry VIII. Says Volpone disguised as a quack:

> *Volpone.* Most noble gentlemen, and my worthy patrons! I have nothing to sell, little or nothing to sell. I protest, I, and my six servants, are not able to make this precious liquor, so fast as it is fetched away from my lodging by gentlemen of your city. O, health! health! the blessing of the rich! the riches of the poor! who can buy thee at too dear a rate, since there is no enjoying this world without thee? Be then not so sparing of your purses, honourable gentlemen, as to abridge the natural course of life—for when a humid flux, or catarrh, by the mutability of air, falls from your head into an arm or shoulder, or any other part; take you a ducket, or your chequin of gold, and apply to the place affected: see what good effect it can work. No, no, 'tis this blessed unguento, this rare extraction, that hath only power to disperse all malignant humours, that proceed either of hot, cold, moist, or windy causes— To fortify the most indigest and crude stomach, ay, were it of one that, through extreme weakness, vomited blood, applying only a warm napkin to the place after the unction and fricace;—for the vertigine in the head, putting but a drop into your nostrils, likewise behind the ears; a most sovereign and approvèd remedy; the mal caduco, cramps, convulsions, paralysies, epilepsies, tremor cordia, retired nerves, ill vapours of the spleen, stopping of the liver, the stone, the strangury, hernia ventosa, iliaca passio; stops a dysenteria immediately; easeth the torsion of the small guts; and cures melancholia hypondriaca, being taken and applied, according to my printed receipt. [*Pointing to his bill and his vial.*] For this is the physician, this is the medicine; this counsels, this cures; this gives the direction, this works the effect; and, in sum, both together may be termed an abstract of the theorick and practick in the Æsculapian art. 'Twill cost you eight crowns. And,—Zan Fritada, prithee sing a verse extempore in honour of it.
>
> *Nano sings.*
>
> Had old Hippocrates, or Galen,
> That to their books put med'cines all in,
> But known this secret, they had never
> (Of which they will be guilty ever)
> Been murders of so much paper,
> Or wasted many a hurtless taper;
> No Indian drug had e'er been famed,
> Tobacco, sassafras not named;
> Ne yet of guacum one small stick, sir,

Nor Raymond Lully's great elixir,
Ne had been known the Danish Gronswart,
Or Paracelsus, with his long sword.

*Volpone.* Very many have assayed, like apes, in imitation of that, which is really and essentially in me, to make of this oil; bestowed great cost in furnaces, still, alembecks, continual fires, and preparation of the ingredients (as indeed there goes to it six hundred several simples, besides some quantity of human fat, for the conglutination, which we buy of the anatomists), but when these practioneers come to the last decoction, blow, blow, puff, puff, and all flies in fumo; ha, ha, ha! Poor wretches! And, gentlemen, honourable gentlemen, I will undertake, by virtue of chemical art, out of the honourable hat that covers your head, to extract the four elements; that is to say, the fire, air, water, and earth, and return you your felt without burn or stain. You all know, honourable gentlemen, I never valued this ampulla, or vial, at less than eight crowns; but for this time, I am content to be deprived of it for six; six crowns is the price, and less in courtesy I know you cannot offer me; take it or leave it, howsoever, both it and I am at your service.

*Nano sings.*

You that would last long, list to my song,
Make no more coil, but buy of this oil.
Would you be ever fair and young?
Stout of teeth, and strong of tongue?
Tart of palate? quick of ear?
Sharp of sight? of nostril clear?
Moist of hand? and light of foot?
Or, I will come nearer to 't,
Would you live free from all diseases?
Do the act your mistresses pleases,
Yet fright all ache from your bones?
Here's a med'cine for the nones.

*Volpone.* Well, I am in a humour at this time to make a present of the small quantity my coffer contains; to the rich in courtesy, and to the poor for God's sake. Wherefore now mark: I ask you six crowns; and six crowns, at other times, you have paid me; you shall not give me six crowns, nor five, nor four, nor three, nor two, nor one; nor half a ducat; no, nor a moccinigo. Sixpence it will cost you, or six hundred pound—expect no lower price, for, by the banner of my front, I will not bate a bagatine,—that I will have, only, a pledge of your loves, to carry something from amongst you, to show I am not contemned by your. *Act ii, Scene 1.*

The mountebank doctor of former times with his carriage, his zany and his musicians has long fallen from his former high estate. The quack is still vending his pills to the gullible public, but he does not mount a stage and resembles his predecessors of years ago only in the fluency and volubility of his discourse on the virtues of his pills and plasters.

The English of the Elizabethan age were an eminently unscientific people. The whole structure of medieval thought, resting on magic, alchemy and astronomy, still had a firm hold on them. The universities did little or nothing to instruct in natural philosophy. The common people had nothing but their fancies to help them and they allowed them the license of unbridled freedom. Down to 1500 the belief in magic, alchemy and astrology was almost universal. The medical men, however, labored under special disadvantages. Astrology still remained an integral part of medicine. It was hard to see any great difference in the methods of the regular physicians and those of the quacks. The people did not see it. They do not to-day. The stars and planetary bodies were supposed to have a direct influence, even a casual effect on disease and so among the acquirements of the physicians of the time of Elizabeth a knowledge of astrology was deemed absolutely necessary. The astrologic acquirements of the physician of Jonson's time are referred to by him in his "Staple of News":

The doctor here . . .
When he discourseth of dissection,
Or any point of anatomy; that he tells you
Of vena cava and of vena porta,
The messaricks and the mesenterium:
What does he else but cant? or if he run
To his *Judicial Astrology,*
And trowl the *Trine,* the *Quartile,* and the *Sextile,*
*Platic aspect,* and *Particle,* with his *Hyleg,*
Or *Alchochoden, Cuspes,* and *Horoscope;*
Does not he cant? Who here does understand him?
*Act iv, Scene 4.*

In the early part of the sixteenth century we hear of few alchemists, but in Queen Elizabeth's time England swarmed with them. A change of thought and action was coming over the world, however, and there was a growing tendency for the honest scientific observer to seek elsewhere than in the field of mysticism and to look for gold other than that which material transmutation could give. The foundations of alchemy were crumbling and the attitude of the people toward the alchemical swindlers was shown when the common people took great joy in breaking into the alchemist's house and destroying everything connected with his work.

Ben Jonson's play, "The Alchemist," shows that he had studied the matter thoroughly and was impressed with some of its follies. It is the greatest and most effective satire on alchemy and the maze of swindles connected with it that has ever been written. The principal character, Subtle, the professional quack and alchemist, was probably a prototype of Forman, the famous London quack of Jonson's day, who was engaged in astrology, magic and medicine. Each of these specific pieces of swindling is detailed in the play. Jonson's reference to Subtle's medical qualification is referred to by Mammon the knight:

*Mammon.* He's a rare physician, do him right,
An excellent Paracelsian, and has done
Strange cures with mineral physic. He deals all
With spirits, he; he will not hear a word
Of Galen. *Act ii, Scene 1.*

and again Mammon says he is:

above the art of Æsculapius. *Act iv, Scene 1.*

With these references Jonson shows Subtle's knavery in trying to practice medicine principally by magic and astrology. Forman, when summoned before the College of Physicians, in 1593, boasted he had only studied two books and used no other help to know diseases than the Ephemerides. Withal we must acknowledge that both astrology and alchemy have been of great service to mankind. Without astrology much valuable astronomic forecasting would have been lost; and without alchemy, chemistry and metallurgy would not have been so vigorously developed. In the later sixteenth and early seventeenth centuries discoveries were made which revolutionized science. Gilbert's publication, in 1600, of his discoveries in terrestial magnetism, Napier's (1614) invention of logarithms and, what interests us vastly more, the announcement of the discovery of the circulation of the blood by William Harvey, in his course of lectures at Oxford, though the formal publication of his book did not take place until later. It might be of some interest to know that his treatise "Exercitatio anatomica de motu cordis et sanguinis in animalibus" was published at Frankfort, in 1628. He probably selected that city as the place of publication, because, by means of its celebrated fairs, books were thence distributed rapidly throughout Germany and the greatest part of Europe. It would be incorrect to say that the characteristics of the medicine of the early dramatists are those of Caius, Linacre, Harvey, Vesalius, Fabricius or Paré. The picture presented to us is a composite one. As a class, physicians were ignorant, adhering to superstitions of the past, believers in Hippocratic treatises modified by Galenism with a touch of Paracelsus. In this it is true to life. It is also true that the great Elizabethan glory shed little of its light on medicine and surgery, but ancient error was beginning to give way to growing truth. Science was alive and making rifts in the clouds of medieval thought, as for instance by the anatomy of Vesalius, by the physic of Galileo, by the experimental physiology of Harvey. With the Renaissance and the revival of learning a new medicine was being born. Great names were being written in the Book of Medicine for all time and it is these men rather than the records of drama who must be our guides in critically judging the characteristics of medicine of the past. The past is worthy of study and more so the further we advance, for in this age of hustle and great scientific progress we are apt to forget the inspiration that a study of our older men of medicine would encourage. The lessons of centuries are not to be forgotten, and in the magic of literature one means is at hand of bringing the influence of the past on the present, and as Goethe says:

> In dem Vergangnen lebt das Tüchtige,
> Verewigt sich in schöner That.

31 North State Street.

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# THE ATROPHY OF MUSCLE AND BONE RESULTING FROM JOINT-DISEASE, INJURY AND FIXATION

ROBERT W. LOVETT, M.D.
BOSTON

The disease, injury or fixation of any of the large joints of the body is attended by certain trophic disturbances in the muscles controlling such joints, and in many instances by similar phenomena in the bones composing the joints. That such atrophy of the soft parts accompanies disease and injury of joints has been recognized for a great many years, being alluded to by John Hunter in 1776, Nelaton in 1837, and from that time on occasionally. As to the theory of the cause, whether the atrophy is due to disuse or to some reflex influence or to certain other causes occasionally mentioned has been a good deal discussed without the acceptance of any definite conclusion.[1]

I wish to call attention to the clinical phenomena accompanying the atrophy of muscles associated with joint-injury and fixation, and to the symptoms of bone atrophy occurring under similar conditions; to present typical cases of each and to describe the measures most likely to be of use in their relief. In this connection I am not discussing the muscular atrophy of chronic joint disease.

In all cases of traumatism to the joints, severe enough to result in synovitis and in many others of milder grade, an atrophy of the muscles controlling that joint occurs and frequently persists after the joint itself has become normal.

This matter was discussed by me in a paper published in 1898, under the title of "Local Muscular Weakness as a Cause of Joint-Irritation";[2] papers have also been contributed on the subject by Freiberg[3] and Hoffa,[4] but on the whole the muscular element in joint-injuries has received scant attention.

A patient receives an injury to the knee, we will say, which results in an acute synovitis. This is treated by fixation until the fluid has disappeared, when massage may or may not be given and the splint discontinued. This treatment is the classical one, and generally accepted as, on the whole, the best. Use is then allowed gradually, with the protection of a bandage, massage perhaps being continued. Under these conditions some patients recover wholly in a few weeks, and others do not.

In the latter class the knee continues irritable and painful on use; it feels insecure in walking and may stiffen after sitting. After every extended attempt at use it becomes painful, and the patient rests until it feels better. This process goes on week after week or month after month with varying progress, but with no real gain, and the patient, after trying one physician after another, is likely to be advised to wear an elastic knee-cap.

On examination such a patient shows a leg in which the circulation may be less good than in the other. It is manifestly smaller than the other, and on examination the thigh-muscles of the affected side are flabby and wasted, especially noticeable being the different contour of the two thighs above the knee. The tape measure may show no marked difference, but the tone of the muscles to the touch is very different on the two sides. Lateral mobility of the joint is generally greater on the affected than on the sound side. This is examined for with the knee extended.

The joint itself is not conspicuously swollen; the synovial cavity may appear relaxed as one feels of it, but fluid and conspicuous swelling are absent. The joint may or may not creak on motion. The $x$-ray is negative except that increased radiability of the bone will be noticed in the cases of longer duration. The occurrence of such cases is in my experience very common in adults who have earlier suffered from knee-joint injuries, and in my experience this is the most common cause of chronic disability following traumatic synovitis of the knee. That severer forms of the affection exist has recently been called to my attention by such cases as the following:

Case 1.—A healthy girl of 21 jumped off from a load of hay and injured the left knee in 1904. There was considerable swelling with ecchymosis, and the patient was on crutches for a month. She wore a bandage for a year, and was occasionally laid up for a few days by twisting the knee during this time. In 1908, four years later, an elastic knee-cap was advised and worn for six months, when the pain became worse, and she was treated by Bier's passive congestion. The knee then seemed better for the next year, but in March 1910, she twisted it coming down stairs, and this time Bier's treatment gave no relief. In June, 1910, an $x$-ray was negative, but pain was severe, and she had $x$-ray and high-frequency treatments, plaster strapping, and in July, 1910, a plaster-of-Paris cast. This was worn a month or so, and the patient could not walk a block without intense pain fo twenty-four hours. In September, 1910, an $x$-ray showed a spot in the femur which was said to be suspicious but which as seen subsequently in a print, was not convincing. Afte this she received an injection of formaldehyd solution into the joint, and was put up in a plaster-of-Paris cast for ten months and given various drugs. The von Pirquet skin test was positive. In February, 1911, she began on baking, massage and exercises, which she took for six weeks. This made her worse than ever, and mercurial plaster was then tried.

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[1] Mally and Richon: Rev. de Chir., 1905, p. 383; October, 1904. Allen: Arthritic Muscular Atrophy, The Journal A. M. A., Dec. 23, 1911, p. 2053. Park: Tr. Am. Orthop. Assn., September, 1891.

[2] Lovett: Tr. Am. Orthop. Assn., xi, 274.

[3] Freiberg: Am. Jour. Med. Sc., May, 1908.

[4] Hoffa: Berl. klin. Wchnschr., January, 1905.

She consulted me in November, 1911, at which time she was lame and could walk very little, and not at all without pain. The left thigh was extremely wasted and flabby; all contours were lost, and the muscular control was so poor that the muscles of the thigh could be voluntarily "set" only with great difficulty and very feebly. The joint-membrane appeared to be normal, but the lateral mobility in the joint was extreme, and when the knee was extended a slipping and grating occurred which was painful. The *x*-ray was negative except for increased radiability of bone on the affected side. A diagnosis was made of a relaxed knee due to muscular atrophy.

Treatment was begun Nov. 27, 1911; the knee was firmly bandaged with flannel, much walking was forbidden, and massage and vibration were begun, and Thomas heels were put on the boots. In ten days exercises were begun, and were followed by pain for twenty-four hours. Short walks were then prescribed, also followed by severe pain. In six weeks the patient was walking briskly thirty minutes without pain every day, and the lateral mobility had greatly diminished, extension was not painful but still accompanied by grating. Jan. 20, 1912, eight weeks after beginning treatment, the patient went to her home.

Her condition in March, 1912, is as follows: She can walk three miles at a stretch without pain, and in walking on icy pavements the knee feels more secure than for seven years. She can climb steep hills, and sometimes after this the muscles of the leg feel a little stiff.

This case, which was, with one exception, the severest that I have even seen due to muscular atrophy alone, seems to me typical, and had I not had the patient's cooperation to work through a painful period, the results of the treatment would have been no better than those of the former treatment.[5]

But apart from the graver type of the affection just described, mild degrees of the affection are in my experience extremely common in orthopedic practice. Three or four times I have found atrophy of the thigh muscles without history of preceding injury, which has given rise to irritability and discomfort in the knee.

The cases already alluded to belong to the muscular group, and these have been recognized and described, but there is apparently another group of atrophic lesions following joint-injury, inflammation and disease, which are still more severe, and which apparently affect the bone as well as the soft parts. The literature on this division of the subject is fragmentary and comparatively but little known, and clinically few references are made to the condition.

In certain cases following joint-injury, disease or inflammation, an acute atrophy of bone has been noted, beginning as early as the fourth day (Sudeck), but all of the cases coming under my observation have been of weeks' or months' duration. The condition is characterized by an accompanying muscular atrophy and by a swelling of the affected joint. This swelling may become marked, and is accompanied by coldness of the skin with some cyanosis and marked disturbance of circulation in the limb. Impairment of function exists from the beginning, and in the cases of long duration joint-stiffness occurs.

A typical case is the following, the records and *x*-ray plates of which were referred to Dr. R. C. Cabot and myself by a physician and an orthopedic surgeon in another city. As the case has been already reported by Dr. Cabot I reproduce his account of it.[6]

Case 2.—"Some two years ago a rather neurotic young married woman from a western state was staying in the family of a doctor. Her sister was having treatment for foot strain and the two women went to the orthopedist's office together. The well sister fancied she felt some discomfort in her foot, too. An *x*-ray of the foot was taken, which disclosed on the end of one of the metatarsal bones a pointed spur about one-quarter of an inch long. For the removal of this an operation was undergone. At the time of the operation the surgeon found in the tissues about the affected joint a good deal of edematous fluid and bogginess, which puzzled and more or less alarmed him. The wound was closed, and it gradually transpired later that the spur was never removed. This fact did not add to the patient's confidence in the medical profession. Meantime the fear of tuberculosis had been aroused in the medical attendants, and was thence communicated to the patient's family and ultimately to her. It was not definitely said that the trouble was tuberculosis, but she was given the kind of treatment which her general knowledge of the movements of the day had taught her to associate with that disease. The foot was kept wholly at rest, the patient urged to spend hours each day in the open air and to take a large amount of nourishment. After nearly a year of this sort of treatment the patient was neither better nor worse. No abscess formation or other definite result of tuberculosis had appeared, but the foot was persistently swollen, painful, tender, mottled and discolored with bluish and purplish tints, while at times two or three toes were marble white. At times, also, the patient would run one-half degree or a degree of temperature in the afternoon for two or three weeks. In February, 1909, she consulted a number of noted specialists in internal medicine and in orthopedics, the total result being that she was advised to take a course of treatment by mercury and iodid of potash. About this time some *x*-ray plates were shown to me and to a well-known Boston orthopedic specialist; to both of us a complete history of the case was also submitted. He made a diagnosis of plaster-of-Paris disease in which I concurred; in other words, of a chronic malnutrition of the part, resulting from the abuse of rest and the consequent impairment of circulation in the part. I saw the patient toward the end of February, 1909, and advised her to begin to walk on the foot, and gradually to disregard all the precautions which she had been urged to observe. Within a few weeks the foot was perfectly well and has remained so since."

This report of Dr. Cabot, made in 1909, is rendered more emphatic by his statement made personally that in the spring of 1912 the patient continues perfectly well.

In these cases, on *x*-ray examination the spongy part of the bone casts little or no shadow, and the cortex shows as a clear white line. In the severest cases the cortex is practically all that shows in the plate, the spongy portion being hardly lighter than the soft parts.

Microscopically one finds a diminution in number and thinning of the trabeculæ with thinning of the cortex. In severe cases the weight of the bone is reduced to a third of normal, but the proportion of organic to inorganic matter remains unchanged (Exner).

One of the most typical and severest cases coming under my notice was the following:

Case 3.—In January, 1910, I saw, in consultation with Dr. H. E Sears of Beverly, Mass., a girl of 16, who gave the following history: In October, 1909, or three months previously, while at school she turned while standing at her seat, and at the same time started to sit down. She felt a very severe pain in her left knee, but finished the school session and walked home. At home the knee was found to be swollen. She was seen that night by Dr. Sears; the knee was bandaged and the girl put to bed. She was in bed five weeks with a very painful knee, and at eight weeks massage was begun, but was so painful that it had to be abandoned. A plaster mold was then applied, but it had to be removed in six days on account of pain. A ham splint was substituted, and at this time an *x*-ray showed no bony lesion but an increased radiability of the bone on the affected side.

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[5] Wolf: Ueber troph. Störungen bei primären Gelenkleiden, Berl. klin. Wchnschr., 1883, Nos. 28 and 29. Kienböck: Ueber akute Knochenatrophie bei Entzündung-Prozessen an der Ext., u. s. w., Wien. med. Wchnschr., 1901, No. 28. Sudeck: Fortschr. a. d. Geb. d. Roentgenstrahlen, iii and v, 277; Ueber die ak. entz. Knochenatrophie, Arch. f. klin. Chir., i, 62. Exner: Beiträge zur Kenntniss der akuten Knochen-Atrophie, Fortschr. a. d. Gebiete d. Roentgenstrahlen, 1902, vi, 1.

[6] Cabot: The Use and Abuse of Rest in Therapeutics, Old Dominion Jour. Med. and Surg., 1909, ix, 5

When I saw the girl the knee was practically stiff, allowing perhaps 5 degrees of motion to show that it was not firmly ankylosed. The knee, leg and foot were greatly swollen, the color of the leg bluish and the skin cold. The knee was exquisitely sensitive to touch and to attempted flexion. The tissues about the knee were dense and infiltrated. The case was carefully discussed by us, and the only diagnosis which I was able to make, and of which I was by no means sure, was that of bone atrophy following an injury to the knee. Passive congestion, graduated use and massage were advised.

In May, 1910, I saw her again with Dr. Sears, and we found that the condition, although somewhat better, had not appreciably improved, and the girl came to Boston for treatment. At this time the symptoms were much the same as those in January. The *x*-ray showed the bones of the knee-joint greatly atrophied, with almost no shadow cast by the spongy tissue, and the cortex showing as a clear sharply-defined line. Treatment to restore the circulation was begun May 25, 1910, by electric light, gentle massage, etc., and gentle bending was begun. The Achilles tendon, which had shortened, was stretched, and crutches were gradually discontinued. In two weeks the knee could be flexed to 45 degrees, and she could walk with one crutch. On June 16, 1910, she went home with directions for exercises to be done, and on July 28, 1910, she wrote that the pain had gone, that she limped very little, that the swelling was diminishing, and that she walked without cane or crutch.

In March, 1912, Dr. Sears reported that the patient walks with no limp, climbs stairs, dances, etc. The knee motion is free except on extreme flexion, and no pain is felt except on overfatigue. There is still slight enlargement of the whole leg, but the same size of boot can be worn on the two feet.

This case, which was the severest that I have seen, recalled to me several cases occurring in the past in which I suspect that I had failed to recognize the true condition; and, indeed, before the use of the *x*-ray it would have been difficult to obtain any confirmation of suspicions of bone atrophy if one had had them. I recall particularly the following case some years ago.

CASE 4.—A boy at the clinic of the Children's Hospital received some injury to his ankle, the progress of which became so slow and resistant that we concluded that tuberculosis was present from the swelling, tenderness and limitation of motion which had existed for months. Plaster-of-Paris was applied, and he was given the usual treatment for months. Finally it was suspected that it might not be tuberculosis, and the plaster was removed. The patient became immediately worse, and the plaster was reapplied. Again the case was investigated, and the *x*-ray showed so marked an atrophy, with disappearance in the *x*-ray of all spongy structure, that I took the responsibility of removing the plaster, giving up the crutches and starting on massage. After several weeks the boy had improved so much that he was walking without assistance, the swelling was less, and the pain had improved. He disappeared from observation when his family moved away, and I have never been able to trace him.

But difficult as the recognition of this condition of bone atrophy may be when existing by itself, it may become exceedingly difficult to separate from other conditions with which it may be associated, as for example in the following:

CASE 5.—In January, 1911, a woman consulted me with a tender and swollen foot which had troubled her for two or three years. In the metatarsus was a tender lump with much swelling of the foot. The *x*-ray showed a thickening of the fourth metatarsal, suggesting osteomyelitis. A plaster-of-Paris bandage was applied and crutches ordered. A month later another *x*-ray showed more marked disease in the metatarsal, and in February I resected the distal two-thirds of the fourth metatarsal bone. The wound healed well, and Feb. 24, 1911, the patient was discharged to her home in Maine. The pathologic examination of the specimen showed chronic osteomyelitis.

In October, 1911 (eight months later), the patient reappeared with much the same symptoms as formerly. There was much pain; the foot was greatly swollen and dusky, and she could not walk except leaning heavily on crutches. I supposed, of course, that the osteomyelitis had extended or returned, and took an *x*-ray. This showed each of the metatarsals apparently healthy, with apparently normal remains of the fourth, but such extreme diminution of shadow in the whole fore portion of the foot that the *x*-ray consisted only of lines of cortex, the spongy tissue throwing no more shadow than the soft parts.

The patient was started on massage, electric light, exercises, etc., and the use of crutches gradually discarded. The tenderness and swelling diminished, and the circulation had improved. After a month of treatment (November, 1911) she was able to wear a boot, walk a short distance without cane or crutches and, after being at home two months, reported that she had improved further but was still lame. That she had enough bone atrophy to account for her pain in the fall of 1911 is clear, but it is of course not proved as yet that this was the whole trouble, although the behavior of the case under the treatment makes it seem likely. The original trouble was of course osteomyelitis.

I am not assuming that these cases of muscle and bone atrophy are not recognized by surgeons, but I am supported by facts in saying that very few cases of the sort are reported, and I am fairly sure that the importance of this factor in connection with joint-injuries is not sufficiently appreciated. With every synovitis, with every fracture, with every arthritis there occurs muscular atrophy, and this muscular atrophy persists after the joint is well in acute cases, and persists as a complicating factor in chronic cases. There is no easier way to improve the condition of a quiescent arthritic joint than to improve the muscles controlling the joint.

We who must use fixation in most cases must not forget that fixation promotes atrophy, and that atrophy must be reckoned with. In this connection I desire to present a letter from Dr. E. H. Nichols, assistant professor of surgical pathology and of surgery in Harvard University. This letter was written in 1908 in response to a request from me for information,[7] and in 1912 Dr. Nichols writes me that he continues to use the same treatment, and has nothing to change in his letter of 1908.

For the acute synovitits of the knee of traumatic origin among the football men at Cambridge the following line of treatment has been used. It must be borne in mind that football men want to get back to playing as soon as possible. Having tried fixation and finding it took about as long to get over the fixation as it did to recover from the injury, the following plan has been tried during the past three years, with better results and shorter convalescence than with fixation:

The man, after acute injury, is carried to his room and put to bed and kept quiet. Alternate hot and cold douches are given three times that night. In most cases the knee is moderately fixed with sheet-wadding compression, outside of which a 4-inch bandage. Next day the man walks to the field with a stiff knee and bandage. Baking is given ten to fifteen minutes. Alternate hot and cold douches at night. As soon as the swelling begins to lessen, massage, not "rubbing," is begun. Man walks with firm bandage. Baking once a day and massage once a day for about a week, then no baking. No playing till effusion and tenderness are gone. Playing begins with bandage without sheet wadding. Weakness lasts about a week after playing begins. I cannot give exact time men are out of the game; the average is about two and a half weeks, I think. No plaster has been used for three years unless rupture of lateral ligaments or obvious semilunar dislocation. No case has recurred on playing.

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[7] St. Paul Med. Jour., February, 1909.

But it is one thing to treat synovitis in college athletes and another thing to treat it in men and women with poor muscles or in middle life, and I am by no means wishing to advocate the abandonment of fixation in acute joint-injury and disease, only to call attention to the inevitable occurrence of muscular atrophy in any event, to insist that prolonged fixation increases it, and to ask that attention be paid to it in after-treatment and after operations on joints.

For example, I have had under treatment recently three patients in whom a slipping semilunar cartilage had been removed without curing the disability, in all of whom muscular weakness and lateral mobility had persisted, resulting in a vulnerable joint easily strained. In one the symptoms were light and rapidly disappeared under muscular development by exercises. In a second, running, skating and games had been abandoned for many months; the knee was insecure and constantly being wrenched in walking. Lateral mobility was very marked, muscular power was poor, but the joint apparently normal. A few weeks of heavy muscular resistive exercises cured the lateral mobility, the muscles became firm and the full use of the joint became possible.

In a third, some months after operation, muscular wasting was excessive; the knee was bandaged and not bent in the little walking that was done, yet the joint membrane was normal, although the patient had given up all activity. After two weeks of massage, vibration, resistive exercises and outdoor walking, the muscular condition had so far improved that the joint could be used normally for a short period daily, and the patient returned home to carry out his exercises; the ultimate condition is not known.

What the condition of these joints was prior to operation I do not know, as I had not seen them until after operation, but it is well to remember that operation will not cure muscular atrophy, and that in chronic knee cases it is always present and is a factor to be remembered.

With regard to bone atrophy, either by itself or complicating other conditions, we should bear it in mind as a competent cause of pain, swelling, stiffness and disability when the *x*-ray shows marked loss of spongy tissue and clear white lines defining the cortex.

As to therapeutics of both conditions, the treatment of the cases described has indicated the measures, in my opinion, most likely to be of use. Rough or excessive massage invariably aggravates symptoms, and overuse causes symptoms so severe that one is tempted to abandon treatment. Massage, heat, passive congestion and active exercises in the smallest possible doses, followed by active progressive use of the joint, are the measures most likely to be of use.

234 Marlborough Street.

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**The Personal Factor in Diagnosis.**—With all our varied instruments of precision, useful as they are, nothing can replace the watchful eye, the alert ear, the tactful finger and the logical mind which correlates the facts obtained through all these avenues of information and so reaches an exact diagnosis.—Keen in Da Costa's "Physical Diagnosis."

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# A SIMPLE BLEEDING-TUBE FOR OBTAINING SPECIMENS FOR THE WASSERMANN REACTION *

ALBERT KEIDEL, M.D.
BALTIMORE

In collecting specimens of blood for complement-fixation reactions it is important to prevent contamination of the serum with certain foreign materials which might vitiate or change the results. In hospitals and laboratories, where the proper instruments and utensils for bleeding the patient and collecting the blood are usually available, such contaminations rarely occur. It is, however, not always possible or convenient to send the patient to a hospital for this purpose and the specimen must be collected at the physician's office or at the patient's home. This is often attended with difficulties, and a poor or worthless specimen is frequently obtained. In other instances there is delay in getting the specimen to the laboratory, which may be situated at a more or less distant point; and, unless the blood and container are sterile, the growth of microorganisms soon renders the specimen unfit for the reaction.

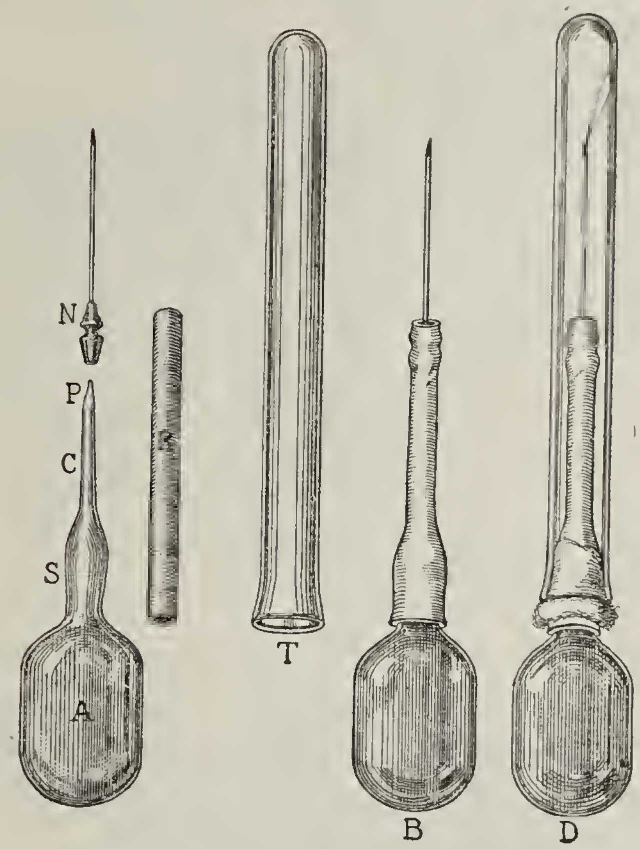

Fig. 1.—*A*, vacuum ampule; *R*, rubber tubing; *N*, needle; *B*, apparatus assembled ready for use; *T*, glass protecting-tube; *D*, assembled for sterilizing. Apparatus marketed by the Steele Glass Company, 622 Locust Street, Philadelphia.

To meet these practical difficulties, and especially to make it as easy as possible for physicians working in their offices to obtain specimens of blood which will give constant and reliable results, the simple bleeding-apparatus here described was devised. Its simplicity may appeal as well, even to those working in laboratories well supplied with the ordinary apparatus.

The essential feature of this apparatus is the substitution of a closed vacuum chamber for the cylinder and piston of the ordinary aspirating syringe. This substitution eliminates all possibility of contamination in collecting the specimen, and makes it possible to ship the specimen in the container in which it was originally collected, without any transfer and sealing whatever.

The apparatus consists of four parts, as shown in Figure 1: An ampule, *A*, of 5 c.c. capacity, with the neck, *S*, drawn out to capillary dimensions at *C*, is exhausted of its containing air and sealed at *P* so as to contain a partial vacuum.

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* From the Genito-Urinary Clinic, Johns Hopkins Hospital.

A short piece of white rubber tubing, *R*, which may be sterilized by dry heat (150 C. for one hour) without melting or charring, is fitted tightly over the neck of the ampule at *S*, and has a lumen sufficiently large to admit the capillary portion of the ampule without being entirely occluded by it.

A needle, *N*, of No. 25 gauge with a special shank is fitted tightly into the free end of the rubber tubing. These three parts are assembled as shown under *B*.

A slender glass tube, *T*, closed at one end and flaring slightly at the other, serves as a protection for the needle which it covers (*D*) when the apparatus is sterilized, fitting loosely over the rubber-covered portion of the ampule at *S*. A thin layer of absorbent cotton is wrapped around the rubber tubing at *S* to prevent adhesion of the rubber to the glass protecting tube, *T*, and the apparatus is sterilized in a hot-air oven at 150 C. for one hour.

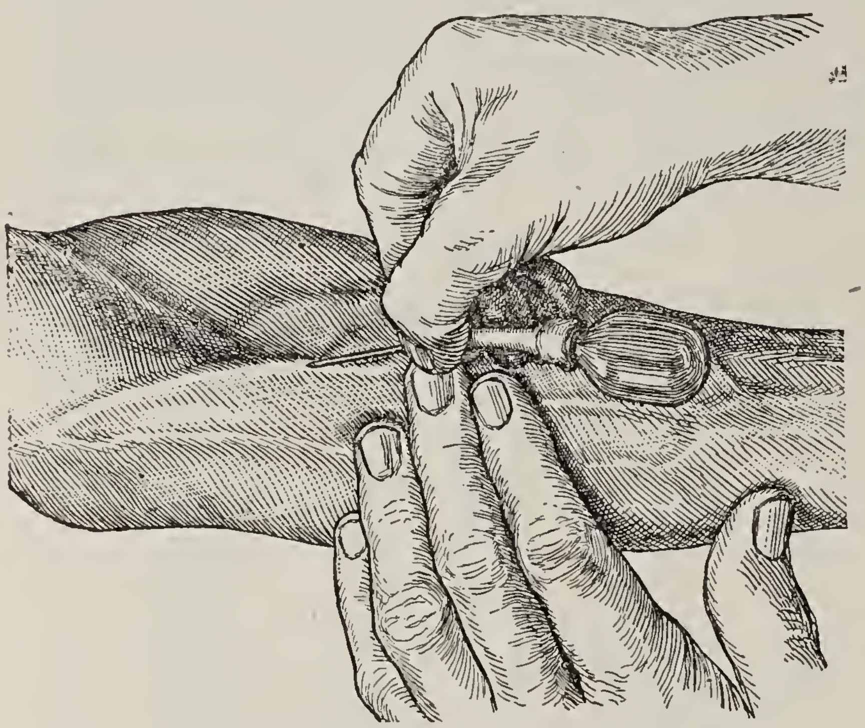
Fig. 2.—Thrusting the needle into the vein, while making traction on the skin to fix the vessel.

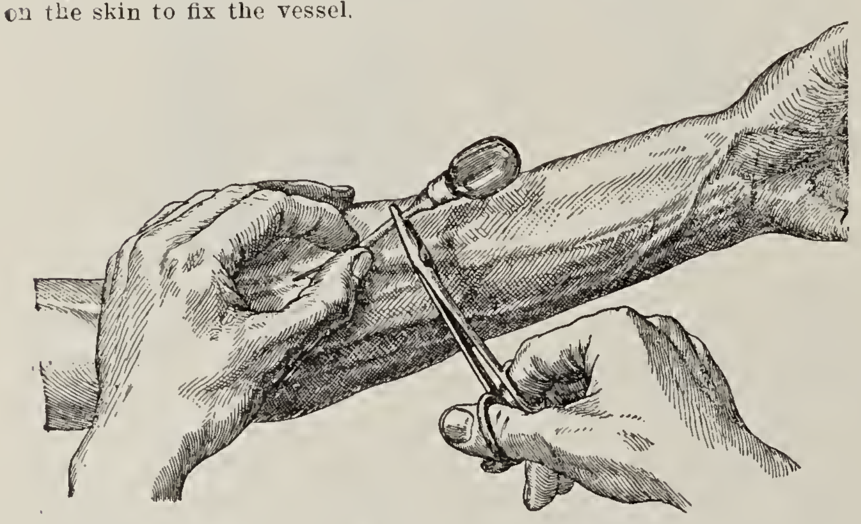
Fig. 3.—Breaking the capillary point, after the point of the needle has been thrust into the lumen of the vein.

To obtain a specimen of blood, select a prominent vein in the forearm and cleanse the overlying skin with soap and water, and alcohol. If necessary, a tourniquet may be applied to the arm above the elbow to make the vein more prominent. Remove the tube, *T*, and grasp the rubber-covered shank of the needle with the thumb and two fingers of the right hand. Thrust the needle obliquely into the lumen of the vein, while making traction on the skin with the left hand to fix the vessel (Fig. 2). After making sure that the point of the needle is in the lumen of the vein and has not pierced the opposite wall, seize the rubber tubing midway between the shank of the needle and the ampule with a pair of hemostatic forceps (Fig. 3) and gently crush the capillary point of the ampule within the rubber tubing.[1] If the vein has been entered, the blood will flow into the ampule until the vacuum has been replaced. Before withdrawing the needle the tourniquet must be loosened to prevent extravasation from the vein.[2] For shipment, the protecting glass tube *T* is replaced, and no further sealing is necessary.

More than 200 of these bleeding-tubes have been used during the past five months, by a number of physicians, and in every instance that I know of they have been an advantage over other methods of obtaining and shipping specimens. Many specimens have been shipped distances of 800 and 1,000 miles, and have arrived at the laboratory in perfect condition. In not a single instance has it been necessary to reject a specimen coming to this laboratory in these tubes, owing to unfitness for the Wassermann reaction. We have in this apparatus all the advantages of an aspirating syringe without its disadvantages. The blood is never exposed to the air until the ampule is opened in the laboratory. No transfer from a syringe to a shipping-tube is necessary. The apparatus provides a quicker, cleaner and more efficient method of bleeding than the simple puncture of an ear or finger. Its application is not limited to the collection of blood for the Wassermann reaction, as any size ampules may be used, and the aspiration of any fluid accomplished under absolutely aseptic conditions. It is easy to sterilize without boiling, is always ready for use, with no parts to get out of order, is simple and easy to operate. It provides an uncontaminated specimen; requires no sealing; and is cheap enough to throw away after using once.

Professional Building.

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# END-RESULTS OF SIXTY-SIX PLATINGS

## REMARKS ON THE TREATMENT OF FRACTURE OF THE LONG PIPE BONES *

EDMUND A. BABLER, M.D.
Visiting Surgeon, City Hospital; Surgeon to Deaconess Hospital
ST. LOUIS

Do the end-results demonstrate that the two principal bugbears of the closed treatment in fracture of the long pipe bones are eliminated by the internal splint, insuring the patient the best possible result without exposing unduly to the dangers of postoperative complications? Shortly after Lane's monograph appeared I saw disaster follow plating in the hands of a few of our best surgeons and I was somewhat reluctant to recommend this form of treatment except in cases of compound fracture with displacement and in cases of non-union. During the past two years, however, several of the surgical members of the visiting staff have done considerable plating at the City Hospital, and in order to determine the practical results of plating in competent hands, I have made strenuous efforts to trace and examine each patient. The findings may be seen in the accompanying table.

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[1] If hemostatic forceps are not at hand, grasp firmly the rubber tubing with the thumb and forefinger of each hand and with a bending motion snap the capillary portion within.

[2] If no blood is obtained at the first attempt, and the operator desires to withdraw the needle for another attempt, the vacuum may be saved by first clamping the rubber tubing close to the shank of the needle with hemostatic forceps.

* From the St. Louis City Hospital.

### COMMENTS ON RESULTS OF PLATING

There were thirteen patients with simple fracture of the femur having sixteen plates applied. One patient had both fractured and both plated. One patient had a fracture plated twice because the first plate broke owing to faulty cast. There was one death from shock following a second plating, and one from sepsis.

Six of the twelve simple and six of the nine compound fractures of the tibia (or tibia and fibula) became infected. One patient died from amputation following sepsis. One patient with fracture of both bones of the leg had both plated. Dr. Heeley writes me that he removed seven other plates from the tibia in the out-clinic department of the City Hospital, and that Drs. Van Wormer and Kissell removed nine plates, all superficial. This would indicate that nineteen of the twenty-one patients with fracture of the tibia, or tibia and fibula, had to have the plates removed, and that nine other plates were removed from superficial bones, e. g., clavicle, radius, ulna and fibula.

TABLE SHOWING END-RESULTS IN SIXTY-ONE CASES OF PLATING

| | Patients | Plated | Infected | Perfect Result | Not Traced | Died |
|---|---|---|---|---|---|---|
| Femur: | | | | | | |
| Simp. | 13 | 16 | 3 | 7 | 2 | 2 |
| Comp. | 0 | 0 | 0 | 0 | 0 | 0 |
| Tibia and Fibula: | | | | | | |
| Simp. | 12 | 12 | 6 | 4 | 6 | 0 |
| Comp. | 9 | 10 | 6 | 4 | 4 | 1 |
| Fibula: | | | | | | |
| Simp. | 6 | 6 | 1 | 2 | 4 | 0 |
| Comp. | 0 | 0 | 0 | 0 | 0 | 0 |
| Clavicle: | | | | | | |
| Simp. | 5 | 5 | 0 | 2 | 2 | 1 |
| Comp. | 1 | 1 | 1 | 0 | 1 | 0 |
| Humerus: | | | | | | |
| Simp. | 11 | 12 | 0 | 5 | 4 | 0 |
| Comp. | 0 | 0 | 0 | 0 | 0 | 0 |
| Radius: | | | | | | |
| Simp. | 2 | 2 | 1 | 1 | 1 | 0 |
| Comp. | 0 | 0 | 0 | 0 | 0 | 0 |
| Ulna: | | | | | | |
| Simp. | 1 | 1 | 0 | 1 | 0 | 0 |
| Comp. | 1 | 1 | 1 | 0 | 1 | 0 |

Of six platings of the fibula, including the one mentioned above, one became infected, two patients had perfect results and four were not traced.

There were five cases of simple and one case of compound fracture of the clavicle. One patient with simple fracture developed a postoperative pneumonia and died; the patient with compound fracture became infected.

Of eleven cases of simple fracture of the humerus, one fracture was replated because of non-union; four patients could not be traced; five had perfect results. One of two simple fractures of the radius and one compound fracture of the ulna became infected.

Thus in sixty cases in which there were sixty-six platings there was one operative death, one death from postoperative pneumonia, and two from sepsis. There were twenty-six perfect results.

### CONCLUSIONS

1. The greatest danger of plating is infection and consequent osteomyelitis.
2. In all platings of compound fracture of the tibia, fibula, radius, ulna and clavicle, we should remove the plate as soon as possible.
3. The plate should never be placed immediately beneath the skin.
4. Plating yields the best results in simple fracture of the humerus and femur, providing every possible precaution is taken to prevent infection.
5. A snugly-fitting cast should be applied immediately after plating. This requires as much attention at the hands of the operator as the plating.
6. Plating is not to be recommended except in cases in which the skiagraph indicates its advisability, since even with the greatest possible precaution infection will occasionally creep in.

### REMARKS ON TREATMENT

The above findings indicate the dangers and limitations of plating, and the need of an absorbable internal splint. Every fracture of the shaft of a long pipe bone should be, if possible, skiagraphed or examined under an anesthetic, since the character and site of the fracture and the degree of displacement are important factors in considering the treatment. I prefer to make a skiagraph both before and after applying splints. I advocate a portable $x$-ray apparatus as a part of the necessary equipment of every hospital.

In simple transverse fracture of the femur in which manipulation under ether fails, I recommend exposure of the fragments and accurate reduction by means of forceps, block and pulley. Apposition splints and a snugly fitting plaster-of-Paris cast are then applied. In my three cases the results have been perfect. In three recent cases of spiral fracture I have used the iron wire with good results. In oblique fracture, and cases of non-union, plating is indicated. In comminuted fracture I rely on the Hodgen splint.

Every attempt is made to avoid plating simple fracture of the tibia. Frequent renewal of the plaster-of-Paris cast will be found efficacious in many cases. This is especially true in comminuted cases. The silver wire does not give satisfactory results in cases of fracture of the tibia. We really need a thin, absorbable plate with two or three screws in the cases of compound fracture, and also in simple fracture of both bones of the leg with considerable displacement.

I seldom or never plate the clavicle. This is also true in fracture of the fibula and of the bones of the forearm. In young women who object to a small operative scar, the usual closed treatment is followed. I have had excellent results in ten cases in which the wire was used.

Plating yields excellent results in all cases of transverse fracture of the humerus, and I recommend this form of treatment when the triangular axillary splint, supplemented with apposition splints and the plaster-of-Paris cast, as shown by the skiagraph, fail. Wiring of the humeral shaft is not satisfactory; plating is preferable in both simple and compound cases providing a small plate is used. In fracture of the neck without dislocation of the head, I prefer wiring.

In fracture of the radius or ulna I rely on the posterior splint or the wire. When both bones of the forearm are fractured I advise wiring. In five cases of fracture of the olecranon process of the ulna I have followed Murphy's technic with excellent results.

### SUMMARY

1. In sixty cases with sixty-six platings there were thirty-five plates removed, twenty-six perfect functionating results: one death was due to postoperative pneumonia, one due to shock following a second plating, and two due to sepsis.
2. Plating yields the best results in cases (a) of non-union; (b) of compound fracture with considerable

displacement, and (c) of simple fracture of the humerus and femur, in which the skiagraph indicates the inefficiency of the closed treatment.

3. Plates should never be placed immediately beneath the skin unless we expect to remove them. I seldom or never plate the clavicle, radius, ulna or fibula, since the absorbable wire is preferable.

4. The character of the fracture and the skiagraph findings indicate the proper treatment in any given case of fracture of the long pipe bones.

5. The possibility of malignant disease following plating is a mooted question.

4826 Delmar Avenue.

## A RARE CASE OF LYMPHATIC LEUKEMIA

CHARLES E. HOLZER, M.D., GALLIPOLIS, O.

The following presents an unusually interesting blood-picture, and since the patient was followed to the autopsy table, the complete study seems worth reporting.

*History.*—The patient was a man 64 years old, grocer, with unimportant family history except that father died of disease which answered description of a leukemia. Two sisters died of tuberculosis at middle age. Previous history was negative; the patient had had no previous illness except usual diseases of childhood. About March, 1910, he noticed a cough which became very persistent, but was not accompanied by expectoration. About the same time he noticed dyspnea on exercise. Both of the foregoing symptoms grew slowly but steadily worse. For two months previous to examination he had had pain at root of neck and difficulty, with some pain, in swallowing. Has been gradually losing weight for about one year, and for past six months has been growing constantly weaker and more exhausted. He was able to work until about two months before death. During the last month before death he showed slight elevation of temperature at irregular intervals, varying between 97.4 and 100.6. During this time he had several times been mildly delirious for a few hours at a time. His appetite was fair, but he would take but little nourishment on account of difficulty of swallowing. There was no disturbance of digestion. Thirst was excessive; bowels constipated. Vision failed during last month of illness. The patient was frequently dizzy and complained much of shortness of breath on slightest exertion and especially when eating or talking. He slept poorly, chiefly because of dyspnea.

*Physical Examination.*—Pale, emaciated, stooped, rather prematurely aged man; color waxy with somewhat of a lemon tinge; dull; slow in responses; at times mentally confused and indefinite as to time and location; memory rather poor; makes an occasional unreasonable statement and also becomes confused as to the names of persons and objects.

Chest: Three glands about size of hazel-nut found in postcervical region. Visible arterial pulsation in cervical vessels and slight pulsation in episternal notch. On percussion, an area of marked dulness found, triangular in shape, the base being a line from middle of clavicle to first interspace on right side, one inch to right of sternal border; one side a line from this point parallel to the sternum to the third interspace, and the other side a line from this point of third interspace to middle of clavicle.

Lungs: Slight dulness found in apex of each lung. Dulness at base of lungs posteriorly on both sides. No respiratory sounds in triangular dull area. Faint tubular breathing at apices of both lungs. Harsh tubular breathing and many coarse râles at bases posteriorly.

Heart: Increase of cardiac dulness chiefly to the right. Apex displaced about one inch to left. Impulse feeble, rhythm irregular. Pulse 90 to 110. Blood-pressure 88. Systolic murmur heard at base on left side, not transmitted, hemic.

Abdomen: Flat, muscles rigid. Several enlarged mesenteric glands detected.

Urine: Clear, acid, specific gravity 1.028. Albumin, a trace. No sugar. Few hyaline, fine and coarsely granular casts.

*X*-ray examination of chest shows deep shadow corresponding to triangular dull area described, also indicates that mediastinal contents have been pushed aside, since the vertebræ are visible at a point where usually they are concealed by mediastinal contents.

Blood Examination: March 11, hemoglobin 14 per cent. (Sahli); reds 1,540,000; whites 10,700; polymorphonuclears 8.5 per cent.; small lymphocytes 4 per cent.; eosinophils 0.2 per cent.; neutrophilic myelocytes 0.6 per cent.

March 17: Hemoglobin 10 per cent. (Sahli); reds 1,090,000; white 20,500; polymorphonuclears 2.2 per cent.; small lymphocytes 93.8 per cent.; large lymphocytes 4 per cent.

*Course.*—Patient gradually grew more stupid and had a low muttering type of delirium. Exhaustion was present to extreme degree and caused death March 19, 1912.

*Autopsy.*—Mass of enlarged glands in mediastinum; lungs show infiltration at the apices of both. A bloody fluid in the pericardium. Liver large, smooth, no nodules. General enlargement of mesenteric glands. Microscopic examination of mediastinal glands showed simple hyperplasia. No evidence of tuberculous infiltration.

Points of interest are:

1. Gland hyperplasia confined to mediastinal and mesenteric glands.
2. Comparatively low white count.
3. High percentage of lymphocytes and correspondingly low percentage of polymorphonuclears. (No case found in literature in which the polymorphonuclear percentage was as low as 2.2 per cent.)
4. Case apparently purely lymphatic, no evidence of the myelogenous type, either enlarged spleen or myelocytes.
5. Absence of all symptoms except local until short time preceding death.

One week before death the patient was referred to Dr. Frank Winders of Columbus, Ohio, whose findings corresponded to the above, and to whom I am indebted for the careful study and report of the blood condition. The case was also seen by my associate, Dr. W. H. Pritchard of Gallipolis, Ohio.

# New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLE HAS BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. ITS ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

**CRESATIN.—Meta-Cresyl Acetate.**—Cresatin is the acetic acid ester, $CH_3C_6H_4.O\ (CH_3CO)$ of meta-cresol, $CH_3C_6H_4.OH$.

The chemical properties of meta-cresyl acetate were studied by C. Panoff in 1903 (*Jour. Russ. Phys. Chem. Ges.*, xxxv, p. 93).

Cresatin occurs as a colorless, oily liquid, possessing a characteristic odor. It is practically insoluble in water, but soluble in the ordinary, organic solvents, miscible with liquid petrolatum, fixed and volatile oils and is volatile with steam.

If 10 Cc. Cresatin be shaken for one minute with 100 Cc. water and filtered through a wet filter, the filtrate should have a neutral reaction, and should not produce a violet color with ferric chloride solution, or produce a turbidity with silver nitrate solution.

If 10 Cc. Cresatin be evaporated it should leave after incineration no weighable residue.

*Actions and Uses.*—Cresatin is said to possess antiseptic and analgesic properties, and is apparently free from toxic effects. It is said to be useful in the treatment of affections of the nose, throat and ear, such as follicular tonsillitis, nasal suppuration due to ethmoidal diseases, atrophic nasopharyngeal catarrhs, furunculosis of the external auditory canal and purulent otitis media. When applied to mucous membranes it is said to cause no irritation, sloughing or discomfort.

*Dosage.*—Cresatin may be employed either in the pure form, or in dilution with oils or alcohol by direct application or spray.

Manufactured by Schieffelin & Co., New York. No U. S. patent. U. S. trademark No. 80,553.

# STATE BOARD STATISTICS FOR 1911

## THE ANNUAL PRESENTATION BY THE COUNCIL ON MEDICAL EDUCATION OF RESULTS OF STATE BOARD EXAMINATIONS

On pages 1584 to 1591 are three tables, A, B and C, giving in detail the results of the various state medical license examinations held during 1911. Complete reports were received from all states.

Tables A and B have been arranged so that, read from left to right, they give the results by colleges, showing the number of graduates appearing for examination in each state, whether they passed or failed, the total number examined during the year, the number who passed, the number who failed, the percentage of failures and the number of states in which graduates of each school appeared for examination. Read from above downward, they give the results by states, showing the number registered and rejected from each college, the total number examined, the total number registered, the total number rejected and the percentage of rejections. The fact that the majority of graduates take the license examination in the state in which the college is located is shown by the dark diagonal zone made by the grouping of figures, passing from the upper left to the lower right corner of each table. This shows also that the states which harbor low-grade medical schools are themselves the recipients of the greater portion of the ill-trained output of such schools. These tables are worthy of much careful study, for many important deductions are possible.

### Caution in Forming Conclusions

In making comparisons on the basis of these statistics several factors should be carefully considered. The number examined is important since, if all other conditions are equal, the larger the number of graduates examined, the more accurate is the finding. But other conditions are seldom equal. The number of states in which a school's graduates have been examined is important. The larger this number the more accurate will be the conclusions. Again, the character of the board making the examination and the methods employed are important factors to be considered, since some boards hold very careful examinations and include practical laboratory and clinical tests, or they may mark the papers more severely, while others, especially partisan boards, may be very lenient. In this connection it should be stated that although conditions are undergoing a steady improvement it is still true that the character of the license examination as usually conducted at the present time is such that graduates of colleges conducted largely by quiz-class methods may easily be successful in passing them. Therefore, the statistics herewith presented should be taken only as part of any investigation of medical schools, although it is an important part.

### Graduates of All Years Examined in 1911

Table A shows the results for all candidates who took examinations in 1911, regardless of the years in which they graduated. This shows that altogether 6,960 were examined last year, as compared with 7,004 in 1910; 7,287 in 1909; 7,770 in 1908, and 7,271 in 1907. Of those examined 19.9 per cent. failed, as compared with 18.4 per cent. in 1910; 19.6 per cent in 1909; 21.7 per cent. in 1908, and 21.3 per cent. in 1907.

There were 119 medical colleges in the United States granting degrees in 1911, which had graduates examined. Foreign graduates were examined in twenty-one states, the total number being 116. The largest number of foreigners examined in any state was forty-three in New York. Graduates of Canadian schools were examined in twenty-seven states, more appearing, naturally, in the border-line states. The figures for the Canadian colleges are given separately in order to show the number of candidates coming from each as well as to show the successes of their graduates at the examinations. Altogether ninety-six candidates from Canadian colleges were examined, of which number twenty or 20.8 per cent. failed. Of all Canadian colleges, the University of Toronto had the largest number examined. The highest percentages of failures were for Laval University, 62.5; Queen's University, 26.7, and Western University, 14.3.

### Undergraduates Examined During 1911

Line 128 of Table A shows the number of non-graduates examined in four states during 1911. Altogether 330 non-graduates were examined, of which number 127 or 38.5 per cent. failed as compared with 45.6 per cent. in 1910. North Carolina is required by an amendment to its practice act to register non-graduates, who are permitted to practice only in the sparsely settled mountain districts. There was an open door for these candidates in 1911 only in Massachusetts, Mississippi, Oregon and Tennessee, and the percentage of failures in these states this year for non-graduates were respectively, 68.6, 46.4, 50.0 and 21.4. The largest number registered was in Tennessee where, out of the 213 candidates registered by examination during the year in that state, 110, or 51.6 per cent., were non-graduates. This is even worse than in 1910 when out of 315 candidates licensed during the year, 142, or 45.1 per cent., were non-graduates. Meanwhile, Tennessee is now the only southern state which has the door wide open for this sort of candidate, Mississippi having recently secured an amendment to its practice act requiring graduation. Note also that in the examination of non-graduates, Tennessee has the lowest percentage of failures.

### Recent Graduates Examined During 1911

Table B gives the results for graduates of 1907 to 1911, inclusive, which were examined during 1911. This table is particularly important, since it deals with recent graduates and is, therefore, the fairest basis for comparison between colleges. The fairest estimate of a medical college from the standpoint of failures at state board examinations would be obtained from this table. Of all candidates examined in 1911, 5,685, or 81.7 per cent., were recent graduates, and of this number 17.2 per cent. failed, as compared with 19.9 per cent. for all candidates. The figures for several medical schools which have ceased to exist either through merger or otherwise have been included in the line for miscellaneous colleges.

### Old Practitioners Examined During 1911

Table C is so arranged as to show in comparison the results for graduates of all years (first column), for recent graduates (second column), the graduates of 1906 and previous years (third column), and the graduates of 1911 (fourth column). Of the graduates of 1906 and previous years, or "old practitioners," 945 were examined and of this number 278, or 29.4 per cent. failed, as compared with 17.2 per cent. of failures for recent graduates. This high percentage of failures is probably due chiefly to the long time these candidates have been out of college and to the fact that they are required to take the same examination as recent graduates. Justice to such candidates, most of whom have already been licensed, but who, for good reasons, may desire to change their locations, is the strongest argument for interstate reciprocity in medical licensure, or for special percentage allowances at the examinations for years of practice. The total number of these candidates will naturally diminish each year as increased reciprocal relations are established, since, as a rule, the states which do not have reciprocal relations with other states (e. g., California, Florida, Washington, see Table L) examined the largest numbers of old practitioners.

### Graduates of 1911 Examined During 1911

Table C also gives the results for the graduates of 1911 who were examined during the year by state boards, and

(Continued on Page 1594)

| Marginal Number | NAME OF COLLEGE | 1 Alabama | | 2 Arizona | | 3 Arkansas | | 4 California | | 5 Colorado | | 6 Connecticut | | 7 Delaware | | 8 District of Columbia | | 9 Florida | | 10 Georgia | | 11 Idaho | | 12 Illinois | | 13 Indiana | | 14 Iowa | | 15 Kansas | | 16 Kentucky | | 17 Louisiana | | 18 Maine | | 19 Maryland | | 20 Massachusetts | | 21 Michigan | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F |
| | ALABAMA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Birmingham Medical College.—R | 20 | 8 | | | | | | | | | | | | | | | 2 | 0 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 2 | University of Alabama, Med. Dept.—R | 41 | 14 | 1 | 0 | | | | | | | | | | | | | 4 | 1 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | |
| | ARKANSAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | College of Physicians and Surgeons.—R | | | 1 | 1 | 15 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | | | | | | | | |
| 4 | University of Arkansas, Med. Dept.—R | | | | | 23 | 1 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 0 | 1 | | | 1 | 1 | | | | | | | | |
| | CALIFORNIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | California Eclectic Med. College.—E | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | College of P. and S., Los Angeles.—R | | | 2 | 0 | | | 8 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | College of P. and S., San Francisco.—R | | | | | | | 13 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Cooper Medical College.—R | | | | | | | 25 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 9 | Hahnemann Medical College of the Pacific.—H | | | | | | | 7 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Oakland College of Medicine and Surgery.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | University of California, Med. Dept.—R | | | 1 | 0 | | | 15 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | |
| | COLORADO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | University of Colorado, Medical Dept.—R | | | | | | | | | 19 | 0 | | | | | | | | | | | 3 | 0 | | | | | | | 1 | 0 | | | | | | | | | | | | |
| | CONNECTICUT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Yale Medical School | | | | | | | | | | | 25 | 1 | | | | | 1 | 0 | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | 1 | 0 | 3 | 0 | | |
| | DISTRICT OF COLUMBIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | George Washington University.—R | | | | | | | 2 | 0 | | | | | 1 | 0 | 11 | 2 | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | 3 | 0 | 1 | 0 | | |
| 15 | Georgetown University, School of Med.—R | 1 | 0 | | | | | 2 | 0 | | | 0 | 1 | | | 4 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | 0 | | |
| 16 | Howard University, Medical Dept.—R | | | | | | | | | | | | | 1 | 0 | 3 | 2 | 1 | 0 | | | | | | | 1 | 0 | | | 1 | 0 | | | 1 | 0 | | | 4 | 1 | 1 | 0 | | |
| | GEORGIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | Atlanta College of Physicians and Surg.—R | 2 | 3 | | | 1 | 0 | 2 | 0 | | | | | | | | | 8 | 4 | 45 | 1 | | | | | | | | | | | | | 2 | 0 | | | | | | | | |
| 18 | Atlanta School of Medicine.—R | 2 | 2 | | | | | | | | | | | | | | | 8 | 1 | 43 | 4 | | | | | | | | | | | | | 0 | 1 | | | | | | | | |
| 19 | Georgia College of Eclectic Med. and S.—E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | Hospital Medical College, Atlanta.—E | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 21 | Medical College of Georgia.—R | 0 | 1 | | | | | | | | | | | | | | | 2 | 1 | 25 | 4 | | | | | | | | | | | | | | | | | 0 | 1 | | | | |
| | ILLINOIS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | Bennett Medical College.—R | | | | | 2 | 0 | 2 | 0 | 0 | 1 | | | | | | | | | | | 1 | 0 | 19 | 16 | 1 | 0 | | | 0 | 1 | | | 1 | 0 | | | | | | | | |
| 23 | Chicago College of Med. and Surg.—R | | | | | 1 | 0 | | | 1 | 0 | | | 1 | 0 | | | 3 | 0 | 1 | 0 | 0 | 1 | 60 | 21 | 3 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 1 | 0 | | | | | | | 1 | |
| 24 | College of Medicine and Surgery.—Ph.M | | | | | | | | | | | | | | | | | | | | | | | 4 | 11 | | | | | | | | | | | | | | | | | | |
| 25 | College of Physicians and Surgeons.—R | | | 1 | 0 | 1 | 0 | 10 | 3 | | | | | | | | | | | | | 4 | 1 | 57 | 20 | | | 3 | 0 | 1 | 0 | | | | | | | | | | | 1 | |
| 26 | Hahnemann Medical College and Hospital.—H | | | 1 | 1 | | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | 13 | 7 | | | 2 | 1 | | | | | | | 1 | 1 | | | | | | |
| 27 | Hering Medical College.—H | | | | | | | 0 | 1 | | | | | | | | | | | | | | | 5 | 3 | | | | | | | | | | | | | | | | | | |
| 28 | Jenner Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | 7 | 8 | | | | | | | | | | | | | | | | | | |
| 29 | National Medical University.—P | | | | | | | | | | | | | | | | | | | | | | | 2 | 4 | | | | | | | | | | | | | | | | | | |
| 30 | Northwestern University, Medical School.—R | | | 3 | 0 | | | 14 | 1 | 1 | 0 | 1 | 0 | | | | | | | | | 4 | 2 | 110 | 14 | 5 | 0 | 8 | 0 | 1 | 0 | | | | | | | | | | | | |
| 31 | Reliance Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | 4 | 5 | | | | | | | | | | | | | | | | | | |
| 32 | Rush Medical College.—R | | | 4 | 0 | | | 19 | 2 | | | | | | | | | 2 | 0 | 1 | 0 | 3 | 0 | 59 | 3 | 2 | 0 | 1 | 0 | 1 | 1 | | | | | | | | | | | 1 | |
| | INDIANA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 33 | Indiana University, School of Medicine.—R | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 0 | 1 | 53 | 2 | | | | | | | | | | | | | | | | |
| | IOWA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34 | Drake University, College of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | 14 | 0 | | | | | | | | | | | | | | |
| 35 | State University of Iowa, College of Med.—R | | | 0 | 1 | | | 2 | 1 | | | | | | | | | | | | | | | | | | | 23 | 0 | | | | | | | | | | | | | | |
| 36 | State University of Iowa, Homeo. Dept.—H | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | |
| | KANSAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 37 | Kansas Medical College.—R | | | | | 1 | 0 | | | | | | | | | | | | | | | 0 | 1 | | | | | | | 10 | 3 | | | | | | | | | | | | |
| 38 | University of Kansas, School of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 16 | 0 | | | | | | | | | | | | |
| | KENTUCKY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39 | Louisville National Medical College.—R | | | | | | | 0 | 1 | | | | | | | | | 0 | 1 | | | | | 0 | 1 | | | | | | | 2 | 3 | | | | | | | | | | |
| 40 | University of Louisville, Medical Dept.—R | 1 | 0 | | | 2 | 3 | 0 | 1 | | | | | | | | | 4 | 1 | | | 1 | 0 | 3 | 2 | 18 | 4 | 1 | 0 | 1 | 1 | 72 | 22 | 3 | 2 | 1 | 0 | | | | | | |
| | LOUISIANA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 41 | Flint Medical College.—R | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 | | | | | | | | |
| 42 | Tulane University, Medical Dept.—R | 14 | 6 | 1 | 0 | 8 | 0 | 1 | 0 | | | | | | | | | 3 | 0 | 1 | 0 | | | | | | | | | | | | | 72 | 0 | | | | | | | | |
| | MAINE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 43 | Medical School of Maine.—R | | | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 13 | 1 | | | 3 | 1 | | |
| | MARYLAND | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44 | Baltimore Medical College.—R | | | 1 | 0 | 1 | 0 | 2 | 0 | | | 6 | 5 | 2 | 0 | | | 2 | 0 | 1 | 0 | | | | | | | | | | | | | | | 4 | 1 | 15 | 3 | 7 | 1 | 1 | |
| 45 | College of Physicians and Surgeons.—R | | | | | | | 1 | 3 | | | 9 | 3 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 17 | 2 | 5 | 1 | | |
| 46 | Johns Hopkins University, Medical Dept.—R | 3 | 0 | | | | | 5 | 0 | | | 5 | 0 | | | 1 | 0 | 1 | 0 | 3 | 0 | | | | | | | | | | | 1 | 0 | | | 1 | 0 | 40 | 2 | 1 | 0 | 3 | |
| 47 | Maryland Medical College.—R | | | | | | | 0 | 1 | | | 0 | 3 | | | | | | | 1 | 4 | | | | | | | 1 | 1 | | | | | 0 | 1 | 3 | 1 | 11 | 13 | 3 | 2 | | |
| 48 | University of Maryland, School of Med.—R | | | | | | | | | | | 0 | 1 | 3 | 0 | | | 5 | 0 | 1 | 0 | | | | | | | | | | | | | | | 1 | 1 | 37 | 8 | 2 | 2 | | |
| | MASSACHUSETTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49 | Boston University School of Medicine.—H | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 3 | 0 | | | 13 | 1 | | |
| 50 | College of Physicians and Surgeons.—R | | | | | | | | | | | 1 | 2 | | | | | 2 | 0 | 1 | 0 | | | | | | | | | | | | | | | 12 | 4 | | | 7 | 11 | | |
| 51 | Harvard Medical School.—R | | | | | | | 5 | 0 | | | 2 | 0 | | | | | | | 1 | 0 | | | 4 | 0 | 1 | 0 | | | | | 1 | 0 | | | 6 | 0 | | | 58 | 3 | 1 | |
| 52 | Tufts College Medical School.—R | 1 | 0 | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | 12 | 0 | | | 54 | 10 | | |
| | MICHIGAN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 53 | Detroit College of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 42 | |
| 54 | Detroit Homeopathic College.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | |
| 55 | Univ. of Mich., Dept. of Med. and Surg.—R | 1 | 0 | 1 | 0 | | | 8 | 1 | | | | | | | 1 | 1 | | | | | 3 | 0 | 3 | 0 | 2 | 0 | | | 1 | 0 | | | | | | | | | 2 | 0 | 50 | |
| 56 | Univ. of Mich., Homeo. College.—H | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 13 | |
| | MINNESOTA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 57 | Univ. of Minn., College of Med. and Surg.—R | | | | | | | 2 | 1 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | |
| 58 | Hamline University, Med. Dept.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MISSISSIPPI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 59 | Mississippi Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MISSOURI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | American Medical College.—E | | | | | 1 | 0 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 61 | Barnes Medical College.—R | 0 | 1 | | | 1 | 2 | 1 | 0 | 0 | 1 | | | | | | | 1 | 0 | 1 | 0 | | | 16 | 11 | | | 1 | 0 | 0 | 1 | | | | | | | | | | | | |
| 62 | Eclectic Medical University, Kansas City.—E | | | | | 11 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 1 | 5 | | | | | | | | | | | | |
| 63 | Ensworth Medical College.—R | | | | | | | 1 | 1 | | | | | | | | | | | | | | | 0 | 1 | | | 1 | 0 | 0 | 1 | | | | | 1 | 0 | | | | | | |
| 64 | Kansas City Hahnemann Med. College.—H | | | | | 5 | 1 | | | 3 | 1 | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 1 | | | | | | | | | | | | |
| 65 | St. Louis University, School of Medicine.—R | | | | | | | 5 | 2 | 1 | 0 | | | | | | | 1 | 0 | | | 1 | 0 | 24 | 4 | | | | | 1 | 1 | | | | | | | | | | | | |
| 66 | St. Louis College of Phys. and Surg.—R | | | | | 1 | 2 | | | 0 | 1 | | | | | 1 | 0 | 0 | 2 | | | 0 | 2 | 1 | 3 | | | | | 0 | 3 | | | 0 | 1 | | | | | | | | |
| 67 | University Medical College, Kansas City.—R | | | 0 | 1 | 2 | 0 | | | | | | | | | | | | | | | | | 0 | 1 | | | | | 7 | 3 | | | | | | | | | | | | |
| 68 | Washington University, Medical Dept.—R | | | 1 | 1 | | | 1 | 0 | | | | | | | | | | | | | | | 11 | 0 | | | | | 1 | 0 | | | | | | | | | | | | |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | | |

R—Regular; H—Homeopathic; E—Eclectic; Ph.M.—Physiomedical; P—Panpathic

# STATE BOARDS DURING 1911

| 22 Minnesota | | 23 Mississippi | | 24 Missouri | | 25 Montana | | 26 Nebraska | | 27 Nevada | | 28 New Hampshire | | 29 New Jersey | | 30 New Mexico | | 31 New York | | 32 North Carolina | | 33 North Dakota | | 34 Ohio | | 35 Oklahoma | | 36 Oregon | | 37 Pennsylvania | | 38 Rhode Island | | 39 South Carolina | | 40 South Dakota | | 41 Tennessee | | 42 Texas | | 43 Utah | | 44 Vermont | | 45 Virginia | | 46 Washington | | 47 West Virginia | | 48 Wisconsin | | 49 Wyoming | | Totals: | Examined—Passed | Examined—Failed | Percentage of Failures | No. States Ex. In | Marginal Number |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | 35 | 26 | 9 | 25.7 | 5 | 1 |
| | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | 69 | 53 | 16 | 23.2 | 9 | 2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 32 | 21 | 11 | 34.4 | 4 | 3 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 3 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 38 | 32 | 6 | 15.8 | 6 | 4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 50.0 | 1 | 5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 12 | 10 | 2 | 16.7 | 2 | 6 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 17 | 13 | 4 | 23.5 | 1 | 7 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 28 | 26 | 2 | 7.1 | 2 | 8 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7 | 7 | 0 | 0. | 1 | 9 |
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| | | | | | | | | | | | | | | | | | | | | 0 | 2 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | 28 | 26 | 2 | 7.1 | 6 | 12 |
| | | | | | | | | | | | | | | | | | | | | 6 | 3 | | | | | | | | | | | 1 | 0 | 3 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 47 | 43 | 4 | 8.5 | 10 | 13 |
| | | | | | | 1 | 0 | | | | | | | | | | | | | 3 | 0 | 1 | 0 | | | | | | | 2 | 0 | | | | | 1 | 0 | | | 1 | 0 | | | | | | | 2 | 0 | 1 | 0 | 1 | 0 | | | | | 35 | 33 | 2 | 5.7 | 16 | 14 |
| | | | | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | 2 | 1 | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | 19 | 16 | 3 | 15.8 | 10 | 15 |
| | | 0 | 1 | 1 | 0 | | | | | | | | | 1 | 0 | | | 2 | 1 | 1 | 0 | | | | | 1 | 1 | | | 3 | 1 | | | 1 | 0 | | | 2 | 0 | 1 | 0 | | | | | 6 | 2 | | | 5 | 0 | | | | | 46 | 37 | 9 | 19.6 | 20 | 16 |
| | | 1 | 1 | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | 1 | 0 | | | | | | | 3 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | | 77 | 67 | 10 | 13.0 | 11 | 17 |
| | | 3 | 1 | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | 68 | 57 | 11 | 16.2 | 7 | 18 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 1 | 0 | 0. | 1 | 19 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | 2 | 0 | 2 | 100.0 | 2 | 20 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 1 | | | | | | | | | | | | | | | | | | | | | 41 | 33 | 8 | 19.5 | 5 | 21 |
| 1 | 0 | | | 1 | 0 | 0 | 1 | | | | | | | | | | | 0 | 1 | | | | | | | 1 | 0 | | | 1 | 0 | | | | | 0 | 2 | | | 0 | 1 | | | | | | | 1 | 2 | | | 5 | 0 | | | 61 | 36 | 25 | 41.0 | 18 | 22 |
| | | | | | | 2 | 0 | | | | | | | | | | | 0 | 1 | 0 | 1 | | | | | 1 | 0 | 0 | 1 | 2 | 0 | | | | | 1 | 0 | | | 2 | 0 | | | | | | | | | | | 1 | 0 | | | 110 | 84 | 26 | 23.6 | 22 | 23 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | 4 | 11 | 73.3 | 1 | 24 |
| 1 | 0 | | | 1 | 0 | 1 | 2 | 2 | 0 | | | | | | | | | 1 | 0 | | | 1 | 0 | | | 2 | 1 | 5 | 1 | 1 | 0 | | | | | 7 | 0 | 1 | 0 | | | 1 | 0 | | | | | 7 | 1 | | | 5 | 0 | | | 143 | 114 | 29 | 20.3 | 22 | 25 |
| | | | | | | | | | | | | | | | | | | 0 | 2 | | | | | | | 1 | 0 | 2 | 1 | 1 | 0 | | | | | 2 | 0 | | | | | 1 | 0 | | | 1 | 1 | 1 | 1 | | | | | | | 43 | 28 | 15 | 35.0 | 14 | 26 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 12 | 8 | 4 | 33.3 | 5 | 27 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 16 | 8 | 8 | 50.0 | 2 | 28 |
| | | 0 | 1 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 | 3 | 5 | 62.5 | 3 | 29 |
| 4 | 0 | | | 1 | 0 | 7 | 1 | | | | | | | | | | | | | | | 2 | 0 | | | 2 | 0 | 7 | 1 | | | | | | | 5 | 0 | 3 | 0 | | | 8 | 0 | | | | | 6 | 1 | | | 11 | 0 | | | 223 | 203 | 20 | 9.0 | 20 | 30 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 4 | 5 | 55.6 | 1 | 31 |
| 4 | 0 | | | 4 | 0 | 2 | 0 | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | 4 | 0 | 5 | 1 | | | 1 | 0 | | | 5 | 0 | | | 1 | 0 | 1 | 0 | | | 1 | 0 | 9 | 4 | | | 3 | 0 | | | 146 | 135 | 11 | 7.5 | 24 | 32 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | 59 | 54 | 5 | 8.5 | 5 | 33 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 | | | | | | | | | | | 0 | 2 | | | | | | | 20 | 17 | 3 | 15.0 | 3 | 34 |
| | | | | | | 1 | 0 | | | | | | | | | | | | | | | 2 | 0 | | | | | 1 | 1 | | | | | | | 3 | 0 | | | | | | | | | | | 2 | 1 | | | | | | | 38 | 34 | 4 | 10.5 | 8 | 35 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 6 | 0 | 0. | 3 | 36 |
| | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 16 | 12 | 4 | 25.0 | 4 | 37 |
| | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 | 19 | 1 | 5.0 | 3 | 38 |
| | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 11 | 4 | 7 | 63.6 | 7 | 39 |
| | | 4 | 2 | 5 | 3 | 0 | 1 | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | 3 | 1 | 0 | 2 | 7 | 5 | | | 3 | 0 | | | 24 | 0 | 5 | 1 | | | | | 1 | 2 | 0 | 2 | 15 | 4 | 2 | 0 | | | 237 | 178 | 59 | 24.8 | 27 | 40 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 2 | 4 | 66.7 | 3 | 41 |
| | | 2 | 1 | | | | | | | | | | | | | | | 0 | 1 | 4 | 0 | | | | | 3 | 0 | | | | | | | 1 | 0 | | | 2 | 0 | 6 | 0 | | | | | | | 1 | 0 | | | | | | | 127 | 119 | 8 | 6.3 | 15 | 42 |
| | | | | | | | | | | | | 1 | 1 | | | | | 2 | 1 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 0 | 1 | | | | | | | 29 | 24 | 5 | 17.2 | 8 | 43 |
| 1 | 0 | | | | | 1 | 1 | | | | | 1 | 1 | 1 | 1 | | | 9 | 1 | | | 1 | 0 | 1 | 0 | | | | | 7 | 0 | 2 | 1 | | | | | | | | | | | | | 2 | 1 | 1 | 1 | 8 | 0 | | | | | 94 | 77 | 17 | 18.1 | 23 | 44 |
| | | | | | | 1 | 0 | | | | | | | 3 | 0 | | | 8 | 2 | 0 | 1 | | | 1 | 0 | | | | | 8 | 1 | 2 | 0 | | | | | | | | | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 13 | 3 | | | | | 91 | 73 | 18 | 19.8 | 18 | 45 |
| | | | | 3 | 0 | | | | | | | | | 3 | 0 | | | 17 | 1 | 1 | 0 | 1 | 0 | 5 | 0 | 1 | 0 | 2 | 0 | 9 | 0 | 1 | 0 | 2 | 0 | | | 1 | 0 | 1 | 0 | | | | | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | | | 119 | 116 | 3 | 2.5 | 28 | 46 |
| | | | | | | | | | | | | 1 | 0 | | | | | | | 1 | 0 | | | | | 0 | 1 | 1 | 0 | 35 | 2 | | | 0 | 1 | | | | | | | | | | | 5 | 7 | | | 10 | 5 | | | | | 114 | 72 | 42 | 36.8 | 16 | 47 |
| | | | | | | | | 1 | 0 | | | | | 4 | 1 | | | 0 | 1 | 11 | 4 | | | | | | | 2 | 0 | 11 | 0 | 2 | 1 | 9 | 0 | | | | | | | | | | | 2 | 1 | 2 | 0 | 1 | 0 | | | | | 114 | 94 | 20 | 17.5 | 18 | 48 |
| 1 | 0 | | | | | | | | | | | 2 | 0 | | | | | 3 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 25 | 24 | 1 | 4.0 | 7 | 49 |
| | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | 42 | 23 | 19 | 45.3 | 7 | 50 |
| 1 | 0 | | | 2 | 0 | | | | | | | 3 | 0 | 4 | 0 | | | 7 | 2 | | | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 7 | 0 | | | | | | | | | | | 2 | 0 | | | 4 | 0 | | | | | | | 120 | 115 | 5 | 4.2 | 22 | 51 |
| | | | | 1 | 0 | | | | | | | 3 | 0 | | | | | 3 | 3 | | | | | | | | | 1 | 0 | | | 3 | 1 | | | | | | | 1 | 0 | | | 1 | 0 | | | 1 | 1 | | | | | | | 98 | 83 | 15 | 15.3 | 12 | 52 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 46 | 45 | 1 | 2.2 | 4 | 53 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | 7 | 6 | 1 | 14.3 | 2 | 54 |
| 1 | 0 | | | 1 | 0 | 4 | 0 | | | 1 | 0 | | | 1 | 1 | | | 1 | 1 | | | 1 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | | | 2 | 0 | | | | | | | | | 1 | 0 | 5 | 2 | 1 | 0 | 1 | 0 | | | 105 | 99 | 6 | 5.7 | 27 | 55 |
| | | | | | | | | | | 1 | 0 | | | | | | | 2 | 0 | | | | | 1 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 21 | 20 | 1 | 4.8 | 7 | 56 |
| 19 | 0 | | | | | 2 | 2 | | | | | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | | | | | | | 6 | 0 | | | | | | | | | | | 6 | 0 | | | | | | | 41 | 38 | 3 | 7.3 | 8 | 57 |
| 10 | 4 | | | | | 4 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 19 | 15 | 4 | 21.1 | 3 | 58 |
| | | 7 | 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | | | | | | | | | | | | | | | | | 27 | 9 | 18 | 66.7 | 2 | 59 |
| | | | | 9 | 3 | | | | | | | | | | | | | | | | | | | | | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 18 | 13 | 5 | 27.8 | 5 | 60 |
| | | | | 24 | 9 | 0 | 1 | | | | | | | | | | | | | | | 1 | 0 | | | 3 | 0 | 1 | 1 | | | | | | | | | 2 | 0 | 1 | 0 | | | | | | | 2 | 1 | | | | | | | 83 | 55 | 28 | 33.7 | 17 | 61 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 19 | 13 | 6 | 31.6 | 4 | 62 |
| | | | | 3 | 3 | | | 8 | 4 | | | | | | | | | | | | | | | | | 2 | 1 | 0 | 1 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 29 | 17 | 12 | 41.4 | 10 | 63 |
| | | | | 4 | 2 | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 | 14 | 6 | 30.0 | 6 | 64 |
| | | | | 35 | 1 | 2 | 0 | | | | | | | | | | | 0 | 1 | | | | | 1 | 0 | 4 | 0 | 1 | 1 | | | | | | | | | | | | | | | | | | | 0 | 1 | | | 1 | 0 | | | 88 | 77 | 11 | 12.5 | 14 | 65 |
| | | 0 | 1 | 13 | 8 | 0 | 1 | 1 | 0 | | | | | 0 | 1 | | | | | | | | | | | 4 | 1 | | | 0 | 1 | | | | | 2 | 0 | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | 52 | 25 | 27 | 51.9 | 18 | 66 |
| | | | | 21 | 4 | 1 | 0 | 2 | 0 | | | | | | | | | | | | | | | | | 4 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | 48 | 38 | 10 | 20.8 | 9 | 67 |
| | | | | 32 | 1 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 3 | 0 | | | 1 | 0 | | | | | 1 | 2 | | | | | | | 56 | 52 | 4 | 7.1 | 9 | 68 |
| 22 | | 23 | | 24 | | 25 | | 26 | | 27 | | 28 | | 29 | | 30 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 | | 39 | | 40 | | 41 | | 42 | | 43 | | 44 | | 45 | | 46 | | 47 | | 48 | | 49 | | | | | | | |

## TABLE A.—PHYSICIANS EXAMINED BY

| Marginal Number | NAME OF COLLEGE | 1 Alabama | | 2 Arizona | | 3 Arkansas | | 4 California | | 5 Colorado | | 6 Connecticut | | 7 Delaware | | 8 District of Columbia | | 9 Florida | | 10 Georgia | | 11 Idaho | | 12 Illinois | | 13 Indiana | | 14 Iowa | | 15 Kansas | | 16 Kentucky | | 17 Louisiana | | 18 Maine | | 19 Maryland | | 20 Massachusetts | | 21 Michigan | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F |
| | NEBRASKA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 69 | John A. Creighton Medical College.—R | | | | | | | | | | | | | | | | | 1 | 0 | 0 | 1 | 2 | 1 | | | | | 4 | 0 | 1 | 0 | | | | | | | | | | | | |
| 70 | Lincoln Medical College.—E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 71 | University of Nebraska, College of Med.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | NEW HAMPSHIRE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 72 | Dartmouth Medical School.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 0 | | | 4 | 0 | | |
| | NEW YORK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 73 | Albany Medical College.—R | | | | | | | 1 | 0 | | | 1 | 0 | | | | | 1 | 0 | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | 3 | 1 | | |
| 74 | Columbia University, Coll. of P. and S.—R | | | | | | | 5 | 1 | | | | | | | | | 2 | 0 | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | 5 | 1 | 1 | 0 |
| 75 | Cornell University Medical College.—R | | | | | | | 3 | 0 | | | 2 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 4 | 0 | | |
| 76 | Eclectic Med. Coll., of City of New York.—E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 77 | Fordham University, School of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | |
| 78 | Long Island College Hospital.—R | | | | | | | 2 | 0 | | | 2 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | 2 | 0 | | |
| 79 | New York Homeo. Med. Coll. and Hosp.—H | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 | New York Med. Coll. and Hosp. for Women.—H | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 81 | Syracuse University, College of Medicine.—R | | | | | | | 2 | 1 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 82 | Univ. and Bellevue Hosp. Med. Coll.—R | | | 3 | 0 | | | 1 | 0 | | | 1 | 0 | | | 1 | 0 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | |
| 83 | University of Buffalo, Medical Dept.—R | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | NORTH CAROLINA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 84 | Leonard School of Medicine.—R | 1 | 1 | | | | | | | | | | | | | | | 2 | 0 | 0 | 4 | | | | | | | | | 1 | 0 | | | | | | | | | | | | |
| 85 | North Carolina Medical College | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | OHIO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 86 | Cleveland College of P. and S.—R | | | | | | | 2 | 1 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | |
| 87 | Cleveland-Pulte Medical College.—H | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 |
| 88 | Eclectic Medical College.—E | | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 0 | 1 | 4 | 1 | | | | | 2 | 0 | | | | | | | | | | |
| 89 | Ohio-Miami Medical College.—R | | | | | | | | | | | | | | | 0 | 1 | | | | | 2 | 0 | | | 4 | 0 | | | | | 2 | 0 | | | | | | | | | | |
| 90 | Starling-Ohio Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | |
| 91 | Toledo Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 92 | Western Reserve University, Med. Dept.—R | | | 2 | 0 | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | OREGON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 93 | Willamette University, Medical Dept.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 94 | University of Oregon, Medical Dept.—R | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PENNSYLVANIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 95 | Hahnemann Medical Coll. and Hosp.—H | | | | | | | 0 | 1 | | | | | 1 | 0 | | | | | | | | | | | | | 3 | 0 | | | | | | | 3 | 0 | 1 | 0 | | | | |
| 96 | Jefferson Medical College.—R | 2 | 0 | | | | | 2 | 0 | | | 3 | 1 | 6 | 0 | 1 | 1 | 1 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 3 | 0 | 1 | 0 | | | | | 1 | 0 | 2 | 0 | 8 | 0 | | | 1 | 0 |
| 97 | Medico-Chirurgical Coll. of Philadelphia.—R | | | | | | | 3 | 0 | 1 | 0 | | | 2 | 0 | | | 1 | 0 | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | 1 | 1 | | | | |
| 98 | Temple University, Medical Dept.—R | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | 2 | 0 | | | | |
| 99 | Univ. of Pennsylvania, Dept. of Med.—R | | | | | | | 8 | 1 | | | 0 | 1 | 2 | 0 | | | 2 | 0 | | | | | 5 | 2 | | | 1 | 0 | | | | | | | 6 | 0 | 6 | 1 | 4 | 0 | 1 | 0 |
| 100 | Univ. of Pittsburgh, School of Medicine.—R | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | |
| 101 | Womans Medical College of Pennsylvania.—R | | | | | | | 3 | 0 | | | | | 1 | 0 | 1 | 0 | | | | | | | 2 | 0 | | | | | | | 1 | 0 | | | | | 10 | 2 | 3 | 0 | | |
| | SOUTH CAROLINA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 102 | Med. Coll. of the State of South Carolina.—R | 1 | 0 | | | | | | | | | | | | | | | 3 | 3 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | |
| | TENNESSEE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 103 | College of Phys. and Surgs., Memphis.—R | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | |
| 104 | Memphis Hospital Medical College.—R | 0 | 7 | | | 9 | 3 | | | | | | | | | | | 3 | 1 | | | | | | | | | | | | | | | 20 | 16 | | | | | | | | |
| 105 | Meharry Medical College.—R | 1 | 1 | | | 4 | 10 | 0 | 1 | | | | | | | | | 2 | 1 | 4 | 1 | | | 1 | 4 | | | | | | | 2 | 3 | 2 | 2 | | | 0 | 1 | | | | |
| 106 | Lincoln Memorial University, Med. Dept.—R | | | | | | | | | 1 | 0 | | | | | | | 1 | 0 | | | 0 | 1 | | | | | | | | | 0 | 1 | | | | | | | | | | |
| 107 | University of Tennessee, Medical Dept.—R | 7 | 4 | 1 | 0 | 3 | 1 | 0 | 1 | | | | | | | | | 3 | 1 | 2 | 0 | 0 | 1 | | | | | | | | | | | 5 | 0 | | | 1 | 0 | | | | |
| 108 | University of West Tennessee, Med. Dept.—R | | | | | | | | | | | | | | | | | 0 | 2 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 109 | Vanderbilt University, Medical Dept.—R | 6 | 2 | | | 6 | 0 | | | | | | | | | | | 3 | 0 | 2 | 1 | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | | | | | |
| | TEXAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 110 | Baylor University, College of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | |
| 111 | Fort Worth University, Medical Dept.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | |
| 112 | Southwestern University Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 113 | University of Texas, Dept. of Med.—R | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | |
| | VERMONT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 114 | University of Vermont, College of Med.—R | | | | | | | | | | | 4 | 0 | | | | | | | | | | | | | | | | | | | | | | | 3 | 0 | | | 13 | 3 | | |
| | VIRGINIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 115 | Medical College of Virginia.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| 116 | University of Virginia, Dept. of Med.—R | 2 | 0 | | | 1 | 0 | | | | | 2 | 0 | | | 1 | 1 | | | 1 | 0 | | | | | 1 | 0 | | | | | | | | | 1 | 0 | 1 | 0 | | | | |
| 117 | University College of Medicine.—R | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | |
| | WISCONSIN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 118 | Marquette University, Medical Dept.—R | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | |
| 119 | Wisconsin College of Phys. and Surgs.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CANADIAN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 120 | Laval University, Medical Dept | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 2 | | | 1 | 4 | | |
| 121 | Manitoba Medical College | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 122 | McGill University, Medical Faculty | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | 1 | 0 | | | | | | | 1 | 0 | | | 1 | 0 | | |
| 123 | Queens University, Medical Faculty | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | |
| 124 | University of Toronto, Faculty of Medicine | | | | | | | | | 1 | 0 | 1 | 0 | | | | | | | | | 1 | 1 | 2 | 0 | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | |
| 125 | Western University, Medical Dept | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | 1 | 0 | | | | | | | | |
| 126 | Foreign Colleges | | | | | 1 | 0 | 6 | 5 | | | 1 | 0 | | | | | 3 | 0 | | | | | 3 | 1 | 3 | 0 | | | | | | | | | | | 1 | 0 | 6 | 3 | 1 | |
| 127 | Miscellaneous Medical Colleges | 1 | 3 | 3 | 4 | 7 | 0 | 18 | 15 | 5 | 4 | 1 | 1 | | | | | 6 | 4 | 5 | 4 | 9 | 2 | 6 | 9 | 5 | 0 | 3 | 2 | 7 | 3 | 3 | 7 | 4 | 1 | 1 | 0 | 0 | 3 | 6 | 5 | 2 | |
| 128 | Undergraduates | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | 11 | 24 | | |
| | Totals by States | 161 | | 37 | | 138 | | 286 | | 41 | | 93 | | 22 | | 33 | | 110 | | 176 | | 54 | | 586 | | 121 | | 81 | | 81 | | 124 | | 153 | | 97 | | 199 | | 300 | | 12 | |
| | Totals—Examined—Passed | 107 | | 28 | | 108 | | 227 | | 33 | | 73 | | 22 | | 25 | | 87 | | 148 | | 41 | | 432 | | 114 | | 75 | | 56 | | 88 | | 123 | | 86 | | 160 | | 226 | | 12 | |
| | Totals—Examined—Failed | 54 | | 9 | | 30 | | 59 | | 8 | | 20 | | 0 | | 8 | | 23 | | 28 | | 13 | | 154 | | 7 | | 6 | | 25 | | 36 | | 30 | | 11 | | 39 | | 74 | | | |
| | Percentage of Failures | 33.5 | | 24.3 | | 21.7 | | 20.6 | | 19.5 | | 21.5 | | 0. | | 24.2 | | 20.9 | | 15.9 | | 24.1 | | 26.3 | | 5.8 | | 7.4 | | 30.9 | | 29.0 | | 19.6 | | 11.3 | | 19.6 | | 24.7 | | 0. | |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 | |

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

| 22 Minnesota | | 23 Mississippi | | 24 Missouri | | 25 Montana | | 26 Nebraska | | 27 Nevada | | 28 New Hampshire | | 29 New Jersey | | 30 New Mexico | | 31 New York | | 32 North Carolina | | 33 North Dakota | | 34 Ohio | | 35 Oklahoma | | 36 Oregon | | 37 Pennsylvania | | 38 Rhode Island | | 39 South Carolina | | 40 South Dakota | | 41 Tennessee | | 42 Texas | | 43 Utah | | 44 Vermont | | 45 Virginia | | 46 Washington | | 47 West Virginia | | 48 Wisconsin | | 49 Wyoming | | Totals: | Examined—Passed | Examined—Failed | Percentage of Failures | No. States Ex. in | Marginal Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | | | | | | |
| | | | | 0 | 1 | 3 | 0 | 29 | 2 | | | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | | | | | 0 | 1 | 5 | 1 | | | | | | | | | | | 4 | 1 | | | | | 2 | 0 | 61 | 53 | 8 | 13.1 | 14 | 69 |
| | | | | | | | | 8 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | 12 | 8 | 4 | 33.3 | 2 | 70 |
| | | | | | | | | 9 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 10 | 10 | 0 | 0. | 2 | 71 |
| | | | | | | | | | | | | 3 | 1 | | | | | 4 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 17 | 16 | 1 | 5.9 | 6 | 72 |
| | | | | | | | | | | | | | | 2 | 0 | | | 37 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 65 | 48 | 17 | 26.2 | 9 | 73 |
| | | | | | | | | | | 1 | 0 | | | 5 | 0 | | | 64 | 11 | 1 | 0 | | | | | 1 | 0 | 3 | 1 | 1 | 0 | | | 1 | 0 | | | | | 3 | 0 | | | 1 | 0 | 1 | 0 | 2 | 0 | | | 1 | 0 | | | 114 | 100 | 14 | 12.3 | 19 | 74 |
| | | | | | | | | | | | | | | 3 | 0 | | | 40 | 2 | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 57 | 55 | 2 | 3.5 | 7 | 75 |
| | | | | | | | | | | | | | | 1 | 0 | | | 12 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | 20 | 15 | 5 | 25.0 | 3 | 76 |
| | | | | | | | | | | | | | | | | | | 9 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | 10 | 5 | 33.3 | 2 | 77 |
| | | | | 1 | 0 | | | | | 1 | 0 | | | 7 | 1 | | | 82 | 25 | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 127 | 101 | 26 | 20.5 | 11 | 78 |
| 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | 18 | 6 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 30 | 24 | 6 | 20.0 | 7 | 79 |
| | | | | | | | | | | | | | | | | | | 4 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7 | 5 | 2 | 28.6 | 2 | 80 |
| | | | | | | | | | | | | | | | | | | 24 | 4 | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 33 | 27 | 6 | 18.2 | 4 | 81 |
| | | | | | | | | | | | | | | 7 | 0 | | | 63 | 7 | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 87 | 80 | 7 | 8.0 | 9 | 82 |
| | | | | | | | | | | | | | | | | | | 41 | 7 | | | | | | | 1 | 0 | 2 | 0 | 4 | 0 | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | 58 | 50 | 8 | 13.8 | 5 | 83 |
| | | | | 1 | 0 | | | | | | | | | | | | | | | 4 | 8 | | | | | 1 | 1 | | | 1 | 1 | | | 3 | 3 | | | | | | | | | | | 8 | 9 | | | 1 | 1 | | | | | 51 | 23 | 28 | 54.9 | 11 | 84 |
| | | | | | | | | | | | | | | | | | | | | 22 | 1 | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | 0 | 1 | | | | | | | | | 26 | 24 | 2 | 7.7 | 3 | 85 |
| | | | | | | | | | | | | | | | | | | | | | | | | 22 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 26 | 25 | 1 | 3.8 | 3 | 86 |
| | | | | | | | | | | | | | | | | | | | | | | | | 9 | 1 | | | 1 | 2 | 7 | 1 | | | | | | | | | | | | | | | | | 0 | 1 | 1 | 0 | | | | | 26 | 20 | 6 | 23.1 | 8 | 87 |
| | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 8 | 3 | | | | | 7 | 0 | | | | | | | | | | | | | | | | | 0 | 1 | 5 | 2 | | | | | 38 | 30 | 8 | 21.1 | 11 | 88 |
| | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | 34 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 46 | 43 | 3 | 6.5 | 7 | 89 |
| | | | | | | | | | | | | | | | | | | | | | | | | 50 | 1 | | | 0 | 1 | 2 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 56 | 54 | 2 | 3.6 | 5 | 90 |
| | | | | | | | | | | | | | | | | | | | | | | | | 8 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 | 8 | 0 | 0. | 1 | 91 |
| 1 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 14 | 0 | 1 | 0 | | | 1 | 0 | | | 0 | 1 | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | 26 | 25 | 1 | 3.8 | 10 | 92 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | 3 | 1 | 2 | 66.7 | 2 | 93 |
| | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 13 | 4 | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | 21 | 15 | 6 | 28.6 | 4 | 94 |
| | | | | | | | | | | | | | | 5 | 2 | | | 2 | 5 | | | | | 1 | 0 | 1 | 0 | 2 | 0 | 31 | 1 | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | 60 | 50 | 10 | 16.7 | 12 | 95 |
| 2 | 0 | 1 | 0 | | | 2 | 0 | 1 | 0 | | | | | 9 | 0 | | | 3 | 3 | 4 | 0 | 2 | 0 | 3 | 0 | 2 | 0 | 4 | 1 | 80 | 0 | | | | | 1 | 0 | | | | | 3 | 0 | | | 2 | 1 | 2 | 0 | 3 | 0 | | | 1 | 0 | 168 | 161 | 7 | 4.2 | 33 | 96 |
| | | | | | | | | | | | | | | 13 | 0 | | | 0 | 1 | | | | | | | 2 | 0 | 1 | 0 | 76 | 1 | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | | | | | | | 107 | 104 | 3 | 2.8 | 14 | 97 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 24 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 30 | 29 | 1 | 3.3 | 5 | 98 |
| 2 | 0 | 1 | 0 | 1 | 0 | | | | | 1 | 0 | | | 23 | 0 | | | 17 | 2 | 9 | 0 | | | 1 | 0 | 1 | 0 | 1 | 0 | 87 | 3 | 2 | 0 | 2 | 0 | | | | | 1 | 0 | | | 1 | 0 | 0 | 1 | 6 | 1 | 3 | 0 | 3 | 0 | | | 209 | 197 | 12 | 5.7 | 29 | 99 |
| | | | | | | | | | | | | | | | | | | | | | | | | 3 | 0 | 1 | 0 | | | 58 | 1 | | | | | | | | | | | | | | | | | 1 | 0 | 4 | 0 | | | | | 72 | 70 | 2 | 2.8 | 7 | 100 |
| | | | | | | | | | | | | | | 1 | 0 | | | 3 | 2 | | | 1 | 0 | | | | | | | 21 | 0 | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | 54 | 50 | 4 | 7.4 | 12 | 101 |
| | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | 47 | 11 | | | | | | | | | | | | | | | | | | | | | 68 | 54 | 14 | 20.6 | 5 | 102 |
| | | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 0 | 1 | 0 | | | | | | | | | | | | | | | 11 | 8 | 3 | 27.3 | 5 | 103 |
| | | 10 | 6 | | | 1 | 1 | | | | | | | | | | | 0 | 1 | | | | | | | 4 | 3 | 1 | 0 | | | | | 1 | 2 | | | 14 | 1 | 9 | 2 | | | | | | | | | | | | | | | 115 | 72 | 43 | 37.4 | 12 | 104 |
| | | 1 | 6 | 7 | 2 | | | 1 | 1 | | | | | | | | | | | | | | | | | 8 | 5 | | | | | | | 0 | 3 | | | 16 | 1 | 2 | 9 | | | | | 5 | 2 | | | 1 | 0 | | | | | 110 | 57 | 53 | 48.2 | 18 | 105 |
| | | | | | | | | | | | | | | | | 1 | 1 | | | 0 | 5 | | | 0 | 1 | 1 | 1 | 0 | 1 | | | | | 1 | 0 | | | 11 | 3 | | | | | | | 1 | 1 | 1 | 1 | 0 | 1 | | | | | 35 | 18 | 17 | 48.6 | 14 | 106 |
| | | 4 | 3 | 2 | 0 | 1 | 0 | | | | | | | | | | | 1 | 0 | 3 | 0 | | | 0 | 1 | 5 | 1 | | | 0 | 1 | | | 0 | 1 | | | 7 | 0 | 5 | 2 | | | | | 1 | 0 | 0 | 1 | | | | | | | 69 | 51 | 18 | 26.1 | 22 | 107 |
| | | 0 | 1 | | | | | | | | | | | | | | | | | 0 | 1 | | | | | 1 | 3 | | | | | | | | | | | 0 | 2 | | | | | | | 0 | 3 | | | | | | | | | 14 | 1 | 13 | 92.8 | 7 | 108 |
| | | 2 | 0 | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | | 2 | 0 | | | | | | | 1 | 0 | | | 3 | 0 | 3 | 1 | | | | | | | | | | | | | | | 36 | 32 | 4 | 11.1 | 13 | 109 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 11 | 0 | | | | | | | | | | | | | | | 14 | 14 | 0 | 0. | 3 | 110 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 21 | 1 | | | | | | | | | | | | | | | 24 | 23 | 1 | 4.2 | 3 | 111 |
| | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 15 | 0 | | | | | | | | | | | | | | | 15 | 15 | 0 | 0. | 1 | 112 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | 48 | 0 | | | | | | | | | | | | | | | 54 | 54 | 0 | 0. | 6 | 113 |
| | | | | | | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | 1 | 0 | 1 | 0 | 0 | 1 | | | | | | | | | | | 41 | 0 | | | 1 | 1 | | | | | | | 71 | 66 | 5 | 7.0 | 10 | 114 |
| | | | | | | | | | | | | | | | | | | 0 | 1 | 4 | 2 | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | 32 | 1 | | | 2 | 0 | | | | | 45 | 41 | 4 | 8.9 | 6 | 115 |
| | | 1 | 0 | | | | | | | | | | | | | | | 2 | 0 | | | | | | | 1 | 0 | | | 1 | 0 | | | 1 | 0 | | | 1 | 0 | | | | | | | 11 | 1 | 1 | 0 | 1 | 0 | | | | | 32 | 30 | 2 | 6.2 | 17 | 116 |
| | | | | | | 1 | 0 | | | | | | | 2 | 1 | | | 2 | 0 | 16 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | 19 | 1 | | | 4 | 1 | | | | | 51 | 45 | 6 | 11.8 | 8 | 117 |
| 1 | 1 | | | | | 2 | 1 | 1 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 2 | 0 | | | | | | | | | | | 1 | 0 | | | 49 | 4 | 1 | 0 | 65 | 59 | 6 | 9.2 | 9 | 118 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 18 | 0 | | | 18 | 18 | 0 | 0. | 1 | 119 |
| 2 | 1 | | | | | 0 | 1 | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | 16 | 6 | 10 | 62.5 | 7 | 120 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0. | 1 | 121 |
| 2 | 0 | | | | | 1 | 0 | | | | | | | 2 | 0 | | | 4 | 1 | | | | | 1 | 0 | | | 1 | 0 | 1 | 0 | 2 | 0 | | | | | | | | | | | | | 2 | 0 | 1 | 1 | | | | | | | 25 | 23 | 2 | 8.0 | 16 | 122 |
| 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | 3 | 3 | | | | | | | | | 1 | 1 | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | 2 | 0 | | | 15 | 11 | 4 | 26.7 | 8 | 123 |
| 3 | 0 | | | | | | | | | | | | | | | | | 9 | 1 | | | 1 | 0 | | | | | 2 | 0 | 1 | 0 | | | | | 3 | 0 | | | | | | | | | | | 2 | 1 | 1 | 0 | | | | | 32 | 29 | 3 | 9.4 | 14 | 124 |
| | | | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 7 | 6 | 1 | 14.3 | 7 | 125 |
| | | | | | | 1 | 0 | | | | | 2 | 1 | 5 | 4 | | | 20 | 23 | | | | | 2 | 0 | | | 1 | 1 | 9 | 3 | | | | | | | | | | | 0 | 1 | 1 | 0 | | | 4 | 1 | 1 | 0 | 0 | 2 | | | 116 | 71 | 45 | 38.8 | 21 | 126 |
| 0 | 1 | 1 | 5 | 4 | 1 | 2 | 6 | 3 | 1 | 1 | 1 | | | 2 | 3 | 1 | 1 | 2 | 4 | 2 | 2 | 5 | 1 | 1 | 0 | 28 | 11 | 14 | 15 | 5 | 4 | | | 4 | 1 | 3 | 1 | 3 | 4 | 8 | 2 | 2 | 2 | 1 | 0 | 6 | 5 | 13 | 5 | 4 | 3 | 1 | 0 | 2 | 0 | 356 | 210 | 146 | 41.0 | 45 | 127 |
| | | 74 | 64 | | | | | | | | | | | | | | | | | | | | | | | | | 7 | 7 | | | | | | | | | 110 | 30 | | | | | | | 0 | 1 | | | | | | | | | 330 | 203 | 127 | 38.5 | 6 | 128 |
| 65 | | 228 | | 220 | | 63 | | 78 | | 9 | | 23 | | 122 | | 4 | | 700 | | 122 | | 26 | | 178 | | 162 | | 144 | | 542 | | 37 | | 121 | | 58 | | 255 | | 170 | | 25 | | 52 | | 158 | | 145 | | 110 | | 114 | | 8 | | 6960 | | | | | |
| 58 | | 115 | | 182 | | 44 | | 67 | | 8 | | 18 | | 107 | | 2 | | 536 | | 92 | | 25 | | 170 | | 123 | | 94 | | 515 | | 32 | | 94 | | 53 | | 213 | | 151 | | 22 | | 51 | | 115 | | 102 | | 88 | | 107 | | 8 | | | 5578 | | | | |
| 7 | | 113 | | 38 | | 19 | | 11 | | 1 | | 5 | | 15 | | 2 | | 164 | | 30 | | 1 | | 8 | | 39 | | 50 | | 27 | | 5 | | 27 | | 5 | | 42 | | 19 | | 3 | | 1 | | 43 | | 43 | | 22 | | 7 | | 0 | | | | 1382 | | | |
| 10.8 | | 49.6 | | 17.3 | | 30.1 | | 14.1 | | 11.1 | | 21.8 | | 12.3 | | 50.0 | | 23.4 | | 24.6 | | 3.8 | | 4.5 | | 24.1 | | 37.4 | | 5.0 | | 13.5 | | 22.3 | | 8.6 | | 16.5 | | 11.2 | | 12.0 | | 1.9 | | 27.3 | | 29.7 | | 20.0 | | 6.1 | | 0. | | | | | 19.9 | | |
| 22 | | 23 | | 24 | | 25 | | 26 | | 27 | | 28 | | 29 | | 30 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 | | 39 | | 40 | | 41 | | 42 | | 43 | | 44 | | 45 | | 46 | | 47 | | 48 | | 49 | | | | | | | |

## TABLE B.—GRADUATES OF 1907 TO 1911, INCLUSIV

| Marginal Number | NAME OF COLLEGE | 1 Alabama | | 2 Arizona | | 3 Arkansas | | 4 California | | 5 Colorado | | 6 Connecticut | | 7 Delaware | | 8 District of Columbia | | 9 Florida | | 10 Georgia | | 11 Idaho | | 12 Illinois | | 13 Indiana | | 14 Iowa | | 15 Kansas | | 16 Kentucky | | 17 Louisiana | | 18 Maine | | 19 Maryland | | 20 Massachusetts | | 21 Michigan | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F |
| | ALABAMA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Birmingham Medical College.—R. | 20 | 8 | | | | | | | | | | | | | | | 2 | 0 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 2 | University of Alabama, Medical Dept.—R. | 41 | 14 | 1 | 0 | | | | | | | | | | | | | 4 | 0 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | |
| | ARKANSAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | College of Physicians and Surgeons.—R. | | | 1 | 1 | 15 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | | | | | | | | |
| 4 | University of Arkansas, Medical Dept.—R. | | | | | 23 | 1 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 0 | 1 | | | 0 | 1 | | | | | | | | |
| | CALIFORNIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | California Eclectic Medical College.—E. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | College of P. and S., Los Angeles.—R. | | | 2 | 0 | | | 8 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | College of P. and S., San Francisco.—R. | | | | | | | 12 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Cooper Medical College.—R. | | | | | | | 25 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Hahnemann Medical College of the Pacific.—H. | | | | | | | 7 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Oakland College of Medicine and Surgery.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | University of California, Medical Dept.—R. | | | 1 | 0 | | | 15 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | |
| | COLORADO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | University of Colorado, Medical Dept.—R. | | | | | | | | | 19 | 0 | | | | | | | | | | | 3 | 0 | | | | | | | 1 | 0 | | | | | | | | | | | | |
| | CONNECTICUT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Yale Medical School | | | | | | | | | | | 25 | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | 2 | 0 | | |
| | DISTRICT OF COLUMBIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | George Washington University.—R. | | | | | | | 2 | 0 | | | | | | | 11 | 2 | | | | | | | | | 1 | 0 | | | | | | | | | | | 3 | 0 | 1 | 0 | | |
| 15 | Georgetown University, School of Medicine.—R. | 1 | 0 | | | | | 2 | 0 | | | 0 | 1 | | | 4 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | 0 | | |
| 16 | Howard University, Medical Dept.—R. | | | | | | | | | | | | | 1 | 0 | 3 | 2 | 1 | 0 | | | | | | | 1 | 0 | | | 1 | 0 | | | 1 | 0 | | | 4 | 1 | 1 | 0 | | |
| | GEORGIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | Atlanta College of Physicians and Surgeons.—R. | 2 | 3 | | | 1 | 0 | | | | | | | | | | | 7 | 4 | 45 | 1 | | | | | | | | | | | | | 1 | 0 | | | | | | | | |
| 18 | Atlanta School of Medicine.—R. | 2 | 2 | | | | | | | | | | | | | | | 8 | 1 | 43 | 4 | | | | | | | | | | | | | 0 | 1 | | | | | | | | |
| 19 | Georgia College of Eclectic Med. and Surg.—E. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | Hospital Medical College, Atlanta.—E. | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 21 | Medical College of Georgia.—R. | 0 | 1 | | | | | | | | | | | | | | | 2 | 1 | 25 | 4 | | | | | | | | | | | | | | | | | 0 | 1 | | | | |
| | ILLINOIS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | Bennett Medical College.—R. | | | | | 2 | 0 | 2 | 0 | 0 | 1 | | | | | | | | | | | | | 19 | 16 | 1 | 0 | | | 0 | 1 | | | | | | | | | | | | |
| 23 | Chicago College of Medicine and Surgery.—R. | | | | | | | | | 1 | 0 | | | 1 | 0 | | | 3 | 0 | 1 | 0 | 0 | 1 | 60 | 21 | 3 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 1 | 0 | | | | | | | 1 | 0 |
| 24 | College of Medicine and Surgery.—Ph.M. | | | | | | | | | | | | | | | | | | | | | | | 4 | 10 | | | | | | | | | | | | | | | | | | |
| 25 | College of Physicians and Surgeons.—R. | | | | | | | 4 | 0 | | | | | | | | | | | | | 3 | 1 | 55 | 20 | | | 3 | 0 | | | | | | | | | | | | | 1 | 0 |
| 26 | Hahnemann Medical College and Hospital.—H. | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 13 | 6 | | | 2 | 1 | | | | | | | 1 | 1 | | | | | | |
| 27 | Hering Medical College.—H. | | | | | | | 0 | 1 | | | | | | | | | | | | | | | 5 | 3 | | | | | | | | | | | | | | | | | | |
| 28 | Jenner Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | 7 | 7 | | | | | | | | | | | | | | | | | | |
| 29 | National Medical University.—P. | | | | | | | | | | | | | | | | | | | | | | | 2 | 4 | | | | | | | | | | | | | | | | | | |
| 30 | Northwestern University, Medical School.—R. | | | 1 | 0 | | | 10 | 0 | 1 | 0 | | | | | | | | | | | 4 | 2 | 109 | 14 | 4 | 0 | 7 | 0 | 1 | 0 | | | | | | | | | | | | |
| 31 | Reliance Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | 4 | 5 | | | | | | | | | | | | | | | | | | |
| 32 | Rush Medical College.—R. | | | 3 | 0 | | | 4 | 0 | | | | | | | | | | | | | 2 | 0 | 58 | 3 | 1 | 0 | 1 | 0 | 1 | 1 | | | | | | | | | | | 1 | 0 |
| | INDIANA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 33 | Indiana University, School of Medicine.—R. | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 0 | 1 | 53 | 2 | | | | | | | | | | | | | | | | |
| | IOWA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34 | Drake University, College of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | 14 | 0 | | | | | | | | | | | | | | |
| 35 | State Univ. of Iowa, College of Medicine.—R. | | | 0 | 1 | | | 2 | 0 | | | | | | | | | | | | | | | | | | | 21 | 0 | | | | | | | | | | | | | | |
| 36 | State Univ. of Iowa, Homeo. Dept.—H. | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | |
| | KANSAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 37 | Kansas Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 3 | | | | | | | | | | | | |
| 38 | University of Kansas, School of Medicine—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 16 | 0 | | | | | | | | | | | | |
| | KENTUCKY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39 | Louisville National Medical College.—R. | | | | | | | | | | | | | | | | | 0 | 1 | | | | | 0 | 1 | | | | | | | 2 | 3 | | | | | | | | | | |
| 40 | University of Louisville, Medical Dept.—R. | 1 | 0 | | | 2 | 3 | | | | | | | | | | | 2 | 1 | | | | | 3 | 2 | 17 | 4 | 1 | 0 | 1 | 1 | 72 | 22 | 3 | 2 | 1 | 0 | | | | | | |
| | LOUISIANA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 41 | Flint Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 | | | | | | | | |
| 42 | Tulane University, Medical Dept.—R. | 13 | 6 | 1 | 0 | 7 | 0 | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 71 | 0 | | | | | | | | |
| | MAINE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 43 | Medical School of Maine.—R. | | | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 11 | 1 | | | 1 | 1 | | |
| | MARYLAND | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44 | Baltimore Medical College.—R. | | | 1 | 0 | 1 | 0 | | | | | 6 | 4 | 2 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | 3 | 1 | 15 | 3 | 7 | 1 | 1 | |
| 45 | College of Physicians and Surgeons.—R. | | | | | | | 1 | 0 | | | 9 | 3 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 17 | 2 | 5 | 1 | | |
| 46 | Johns Hopkins University, Medical Dept.—R. | 3 | 0 | | | | | 3 | 0 | | | 5 | 0 | | | 1 | 0 | | | 3 | 0 | | | | | | | | | | | 1 | 0 | | | 1 | 0 | 39 | 2 | | | 3 | |
| 47 | Maryland Medical College.—R. | | | | | | | 0 | 1 | | | 0 | 3 | | | | | | | 1 | 4 | | | | | | | 1 | 1 | | | | | 0 | 1 | 3 | 1 | 11 | 12 | 2 | 1 | | |
| 48 | University of Maryland, School of Med.—R. | | | | | | | | | | | 0 | 1 | 3 | 0 | | | 4 | 0 | 1 | 0 | | | | | | | | | | | | | | | 1 | 1 | 36 | 6 | 2 | 2 | | |
| | MASSACHUSETTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49 | Boston University, School of Medicine.—H. | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | 13 | 1 | | |
| 50 | College of Physicians and Surgeons.—R. | | | | | | | | | | | 1 | 2 | | | | | 2 | 0 | 1 | 0 | | | | | | | | | | | | | | | 12 | 4 | | | 7 | 11 | | |
| 51 | Harvard Medical School.—R. | | | | | | | 3 | 0 | | | 2 | 0 | | | | | | | | | | | 3 | 0 | 1 | 0 | | | | | 1 | 0 | | | 5 | 0 | | | 58 | 3 | 1 | |
| 52 | Tufts College Medical School.—R. | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 12 | 0 | | | 53 | 10 | | |
| | MICHIGAN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 53 | Detroit College of Medicine.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 42 | |
| 54 | Detroit Homeopathic College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | |
| 55 | Univ. of Mich., Dept. of Med. and Surg.—R. | 1 | 0 | | | | | 3 | 0 | | | | | | | 0 | 1 | | | | | 3 | 0 | 3 | 0 | 2 | 0 | | | | | | | | | | | | | 1 | 0 | 48 | |
| 56 | Univ. of Mich., Homeo. College.—H. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 13 | |
| | MINNESOTA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 57 | Univ. of Minn., Coll. of Med. and Surg.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 58 | Hamline University, Medical Dept.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MISSISSIPPI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 59 | Mississippi Medical College.—R. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MISSOURI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | American Medical College.—E. | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 61 | Barnes Medical College.—R. | 0 | 1 | | | 0 | 2 | | | 0 | 1 | | | | | | | | | | | | | 16 | 11 | | | 1 | 0 | 0 | 1 | | | | | | | | | | | | |
| 62 | Eclectic Medical University, Kansas City.—E. | | | | | 11 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 0 | 5 | | | | | | | | | | | | |
| 63 | Ensworth Medical College.—R. | | | | | | | 1 | 1 | | | | | | | | | | | | | | | 0 | 1 | | | 1 | 0 | 0 | 1 | | | | | | | | | | | | |
| 64 | Kansas City Hahnemann Medical College.—H. | | | | | 5 | 0 | | | 3 | 1 | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 1 | | | | | | | | | | | | |
| 65 | St. Louis University, School of Medicine.—R. | | | | | | | 3 | 0 | 1 | 0 | | | | | | | | | | | 1 | 0 | 24 | 4 | | | | | 1 | 0 | | | | | | | | | | | | |
| 66 | St. Louis College of Phys. and Surgs.—R. | | | | | 1 | 2 | | | | | | | | | 1 | 0 | 0 | 1 | | | 0 | 1 | 1 | 3 | | | | | 0 | 3 | | | 0 | 1 | | | | | | | | |
| 67 | University Medical College, Kansas City.—R. | | | 0 | 1 | 1 | 0 | | | | | | | | | | | | | | | | | 0 | 1 | | | | | 7 | 3 | | | | | | | | | | | | |
| 68 | Washington University, Medical Dept.—R. | | | | | | | | | | | | | | | | | | | | | | | 11 | 0 | | | | | 1 | 0 | | | | | | | | | | | | |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 | |

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

|22 Minnesota F|23 Mississippi P|23 Mississippi F|24 Missouri P|24 Missouri F|25 Montana P|25 Montana F|26 Nebraska P|26 Nebraska F|27 Nevada P|27 Nevada F|28 New Hampshire P|28 New Hampshire F|29 New Jersey P|29 New Jersey F|30 New Mexico P|30 New Mexico F|31 New York P|31 New York F|32 North Carolina P|32 North Carolina F|33 North Dakota P|33 North Dakota F|34 Ohio P|34 Ohio F|35 Oklahoma P|35 Oklahoma F|36 Oregon P|36 Oregon F|37 Pennsylvania P|37 Pennsylvania F|38 Rhode Island P|38 Rhode Island F|39 South Carolina P|39 South Carolina F|40 South Dakota P|40 South Dakota F|41 Tennessee P|41 Tennessee F|42 Texas P|42 Texas F|43 Utah P|43 Utah F|44 Vermont P|44 Vermont F|45 Virginia P|45 Virginia F|46 Washington P|46 Washington F|47 West Virginia P|47 West Virginia F|48 Wisconsin P|48 Wisconsin F|49 Wyoming P|49 Wyoming F|Totals:|Examined—Passed|Examined—Failed|Percentage of Failures|No. States Ex in|Marginal Number|
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
||||||||||||||||||||||||||||||||||1|0|||1|0|||||||||||||||||35|26|9|25.7|5|1|
||1|0|||||||||||||||||||||||||1|0|||||||1|0|||||||||||||||||||||||65|51|14|21.5|8|2|
|||||||||||||||||||||||||||3|2|||||||||||||||||||||||||||||32|21|11|34.4|4|3|
|||||||||||||||||||||||||||5|3||||||||||||||1|0|||||||||||||||36|30|6|16.7|6|4|
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||5|
||||||||||||||||||||||||||||||||||||||||||||||||||||||||12|10|2|16.7|2|6|
||||||||||||||||||||||||||||||||||||||||||||||||||||||||15|12|3|20.0|1|7|
||||||||||||||||||||||||||||||||||||||||||||||||||||||||27|25|2|7.5|1|8|
||||||||||||||||||||||||||||||||||||||||||||||||||||||||7|7|0|0.|1|9|
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||10|
|||||||||||||||||||||||||||1|0|||||||||||||||||||||||||||||18|18|0|0.|4|11|
|||||||||||||||||||0|2|||||||||||||||||||||||||||||1|0|||||||26|24|2|7.7|5|12|
|||||||||||||||||||6|3|||||||||||1|0|3|0|||||||||||||||1|0|||||||44|40|4|9.1|8|13|
|||||||||||||||||||3|0|1|0||||||||2|0|||||1|0|||1|0|||||||2|0|1|0|1|0|||||32|30|2|6.2|13|14|
|||||||||||||||||||3|0||||||||||||||2|1|||||||||||1|0|||||||||||||||18|15|3|16.7|9|15|
||0|1|1|0|||||||||1|0|||2|1|1|0|||||1|0|||3|1|||1|0|||2|0|1|0|||||6|2|||5|0|||||45|37|8|17.8|20|16|
||0|1|||||||||||||||||1|1|||||1|0|||||||3|0|||||||||||||||||||||||71|61|10|14.1|9|17|
||3|1|||||||||||||||||1|1|||||||||||||||0|1|||||||||||||||||||||||68|57|11|16.2|7|18|
|||||||||||||||||||||||||||||||||||||||||1|0|||||||||||||||1|1|0|0.|1|19|
|||||||||||||||||||||||||||||||||||0|1|||||||||||||||||||||||2|0|2|100.0|2|20|
|||||||||||||||||||||||||||||||||||6|1|||||||||||||||||||||||41|33|8|19.5|5|21|
|0|||1|0|0|1||||||||||||||||||||1|0|||1|0|||||0|2|||0|1|||||||||0|1|||4|0|||55|32|23|41.8|15|22|
|||||||2|0||||||||||||0|1|0|1|||||1|0|0|1|2|0|||||1|0|||2|0|||||||||||||1|0|||109|83|26|23.9|21|23|
||||||||||||||||||||||||||||||||||||||||||||||||||||||||14|4|10|71.4|1|24|
|0|||1|0|0|1|1|0|||||||||1|0|||||||2|0|2|0|||||||7|0|1|0|||1|0|||||5|1|||5|0|||116|93|23|19.8|17|25|
|||||||||||||||||||0|1|||||||1|0|1|0|1|0|||||1|0|||||1|0|||1|1|1|0|||||||34|24|10|29.4|12|26|
|||||||||||||||||||||||||||1|0||||||||||||||1|0|||||||||||||||11|7|4|36.3|4|27|
||||||||||||||||||||||||||||||||||||||||||||||||||||||||14|7|7|50.0|1|28|
||||||||||||||||||||||||||||||||||||||||||||||||||||||||6|2|4|66.7|1|29|
|0|||1|0|6|0|||||||||||||||2|0|||1|0|3|0|||||||3|0|3|0|||8|0|||||6|1|||7|0|||198|181|17|8.6|19|30|
||||||||||||||||||||||||||||||||||||||||||||||||||||||||9|4|5|55.6|1|31|
|0|||3|0||||||||||||||||||||1|0|1|0|3|0|||||||4|0|||||1|0|||||5|0|||2|0|||99|95|4|4.0|17|32|
|||||||||||||||||||||||||||||||||||||||||||||||||||||0|1|||58|54|4|6.9|4|33|
|||||||||||||||||||||||||||||||||||||1|0|||||||||||||||||||||15|15|0|0.|2|34|
||||||1|0|||||||||||||||||1|0|||||||1|0|||||||||2|0|||||||||||||||2|1|||||||32|30|2|6.2|8|35|
|||||||||||||||||||||||||||||1|0|||||||||||||||||||||||||||||5|5|0|0.|3|36|
||||1|0|||||||||||||||||||||||||||||||||||||||||||||||||||13|10|3|23.1|2|37|
||||3|0|||||||||||||||||||||||||||||||||||||||||||||||||||19|19|0|0.|2|38|
||0|1||||||||||||||||||||||||1|0||||||||||||||1|0|||||||||||||||||||10|4|6|60.0|6|39|
||4|2|5|3|0|1|||||||||||||||||1|0|||2|0|0|2|7|5|||3|0|||24|0|5|1|||||1|2|0|1|12|4|2|0|||225|169|56|24.9|24|40|
||||||||||||||||||||||||||||||||||||||||||||||||||||||||3|1|2|66.7|1|41|
||1|1|||||||||||||||0|1|4|0|||||2|0|||||||1|0|||2|0|6|0|||||||||1|0|||||||119|111|8|6.7|14|42|
|||||||||||1|0|||||||2|1|||||||||||||||1|0|||||||||||||||||0|1|||||||23|19|4|17.4|7|43|
|0|||||1|0|||||1|1|1|1|||8|1|||1|0|1|0|||||6|0|2|1|||||||||||||2|0|1|1|7|0|||||83|69|14|16.9|21|44|
||||||1|0|||||||3|0|||7|2|0|1|||1|0|||||8|1|2|0|||||||||2|0|1|0|||0|1|12|3|||||85|71|14|16.5|17|45|
||||2|0|||||||||2|0|||12|1|1|0|||5|0|1|0|2|0|9|0|1|0|1|0|||1|0|1|0|||||1|0|1|0|2|0|1|0|||105|102|3|2.9|25|46|
|||||||||||1|0||||||||1|0||||||||1|0|35|2|||||||||||||||||4|7|||9|5|||||107|69|38|35.5|14|47|
||||||||1|0||||||2|1|||0|1|10|3||||||||2|0|10|0|2|1|9|0|||||||||||||1|1|1|0|1|0|||||103|86|17|16.5|18|48|
|0||||||||||2|0|||||||1|0|||||||||||||||||||||||||||||||||||||||21|20|1|4.8|6|49|
|||||||||||||||||||||0|1||||||||||||||||||||||||0|1|||||||||||||42|23|19|45.3|7|50|
|0|||1|0|||||||2|0|3|0|||6|0|||||1|0|1|0|||1|0|6|0|||||||||||1|0|||2|0|||||||102|99|3|2.9|19|51|
||||1|0|||||||3|0|||||3|1||||||||||||||3|1|||||||1|0|||1|0|||1|0|||||||92|80|12|13.0|11|52|
|||||||||||||||||||||||||||||||1|0|||||||1|0|||||||||||||||||||45|44|1|2.2|3|53|
||||||||||||||||||||||||||||||||||||||||||||||||||0|1|||||7|6|1|14.3|2|54|
||||1|0|3|0|||||||||||1|0|||||1|0|1|0|1|0|1|0|1|0|||2|0|||||||||||||3|0|||1|0|||78|77|1|1.3|19|55|
|||||||||||||||||||||||||1|0|||||1|0|||||||||||||||||||||||||||15|15|0|0.|3|56|
|0|||||1|0|||||||||||||||1|0|||||1|0|||||||6|0|||||||||||||3|0|||||||31|31|0|0.|6|57|
|4|||||1|0|||||||||||||||||||||||||||||||||||||||||||1|0|||||||16|12|4|25.0|3|58|
||7|17|||||||||||||||||||||||||||||||||||2|1|||||||||||||||||||27|9|18|66.7|2|59|
||||8|3|||||||||||||||||||||||1|0|||||||||||||||||||||||||||||13|10|3|23.1|3|60|
||||23|9|0|1|||||||||||||||||||||3|0|1|0|||||||||||2|0|||||||||||0|1|||||||73|46|27|37.0|12|61|
|||||||||||||||||||||||||||||0|1|||||||||||||||||||||||||||||18|12|6|33.3|4|62|
||||2|3|||8|3|||||||||||||||||||2|1|0|1|||||||||1|0|||||||||||||||||||||26|15|11|42.3|9|63|
||||4|2|||||||||||||||||||||||||0|1|||||||||||||||||||||||||||||19|14|5|26.3|6|64|
||||35|1|2|0|||||||||||||0|1|||||1|0|4|0|||||||||||||||||||||||||0|1|||1|0|||80|73|7|8.7|12|65|
||0|1|13|7|0|1|||||||||||||||||||4|1|||||||||||2|0|||1|0|1|0|||||||||||||||45|24|21|46.7|14|66|
||||20|4|||2|0|||||||||||||||||||3|0|||||||||||||||||||||||||||||42|33|9|21.4|7|67|
||||32|1||||||||||||||||||||||||||||||||||||||3|0|||1|0|||||||1|1|||||||51|49|2|3.9|6|68|
||23||24||25||26||27||28||29||30||31||32||33||34||35||36||37||38||39||40||41||42||43||44||45||46||47||48||49|||||||||

## TABLE B.—GRADUATES OF 1907 TO 1911, INCLUSI

| Marginal Number | NAME OF COLLEGE | 1<br>Alabama | | 2<br>Arizona | | 3<br>Arkansas | | 4<br>California | | 5<br>Colorado | | 6<br>Connecticut | | 7<br>Delaware | | 8<br>District of Columbia | | 9<br>Florida | | 10<br>Georgia | | 11<br>Idaho | | 12<br>Illinois | | 13<br>Indiana | | 14<br>Iowa | | 15<br>Kansas | | 16<br>Kentucky | | 17<br>Louisiana | | 18<br>Maine | | 19<br>Maryland | | 20<br>Massachusetts | | 21<br>Michigan | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F |
| | NEBRASKA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 69 | John A. Creighton Medical College.—R | | | | | | | | | | | | | | | | | | | 0 | 1 | 1 | 1 | | | | | 4 | 0 | 1 | 0 | | | | | | | | | | | | |
| 70 | Lincoln Medical College.—E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 71 | University of Nebraska, College of Med.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | NEW HAMPSHIRE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 72 | Dartmouth Medical School—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | 3 | 0 | | |
| | NEW YORK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 73 | Albany Medical College.—R | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 2 | 1 | | |
| 74 | Columbia Univ., Coll. of Phys. and Surgs.—R | | | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 3 | 0 | | |
| 75 | Cornell University Medical College.—R | | | | | | | 2 | 0 | | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 4 | 0 | | |
| 76 | Eclectic Med. Coll., of City of New York.—E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 77 | Fordham University, School of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | |
| 78 | Long Island College Hospital.—R | | | | | | | 1 | 0 | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | |
| 79 | New York Homeo. Med. Coll. and Hosp.—H | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 | New York Med. Coll. and Hosp. for Women.—H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 81 | Syracuse University, College of Medicine.—R | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 82 | University and Bellevue Hosp. Med. Coll.—R | | | 1 | 0 | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | |
| 83 | University of Buffalo, Medical Dept.—R | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | NORTH CAROLINA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 84 | Leonard School of Medicine.—R | 1 | 1 | | | | | | | | | | | | | | | 2 | 0 | 0 | 3 | | | | | | | | | 1 | 0 | | | | | | | | | | | | |
| 85 | North Carolina Medical College | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | OHIO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 86 | Cleveland College of Phys. and Surgs.—R | | | | | | | 2 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | |
| 87 | Cleveland-Pulte Medical College.—H | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 0 | 1 | 4 | 1 | | | | | 2 | 0 | | | | | | | | | 1 | |
| 88 | Eclectic Medical College.—E | | | | | | | | | | | | | | | 0 | 1 | | | | | 2 | 0 | | | 4 | 0 | | | | | 2 | 0 | | | | | | | | | | |
| 89 | Ohio-Miami Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | |
| 90 | Starling-Ohio Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 91 | Toledo Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 92 | Western Reserve University, Medical Dept.—R | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | OREGON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 93 | Willamette University, Medical Dept.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 94 | University of Oregon, Medical Dept.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PENNSYLVANIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 95 | Hahnemann Medical College and Hospital.—H | | | | | | | 0 | 1 | | | | | 1 | 0 | | | | | | | | | | | | | 3 | 0 | | | | | | | 3 | 0 | 1 | 0 | | | | |
| 96 | Jefferson Medical College.—R | 1 | 0 | | | | | 2 | 0 | | | 3 | 1 | 6 | 0 | 1 | 1 | | | 1 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 1 | 0 | | | | | 1 | 0 | 2 | 0 | 7 | 0 | | | 1 | |
| 97 | Medico-Chirurgical College of Philadelphia.—R | | | | | | | 1 | 0 | 1 | 0 | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | |
| 98 | Temple University, Medical Dept.—R | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | 2 | 0 | | | | |
| 99 | Univ. of Pennsylvania, Dept. of Med.—R | | | | | | | 4 | 1 | | | 0 | 1 | 1 | 0 | | | 2 | 0 | | | | | 2 | 0 | | | 1 | 0 | | | | | | | 5 | 0 | 6 | 1 | 3 | 0 | 1 | |
| 100 | Univ. of Pittsburgh, School of Medicine.—R | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | |
| 101 | Woman's Medical College of Pennsylvania.—R | | | | | | | 3 | 0 | | | | | 1 | 0 | 1 | 0 | | | | | | | 1 | 0 | | | | | | | 1 | 0 | | | | | 10 | 2 | 3 | 0 | | |
| | SOUTH CAROLINA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 102 | Med. Coll. of the State of South Carolina.—R | | | | | | | | | | | | | | | | | 3 | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| | TENNESSEE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 103 | College of Phys. and Surgs., Memphis.—R | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | |
| 104 | Memphis Hospital Medical College.—R | 0 | 7 | | | 7 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | 19 | 15 | | | | | | | | |
| 105 | Meharry Medical College.—R | 1 | 1 | | | 4 | 10 | | | | | | | | | | | 2 | 1 | 4 | 1 | | | 1 | 3 | | | | | | | 2 | 3 | 2 | 2 | | | 0 | 1 | | | | |
| 106 | Lincoln Memorial Univ., Med. Dept.—R | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | |
| 107 | University of Tennessee, Medical Dept.—R | 7 | 4 | 1 | 0 | 2 | 1 | 0 | 1 | | | | | | | | | 3 | 1 | 2 | 0 | | | | | | | | | | | | | 5 | 0 | | | 1 | 0 | | | | |
| 108 | University of West Tennessee, Med. Dept.—R | | | | | | | | | | | | | | | | | 0 | 2 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 109 | Vanderbilt University, Medical Dept.—R | 6 | 2 | | | 5 | 0 | | | | | | | | | | | 3 | 0 | 2 | 1 | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | | | | | |
| | TEXAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 110 | Baylor University, College of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | |
| 111 | Fort Worth University, Med. Dept.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | |
| 112 | Southwestern University Medical College.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 113 | University of Texas, Dept. of Med.—R | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | |
| | VERMONT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 114 | University of Vermont, College of Med.—R | | | | | | | | | | | 4 | 0 | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | 11 | 1 | | |
| | VIRGINIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 115 | Medical College of Virginia.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| 116 | University of Virginia, Dept. of Med.—R | [illegible] | 0 | | | 1 | 0 | | | | | 2 | 0 | | | 1 | 1 | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | |
| 117 | University College of Medicine.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | |
| | WISCONSIN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 118 | Marquette University, Medical Dept.—R | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | |
| 119 | Wisconsin College of Phys. and Surgs.—R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CANADIAN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 120 | Laval University, Medical Dept | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 2 | | | 0 | 3 | | |
| 121 | Manitoba Medical College | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 122 | McGill University, Medical Faculty | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | |
| 123 | Queens University, Medical Faculty | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | |
| 124 | University of Toronto, Faculty of Medicine | | | | | | | | | 1 | 0 | 1 | 0 | | | | | | | | | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | |
| 125 | Western University, Medical Dept | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 126 | Foreign Colleges | | | | | | | 0 | 1 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 1 | 0 | 2 | 2 | | |
| 127 | Miscellaneous Medical Colleges | 1 | 3 | | | | | 1 | 0 | 5 | 1 | 0 | 1 | | | | | 2 | 0 | 2 | 3 | 3 | 0 | 1 | 7 | 2 | 0 | 3 | 0 | 2 | 2 | 2 | 3 | 3 | 0 | | | 0 | 1 | 3 | 2 | | |
| | Totals by States | 158 | | 19 | | 117 | | 151 | | 37 | | 85 | | 20 | | 32 | | 72 | | 161 | | 33 | | 557 | | 108 | | 73 | | 70 | | 119 | | 143 | | 87 | | 189 | | 233 | | | |
| | Totals—Examined—Passed | 104 | | 16 | | 89 | | 136 | | 33 | | 66 | | 20 | | 24 | | 56 | | 136 | | 27 | | 413 | | 101 | | 69 | | 47 | | 87 | | 115 | | 76 | | 156 | | 192 | | | |
| | Totals—Examined—Failed | 54 | | 3 | | 28 | | 15 | | 4 | | 19 | | 0 | | 8 | | 16 | | 25 | | 6 | | 144 | | 7 | | 4 | | 23 | | 32 | | 28 | | 11 | | 33 | | 41 | | | |
| | Percentage of Failures | 34.2 | | 15.8 | | 23.9 | | 9.9 | | 10.8 | | 22.4 | | 0. | | 25.0 | | 22.2 | | 15.5 | | 18.2 | | 25.9 | | 6.5 | | 5.5 | | 32.9 | | 26.9 | | 19.6 | | 12.6 | | 17.5 | | 17.6 | | | |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | | |

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

| 23 Mississippi | | 24 Missouri | | 25 Montana | | 26 Nebraska | | 27 Nevada | | 28 New Hampshire | | 29 New Jersey | | 30 New Mexico | | 31 New York | | 32 North Carolina | | 33 North Dakota | | 34 Ohio | | 35 Oklahoma | | 36 Oregon | | 37 Pennsylvania | | 38 Rhode Island | | 39 South Carolina | | 40 South Dakota | | 41 Tennessee | | 42 Texas | | 43 Utah | | 44 Vermont | | 45 Virginia | | 46 Washington | | 47 West Virginia | | 48 Wisconsin | | 49 Wyoming | | Totals: | Examined—Passed | Examined—Failed | Percentage of Failures | No. States Ex. in | Marginal Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | | | | | | |
| | | 0 | 1 | 3 | 0 | 29 | 2 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 0 | 1 | 5 | 1 | | | | | | | | | | | 4 | 1 | | | | | 2 | 0 | 58 | 50 | 8 | 13.8 | 12 | 69 |
| | | | | | | 8 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | 12 | 8 | 4 | 33.3 | 2 | 70 |
| | | | | | | 9 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 10 | 10 | 0 | 0. | 2 | 71 |
| | | | | | | | | | | 3 | 0 | | | | | 3 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 12 | 12 | 0 | 0. | 5 | 72 |
| | | | | | | | | | | | | 2 | 0 | | | 30 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 60 | 43 | 17 | 28.3 | 6 | 73 |
| | | | | | | | | | | | | 4 | 0 | | | 60 | 9 | 1 | 0 | | | | | 1 | 0 | 1 | 0 | | | | | 1 | 0 | | | | | 1 | 0 | | | 1 | 0 | 1 | 0 | 1 | 0 | | | 1 | 0 | | | 89 | 80 | 9 | 10.1 | 14 | 74 |
| | | | | | | | | | | | | 3 | 0 | | | 40 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 53 | 51 | 2 | 3.8 | 6 | 75 |
| | | | | | | | | | | | | 1 | 0 | | | 12 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | 20 | 15 | 5 | 25.0 | 3 | 76 |
| | | | | | | | | | | | | | | | | 9 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | 10 | 5 | 33.3 | 2 | 77 |
| | | | | | | | | | | | | 7 | 1 | | | 82 | 25 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 121 | 95 | 26 | 21.5 | 7 | 78 |
| | | | | | | | | | | | | 1 | 0 | | | 18 | 6 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 29 | 23 | 6 | 20.7 | 6 | 79 |
| | | | | | | | | | | | | | | | | 4 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 4 | 2 | 33.3 | 1 | 80 |
| | | | | | | | | | | | | | | | | 24 | 4 | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | 30 | 24 | 6 | 20.0 | 3 | 81 |
| | | | | | | | | | | | | 7 | 0 | | | 63 | 6 | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 83 | 77 | 6 | 7.2 | 8 | 82 |
| | | | | | | | | | | | | | | | | 41 | 6 | | | | | | | | | 1 | 0 | 3 | 0 | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | 54 | 47 | 7 | 13.0 | 5 | 83 |
| | | | | | | | | | | | | | | | | | | 4 | 8 | | | | | 1 | 1 | | | 1 | 1 | | | 3 | 2 | | | | | | | | | | | 8 | 9 | | | 1 | 1 | | | | | 48 | 22 | 26 | 54.2 | 10 | 84 |
| | | | | | | | | | | | | | | | | | | 22 | 1 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 0 | 1 | | | | | | | | | 25 | 23 | 2 | 8.0 | 3 | 85 |
| | | | | | | | | | | | | | | | | | | | | | | 22 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 25 | 25 | 0 | 0. | 3 | 86 |
| | | | | | | | | | | | | | | | | | | | | | | 9 | 1 | | | | | 6 | 1 | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 19 | 17 | 2 | 10.5 | 4 | 87 |
| | | 1 | 0 | | | | | | | | | | | | | | | | | | | 8 | 3 | | | | | 6 | 0 | | | | | | | | | | | | | | | | | 0 | 1 | 5 | 2 | | | | | 35 | 27 | 8 | 22.9 | 9 | 88 |
| | | | | | | | | | | | | | | | | 0 | 1 | | | | | 34 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 46 | 43 | 3 | 6.5 | 7 | 89 |
| | | | | | | | | | | | | | | | | | | | | | | 50 | 1 | | | 0 | 1 | 2 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 56 | 54 | 2 | 3.6 | 5 | 90 |
| | | | | | | | | | | | | | | | | | | | | | | 8 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 | 8 | 0 | 0. | 1 | 91 |
| | | | | | | | | | | | | | | | | | | | | 1 | 0 | 14 | 0 | | | | | 1 | 0 | | | 0 | 1 | | | | | | | | | | | | | | | | | 1 | 0 | | | 20 | 19 | 1 | 5.0 | 6 | 92 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | 3 | 1 | 2 | 66.7 | 2 | 93 |
| | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 13 | 4 | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | 20 | 15 | 5 | 25.0 | 3 | 94 |
| | | | | | | | | | | | | 5 | 2 | | | 0 | 3 | | | | | 1 | 0 | | | 2 | 0 | 31 | 1 | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | 55 | 47 | 8 | 14.5 | 11 | 95 |
| 1 | 0 | | | 2 | 0 | | | | | | | 8 | 0 | | | 3 | 3 | 3 | 0 | 2 | 0 | 3 | 0 | 1 | 0 | 1 | 1 | 79 | 0 | | | | | 1 | 0 | | | | | 3 | 0 | | | 2 | 0 | 1 | 0 | 3 | 0 | | | 1 | 0 | 153 | 147 | 6 | 3.9 | 31 | 96 |
| | | | | | | | | | | | | 10 | 0 | | | 0 | 1 | | | | | | | | | | | 76 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 94 | 92 | 2 | 2.1 | 8 | 97 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 24 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 30 | 29 | 1 | 3.3 | 5 | 98 |
| | | 1 | 0 | | | | | 1 | 0 | | | 21 | 0 | | | 14 | 0 | 9 | 0 | | | | | 1 | 0 | | | 86 | 3 | 2 | 0 | 2 | 0 | | | | | 1 | 0 | | | 1 | 0 | 0 | 1 | 1 | 1 | 3 | 0 | 3 | 0 | | | 179 | 171 | 8 | 4.5 | 25 | 99 |
| | | | | | | | | | | | | | | | | | | | | | | 3 | 0 | 1 | 0 | | | 58 | 1 | | | | | | | | | | | | | | | | | 1 | 0 | 4 | 0 | | | | | 72 | 70 | 2 | 2.8 | 7 | 100 |
| | | | | | | | | | | | | 1 | 0 | | | 3 | 2 | | | 1 | 0 | | | | | | | 20 | 0 | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | 52 | 48 | 4 | 7.7 | 12 | 101 |
| | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | 46 | 11 | | | | | | | | | | | | | | | | | | | | | 65 | 51 | 14 | 21.5 | 3 | 102 |
| 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 0 | 1 | 0 | | | | | | | | | | | | | | | 11 | 8 | 3 | 27.3 | 5 | 103 |
| 7 | 5 | | | 1 | 1 | | | | | | | | | | | | | | | | | | | 4 | 2 | 1 | 0 | | | | | 1 | 2 | | | 12 | 1 | 8 | 2 | | | | | | | | | | | | | | | 98 | 60 | 38 | 38.8 | 10 | 104 |
| 1 | 5 | 7 | 2 | | | 1 | 1 | | | | | | | | | | | | | | | | | 8 | 5 | | | | | | | 0 | 3 | | | 15 | 1 | 2 | 9 | | | | | 5 | 2 | | | 1 | 0 | | | | | 106 | 56 | 50 | 47.2 | 17 | 105 |
| | | | | | | | | | | | | | | | | | | 0 | 4 | | | 0 | 1 | | | 0 | 1 | | | | | 1 | 0 | | | 11 | 2 | | | | | | | 1 | 1 | | | 0 | 1 | | | | | 25 | 14 | 11 | 44.0 | 9 | 106 |
| 4 | 2 | 2 | 0 | | | | | | | | | | | | | 1 | 0 | 3 | 0 | | | 0 | 1 | 2 | 0 | | | 0 | 1 | | | | | | | 6 | 0 | 5 | 2 | | | | | | | | | | | | | | | 57 | 44 | 13 | 22.8 | 17 | 107 |
| 0 | 1 | | | | | | | | | | | | | | | | | 0 | 1 | | | | | 1 | 3 | | | | | | | | | | | 0 | 2 | | | | | | | 0 | 3 | | | | | | | | | 14 | 1 | 13 | 92.8 | 7 | 108 |
| 2 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 2 | 0 | | | | | | | 1 | 0 | | | 3 | 0 | 2 | 1 | | | | | | | | | | | | | | | 33 | 29 | 4 | 12.1 | 12 | 109 |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 11 | 0 | | | | | | | | | | | | | | | 13 | 13 | 0 | 0. | 2 | 110 |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 21 | 1 | | | | | | | | | | | | | | | 24 | 23 | 1 | 4.2 | 3 | 111 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | 0 | | | | | | | | | | | | | | | 15 | 15 | 0 | 0. | 1 | 112 |
| | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | 48 | 0 | | | | | | | | | | | | | | | 54 | 54 | 0 | 0. | 6 | 113 |
| | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | 0 | 1 | | | | | | | | | | | 40 | 0 | | | | | | | | | | | 61 | 59 | 2 | 3.3 | 7 | 114 |
| | | | | | | | | | | | | | | | | 0 | 1 | 4 | 2 | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | 32 | 0 | | | 2 | 0 | | | | | 44 | 41 | 3 | 6.8 | 6 | 115 |
| 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | 9 | 1 | | | | | | | | | 23 | 21 | 2 | 8.7 | 11 | 116 |
| | | | | | | | | | | | | 2 | 1 | | | 1 | 0 | 15 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | 19 | 1 | | | 3 | 1 | | | | | 46 | 40 | 6 | 13.0 | 6 | 117 |
| | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | 49 | 4 | 1 | 0 | 62 | 57 | 5 | 8.1 | 9 | 118 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 17 | 0 | | | 17 | 17 | 0 | 0. | 1 | 119 |
| | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | 12 | 4 | 8 | 66.7 | 6 | 120 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 121 |
| | | | | 1 | 0 | | | | | | | 2 | 0 | | | 4 | 1 | | | | | 1 | 0 | | | | | 1 | 0 | 2 | 0 | | | | | | | | | | | | | 1 | 0 | 1 | 1 | | | | | | | 20 | 18 | 2 | 10.0 | 12 | 122 |
| | | | | | | | | | | | | | | | | 3 | 2 | | | | | | | | | 1 | 1 | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | 12 | 9 | 3 | 25.0 | 7 | 123 |
| | | | | | | | | | | | | | | | | 8 | 0 | | | 1 | 0 | | | | | 2 | 0 | 1 | 0 | | | | | 3 | 0 | | | | | | | | | | | 2 | 1 | 1 | 0 | | | | | 29 | 28 | 1 | 3.4 | 14 | 124 |
| | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 4 | 4 | 0 | 0. | - | 125 |
| | | | | | | | | | | | | 3 | 1 | | | 5 | 5 | | | | | | | | | | | 4 | 1 | | | | | | | | | | | | | | | | | 2 | 0 | | | 0 | 1 | | | 30 | 19 | 11 | 36.7 | 10 | 126 |
| 0 | 2 | 2 | 1 | 0 | 2 | | | | | | | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | | | | | 17 | 4 | 3 | 2 | 0 | 1 | | | 1 | 1 | | | 2 | 3 | | | | | | | 0 | 4 | 2 | 2 | 0 | 2 | | | | | 110 | 60 | 50 | 45.5 | 31 | 127 |
| 75 | | 208 | | 35 | | 69 | | 2 | | 17 | | 98 | | 2 | | 613 | | 112 | | 13 | | 174 | | 112 | | 66 | | 511 | | 35 | | 112 | | 44 | | 107 | | 152 | | 19 | | 48 | | 136 | | 78 | | 95 | | 103 | | 4 | | 5685 | | | | | |
| 34 | | 171 | | 27 | | 60 | | 2 | | 15 | | 91 | | 1 | | 491 | | 85 | | 13 | | 166 | | 90 | | 48 | | 490 | | 30 | | 88 | | 41 | | 97 | | 135 | | 19 | | 47 | | 99 | | 57 | | 74 | | 97 | | 4 | | | 4708 | | | | |
| 41 | | 37 | | 8 | | 9 | | 0 | | 2 | | 7 | | 1 | | 122 | | 27 | | 0 | | 8 | | 22 | | 18 | | 21 | | 5 | | 24 | | 3 | | 10 | | 17 | | 0 | | 1 | | 37 | | 21 | | 21 | | 6 | | 0 | | | | 977 | | | |
| 54.7 | | 17.8 | | 22.9 | | 13.0 | | 0. | | 11.8 | | 7.1 | | 50.0 | | 19.9 | | 24.1 | | 0. | | 4.6 | | 19.6 | | 27.3 | | 4.1 | | 14.3 | | 21.4 | | 6.8 | | 9.3 | | 11.2 | | 0. | | 2.1 | | 27.2 | | 26.9 | | 22.1 | | 5.8 | | 0. | | | | | 17.2 | | |
| 23 | | 24 | | 25 | | 26 | | 27 | | 28 | | 29 | | 30 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 | | 39 | | 40 | | 41 | | 42 | | 43 | | 44 | | 45 | | 46 | | 47 | | 48 | | 49 | | | | | | | |

## TABLE C.—GRADUATES EXAMI

| Marginal Number | NAME OF COLLEGE | Graduates of All Years. | | | | | Graduates of 1907-1911. | | | | | Graduates of 1906 and Previous. | | | | | Graduates of 1911 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number Examined | Number Passed | Number Failed | Per Cent. Failed | Number of States | Number Examined | Number Passed | Number Failed | Per Cent. Failed | Number of States | Number Examined | Number Passed | Number Failed | Per Cent. Failed | Number of States | Number Examined | Number Passed | Number Failed | Per Cent. Failed |
| | ALABAMA | | | | | | | | | | | | | | | | | | | |
| 1 | Birmingham Medical College.—R | 35 | 26 | 9 | 25.7 | 5 | 35 | 26 | 9 | 25.7 | 5 | .... | .... | .... | .... | .... | 24 | 18 | 6 | 25.0 |
| 2 | University of Alabama, Medical Dept.—R | 69 | 53 | 16 | 23.2 | 9 | 65 | 51 | 14 | 21.5 | 8 | 4 | 2 | 2 | 50.0 | 4 | 41 | 36 | 5 | 12.2 |
| | ARKANSAS | | | | | | | | | | | | | | | | | | | |
| 3 | College of Physicians and Surgeons.—R | 32 | 21 | 11 | 34.4 | 4 | 32 | 21 | 11 | 34.4 | 4 | .... | .... | .... | .... | .... | 24 | 18 | 6 | 25.0 |
| 4 | University of Arkansas, Medical Dept.—R | 38 | 32 | 6 | 15.8 | 6 | 36 | 30 | 6 | 16.7 | 6 | 2 | 2 | 0 | 0. | 2 | 31 | 26 | 5 | 16.1 |
| | CALIFORNIA | | | | | | | | | | | | | | | | | | | |
| 5 | California Eclectic Medical College.—E | 2 | 1 | 1 | 50.0 | 1 | .... | .... | .... | .... | .... | 2 | 1 | 1 | 50.0 | 1 | .... | .... | .... | .... |
| 5 | College of Phys. and Surgs., Los Angeles.—R | 12 | 10 | 2 | 16.7 | 2 | 12 | 10 | 2 | 16.7 | 2 | .... | .... | .... | .... | .... | 8 | 7 | 1 | 12.5 |
| 7 | College of Phys. and Surgs., San Francisco.—R | 17 | 13 | 4 | 23.5 | 1 | 15 | 12 | 3 | 20.0 | 1 | 2 | 1 | 1 | 50.0 | 1 | 6 | 5 | 1 | 16.7 |
| 8 | Cooper Medical College.—R | 28 | 26 | 2 | 7.1 | 2 | 27 | 25 | 2 | 7.5 | 1 | 1 | 1 | 0 | 0. | 1 | 21 | 21 | 0 | 0. |
| 9 | Hahnemann Medical College of the Pacific.—H | 7 | 7 | 0 | 0. | 1 | 7 | 7 | 0 | 0. | 1 | .... | .... | .... | .... | .... | 6 | 6 | 0 | 0. |
| 10 | Oakland College of Medicine and Surgery.—R | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| 11 | University of California, Medical Dept.—R | 20 | 18 | 2 | 10.0 | 5 | 18 | 18 | 0 | 0. | 4 | 2 | 0 | 2 | 100.0 | 1 | 14 | 14 | 0 | 0. |
| | COLORADO | | | | | | | | | | | | | | | | | | | |
| 12 | University of Colorado, Medical Dept.—R | 28 | 26 | 2 | 7.1 | 6 | 26 | 24 | 2 | 7.7 | 5 | 2 | 2 | 0 | 0. | 2 | 22 | 22 | 0 | 0. |
| | CONNECTICUT | | | | | | | | | | | | | | | | | | | |
| 13 | Yale Medical College | 47 | 43 | 4 | 8.5 | 10 | 44 | 40 | 4 | 9.1 | 8 | 3 | 3 | 0 | 0. | 3 | 15 | 14 | 1 | 6.7 |
| | DISTRICT OF COLUMBIA | | | | | | | | | | | | | | | | | | | |
| 14 | George Washington University.—R | 35 | 33 | 2 | 5.7 | 16 | 32 | 30 | 2 | 6.2 | 13 | 3 | 3 | 0 | 0. | 3 | 15 | 14 | 1 | 6.7 |
| 15 | Georgetown University, School of Medicine.—R | 19 | 16 | 3 | 15.8 | 10 | 18 | 15 | 3 | 16.7 | 9 | 1 | 1 | 0 | 0. | 1 | 8 | 6 | 2 | 25.0 |
| 16 | Howard University, Medical Dept.—R | 46 | 37 | 9 | 19.6 | 20 | 45 | 37 | 8 | 17.8 | 20 | 1 | 0 | 1 | 100.0 | 1 | 16 | 13 | 3 | 18.7 |
| | GEORGIA | | | | | | | | | | | | | | | | | | | |
| 17 | Atlanta College of Phys. and Surgs.—R | 77 | 67 | 10 | 13.0 | 11 | 71 | 61 | 10 | 14.1 | 9 | 6 | 6 | 0 | 0. | 5 | 58 | 51 | 7 | 12.0 |
| 18 | Atlanta School of Medicine.—R | 68 | 57 | 11 | 16.2 | 7 | 68 | 57 | 11 | 16.2 | 7 | .... | .... | .... | .... | .... | 62 | 55 | 7 | 11.3 |
| 19 | Georgia College of Eclectic Med. and Surg.—E | 1 | 1 | 0 | 0. | 1 | 1 | 1 | 0 | 0. | 1 | .... | .... | .... | .... | .... | 1 | 1 | 0 | 0. |
| 20 | Hospital Medical College, Atlanta.—E | 2 | 0 | 2 | 100.0 | 2 | 2 | 0 | 2 | 100.0 | 2 | .... | .... | .... | .... | .... | 2 | 0 | 2 | 100.0 |
| 21 | Medical College of Georgia.—R | 41 | 33 | 8 | 19.5 | 5 | 41 | 33 | 8 | 19.5 | 5 | .... | .... | .... | .... | .... | 35 | 29 | 6 | 17.1 |
| | ILLINOIS | | | | | | | | | | | | | | | | | | | |
| 22 | Bennett Medical College.—R | 61 | 36 | 25 | 41.0 | 18 | 55 | 32 | 23 | 41.8 | 15 | 6 | 4 | 2 | 33.3 | 5 | 36 | 28 | 8 | 22.2 |
| 23 | Chicago College of Medicine and Surgery.—R | 110 | 84 | 26 | 23.6 | 22 | 109 | 83 | 26 | 23.9 | 21 | 1 | 1 | 0 | 0. | 1 | 94 | 72 | 22 | 23.4 |
| 24 | College of Medicine and Surgery.—Ph.M | 15 | 4 | 11 | 73.3 | 1 | 14 | 4 | 10 | 71.4 | 1 | 1 | 0 | 1 | 100.0 | 1 | 7 | 3 | 4 | 57.1 |
| 25 | College of Physicians and Surgeons.—R | 143 | 114 | 29 | 20.3 | 22 | 116 | 93 | 23 | 19.8 | 17 | 27 | 21 | 6 | 22.2 | 13 | 71 | 60 | 11 | 15.5 |
| 26 | Hahnemann Medical College and Hospital.—H | 43 | 28 | 15 | 35.0 | 14 | 34 | 24 | 10 | 29.4 | 12 | 9 | 4 | 5 | 55.6 | 7 | 23 | 18 | 5 | 21.8 |
| 27 | Hering Medical College.—H | 12 | 8 | 4 | 33.3 | 5 | 11 | 7 | 4 | 36.3 | 4 | 1 | 1 | 0 | 0. | 1 | 5 | 4 | 1 | 20.0 |
| 28 | Jenner Medical College.—R | 16 | 8 | 8 | 50.0 | 2 | 14 | 7 | 7 | 50.0 | 1 | 2 | 1 | 1 | 50.0 | 2 | 8 | 5 | 3 | 37.5 |
| 29 | National Medical University.—P | 8 | 3 | 5 | 62.5 | 3 | 6 | 2 | 4 | 66.7 | 1 | 2 | 1 | 1 | 50.0 | 2 | 1 | 0 | 1 | 100.0 |
| 30 | Northwestern University Medical School.—R | 223 | 203 | 20 | 9.0 | 20 | 198 | 181 | 17 | 8.6 | 19 | 25 | 22 | 3 | 12.0 | 11 | 156 | 143 | 13 | 8.3 |
| 31 | Reliance Medical College.—R | 9 | 4 | 5 | 55.6 | 1 | 9 | 4 | 5 | 55.6 | 1 | .... | .... | .... | .... | .... | 4 | 1 | 3 | 75.0 |
| 32 | Rush Medical College.—R | 146 | 135 | 11 | 7.5 | 24 | 99 | 95 | 4 | 4.0 | 17 | 47 | 40 | 7 | 14.9 | 18 | 68 | 64 | 4 | 5.9 |
| | INDIANA | | | | | | | | | | | | | | | | | | | |
| 33 | Indiana University, School of Medicine.—R | 59 | 54 | 5 | 8.5 | 5 | 58 | 54 | 4 | 6.9 | 4 | 1 | 0 | 1 | 100.0 | 1 | 53 | 52 | 1 | 1.9 |
| | IOWA | | | | | | | | | | | | | | | | | | | |
| 34 | Drake University, College of Medicine.—R | 20 | 17 | 3 | 15.0 | 3 | 15 | 15 | 0 | 0. | 2 | 5 | 2 | 3 | 60.0 | 2 | 14 | 14 | 0 | 0. |
| 35 | State University of Iowa, College of Med.—R | 38 | 34 | 4 | 10.5 | 8 | 32 | 30 | 2 | 6.2 | 8 | 6 | 4 | 2 | 33.3 | 5 | 22 | 22 | 0 | 0. |
| 36 | State University of Iowa, Homeo. Dept.—H | 6 | 6 | 0 | 0. | 3 | 5 | 5 | 0 | 0. | 3 | 1 | 1 | 0 | 0. | 1 | 3 | 3 | 0 | 0. |
| | KANSAS | | | | | | | | | | | | | | | | | | | |
| 37 | Kansas Medical College.—R | 16 | 12 | 4 | 25.0 | 4 | 13 | 10 | 3 | 23.1 | 2 | 3 | 2 | 1 | 33.3 | 3 | 13 | 10 | 3 | 23.1 |
| 38 | University of Kansas, School of Medicine.—R | 20 | 19 | 1 | 5.0 | 3 | 19 | 19 | 0 | 0. | 2 | 1 | 0 | 1 | 100.0 | 1 | 19 | 19 | 0 | 0. |
| | KENTUCKY | | | | | | | | | | | | | | | | | | | |
| 39 | Louisville National Medical College.—R | 11 | 4 | 7 | 63.6 | 7 | 10 | 4 | 6 | 60.0 | 6 | 1 | 0 | 1 | 100.0 | 1 | 4 | 2 | 2 | 50.0 |
| 40 | University of Louisville, Medical Dept.—R | 237 | 178 | 59 | 24.8 | 27 | 225 | 169 | 56 | 24.9 | 24 | 12 | 9 | 3 | 25.0 | 8 | 179 | 145 | 34 | 19.0 |
| | LOUISIANA | | | | | | | | | | | | | | | | | | | |
| 41 | Flint Medical College.—R | 6 | 2 | 4 | 66.7 | 3 | 3 | 1 | 2 | 66.7 | 1 | 3 | 1 | 2 | 66.7 | 2 | .... | .... | .... | .... |
| 42 | Tulane University, Medical Dept.—R | 127 | 119 | 8 | 6.3 | 15 | 119 | 111 | 8 | 6.7 | 14 | 8 | 8 | 0 | 0. | 7 | 100 | 96 | 4 | 4.0 |
| | MAINE | | | | | | | | | | | | | | | | | | | |
| 43 | Medical School of Maine.—R | 29 | 24 | 5 | 17.2 | 8 | 23 | 19 | 4 | 17.4 | 7 | 6 | 5 | 1 | 16.7 | 4 | 15 | 13 | 2 | 13.3 |
| | MARYLAND | | | | | | | | | | | | | | | | | | | |
| 44 | Baltimore Medical College.—R | 94 | 77 | 17 | 18.1 | 23 | 83 | 69 | 14 | 16.9 | 21 | 11 | 8 | 3 | 27.3 | 10 | 48 | 43 | 5 | 10.4 |
| 45 | College of Physicians and Surgeons.—R | 91 | 73 | 18 | 19.8 | 18 | 85 | 71 | 14 | 16.5 | 17 | 6 | 2 | 4 | 66.7 | 4 | 52 | 49 | 3 | 5. |
| 46 | Johns Hopkins University, Medical Dept.—R | 119 | 116 | 3 | 2.5 | 28 | 105 | 102 | 3 | 2.9 | 25 | 14 | 14 | 0 | 0. | 9 | 63 | 61 | 2 | 3. |
| 47 | Maryland Medical College.—R | 114 | 72 | 42 | 36.8 | 16 | 107 | 69 | 38 | 35.5 | 14 | 7 | 3 | 4 | 57.1 | 6 | 71 | 54 | 17 | 23. |
| 48 | University of Maryland, School of Medicine.—R | 114 | 94 | 20 | 17.5 | 18 | 103 | 86 | 17 | 16.5 | 18 | 11 | 8 | 3 | 27.3 | 7 | 64 | 57 | 7 | 10. |
| | MASSACHUSETTS | | | | | | | | | | | | | | | | | | | |
| 49 | Boston University School of Medicine.—H | 25 | 24 | 1 | 4.0 | 7 | 21 | 20 | 1 | 4.8 | 6 | 4 | 4 | 0 | 0. | 3 | 15 | 14 | 1 | 6. |
| 50 | College of Physicians and Surgeons.—R | 42 | 23 | 19 | 45.3 | 7 | 42 | 23 | 19 | 45.3 | 7 | .... | .... | .... | .... | .... | 18 | 11 | 7 | 38. |
| 51 | Harvard Medical School.—R | 120 | 115 | 5 | 4.2 | 22 | 102 | 99 | 3 | 2.9 | 19 | 18 | 16 | 2 | 11.1 | 14 | 53 | 51 | 2 | 3. |
| 52 | Tufts College Medical School.—R | 98 | 83 | 15 | 15.3 | 12 | 92 | 80 | 12 | 13.0 | 11 | 6 | 3 | 3 | 50.0 | 5 | 62 | 55 | 7 | 11. |
| | MICHIGAN | | | | | | | | | | | | | | | | | | | |
| 53 | Detroit College of Medicine.—R | 46 | 45 | 1 | 2.2 | 4 | 45 | 44 | 1 | 2.2 | 3 | 1 | 1 | 0 | 0. | 1 | 41 | 41 | 0 | 0. |
| 54 | Detroit Homeopathic College.—R | 7 | 6 | 1 | 14.3 | 2 | 7 | 6 | 1 | 14.3 | 2 | .... | .... | .... | .... | .... | 7 | 6 | 1 | 14. |
| 55 | Univ. of Mich., Dept. of Med. and Surg.—R | 105 | 99 | 6 | 5.7 | 27 | 78 | 77 | 1 | 1.3 | 19 | 27 | 22 | 5 | 18.5 | 17 | 54 | 54 | 0 | 0. |
| 56 | Univ. of Mich., Homeo. College.—H | 21 | 20 | 1 | 4.8 | 7 | 15 | 15 | 0 | 0. | 3 | 6 | 5 | 1 | 16.7 | 4 | 13 | 13 | 0 | 0. |
| | MINNESOTA | | | | | | | | | | | | | | | | | | | |
| 57 | Univ. of Minn., College of Med. and Surg.—R | 41 | 38 | 3 | 7.3 | 8 | 31 | 31 | 0 | 0. | 6 | 10 | 7 | 3 | 30.0 | 4 | 16 | 16 | 0 | 0. |
| 58 | Hamline University, Medical Dept.—R | 19 | 15 | 4 | 21.1 | 3 | 16 | 12 | 4 | 25.0 | 3 | 3 | 3 | 0 | 0. | 1 | 5 | 5 | 0 | 0. |
| | MISSISSIPPI | | | | | | | | | | | | | | | | | | | |
| 59 | Mississippi Medical College.—R | 27 | 9 | 18 | 66.7 | 2 | 27 | 9 | 18 | 66.7 | 2 | .... | .... | .... | .... | .... | 17 | 6 | 11 | 64. |
| | MISSOURI | | | | | | | | | | | | | | | | | | | |
| 60 | American Medical College.—E | 18 | 13 | 5 | 27.8 | 5 | 13 | 10 | 3 | 23.1 | 3 | 5 | 3 | 2 | 40.0 | 4 | 10 | 8 | 2 | 20. |
| 61 | Barnes Medical College.—R | 83 | 55 | 28 | 33.7 | 17 | 73 | 46 | 27 | 37.0 | 12 | 10 | 9 | 1 | 10.0 | 9 | 51 | 39 | 12 | 23. |
| 62 | Eclectic Medical University, Kansas City.—E | 19 | 13 | 6 | 31.6 | 4 | 18 | 12 | 6 | 33.3 | 4 | 1 | 1 | 0 | 0. | 1 | 13 | 9 | 4 | 30. |
| 63 | Ensworth Medical College.—R | 29 | 17 | 12 | 41.4 | 10 | 26 | 15 | 11 | 42.3 | 9 | 3 | 2 | 1 | 33.3 | 3 | 15 | 10 | 5 | 33. |
| 64 | Kansas City Hahnemann Medical College.—H | 20 | 14 | 6 | 30.0 | 6 | 19 | 14 | 5 | 26.3 | 6 | 1 | 0 | 1 | 100.0 | 1 | 13 | 11 | 2 | 15. |
| 65 | St. Louis University, School of Medicine.—R | 88 | 77 | 11 | 12.5 | 14 | 80 | 73 | 7 | 8.7 | 12 | 8 | 4 | 4 | 50.0 | 4 | 64 | 61 | 3 | 4. |
| 66 | St. Louis College of Phys. and Surgs.—R | 52 | 25 | 27 | 51.9 | 18 | 45 | 24 | 21 | 46.7 | 14 | 7 | 1 | 6 | 85.7 | 7 | 19 | 9 | 10 | 52. |
| 67 | University Medical College, Kansas City.—R | 48 | 38 | 10 | 20.8 | 9 | 42 | 33 | 9 | 21.4 | 7 | 6 | 5 | 1 | 16.7 | 5 | 35 | 28 | 7 | 20. |
| 68 | Washington University, Medical Dept.—R | 56 | 52 | 4 | 7.1 | 9 | 51 | 49 | 2 | 3.9 | 6 | 5 | 3 | 2 | 40.0 | 4 | 45 | 43 | 2 | 4. |

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

| NAME OF COLLEGE | Graduates of All Years. | | | | | Graduates of 1907-1911. | | | | | Graduates of 1906 and Previous. | | | | | Graduates of 1911. | | | | | Marginal Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number Examined | Number Passed | Number Failed | Per Cent. Failed | Number of States | Number Examined | Number Passed | Number Failed | Per Cent. Failed | Number of States | Number Examined | Number Passed | Number Failed | Per Cent. Failed | Number of States | Number Examined | Number Passed | Number Failed | Per Cent. Failed | Number of States | |
| NEBRASKA | | | | | | | | | | | | | | | | | | | | | |
| n A. Creighton Medical College.—R. | 61 | 53 | 8 | 13.1 | 14 | 58 | 50 | 8 | 13.8 | 12 | 3 | 3 | 0 | 0. | 3 | 42 | 38 | 4 | 9.5 | 8 | 69 |
| ncoln Medical College.—E. | 12 | 8 | 4 | 33.3 | 2 | 12 | 8 | 4 | 33.3 | 2 | .... | .... | .... | .... | .... | 11 | 7 | 4 | 36.3 | 2 | 70 |
| iversity of Nebraska, College of Med.—R. | 10 | 10 | 0 | 0. | 2 | 10 | 10 | 0 | 0. | 2 | .... | .... | .... | .... | .... | 10 | 10 | 0 | 0. | 2 | 71 |
| NEW HAMPSHIRE | | | | | | | | | | | | | | | | | | | | | |
| rtmouth Medical School.—R. | 17 | 16 | 1 | 5.9 | 6 | 12 | 12 | 0 | 0. | 5 | 5 | 4 | 1 | 20.0 | 5 | 4 | 4 | 0 | 0. | 2 | 72 |
| NEW YORK | | | | | | | | | | | | | | | | | | | | | |
| bany Medical College.—R. | 65 | 48 | 17 | 26.2 | 9 | 60 | 43 | 17 | 28.3 | 6 | 5 | 5 | 0 | 0. | 5 | 39 | 28 | 11 | 28.3 | 3 | 73 |
| lumbia Univ., Coll. of Phys. and Surgs.—R. | 114 | 100 | 14 | 12.3 | 19 | 89 | 80 | 9 | 10.1 | 14 | 25 | 20 | 5 | 20.0 | 12 | 50 | 44 | 6 | 12.0 | 8 | 74 |
| rnell University Medical College.—R. | 57 | 55 | 2 | 3.5 | 7 | 53 | 51 | 2 | 3.8 | 6 | 4 | 4 | 0 | 0. | 4 | 37 | 35 | 2 | 5.4 | 3 | 75 |
| ectic Med. Coll. of City of New York.—E. | 20 | 15 | 5 | 25.0 | 3 | 20 | 15 | 5 | 25.0 | 3 | .... | .... | .... | .... | .... | 12 | 10 | 2 | 16.7 | 3 | 76 |
| rdham University, School of Medicine.—R. | 15 | 10 | 5 | 33.3 | 2 | 15 | 10 | 5 | 33.3 | 2 | .... | .... | .... | .... | .... | 13 | 8 | 5 | 38.4 | 2 | 77 |
| ng Island College Hospital.—R. | 127 | 101 | 26 | 20.5 | 11 | 121 | 95 | 26 | 21.5 | 7 | 6 | 6 | 0 | 0. | 6 | 61 | 43 | 18 | 29.5 | 4 | 78 |
| v York Homeo. Med. Coll. and Hospital.—H. | 30 | 24 | 6 | 20.0 | 7 | 29 | 23 | 6 | 20.7 | 6 | 1 | 1 | 0 | 0. | 1 | 14 | 10 | 4 | 28.6 | 3 | 79 |
| v York Med. Coll. and Hosp. for Women.—H. | 7 | 5 | 2 | 28.6 | 2 | 6 | 4 | 2 | 33.3 | 1 | 1 | 1 | 0 | 0. | 1 | 3 | 2 | 1 | 33.3 | 1 | 80 |
| acuse University, College of Medicine.—R. | 33 | 27 | 6 | 18.2 | 4 | 30 | 24 | 6 | 20.0 | 3 | 3 | 3 | 0 | 0. | 2 | 21 | 19 | 2 | 9.5 | 1 | 81 |
| versity and Bellevue Hospital Med. Coll.—R. | 87 | 80 | 7 | 8.0 | 9 | 83 | 77 | 6 | 7.2 | 8 | 4 | 3 | 1 | 25.0 | 3 | 49 | 46 | 3 | 6.1 | 4 | 82 |
| versity of Buffalo, Medical Dept.—R. | 58 | 50 | 8 | 13.8 | 5 | 54 | 47 | 7 | 13.0 | 5 | 4 | 3 | 1 | 25.0 | 4 | 37 | 32 | 5 | 13.5 | 3 | 83 |
| NORTH CAROLINA | | | | | | | | | | | | | | | | | | | | | |
| nard School of Medicine.—R. | 51 | 23 | 28 | 54.9 | 11 | 48 | 22 | 26 | 54.2 | 10 | 3 | 1 | 2 | 66.7 | 3 | 34 | 15 | 19 | 55.7 | 7 | 84 |
| th Carolina Medical College | 26 | 24 | 2 | 7.7 | 3 | 25 | 23 | 2 | 8.0 | 3 | 1 | 1 | 0 | 0. | 1 | 23 | 21 | 2 | 8.7 | 2 | 85 |
| OHIO | | | | | | | | | | | | | | | | | | | | | |
| veland College of Phys. and Surgs.—R. | 26 | 25 | 1 | 3.8 | 3 | 25 | 25 | 0 | 0. | 3 | 1 | 0 | 1 | 100.0 | 1 | 23 | 23 | 0 | 0. | 3 | 86 |
| veland-Pulte Medical College.—H. | 26 | 20 | 6 | 23.1 | 8 | 19 | 17 | 2 | 10.5 | 4 | 7 | 3 | 4 | 57.1 | 5 | 16 | 15 | 1 | 6.3 | 4 | 87 |
| ectic Medical College.—E. | 38 | 30 | 8 | 21.1 | 11 | 35 | 27 | 8 | 22.9 | 9 | 3 | 3 | 0 | 0. | 3 | 27 | 22 | 5 | 18.5 | 8 | 88 |
| o-Miami Medical College.—R. | 46 | 43 | 3 | 6.5 | 7 | 46 | 43 | 3 | 6.5 | 7 | .... | .... | .... | .... | .... | 40 | 38 | 2 | 5.0 | 5 | 89 |
| rling-Ohio Medical College.—R. | 56 | 54 | 2 | 3.6 | 5 | 56 | 54 | 2 | 3.6 | 5 | .... | .... | .... | .... | .... | 55 | 53 | 2 | 3.6 | 4 | 90 |
| edo Medical College.—R. | 8 | 8 | 0 | 0. | 1 | 8 | 8 | 0 | 0. | 1 | .... | .... | .... | .... | .... | 8 | 8 | 0 | 0. | 1 | 91 |
| stern Reserve University, Medical Dept.—R. | 26 | 25 | 1 | 3.8 | 10 | 20 | 19 | 1 | 5.0 | 6 | 6 | 6 | 0 | 0. | 4 | 14 | 14 | 0 | 0. | 2 | 92 |
| OREGON | | | | | | | | | | | | | | | | | | | | | |
| lamette University, Medical Dept.—R. | 3 | 1 | 2 | 66.7 | 2 | 3 | 1 | 2 | 66.7 | 2 | .... | .... | .... | .... | .... | 1 | 1 | 0 | 0. | 1 | 93 |
| versity of Oregon, Medical Dept.—R. | 21 | 15 | 6 | 28.6 | 4 | 20 | 15 | 5 | 25.0 | 3 | 1 | 0 | 1 | 100.0 | 1 | 12 | 10 | 2 | 16.7 | 3 | 94 |
| PENNSYLVANIA | | | | | | | | | | | | | | | | | | | | | |
| nemann Medical College and Hospital.—H. | 60 | 50 | 10 | 16.7 | 12 | 55 | 47 | 8 | 14.5 | 11 | 5 | 3 | 2 | 40.0 | 2 | 38 | 36 | 2 | 5.3 | 6 | 95 |
| erson Medical College.—R. | 168 | 161 | 7 | 4.2 | 33 | 153 | 147 | 6 | 3.9 | 31 | 15 | 14 | 1 | 6.7 | 13 | 104 | 103 | 1 | 1.0 | 14 | 96 |
| lico-Chirurgical College of Philadelphia.—R. | 107 | 104 | 3 | 2.8 | 14 | 94 | 92 | 2 | 2.1 | 8 | 13 | 12 | 1 | 7.7 | 9 | 78 | 78 | 0 | 0. | 6 | 97 |
| ple University, Medical Dept.—R. | 30 | 29 | 1 | 3.3 | 5 | 30 | 29 | 1 | 3.3 | 5 | .... | .... | .... | .... | .... | 27 | 27 | 0 | 0. | 3 | 98 |
| versity of Pennsylvania, Dept. of Med.—R. | 209 | 197 | 12 | 5.7 | 29 | 179 | 171 | 8 | 4.5 | 25 | 30 | 26 | 4 | 13.3 | 13 | 124 | 119 | 5 | 4.0 | 14 | 99 |
| versity of Pittsburgh, School of Med.—R. | 72 | 70 | 2 | 2.8 | 7 | 72 | 70 | 2 | 2.8 | 7 | .... | .... | .... | .... | .... | 59 | 58 | 1 | 1.7 | 4 | 100 |
| nan's Med. Coll. of Pennsylvania.—R. | 54 | 50 | 4 | 7.4 | 12 | 52 | 48 | 4 | 7.7 | 12 | 2 | 2 | 0 | 0. | 2 | 37 | 35 | 2 | 5.4 | 9 | 101 |
| SOUTH CAROLINA | | | | | | | | | | | | | | | | | | | | | |
| l. Coll. of the State of South Carolina.—R. | 68 | 54 | 14 | 20.6 | 5 | 65 | 51 | 14 | 21.5 | 3 | 3 | 3 | 0 | 0. | 3 | 47 | 39 | 8 | 17.0 | 3 | 102 |
| TENNESSEE | | | | | | | | | | | | | | | | | | | | | |
| lege of Physicians and Surgeons, Memphis.R. | 11 | 8 | 3 | 27.3 | 5 | 11 | 8 | 3 | 27.3 | 5 | .... | .... | .... | .... | .... | 10 | 8 | 2 | 20.0 | 4 | 103 |
| phis Hospital Medical College.—R. | 115 | 72 | 43 | 37.4 | 12 | 98 | 60 | 38 | 38.8 | 10 | 17 | 12 | 5 | 29.4 | 8 | 64 | 40 | 24 | 37.5 | 8 | 104 |
| arry Medical College.—R. | 110 | 57 | 53 | 48.2 | 18 | 106 | 56 | 50 | 47.2 | 17 | 4 | 1 | 3 | 75.0 | 4 | 60 | 34 | 26 | 43.3 | 15 | 105 |
| oln Memorial University, Medical Dept.—R. | 35 | 18 | 17 | 48.6 | 14 | 25 | 14 | 11 | 44.0 | 9 | 10 | 4 | 6 | 60.0 | 7 | 19 | 12 | 7 | 36.8 | 6 | 106 |
| versity of Tennessee, Medical Dept.—R. | 69 | 51 | 18 | 26.1 | 22 | 57 | 44 | 13 | 22.8 | 17 | 12 | 7 | 5 | 41.7 | 9 | 39 | 34 | 5 | 12.8 | 13 | 107 |
| versity of West Tennessee, Medical Dept.—R. | 14 | 1 | 13 | 92.8 | 7 | 14 | 1 | 13 | 92.8 | 7 | .... | .... | .... | .... | .... | 6 | 2 | 4 | 66.7 | 4 | 108 |
| derbilt University, Medical Dept.—R. | 36 | 32 | 4 | 11.1 | 13 | 33 | 29 | 4 | 12.1 | 12 | 3 | 3 | 0 | 0. | 3 | 24 | 20 | 4 | 16.7 | 10 | 109 |
| TEXAS | | | | | | | | | | | | | | | | | | | | | |
| lor University, College of Medicine.—R. | 14 | 14 | 0 | 0. | 3 | 13 | 13 | 0 | 0. | 2 | 1 | 1 | 0 | 0. | 1 | 12 | 12 | 0 | 0. | 2 | 110 |
| t Worth University, Medical Dept.—R. | 24 | 23 | 1 | 4.2 | 3 | 24 | 23 | 1 | 4.2 | 3 | .... | .... | .... | .... | .... | 22 | 22 | 0 | 0. | 3 | 111 |
| thwestern University Medical College.—R. | 15 | 15 | 0 | 0. | 1 | 15 | 15 | 0 | 0. | 1 | .... | .... | .... | .... | .... | 14 | 14 | 0 | 0. | 1 | 112 |
| versity of Texas, Dept. of Med.—R. | 54 | 54 | 0 | 0. | 6 | 54 | 54 | 0 | 0. | 6 | .... | .... | .... | .... | .... | 48 | 48 | 0 | 0. | 4 | 113 |
| VERMONT | | | | | | | | | | | | | | | | | | | | | |
| versity of Vermont, College of Med.—R. | 71 | 66 | 5 | 7.0 | 10 | 61 | 59 | 2 | 3.3 | 7 | 10 | 7 | 3 | 30.0 | 6 | 31 | 30 | 1 | 3.2 | 5 | 114 |
| VIRGINIA | | | | | | | | | | | | | | | | | | | | | |
| ical College of Virginia.—R. | 45 | 41 | 4 | 8.9 | 6 | 44 | 41 | 3 | 6.8 | 6 | 1 | 0 | 1 | 100.0 | 1 | 37 | 37 | 0 | 0. | 5 | 115 |
| ersity of Virginia, Dept. of Med.—R. | 32 | 30 | 2 | 6.2 | 17 | 23 | 21 | 2 | 8.7 | 11 | 9 | 9 | 0 | 0. | 7 | 9 | 9 | 0 | 0. | 3 | 116 |
| versity College of Medicine.—R. | 51 | 45 | 6 | 11.8 | 8 | 46 | 40 | 6 | 13.0 | 6 | 5 | 5 | 0 | 0. | 5 | 39 | 35 | 4 | 10.3 | 3 | 117 |
| WISCONSIN | | | | | | | | | | | | | | | | | | | | | |
| quette University, Medical Dept.—R. | 65 | 59 | 6 | 9.2 | 9 | 62 | 57 | 5 | 8.1 | 9 | 3 | 2 | 1 | 33.3 | 2 | 44 | 42 | 2 | 4.5 | 3 | 118 |
| consin College of Physicians and Surgs.—R. | 18 | 18 | 0 | 0. | 1 | 17 | 17 | 0 | 0. | 1 | 1 | 1 | 0 | 0. | 1 | 16 | 16 | 0 | 0. | 1 | 119 |
| CANADIAN | | | | | | | | | | | | | | | | | | | | | |
| al University, Medical Dept. | 16 | 6 | 10 | 62.5 | 7 | 12 | 4 | 8 | 66.7 | 6 | 4 | 2 | 2 | 50.0 | 3 | 6 | 1 | 5 | 83.3 | 3 | 120 |
| itoba Medical College | 1 | 1 | 0 | 0. | 1 | .... | .... | .... | .... | .... | 1 | 1 | 0 | 0. | 1 | .... | .... | .... | .... | .... | 121 |
| ill University, Medical Faculty | 25 | 23 | 2 | 8.0 | 16 | 20 | 18 | 2 | 10.0 | 12 | 5 | 5 | 0 | 0. | 5 | 1 | 1 | 0 | 0. | 1 | 122 |
| n's University, Medical Faculty | 15 | 11 | 4 | 26.7 | 8 | 12 | 9 | 3 | 25.0 | 7 | 3 | 2 | 1 | 33.3 | 3 | 1 | 1 | 0 | 0. | 1 | 123 |
| ersity of Toronto, Faculty of Medicine | 32 | 29 | 3 | 9.4 | 14 | 29 | 23 | 1 | 3.4 | 14 | 3 | 1 | 2 | 66.7 | 2 | 2 | 2 | 0 | 0. | 2 | 124 |
| tern University, Medical Dept. | 7 | 6 | 1 | 14.3 | 7 | 4 | 4 | 0 | 0. | 4 | 3 | 2 | 1 | 33.3 | 3 | .... | .... | .... | .... | .... | 125 |
| ign Colleges | 116 | 71 | 45 | 38.8 | 21 | 30 | 19 | 11 | 36.7 | 10 | 86 | 52 | 34 | 39.5 | 19 | 2 | 2 | 0 | 0. | 2 | 126 |
| ellaneous Medical Colleges | 356 | 210 | 146 | 41.0 | 45 | 110 | 60 | 50 | 45.5 | 31 | 246 | 150 | 96 | 39.0 | 42 | 16 | 13 | 3 | 18.7 | 2 | 127 |
| ergraduates | 330 | 203 | 127 | 38.5 | 6 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 128 |
| tals | 6960 | 5578 | 1382 | 19.9 | .... | 5685 | 4708 | 977 | 17.2 | .... | 945 | 667 | 278 | 29.4 | .... | 3860 | 3370 | 490 | 12.7 | .... | |

(Continued from Page 1583)

shows that 3,860 or 55.5 per cent. of all candidates examined during the year graduated in 1911, including twelve who graduated in Canada and other foreign colleges. Educational statistics show that the medical colleges of the United States graduated 4,273 students last year; therefore, 90.1 per cent. of all graduates in 1911 took examinations for license during that year. In some of the states graduates in medicine are allowed to serve hospital internships without first becoming licensed practitioners, which doubtless accounts for some of the remaining 10 per cent. Of those examined 490, or 12.7 per cent., failed.

Table C permits of an interesting study of medical schools from the standpoint of state board examinations. For some colleges a marked improvement in teaching methods is apparent from the fact that while the percentages of failures are high for old practitioners they are lower for recent graduates and still lower for graduates of 1911. Other colleges, however, show no improvement either for recent graduates, or for graduates of 1911. In the latter instance a knowledge of these colleges, based on a careful study, which included inspections of the colleges, bears out what the figures of thi table indicate, that some of these institutions are teachin medicine no better to-day than they did ten or more years ag

TABLE D.—Colleges Grouped by States
Showing the Number Examined and Percentage of Failures

| All Colleges of | Graduates. | | | | | | | | State Rank According to the Number Examined | Rank According to Successes at Examinations |
|---|---|---|---|---|---|---|---|---|---|---|
| | Of All Years. | | Of 1907 to 1911. | | Of 1906 & Prev. | | Of 1911. | | | |
| | Number Examined. | Per Cent. Failed. | Number Examined. | Per Cent. Failed. | Number Examined. | Per Cent. Failed. | Number Examined. | Per Cent. Failed. | | |
| Alabama | 104 | 24.0 | 100 | 23.0 | 4 | 50.0 | 65 | 16.9 | 15 | 26 |
| Arkansas | 70 | 24.3 | 68 | 23.5 | 2 | 0. | 55 | 20.0 | 22 | 27 |
| California | 86 | 12.8 | 79 | 8.9 | 7 | 57.1 | 55 | 3.6 | 17 | 15 |
| Colorado | 28 | 7.1 | 26 | 7.7 | 2 | 0. | 22 | 0. | 30 | 6 |
| Connecticut | 47 | 8.5 | 44 | 9.1 | 3 | 0. | 15 | 6.7 | 27 | 8 |
| District of Columbia | 100 | 14.0 | 95 | 13.7 | 5 | 20.0 | 39 | 15.4 | 16 | 17 |
| Georgia | 189 | 16.4 | 183 | 16.9 | 6 | 0. | 158 | 13.9 | 10 | 21 |
| Illinois | 786 | 20.2 | 665 | 20.0 | 121 | 21.5 | 473 | 15.8 | 1 | 24 |
| Indiana | 59 | 8.5 | 58 | 6.9 | 1 | 100.0 | 53 | 1.9 | 26 | 9 |
| Iowa | 64 | 10.9 | 52 | 3.8 | 12 | 41.7 | 39 | 0. | 24 | 13 |
| Kansas | 36 | 13.9 | 32 | 9.4 | 4 | 50.0 | 32 | 9.4 | 28 | 16 |
| Kentucky | 248 | 26.6 | 235 | 26.4 | 13 | 30.8 | 183 | 19.7 | 8 | 29 |
| Louisiana | 133 | 9.0 | 122 | 8.2 | 11 | 18.2 | 100 | 4.0 | 12 | 10 |
| Maine | 29 | 17.2 | 23 | 17.4 | 6 | 16.7 | 15 | 13.3 | 29 | 22 |
| Maryland | 532 | 18.8 | 483 | 17.8 | 49 | 28.6 | 298 | 11.4 | 4 | 23 |
| Massachusetts | 285 | 14.0 | 257 | 13.6 | 28 | 17.9 | 148 | 11.5 | 7 | 18 |
| Michigan | 179 | 5.0 | 145 | 2.1 | 34 | 17.6 | 115 | 0.9 | 11 | 2 |
| Minnesota | 60 | 11.7 | 47 | 8.5 | 13 | 23.1 | 21 | 0. | 25 | 14 |
| Mississippi | 27 | 66.7 | 27 | 66.7 | .... | ..... | 17 | 64.7 | 31 | 33 |
| Missouri | 413 | 26.4 | 367 | 24.8 | 46 | 39.1 | 265 | 17.7 | 5 | 28 |
| Nebraska | 83 | 14.5 | 80 | 15.0 | 3 | 0. | 63 | 12.7 | 19 | 19 |
| New Hampshire | 17 | 5.9 | 12 | 0. | 5 | 20.0 | 4 | 0. | 33 | 4 |
| New York | 613 | 15.9 | 560 | 10.9 | 53 | 13.2 | 336 | 17.6 | 3 | 20 |
| North Carolina | 77 | 39.0 | 73 | 38.4 | 4 | 50.0 | 57 | 36.8 | 20 | 32 |
| Ohio | 226 | 9.3 | 209 | 7.7 | 17 | 29.4 | 183 | 5.5 | 9 | 11 |
| Oregon | 24 | 33.3 | 23 | 30.4 | 1 | 100.0 | 13 | 15.4 | 32 | 31 |
| Pennsylvania | 700 | 5.6 | 635 | 4.9 | 65 | 12.3 | 467 | 2.4 | 2 | 3 |
| South Carolina | 68 | 20.6 | 65 | 21.5 | 3 | 0. | 47 | 17.0 | 23 | 25 |
| Tennessee | 390 | 30.9 | 344 | 38.4 | 46 | 41.2 | 222 | 32.4 | 6 | 30 |
| Texas | 107 | 1.9 | 106 | 0.9 | 1 | 0. | 96 | 0. | 14 | 1 |
| Vermont | 71 | 7.0 | 61 | 3.3 | 10 | 30.0 | 31 | 3.2 | 21 | 5 |
| Virginia | 128 | 9.4 | 113 | 9.7 | 15 | 6.7 | 85 | 4.7 | 13 | 12 |
| Wisconsin | 83 | 7.2 | 79 | 6.3 | 4 | 25.0 | 60 | 3.3 | 18 | 7 |
| Totals Examined in 1911 | 6062 | 17.2 | 5468 | 16.5 | 594 | 23.9 | 3832 | 12.6 | .... | .... |

This table gives data relating to the group of colleges in each state. For example, it shows that of all the medical schools in New York 613 graduates of various years were examined by state boards during 1911, of which number 15.9 per cent. failed. Of the 560 who graduated in recent years, however (1907 to 1911 inclusive), 10.9 per cent. failed, while of the 53 who graduated previous to 1907, 13.2 per cent. failed.

The ninth column gives the rank of each state group of colleges according to the number of applicants. The Illinois group of colleges leads, having 786 graduates examined by state boards during 1911, followed by Pennsylvania with 700, New York with 613, Maryland with 532, Missouri with 413 and Tennessee with 390.

The tenth column gives the rank of each state group of colleges according to the success of the graduates at state board examinations. It is interesting to compare the figures of these two last columns. While the Illinois group ranks first according to the number examined it ranks twenty-fourth in the success of its graduates at examinations. While New York ranks third as to the number examined, it ranks twentieth in the success of its graduates at examinations and while Tennessee ranks sixth as to the number examined, it ranks thirtieth in the success of its graduates at examinations.

Total Results
Comparison with Previous Years

| | Table A | | | | B | | C | | A | | K | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year. | Total Examined. | Examined—Passed. | Examined—Failed. | Percentage Failed. | Recent Grads. Examined. | Percentage Failed. | Older Pract. Examined. | Percentage Failed. | Non-Grads. Examined. | Percentage Failed. | Regist. Without Written Examination | Total Registered. |
| 1904 | 7035 | 5672 | 1363 | 19.3 | 4773 | 14.1 | 579 | 29.7 | 515 | 52.6 | 999 | 6671 |
| 1905 | 7170 | 5680 | 1490 | 20.8 | 6054 | 16.2 | 690 | 37.7 | 472 | 61.9 | 394 | 6074 |
| 1906 | 8035 | 6368 | 1667 | 20.7 | 6250 | 16.4 | 793 | 27.1 | 703 | 51.3 | 1497 | 7865 |
| 1907 | 7271 | 5723 | 1548 | 21.3 | 5922 | 15.1 | 675 | 27.7 | 674 | 69.6 | 1426 | 7149 |
| 1908 | 7770 | 6084 | 1686 | 21.7 | 6477 | 17.8 | 796 | 31.5 | 494 | 56.8 | 1276 | 7360 |
| 1909 | 7287 | 5857 | 1430 | 19.6 | 5891 | 15.4 | 958 | 30.0 | 438 | 54.1 | 1373 | 7230 |
| 1910 | 7004 | 5712 | 1292 | 18.4 | 5678 | 14.9 | 973 | 29.1 | 353 | 45.6 | 1640 | 7352 |
| 1911 | 6960 | 5578 | 1382 | 19.9 | 5685 | 17.2 | 945 | 29.4 | 330 | 38.5 | 1246 | 6824 |

Results for Larger Colleges
Comparison with Previous Years (Table E).

| Year. | Colleges Represented. | Total Examined. | Per Cent. Failed. | Colleges, 100 or More Examined. | Total Examined. | Per Cent. Failed. | Colleges, 50 to 100 Examined. | Total Examined. | Per Cent. Failed. | Colleges, Less than 50 Examined. | Total Examined. | Per Cent. Failed. | Foreign, Misc., and non-grads. Exam'd. | Per Cent. Failed. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1904 | 149 | 6241 | 16.4 | 14 | 2271 | 11.7 | 28 | 1817 | 16.9 | 107 | 2153 | 21.0 | 794 | 43. |
| 1905 | 153 | 6411 | 18.3 | 14 | 2350 | 12.4 | 37 | 2543 | 17.7 | 102 | 1518 | 28.9 | 759 | 51. |
| 1906 | 151 | 6938 | 17.3 | 16 | 2504 | 14.5 | 34 | 2381 | 16.9 | 96 | 2053 | 21.3 | 1097 | 42. |
| 1907 | 146 | 6207 | 13.8 | 12 | 1626 | 12.7 | 36 | 2578 | 14.7 | 98 | 2003 | 13.6 | 1064 | 55. |
| 1908 | 137 | 6491 | 17.2 | 19 | 2596 | 15.6 | 26 | 1825 | 15.5 | 92 | 2070 | 20.8 | 1279 | 14. |
| 1909 | 134 | 6341 | 16.2 | 17 | 2476 | 16.9 | 27 | 1920 | 12.3 | 90 | 1945 | 19.2 | 946 | 42. |
| 1910 | 121 | 5953 | 15.3 | 17 | 2379 | 13.3 | 25 | 1791 | 13.7 | 79 | 1783 | 19.3 | 1051 | 36. |
| 1911 | 119 | 6062 | 17.2 | 18 | 2508 | 11.0 | 28 | 1895 | 17.1 | 73 | 1659 | 20.1 | 898 | 37. |

### Study of Totals and Percentages

A study of totals and percentages as compared with prev ous years is of interest. The total examined and the pe centage of failures, shown in Table A, are the lowest sinc the compiling of these statistics was begun in 1904. Th total examined in 1911 shows a decrease of 1,075 below 190 when 8,035 candidates were examined. By all methods—exan ination, reciprocity, under exemption, etc.—6,824 physicia were licensed during 1911, or 1,041 less than in 1906, wh 7,865 physicians were licensed.

Other deductions from the larger tables have been ma and are presented in Tables D to M, which are worthy careful study.

### Study of Colleges by State Groups

Table D is based on the first four large tables and gives t results for the group of colleges located in each state. shows what states are furnishing the largest numbers of ph sicians and the failure percentages indicate what kind training these colleges are furnishing, so far as may judged from the failures of their graduates before state boar By comparing the percentages of the first column with t other columns it can be seen whether there has been a reduction in failures for graduates of recent years. Of t thirty-three states having medical colleges which grant degre sixteen furnished 100 or more candidates examined. Of th sixteen groups of colleges, six had failure percentages of l than 10 per cent.; five had failure percentages between 10 a 20, and five had over 20 per cent. of failures. The high failure percentage was obtained by the Mississippi group w 66.7. Of the states having 100 or more candidates examin however, the highest failure percentage was obtained by

Tennessee group, which had 30.9 per cent., followed by the Kentucky group with 26.6 per cent., and the Missouri group with 26.4 per cent. of their graduates failing. Other deductions are given with the table.

### Study of Larger Colleges

Table E is also based on the three large tables and gives the results of state board examinations as they affect the forty-six largest medical colleges. Although these colleges represent 38 per cent. of the medical colleges in the United States, they furnish 63 per cent. of all the candidates for license. This table shows that the graduation of large classes by a medical college does not prove excellence of teaching since several colleges having 100 or more examined have very high failure percentages and this holds true even for the graduates of 1911. In fact, the larger the college from the standpoint of the number of students and graduates the more serious is inferior teaching ability, indicated by a high failure percentage. In fairness to the medical student, and in the interests of the public, such schools should greatly strengthen their teaching facilities or reduce the size of their classes.

Altogether for these schools 711, or 16.1 per cent., failed, as compared with 20.1 per cent. of failures for the 1,659 candidates from the seventy-three colleges having less than fifty each examined.

Besides the graduates of the medical colleges of the United States, 898 candidates were examined, made up of ninety-six graduates of Canadian colleges, 116 foreign college graduates, 356 graduates of miscellaneous colleges and 330 non-graduates. Of these 898 candidates, 338, or 37.6 per cent., failed.

### Results in Home States and Elsewhere

Table F is of much interest, because it shows for each college the results of examinations in the state where the college

### TABLE E.—COLLEGES HAVING FIFTY OR MORE EXAMINED

Table Shows Total Number Examined, Total Number Passed, Total Number Failed, Percentage of Failures and Number of States in Which Each College Had Representatives

| College. | Graduates, All Years. | | | | | Graduates of 1907-1911. | | | | | Graduates, 1906 and Previous. | | | | | Graduates of 1911. | | | | | Marginal Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total Examined. | Number Passed. | Number Failed. | Per Cent. of Failures. | No. States. | Total Examined. | Number Passed. | Number Failed. | Per Cent. of Failures. | No. States. | Total Examined. | Number Passed. | Number Failed. | Per Cent. of Failures. | No. States. | Total Examined. | Number Passed. | Number Failed. | Per Cent. of Failures. | No. States. | |
| University of Louisville, Medical Department | 237 | 178 | 59 | 24.8 | 27 | 225 | 169 | 56 | 24.9 | 24 | 12 | 9 | 3 | 25.0 | 8 | 179 | 145 | 34 | 19.0 | 19 | 40 |
| Northwestern University Medical School | 223 | 203 | 20 | 9.0 | 20 | 198 | 181 | 17 | 8.6 | 19 | 25 | 22 | 3 | 12.0 | 11 | 156 | 143 | 13 | 8.3 | 13 | 30 |
| University of Pennsylvania, Dept. of Medicine | 209 | 197 | 12 | 5.7 | 29 | 179 | 171 | 8 | 4.5 | 25 | 30 | 26 | 4 | 13.3 | 13 | 124 | 119 | 5 | 4.0 | 14 | 99 |
| Jefferson Medical College | 168 | 161 | 7 | 4.2 | 33 | 153 | 147 | 6 | 3.9 | 31 | 15 | 14 | 1 | 6.7 | 13 | 104 | 103 | 1 | 1.0 | 14 | 96 |
| Rush Medical College | 146 | 135 | 11 | 7.5 | 24 | 99 | 95 | 4 | 4.0 | 17 | 47 | 40 | 7 | 14.9 | 18 | 68 | 64 | 4 | 5.9 | 12 | 32 |
| College of Physicians and Surgeons, Chicago | 143 | 114 | 29 | 20.3 | 22 | 116 | 93 | 23 | 19.8 | 17 | 27 | 21 | 6 | 22.2 | 13 | 71 | 60 | 11 | 15.5 | 8 | 25 |
| Tulane University, Medical Department | 127 | 119 | 8 | 6.3 | 15 | 119 | 111 | 8 | 6.7 | 14 | 8 | 8 | 0 | 0. | 7 | 100 | 96 | 4 | 4.0 | 9 | 42 |
| Long Island College Hospital | 127 | 101 | 26 | 20.5 | 11 | 121 | 95 | 26 | 21.5 | 7 | 6 | 6 | 0 | 0. | 6 | 61 | 43 | 18 | 29.5 | 4 | 78 |
| Harvard Medical School | 120 | 115 | 5 | 4.2 | 22 | 102 | 99 | 3 | 2.9 | 19 | 18 | 16 | 2 | 11.1 | 14 | 53 | 51 | 2 | 3.8 | 12 | 51 |
| Johns Hopkins University, Medical Department | 119 | 116 | 3 | 2.5 | 28 | 105 | 102 | 3 | 2.9 | 25 | 14 | 14 | 0 | 0. | 9 | 63 | 61 | 2 | 3.2 | 14 | 46 |
| Memphis Hospital Medical College | 115 | 72 | 43 | 37.4 | 12 | 98 | 60 | 38 | 38.8 | 10 | 17 | 12 | 5 | 29.4 | 8 | 64 | 40 | 24 | 37.5 | 8 | 104 |
| University of Maryland, School of Medicine | 114 | 94 | 20 | 17.5 | 18 | 103 | 86 | 17 | 16.5 | 18 | 11 | 8 | 3 | 27.3 | 7 | 64 | 57 | 7 | 10.9 | 12 | 48 |
| Maryland Medical College | 114 | 72 | 42 | 36.8 | 16 | 107 | 69 | 38 | 35.5 | 14 | 7 | 3 | 4 | 57.1 | 6 | 71 | 54 | 17 | 23.9 | 10 | 47 |
| Columbia Univ., College of Phys. and Surgs | 114 | 100 | 14 | 12.3 | 19 | 89 | 80 | 9 | 10.1 | 14 | 25 | 20 | 5 | 20.0 | 12 | 50 | 44 | 6 | 12.0 | 8 | 74 |
| Meharry Medical College | 110 | 57 | 53 | 48.2 | 18 | 106 | 56 | 50 | 47.2 | 17 | 4 | 1 | 3 | 75.0 | 4 | 60 | 34 | 26 | 43.3 | 15 | 105 |
| Chicago College of Medicine and Surgery | 110 | 84 | 26 | 23.6 | 22 | 109 | 83 | 26 | 23.9 | 21 | 1 | 1 | 0 | 0. | 1 | 94 | 72 | 22 | 23.4 | 13 | 23 |
| Medico-Chirurgical College of Philadelphia | 107 | 104 | 3 | 2.8 | 14 | 94 | 92 | 2 | 2.1 | 8 | 13 | 12 | 1 | 7.7 | 9 | 78 | 78 | 0 | 0. | 6 | 97 |
| University of Michigan, Dept. of Med. and Surg. | 105 | 99 | 6 | 5.7 | 27 | 78 | 77 | 1 | 1.3 | 19 | 27 | 22 | 5 | 18.5 | 17 | 54 | 54 | 0 | 0. | 5 | 55 |
| Tufts College Medical School | 98 | 83 | 15 | 15.3 | 12 | 92 | 80 | 12 | 13.0 | 11 | 6 | 3 | 3 | 50.0 | 5 | 62 | 55 | 7 | 11.3 | 5 | 52 |
| Baltimore Medical College | 94 | 77 | 17 | 18.1 | 23 | 83 | 69 | 14 | 16.9 | 21 | 11 | 8 | 3 | 27.3 | 10 | 48 | 43 | 5 | 10.4 | 11 | 44 |
| College of Physicians and Surgeons, Baltimore | 91 | 73 | 18 | 19.8 | 18 | 85 | 71 | 14 | 16.5 | 17 | 6 | 2 | 4 | 66.7 | 4 | 52 | 49 | 3 | 5.8 | 10 | 45 |
| St. Louis University, School of Medicine | 88 | 77 | 11 | 12.5 | 14 | 80 | 73 | 7 | 8.7 | 12 | 8 | 4 | 4 | 50.0 | 4 | 64 | 61 | 3 | 4.7 | 6 | 65 |
| Univ. and Bellevue Hospital Medical College | 87 | 80 | 7 | 8.0 | 9 | 83 | 77 | 6 | 7.2 | 8 | 4 | 3 | 1 | 25.0 | 3 | 49 | 46 | 3 | 6.1 | 4 | 82 |
| Barnes Medical College | 83 | 55 | 28 | 33.7 | 17 | 72 | 46 | 26 | 36.1 | 12 | 10 | 9 | 1 | 10.0 | 9 | 51 | 39 | 12 | 23.5 | 7 | 61 |
| Atlanta College of Physicians and Surgeons | 77 | 67 | 10 | 13.0 | 11 | 71 | 61 | 10 | 14.1 | 9 | 6 | 6 | 0 | 0. | 5 | 58 | 51 | 7 | 12.0 | 7 | 17 |
| University of Pittsburgh, School of Medicine | 72 | 70 | 2 | 2.8 | 7 | 72 | 70 | 2 | 2.8 | 7 | .... | .... | .... | ...... | .... | 59 | 58 | 1 | 1.7 | 4 | 100 |
| University of Vermont, College of Medicine | 71 | 66 | 5 | 7.0 | 10 | 61 | 59 | 2 | 3.3 | 7 | 10 | 7 | 3 | 30.0 | 6 | 31 | 30 | 1 | 3.2 | 5 | 114 |
| University of Tennessee, Medical Department | 69 | 51 | 18 | 26.1 | 22 | 57 | 44 | 13 | 22.8 | 17 | 12 | 7 | 5 | 41.7 | 9 | 39 | 34 | 5 | 12.8 | 13 | 107 |
| University of Alabama, Medical Department | 69 | 53 | 16 | 23.2 | 9 | 65 | 51 | 14 | 21.5 | 8 | 4 | 2 | 2 | 50.0 | 4 | 41 | 36 | 5 | 12.2 | 6 | 2 |
| Medical College of the State of South Carolina | 68 | 54 | 14 | 20.6 | 5 | 65 | 51 | 14 | 21.5 | 3 | 3 | 3 | 0 | 0. | 3 | 47 | 39 | 8 | 17.0 | 3 | 102 |
| Atlanta School of Medicine | 68 | 57 | 11 | 16.2 | 7 | 68 | 57 | 11 | 16.2 | 7 | .... | .... | .... | ...... | .... | 62 | 55 | 7 | 11.3 | 6 | 18 |
| Marquette University, Medical Department | 65 | 59 | 6 | 9.2 | 9 | 62 | 57 | 5 | 8.1 | 9 | 3 | 2 | 1 | 33.3 | 2 | 44 | 42 | 2 | 4.5 | 3 | 118 |
| Albany Medical College | 65 | 48 | 17 | 26.2 | 9 | 60 | 43 | 17 | 28.3 | 6 | 5 | 5 | 0 | 0. | 5 | 39 | 28 | 11 | 28.3 | 3 | 73 |
| John A. Creighton Medical College | 61 | 53 | 8 | 13.1 | 14 | 58 | 50 | 8 | 13.8 | 12 | 3 | 3 | 0 | 0. | 3 | 42 | 38 | 4 | 9.5 | 8 | 69 |
| Bennett Medical College | 61 | 36 | 25 | 41.0 | 18 | 55 | 32 | 23 | 41.8 | 15 | 6 | 4 | 2 | 33.3 | 5 | 36 | 28 | 8 | 22.2 | 8 | 22 |
| Hahnemann Med. Coll. and Hosp., Philadelphia | 60 | 50 | 10 | 16.7 | 12 | 55 | 47 | 8 | 14.5 | 11 | 5 | 3 | 2 | 40.0 | 2 | 38 | 36 | 2 | 5.3 | 6 | 95 |
| Indiana University, School of Medicine | 59 | 54 | 5 | 8.5 | 5 | 58 | 54 | 4 | 6.9 | 4 | 1 | 0 | 1 | 100.0 | 1 | 53 | 52 | 1 | 1.9 | 1 | 33 |
| University of Buffalo, Medical Department | 58 | 50 | 8 | 13.8 | 5 | 54 | 47 | 7 | 13.0 | 5 | 4 | 3 | 1 | 25.0 | 4 | 37 | 32 | 5 | 13.5 | 3 | 83 |
| Cornell University Medical College | 57 | 55 | 2 | 3.5 | 7 | 53 | 51 | 2 | 3.8 | 6 | 4 | 4 | 0 | 0. | 4 | 37 | 35 | 2 | 5.4 | 3 | 75 |
| Washington University, Medical Dept., St. Louis | 56 | 52 | 4 | 7.1 | 9 | 51 | 49 | 2 | 3.9 | 6 | 5 | 3 | 2 | 40.0 | 4 | 45 | 43 | 2 | 4.4 | 5 | 68 |
| Starling-Ohio Medical College | 56 | 54 | 2 | 3.6 | 5 | 56 | 54 | 2 | 3.6 | 5 | .... | .... | .... | ...... | .... | 55 | 53 | 2 | 3.6 | 4 | 90 |
| University of Texas, Department of Medicine | 54 | 54 | 0 | 0. | 6 | 54 | 54 | 0 | 0. | 6 | .... | .... | .... | ...... | .... | 48 | 48 | 0 | 0. | 4 | 113 |
| Woman's Medical College of Pennsylvania | 54 | 50 | 4 | 7.4 | 12 | 52 | 48 | 4 | 7.7 | 12 | 2 | 2 | 0 | 0. | 2 | 37 | 35 | 2 | 5.4 | 9 | 101 |
| St. Louis College of Physicians and Surgeons | 52 | 25 | 27 | 51.9 | 18 | 45 | 24 | 21 | 46.7 | 14 | 7 | 1 | 6 | 85.7 | 7 | 19 | 9 | 10 | 52.6 | 7 | 66 |
| University College of Medicine, Richmond | 51 | 45 | 6 | 11.8 | 8 | 46 | 40 | 6 | 13.0 | 6 | 5 | 5 | 0 | 0. | 5 | 39 | 35 | 4 | 10.3 | 3 | 117 |
| Leonard School of Medicine | 51 | 23 | 28 | 54.9 | 11 | 48 | 22 | 26 | 54.2 | 10 | 3 | 1 | 2 | 66.7 | 3 | 34 | 15 | 19 | 55.7 | 7 | 84 |
| Totals | 4403 | 3692 | 711 | 16.1 | .... | 3962 | 3347 | 615 | 15.5 | .... | 440 | 345 | 95 | 21.6 | .... | 2780 | 2443 | 337 | 12.1 | .... | .... |

This table is especially interesting, since it gives data relating to the 46 larger medical colleges arranged according to the number of graduates examined. This allows of comparisons between colleges having classes of nearly equal size. This time as in 1909 and 1910 the University of Louisville Medical Department had the largest number examined, which place was held in 1908 by Jefferson Medical College and in the three previous years by the College of Physicians and Surgeons of Chicago.

Of the 18 colleges having 100 or more examined 9 have failure percentages of less than 10, while 7 stand out prominently with large failure percentages of 20.3, 20.5, 23.6, 24.8, 37.4, 36.8 and 48.2. This marked difference holds even in respect to recent graduates (of 1907 to 1911 inclusive). The highest three failure percentages are for Meharry Medical College, 48.2; Memphis Hospital Medical College, 37.4, and Maryland Medical College, 36.8.

Of the 28 colleges having between 50 and 100 graduates examined, 10 had failure percentages of less than 10; 10 had failure percentages between 10 and 20, and 8 had failure percentages above 20, the 4 colleges having the highest failure percentages being Leonard School of Medicine, 54.9; St. Louis College of Physicians and Surgeons, 51.9; Bennett Medical College, 41.0, and Barnes Medical College, 33.7.

The average percentage of failures for these larger colleges for graduates of 1906 and previous years, was 21.6; for graduates of 1907 to 1911 inclusive (recent graduates), 15.5; for graduates of 1911, 12.1, and for graduates of all years, was 16.1. Of the 6,062 graduates of the 119 colleges in the United States which were examined by state boards in 1911 these larger schools furnished 4,403 or 72.6 per cent.

TABLE F.—Comparison of Results in Home States and Elsewhere. Based on Table B.

| College. | Total Examined. | Results in Home State. | | | Results in Other States. | | |
|---|---|---|---|---|---|---|---|
| | | Passed. | Failed. | Per Cent. Failed. | Passed. | Failed. | Per Cent. Failed. |
| ALABAMA **—20.6** | **100** | **61** | **22** | **26.5** | **16** | **1** | **5.9** |
| Birmingham Medical College | 35 | 20 | 8 | 28.6 | 6 | 1 | 14.3 |
| University of Alabama | 65 | 41 | 14 | 25.5 | 10 | 0 | 0. |
| ARKANSAS **+27.9** | **68** | **38** | **7** | **15.6** | **13** | **10** | **43.5** |
| College of Physicians and Surgeons | 32 | 15 | 6 | 28.6 | 6 | 5 | 45.5 |
| University of Arkansas | 36 | 23 | 1 | 4.2 | 7 | 5 | 41.7 |
| CALIFORNIA **— 9.5** | **79** | **67** | **7** | **9.5** | **5** | **0** | **0.** |
| California Eclectic Medical College | .... | .... | .... | .... | .... | .... | .... |
| College of P. and S., Los Angeles | 12 | 8 | 2 | 20.0 | 2 | 0 | 0. |
| College of P. and S., San Francisco | 15 | 12 | 3 | 20.0 | .... | .... | .... |
| Cooper Medical College | 27 | 25 | 2 | 7.5 | .... | .... | .... |
| Hahnemann Med. Coll. of the Pacific | 7 | 7 | 0 | 0. | .... | .... | .... |
| Oakland Coll. of Medicine and Surgery | .... | .... | .... | .... | .... | .... | .... |
| University of California | 18 | 15 | 0 | 0. | 3 | 0 | 0. |
| COLORADO **+28.6** | **26** | **19** | **0** | **0.** | **5** | **2** | **28.6** |
| University of Colorado | 26 | 19 | 0 | 0. | 5 | 2 | 28.6 |
| CONNECTICUT **+12.9** | **44** | **25** | **1** | **3.8** | **15** | **3** | **16.7** |
| Yale Medical School | 44 | 25 | 1 | 3.8 | 15 | 3 | 16.7 |
| DISTRICT OF COLUMBIA **— 5.9** | **95** | **18** | **4** | **18.2** | **64** | **9** | **12.3** |
| George Washington University | 32 | 11 | 2 | 15.4 | 19 | 0 | 0. |
| Georgetown University | 18 | 4 | 0 | 0. | 11 | 3 | 21.4 |
| Howard University | 45 | 3 | 2 | 40.0 | 34 | 6 | 15.0 |
| GEORGIA **+26.9** | **183** | **113** | **10** | **8.1** | **39** | **21** | **35.0** |
| Atlanta College of Phys. and Surgs. | 71 | 45 | 1 | 2.2 | 16 | 9 | 36.0 |
| Atlanta School of Medicine | 68 | 43 | 4 | 8.5 | 14 | 7 | 33.3 |
| Georgia College of Eclectic M. and S. | 1 | .... | .... | .... | 1 | 0 | 0. |
| Hospital Medical College, Atlanta | 2 | 0 | 1 | 100.0 | 0 | 1 | 100.0 |
| Medical College of Georgia | 41 | 25 | 4 | 13.8 | 8 | 4 | 33.3 |
| ILLINOIS **—13.6** | **665** | **336** | **109** | **24.5** | **196** | **24** | **10.9** |
| Bennett Medical College | 55 | 19 | 16 | 45.7 | 13 | 7 | 35.0 |
| Chicago College of Med. and Surg. | 109 | 60 | 21 | 25.9 | 23 | 5 | 17.9 |
| College of Medicine and Surg., Ph.M. | 14 | 4 | 10 | 71.4 | .... | .... | .... |
| College of Phys. and Surgs., Chicago | 116 | 55 | 20 | 26.7 | 38 | 3 | 7.3 |
| Hahnemann Med. Coll. and Hospital | 34 | 13 | 6 | 31.6 | 11 | 4 | 26.7 |
| Hering Medical College | 11 | 5 | 3 | 37.5 | 2 | 1 | 33.3 |
| Jenner Medical College | 14 | 7 | 7 | 50.0 | .... | .... | .... |
| National Medical University | 6 | 2 | 4 | 66.7 | .... | .... | .... |
| Northwestern University Med. School | 198 | 109 | 14 | 11.4 | 72 | 3 | 4.0 |
| Reliance Medical College | 9 | 4 | 5 | 55.6 | .... | .... | .... |
| Rush Medical College | 99 | 58 | 3 | 4.9 | 37 | 1 | 2.6 |
| INDIANA **+63.1** | **58** | **53** | **2** | **3.6** | **1** | **2** | **66.7** |
| Indiana University, School of Med. | 58 | 53 | 2 | 3.6 | 1 | 2 | 66.7 |
| IOWA **+14.3** | **52** | **38** | **0** | **0.** | **12** | **2** | **14.3** |
| Drake University, College of Medicine | 15 | 14 | 0 | 0. | 1 | 0 | 0. |
| State University of Iowa, Coll. of Med. | 32 | 21 | 0 | 0. | 9 | 2 | 18.2 |
| State University of Iowa, Homeo. Dept. | 5 | 3 | 0 | 0. | 2 | 0 | 0. |
| KANSAS **—10.7** | **32** | **25** | **3** | **10.7** | **4** | **0** | **0.** |
| Kansas Medical College | 13 | 9 | 3 | 25.0 | 1 | 0 | 0. |
| Univ. of Kansas, School of Medicine | 19 | 16 | 0 | 0. | 3 | 0 | 0. |
| KENTUCKY **+ 1.9** | **235** | **74** | **25** | **25.3** | **99** | **37** | **27.2** |
| Louisville National Medical College | 10 | 2 | 3 | 60.0 | 2 | 3 | 60.0 |
| University of Louisville, Medical Dept. | 225 | 72 | 22 | 23.4 | 97 | 34 | 26.0 |
| LOUISIANA **+14.0** | **122** | **72** | **2** | **2.7** | **40** | **8** | **16.7** |
| Flint Medical College | 3 | 1 | 2 | 66.7 | .... | .... | .... |
| Tulane University Medical Department | 119 | 71 | 0 | 0. | 40 | 8 | 16.7 |
| MAINE **+19.0** | **23** | **11** | **1** | **8.3** | **8** | **3** | **27.3** |
| Medical School of Maine | 23 | 11 | 1 | 8.3 | 8 | 3 | 27.3 |
| MARYLAND **+ 0.4** | **483** | **118** | **25** | **17.5** | **279** | **61** | **17.9** |
| Baltimore Medical College | 83 | 15 | 3 | 16.7 | 54 | 11 | 16.9 |
| College of Physicians and Surgeons | 85 | 17 | 2 | 10.5 | 54 | 12 | 18.2 |
| Johns Hopkins University | 105 | 39 | 2 | 4.9 | 63 | 1 | 1.6 |
| Maryland Medical College | 107 | 11 | 12 | 52.2 | 58 | 26 | 31.0 |
| University of Maryland | 103 | 36 | 6 | 14.3 | 50 | 11 | 18.0 |
| MASSACHUSETTS **— 6.1** | **257** | **131** | **25** | **16.0** | **91** | **10** | **9.9** |
| Boston University | 21 | 13 | 1 | 7.2 | 7 | 0 | 0. |
| College of Physicians and Surgeons | 42 | 7 | 11 | 61.1 | 16 | 8 | 33.3 |
| Harvard Medical School | 102 | 58 | 3 | 4.9 | 41 | 0 | 0. |
| Tufts College Medical School | 92 | 53 | 10 | 15.9 | 27 | 2 | 6.9 |
| MICHIGAN **+ 4.8** | **145** | **109** | **1** | **0.9** | **33** | **2** | **5.7** |
| Detroit College of Medicine | 45 | 42 | 1 | 2.3 | 2 | 0 | 0. |
| Detroit Homeopathic College | 7 | 6 | 0 | 0. | 0 | 1 | 100.0 |
| Univ. of Michigan, Dept. of M. and S. | 78 | 48 | 0 | 0. | 29 | 1 | 3.3 |
| Univ. of Michigan, Homeopathic Coll. | 15 | 13 | 0 | 0. | 2 | 0 | 0. |
| MINNESOTA **—12.1** | **47** | **29** | **4** | **12.1** | **14** | **0** | **0.** |
| Univ. of Minnesota, Coll. of M. and S. | 31 | 19 | 0 | 0. | 12 | 0 | 0. |
| Hamline University | 16 | 10 | 4 | 28.6 | 2 | 0 | 0. |
| MISSISSIPPI **—20.8** | **27** | **7** | **17** | **70.8** | **2** | **1** | **50.0** |
| Mississippi Medical College | 27 | 7 | 17 | 70.8 | 2 | 1 | 50.0 |
| MISSOURI **+12.5** | **367** | **137** | **30** | **18.0** | **139** | **61** | **30.5** |
| American Medical College | 14 | 8 | 3 | 27.3 | 2 | 1 | 50.0 |
| Barnes Medical College | 72 | 23 | 9 | 28.1 | 23 | 17 | 42.5 |
| Eclectic Medical University, Kansas City | 18 | (a) | ... | .... | 12 | 6 | 33.3 |
| Ensworth Medical College | 26 | 2 | 3 | 60.0 | 13 | 8 | 38.1 |
| Kansas City Hahnemann Medical Coll. | 19 | 4 | 2 | 33.3 | 10 | 3 | 23.1 |
| St. Louis University | 80 | 35 | 1 | 2.8 | 38 | 6 | 13.6 |
| St. Louis College of Phys. and Surgs. | 45 | 13 | 7 | 35.0 | 11 | 14 | 56.0 |
| University Medical College, Kansas City | 42 | 20 | 4 | 16.7 | 13 | 5 | 27.8 |
| Washington University | 51 | 32 | 1 | 3.0 | 17 | 1 | 5.6 |
| NEBRASKA **+14.3** | **80** | **46** | **5** | **9.8** | **22** | **7** | **24.1** |
| John A. Creighton Medical College | 58 | 29 | 2 | 6.5 | 21 | 6 | 22.2 |
| Lincoln Medical College | 12 | 8 | 3 | 27.3 | 0 | 1 | 100.0 |
| University of Nebraska | 10 | 9 | 0 | 0. | 1 | 0 | 0. |
| NEW HAMPSHIRE **—** | **12** | **3** | **0** | **0.** | **9** | **0** | **0.** |
| Dartmouth Medical School | 12 | 3 | 0 | 0. | 9 | 0 | 0. |
| NEW YORK **—12.2** | **560** | **389** | **86** | **18.1** | **80** | **5** | **5.9** |
| Albany Medical College | 60 | 36 | 16 | 30.8 | 7 | 1 | 12.5 |
| Columbia Univ. Coll. of P. and S. | 89 | 60 | 9 | 13.0 | 20 | 0 | 0. |
| Cornell University Medical School | 53 | 40 | 2 | 4.8 | 11 | 0 | 0. |
| Eclectic Medical College, New York | 20 | 12 | 5 | 29.4 | 3 | 0 | 0. |
| Fordham University | 15 | 9 | 5 | 35.7 | 1 | 0 | 0. |
| Long Island College Hospital | 121 | 82 | 25 | 23.4 | 13 | 1 | 7.2 |
| New York Homeo. Med. Coll. and Hosp. | 29 | 18 | 6 | 25.0 | 5 | 0 | 0. |
| N. Y. Med. Coll. and Hosp. for Women | 6 | 4 | 2 | 33.3 | .... | .... | .... |
| Syracuse University | 30 | 24 | 4 | 14.3 | 0 | 2 | 100.0 |
| University and Bellevue Hosp. Med. Coll. | 83 | 63 | 6 | 8.7 | 14 | 0 | 0. |
| University of Buffalo, Medical Dept. | 54 | 41 | 6 | 12.8 | 6 | 1 | 14.3 |
| NORTH CAROLINA **+24.3** | **73** | **26** | **9** | **25.7** | **19** | **19** | **50.0** |
| Leonard School of Medicine | 48 | 4 | 8 | 66.7 | 18 | 18 | 50.0 |
| North Carolina Medical College | 25 | 22 | 1 | 4.4 | 1 | 1 | 50.0 |
| OHIO **+13.1** | **209** | **145** | **6** | **4.0** | **48** | **10** | **17.1** |
| Cleveland College of Phys. and Surgs. | 25 | 22 | 0 | 0. | 3 | 0 | 0. |
| Cleveland-Pulte Medical College | 19 | 9 | 1 | 10.0 | 8 | 1 | 11.1 |
| Eclectic Medical College | 35 | 8 | 3 | 27.3 | 19 | 5 | 20.8 |
| Ohio-Miami Medical College | 46 | 34 | 1 | 2.9 | 9 | 2 | 18.2 |
| Starling-Ohio Medical College | 56 | 50 | 1 | 2.0 | 4 | 1 | 20.0 |
| Toledo Medical College | 8 | 8 | 0 | 0. | .... | .... | .... |
| Western Reserve University | 20 | 14 | 0 | 0. | 5 | 1 | 16.7 |
| OREGON **+23.7** | **23** | **14** | **5** | **26.3** | **2** | **2** | **50.0** |
| Willamette University | 3 | 1 | 1 | 50.0 | 0 | 1 | 100.0 |
| University of Oregon | 20 | 13 | 4 | 23.5 | 2 | 1 | 33.3 |
| PENNSYLVANIA **+ 8.2** | **635** | **374** | **6** | **1.6** | **230** | **25** | **9.8** |
| Hahnemann Medical College and Hosp. | 55 | 31 | 1 | 3.1 | 16 | 7 | 30.4 |
| Jefferson Medical College | 153 | 79 | 0 | 0. | 68 | 6 | 8.1 |
| Medico-Chirurgical Coll. of Philadelphia | 94 | 76 | 1 | 1.3 | 16 | 1 | 5.9 |
| Temple University | 30 | 24 | 0 | 0. | 5 | 1 | 16.7 |
| University of Pennsylvania | 179 | 86 | 3 | 3.4 | 85 | 5 | 5.6 |
| University of Pittsburgh | 72 | 58 | 1 | 1.7 | 12 | 1 | 7.7 |
| Woman's Med. Coll. of Pennsylvania | 52 | 20 | 0 | 0. | 28 | 4 | 12.5 |
| SOUTH CAROLINA **+18.2** | **65** | **46** | **11** | **19.3** | **5** | **3** | **37.5** |
| Med. Coll. of the State of So. Carolina | 65 | 46 | 11 | 19.3 | 5 | 3 | 37.5 |
| TENNESSEE **+33.4** | **344** | **51** | **6** | **10.5** | **161** | **126** | **43.9** |
| College of Phys. and Surg., Memphis | 11 | 4 | 0 | 0. | 4 | 3 | 42.9 |
| Memphis Hospital Medical College | 98 | 12 | 1 | 7.7 | 48 | 37 | 43.5 |
| Meharry Medical College | 106 | 15 | 1 | 6.3 | 41 | 49 | 54.4 |
| Lincoln Memorial University, Med. Dept. | 25 | 11 | 2 | 15.4 | 3 | 9 | 75.0 |
| University of Tennessee | 57 | 6 | 0 | 0. | 38 | 13 | 25.5 |
| University of West Tennessee | 14 | 0 | 2 | 100.0 | 1 | 11 | 91.7 |
| Vanderbilt University | 33 | 3 | 0 | 0. | 26 | 4 | 13.3 |
| TEXAS **— 1.0** | **106** | **95** | **1** | **1.0** | **10** | **0** | **0.** |
| Baylor University | 13 | 11 | 0 | 0. | 2 | 0 | 0. |
| Fort Worth University | 24 | 21 | 1 | 4.5 | 2 | 0 | 0. |
| Southwestern University Medical College | 15 | 15 | 0 | 0. | .... | .... | .... |
| University of Texas | 54 | 48 | 0 | 0. | 6 | 0 | 0. |
| VERMONT **+ 9.5** | **61** | **40** | **0** | **0.** | **19** | **2** | **9.5** |
| University of Vermont | 61 | 40 | 0 | 0. | 19 | 2 | 9.5 |
| VIRGINIA **+14.4** | **113** | **60** | **2** | **3.2** | **42** | **9** | **17.6** |
| Medical College of Virginia | 44 | 32 | 0 | 0. | 9 | 3 | 25.0 |
| University of Virginia | 23 | 9 | 1 | 10.0 | 12 | 1 | 8.3 |
| University College of Medicine | 46 | 19 | 1 | 5.0 | 21 | 5 | 19.2 |
| WISCONSIN **+ 5.4** | **79** | **66** | **4** | **5.7** | **8** | **1** | **11.1** |
| Marquette University | 62 | 49 | 4 | 7.5 | 8 | 1 | 11.1 |
| Wisconsin Coll. of Phys. and Surgeons | 17 | 17 | 0 | 0. | .... | .... | .... |
| Totals **+ 7.9** | **5468** | **2836** | **436** | **13.3** | **1730** | **466** | **21.2** |

In this table the number of graduates examined in the state in which the college is located are grouped in one column, while graduates of that college examined in other states are in another column. For example, under Tennessee, this table shows that, of the 98 graduates of Memphis Hospital Medical College examined by State Boards during 1911, 13 were examined in Tennessee of which number 12 passed and 1, or 7.7 per cent. failed, while 85 were examined in other states of which number 48 passed and 37, or 43.5 per cent. failed. This table shows that in the majority of instances the graduates have better chances of passing examinations in the state in which their colleges are located than they have elsewhere. This should always be considered in making comparisons between colleges. A low standard college, by having all its graduates examined in the home state, may sometimes show a lower percentage of failures than a college of much higher grade which has graduates examined by several states.

The heavy-faced figures give the results by states. The first column of heavy-faced figures preceded by the + and — signs, shows the differences between the percentages of examinations in the home state and the examinations elsewhere. The plus sign indicates that graduates have better chances of success in the state where the colleges from which they graduated are located; the minus sign indicates that the chances are better elsewhere. The most marked variations in 1911 were in the examination of the graduates of the colleges of Indiana, 63.1 per cent., Tennessee, 33.4 per cent., Colorado, 28.6 per cent., Arkansas, 27.9 per cent., Georgia, 26.9 per cent., North Carolina, 24.3 per cent., and Oregon, 23.7 per cent., in all of which the chances of the graduates were better in the home state. The marked variations where the graduate's chances were better elsewhere were in Mississippi, 20.8 per cent., Alabama, 20.6 per cent., and Illinois, 13.6 per cent. The danger of forming hasty conclusions from these percentages taken alone, however, is very well shown by the heavy figures for Indiana where there is one high grade school, where only 3 graduates were examined in "other states," and where the failure of two of them was probably accidental. The same is doubtless true regarding the percentages in Colorado where very few were examined in "other states." More reliable are the percentages in Tennessee and Missouri where larger numbers from larger groups of colleges were examined in "other states." The totals show that on the average the chances of success were 7.9 per cent. better if the graduate took the examination in the state where his college was located.

is located, as compared with the results of examinations in other states, where there is less possibility of local influence. Of all recent graduates examined in 1911, 3,272, or about 60 per cent., took their license examinations in the states where the colleges from which they graduated were located. Of this number 13.3 per cent. failed on the average, whereas, of the 1,730 candidates examined in other states, 21.2 per cent. failed. This would indicate that, as a rule, the student's chances of passing the license examination are better if he stays in the college's home state. In this connection it is interesting to note that no graduate of any of the Iowa colleges failed in the Iowa examinations, although of the graduates of these colleges who were examined in other states, 14.3 per cent. failed. In Colorado there were no failures for the Colorado college, although of the graduates of that school examined elsewhere, 28.6 per cent. failed, and in Vermont there were no failures of graduates of the Vermont college, although of the graduates of that college examined in other states 9.5 per cent. failed. The student's chances for success at home and elsewhere were equal or nearly so in four instances, these being for the colleges of Kentucky, Maryland, New Hampshire and Texas; the student's chances were better in the home state in twenty instances, while in nine instances the student's chances were better if he went to some other state.

### Total Results for Five Years

Table G shows, so far as reports were obtainable, the number registered and the number rejected in each state for each of the past five years. A comparison of this table with the statistics in the last educational number of The Journal (Aug. 19, 1911, p. 656, Table 10), shows what would be expected, that the states having the largest number of medical graduates examine the largest number of physicians. Now, only one state, New Mexico, will register candidates on presentation of diploma, without examination. This table shows only those registered by examination. Another table (K) shows the total registration by all methods.

### Classification of Colleges

Tables H, I and J give a classification of the medical colleges of the United States on the basis of the failures of their graduates at state board examinations during the past year. This classification is based on the examination of *recent graduates,* as shown in Table B. In forming conclusions, the caution already given should be observed, of noting the number examined, the number of states in which representatives appeared, the character of the board making the examination and the character of the examination. To form a more exact judgment one should compare the percentage of failures received by any college this year with those received in the classifications published in previous years. Careful investigation shows that a college cannot be considered a high-grade medical school merely because its graduates occasionally show a low percentage or an absence of failures at state board examinations. The fact is, several poorly equipped and low-standard colleges appear in the first list. On the other hand, some good schools appear in the second list. For the majority of colleges, however, the classification is fairly accurate. A comparison of this classification with that based on the actual inspection of the colleges by the Council on Medical Education will be of interest (see The Journal A. M. A., June 18, 1910, p. 2062).

Table H gives a list of forty-seven colleges which obtained failure percentages below 10 per cent., fourteen of which had no failures whatsoever and seventeen others had only 5 per cent. or less. The failure percentage for the entire group was 4.7. Table I shows twenty-one colleges whose failure percentages were between 10 and 20 per cent., of which number ten had percentages below the average for the group, which was 15.3. Table J includes forty-six colleges having failure percentages of 20 per cent., or above, of which number twenty-five had above 30 per cent., seventeen had above 40 per cent. and eleven had percentages of 50 per cent., or higher. The average percentage for all candidates from this group of colleges was 32.9.

Classification of Colleges
Comparison with Previous Years (Tables H, I, J).

| | Colleges Having Less than 10 Per Cent. | Colleges Having 10 to 20 Per Cent. | Colleges Having Above 20 Per Cent. | Unclassified Colleges. | Total Colleges. |
|---|---|---|---|---|---|
| 1904 | 47 | 27 | 38 | 37 | 149 |
| 1905 | 45 | 22 | 40 | 46 | 153 |
| 1906 | 62 | 24 | 43 | 20 | 149 |
| 1907 | 64 | 27 | 39 | 18 | 148 |
| 1908 | 48 | 29 | 46 | 15 | 138 |
| 1909 | 58 | 31 | 38 | 7 | 134 |
| 1910 | 57 | 22 | 42 | 0 | 121 |
| 1911 | 47 | 21 | 46 | 5 | 119 |

Table G.—Physicians Examined by State Boards, 1907 to 1911, Inclusive

| State. | 1907 | | 1908 | | 1909 | | 1910 | | 1911 | | Totals. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Registered. | Rejected. | Registered. | Rejected. | Registered. | Rejected. | Registered. | Rejected. | Registered. | Rejected. | Examined. | Registered. | Rejected. | Percentage Rejected. |
| Alabama | 142 | 38 | 66 | 66 | 7 | 20 | 94 | 64 | 107 | 54 | 658 | 416 | 242 | 35.3 |
| Arizona | 29 | 2 | 36 | 4 | 19 | 6 | 15 | 9 | 28 | 9 | 157 | 127 | 30 | 19.1 |
| Arkansas | 72 | 106 | 120 | 85 | 111 | 131 | 96 | 28 | 108 | 30 | 887 | 507 | 380 | 42.8 |
| California | 118 | 84 | 145 | 96 | 184 | 73 | 204 | 47 | 227 | 59 | 1,237 | 878 | 359 | 29.0 |
| Colorado | 50 | 6 | 52 | 14 | 36 | 15 | 48 | 5 | 33 | 8 | 267 | 219 | 48 | 18.0 |
| Connecticut | 64 | 17 | 67 | 16 | 52 | 13 | 69 | 18 | 73 | 20 | 409 | 325 | 84 | 20.5 |
| Delaware | 4 | 2 | 11 | 0 | 19 | 2 | 21 | 2 | 22 | 0 | 83 | 77 | 6 | 7.2 |
| Dist. of Columbia | 59 | 37 | 53 | 36 | 46 | 21 | 32 | 13 | 25 | 8 | 330 | 215 | 115 | 34.8 |
| Florida | 72 | 8 | 79 | 10 | 70 | 12 | 102 | 15 | 87 | 23 | 478 | 410 | 68 | 14.2 |
| Georgia | 139 | 22 | 150 | 14 | 143 | 28 | 148 | 9 | 148 | 28 | 829 | 728 | 101 | 12.2 |
| Idaho | 38 | 7 | 52 | 16 | 54 | 23 | 47 | 24 | 41 | 13 | 315 | 232 | 83 | 26.3 |
| Illinois | 580 | 52 | 646 | 96 | 645 | 117 | 631 | 100 | 432 | 154 | 3,453 | 2,934 | 519 | 15.0 |
| Indiana | 172 | 17 | 172 | 7 | 102 | 3 | 97 | 9 | 114 | 7 | 700 | 657 | 43 | 6.1 |
| Iowa | 146 | 26 | 139 | 43 | 98 | 14 | 113 | 4 | 75 | 6 | 664 | 571 | 93 | 14.0 |
| Kansas | 125 | 14 | 116 | 18 | 121 | 20 | 66 | 25 | 56 | 25 | 586 | 484 | 102 | 17.3 |
| Kentucky | 48 | 19 | 107 | 61 | 120 | 18 | 119 | 35 | 88 | 36 | 651 | 482 | 169 | 26.0 |
| Louisiana | 153 | 7 | 145 | 29 | 121 | 33 | 104 | 34 | 123 | 30 | 779 | 646 | 133 | 17.1 |
| Maine | 74 | 4 | 92 | 11 | 55 | 10 | 73 | 5 | 86 | 11 | 421 | 380 | 41 | 9.7 |
| Maryland | 139 | 41 | 132 | 71 | 130 | 33 | 131 | 32 | 160 | 39 | 908 | 692 | 216 | 23.7 |
| Massachusetts* | 226 | 118 | 238 | 108 | 213 | 95 | 197 | 100 | 226 | 74 | 1,595 | 1,100 | 495 | 31.0 |
| Michigan | 150 | 8 | 113 | 6 | 140 | 2 | 131 | 3 | 127 | 1 | 681 | 661 | 20 | 2.9 |
| Minnesota | 80 | 35 | 76 | 25 | 90 | 25 | 76 | 22 | 58 | 7 | 494 | 380 | 114 | 23.1 |
| Mississippi* | 157 | 191 | 138 | 184 | 130 | 154 | 84 | 150 | 115 | 113 | 1,416 | 624 | 792 | 55.9 |
| Missouri | 186 | 86 | 181 | 50 | 212 | 70 | 181 | 23 | 182 | 38 | 1,209 | 942 | 267 | 22.1 |
| Montana | 34 | 14 | 51 | 27 | 68 | 23 | 73 | 24 | 44 | 19 | 377 | 270 | 107 | 28.4 |
| Nebraska | 68 | 14 | 103 | 16 | 74 | 8 | 80 | 0 | 67 | 11 | 441 | 392 | 49 | 11.1 |
| Nevada | 10 | 1 | 17 | 0 | 9 | 0 | 12 | 1 | 8 | 1 | 59 | 56 | 3 | 5.1 |
| New Hampshire | 19 | 11 | 37 | 16 | 20 | 10 | 34 | 8 | 18 | 5 | 178 | 128 | 50 | 28.1 |
| New Jersey | 73 | 15 | 89 | 17 | 76 | 12 | 63 | 17 | 107 | 15 | 484 | 408 | 76 | 15.7 |
| New Mexico | 5 | 3 | 30 | 2 | 11 | 4 | 6 | 1 | 2 | 2 | 66 | 54 | 12 | 18.2 |
| New York | 691 | 54 | 679 | 73 | 566 | 72 | 515 | 72 | 536 | 164 | 3,422 | 2,987 | 435 | 12.7 |
| North Carolina | 111 | 20 | 95 | 26 | 111 | 18 | 79 | 15 | 92 | 30 | 597 | 488 | 109 | 18.3 |
| North Dakota | 49 | 4 | 52 | 10 | 41 | 6 | 42 | 5 | 25 | 1 | 235 | 209 | 26 | 11.1 |
| Ohio | 179 | 9 | 182 | 6 | 192 | 13 | 172 | 10 | 170 | 8 | 941 | 895 | 46 | 4.9 |
| Oklahoma | ... | ... | 34 | 10 | 92 | 44 | 100 | 42 | 123 | 39 | 484 | 349 | 135 | 27.9 |
| Oregon* | 62 | 56 | 43 | 63 | 95 | 50 | 93 | 55 | 94 | 50 | 661 | 387 | 274 | 41.5 |
| Pennsylvania | 465 | 54 | 485 | 49 | 474 | 27 | 451 | 52 | 515 | 27 | 2,599 | 2,390 | 209 | 8.0 |
| Rhode Island | 36 | 23 | 29 | 17 | 23 | 10 | 23 | 10 | 32 | 5 | 208 | 143 | 65 | 31.3 |
| South Carolina | 41 | 17 | 47 | 21 | 46 | 33 | 61 | 44 | 94 | 27 | 431 | 289 | 142 | 32.9 |
| South Dakota | 23 | 5 | 58 | 6 | 60 | 21 | 52 | 9 | 53 | 5 | 292 | 246 | 46 | 15.8 |
| Tennessee* | 133 | 140 | 213 | 87 | 277 | 4 | 315 | 52 | 213 | 42 | 1,476 | 1,151 | 325 | 22.0 |
| Texas | 187 | 64 | 143 | 23 | 181 | 19 | 162 | 5 | 151 | 19 | 954 | 824 | 130 | 13.6 |
| Utah | 26 | 0 | 27 | 5 | 28 | 4 | 34 | 4 | 22 | 3 | 153 | 137 | 16 | 10.5 |
| Vermont | 40 | 7 | 45 | 6 | 38 | 2 | 21 | 1 | 51 | 1 | 212 | 195 | 17 | 8.0 |
| Virginia | 124 | 33 | 128 | 53 | 136 | 40 | 122 | 14 | 115 | 43 | 808 | 625 | 183 | 22.6 |
| Washington | 163 | 38 | 182 | 60 | 148 | 49 | 154 | 43 | 102 | 43 | 982 | 749 | 233 | 23.7 |
| West Virginia | 92 | 9 | 102 | 18 | 105 | 10 | 88 | 25 | 88 | 22 | 559 | 475 | 84 | 15.0 |
| Wisconsin | 62 | 5 | 80 | 7 | 56 | 13 | 71 | 7 | 107 | 7 | 415 | 376 | 39 | 9.4 |
| Wyoming | 7 | 5 | 7 | 2 | 12 | 0 | 10 | 0 | 8 | 0 | 51 | 44 | 7 | 13.7 |
| Totals | 7,271 | | 7,770 | | 7,287 | | 7,004 | | 6,960 | | 36,292 | | | |
| Registered | 5,723 | | 6,084 | | 5,857 | | 5,712 | | 5,578 | | 28,954 | | | |
| Rejected | 1,548 | | 1,686 | | 1,430 | | 1,292 | | 1,382 | | 7,338 | | | |
| Per Cent. Rej | 21.3 | | 21.7 | | 19.6 | | 18.4 | | 19.9 | | 20.2 | | | |

This table gives the number of candidates registered by examination by each state during each of the last five years, as well as the number rejected. The last four columns give the totals for the five years and the percentage rejected by each state.

Eight states registered over 1,000 candidates by examination, these being California, Illinois, Massachusetts, Mississippi, Missouri, New York, Pennsylvania and Tennessee. Over 3,000 were registered in Illinois and New York. Of the 1,151 candidates registered in Tennessee in the last five years, 394 or 34.2 per cent., were non-graduates.

The highest percentage of rejections was 55.9 in Mississippi, followed by Arkansas, Oregon and Alabama, with 42.8, 41.5 and 35.3, respectively. The states marked with an asterisk (*) included non-graduates among those examined, and for that reason would be expected to have higher percentages rejected. On the other hand, in several states the boards eliminate many candidates prior to the examination by a careful scrutiny of credentials and as a result lower percentages of failures result at the examinations.

The lowest failure percentages were in Michigan, 2.9; Ohio, 4.9; Nevada, 5.1, and Indiana, 6.1.

A comparison of the classification this year with those of previous years shows an increase in the number of colleges having above 20 per cent. of failures and a marked decrease in those having less than 10 per cent. of failures. It will be interesting to note the changes in these totals hereafter, as state boards more generally adopt the use of practical examinations.

TABLE H.—Colleges Having Less Than 10 Per Cent. of Failures Before State Boards in 1911. Based on Table B.

| College. | Total Examined. | Number Passed. | Number Failed. | Per Cent. Failed. | No. of States. |
|---|---|---|---|---|---|
| CALIFORNIA | | | | | |
| Cooper Medical College | 27 | 25 | 2 | 7.5 | 1 |
| Hahnemann Medical College of the Pacific | 7 | 7 | 0 | 0. | 1 |
| University of California, Medical Dept | 18 | 18 | 0 | 0. | 4 |
| COLORADO | | | | | |
| University of Colorado, Medical Dept | 26 | 24 | 2 | 7.7 | 5 |
| CONNECTICUT | | | | | |
| Yale Medical School | 44 | 40 | 4 | 9.1 | 8 |
| DISTRICT OF COLUMBIA | | | | | |
| George Washington University | 32 | 30 | 2 | 6.2 | 13 |
| ILLINOIS | | | | | |
| Northwestern University Medical School | 198 | 181 | 17 | 8.6 | 19 |
| Rush Medical College | 99 | 95 | 4 | 4.0 | 17 |
| INDIANA | | | | | |
| Indiana University, School of Medicine | 58 | 54 | 4 | 6.9 | 4 |
| IOWA | | | | | |
| Drake University, College of Medicine | 15 | 15 | 0 | 0. | 2 |
| State University of Iowa, College of Med | 32 | 30 | 2 | 6.2 | 8 |
| State University of Iowa, Homeo. Dept | 5 | 5 | 0 | 0. | 3 |
| KANSAS | | | | | |
| University of Kansas, School of Medicine | 19 | 19 | 0 | 0. | 2 |
| LOUISIANA | | | | | |
| Tulane University, Medical Dept | 119 | 111 | 8 | 6.7 | 14 |
| MARYLAND | | | | | |
| Johns Hopkins University, Medical Dept | 105 | 102 | 3 | 2.9 | 25 |
| MASSACHUSETTS | | | | | |
| Boston University School of Medicine | 21 | 20 | 1 | 4.8 | 6 |
| Harvard Medical School | 102 | 99 | 3 | 2.9 | 19 |
| MICHIGAN | | | | | |
| Detroit College of Medicine | 45 | 44 | 1 | 2.2 | 3 |
| Univ. of Mich., Dept. of Med. and Surg | 78 | 77 | 1 | 1.3 | 19 |
| University of Michigan, Homeo. College | 15 | 15 | 0 | 0. | 3 |
| MINNESOTA | | | | | |
| Univ. of Minn., College of Med. and Surg | 31 | 31 | 0 | 0. | 6 |
| MISSOURI | | | | | |
| St. Louis University, School of Medicine | 80 | 73 | 7 | 8.7 | 12 |
| Washington University, Medical Dept | 51 | 49 | 2 | 3.9 | 6 |
| NEBRASKA | | | | | |
| University of Nebraska, College of Med | 10 | 10 | 0 | 0. | 2 |
| NEW HAMPSHIRE | | | | | |
| Dartmouth Medical School | 12 | 12 | 0 | 0. | 5 |
| NEW YORK | | | | | |
| Cornell University Medical College | 53 | 51 | 2 | 3.8 | 6 |
| Univ. and Bellevue Hosp. Medical College | 83 | 77 | 6 | 7.2 | 8 |
| NORTH CAROLINA | | | | | |
| North Carolina Medical College | 25 | 23 | 2 | 8.0 | 3 |
| OHIO | | | | | |
| Ohio-Miami Medical College | 46 | 43 | 3 | 6.5 | 7 |
| Starling-Ohio Medical College | 56 | 54 | 2 | 3.6 | 5 |
| Toledo Medical College | 8 | 8 | 0 | 0. | 1 |
| Western Reserve University, Medical Dept | 20 | 19 | 1 | 5.0 | 6 |
| PENNSYLVANIA | | | | | |
| Jefferson Medical College | 153 | 147 | 6 | 3.9 | 31 |
| Medico-Chirurgical College of Philadelphia | 94 | 92 | 2 | 2.1 | 8 |
| Temple University, Medical Dept | 30 | 29 | 1 | 3.3 | 5 |
| University of Pennsylvania, Dept. of Med | 179 | 171 | 8 | 4.5 | 25 |
| Univ. of Pittsburgh, School of Medicine | 72 | 70 | 2 | 2.8 | 7 |
| Woman's Medical College of Pennsylvania | 52 | 48 | 4 | 7.7 | 12 |
| TEXAS | | | | | |
| Baylor University, College of Medicine | 13 | 13 | 0 | 0. | 2 |
| Fort Worth University, Medical Dept | 24 | 23 | 1 | 4.2 | 3 |
| Southwestern University Medical College | 15 | 15 | 0 | 0. | 1 |
| University of Texas, Dept. of Medicine | 54 | 54 | 0 | 0. | 6 |
| VERMONT | | | | | |
| University of Vermont, College of Medicine | 61 | 59 | 2 | 3.3 | 7 |
| VIRGINIA | | | | | |
| Medical College of Virginia | 44 | 41 | 3 | 6.8 | 6 |
| University of Virginia, Dept. of Medicine | 23 | 21 | 2 | 8.7 | 11 |
| WISCONSIN | | | | | |
| Marquette University, Medical Dept | 62 | 57 | 5 | 8.1 | 9 |
| Wisconsin College of Phys. and Surgs | 17 | 17 | 0 | 0. | 1 |
| Totals | 2433 | 2318 | 115 | 4.7 | .. |

### Total Registration in 1911

The tables thus far described have referred only to the results of examinations and to those registered on that basis. Table K, however, shows the total number who received licenses in each state including those registered by examination, by reciprocity, and under various exemption clauses. Above 100 were registered in thirty different states, above 200 in nine and above 400 in three, the largest numbers being registered in New York with 611, in Pennsylvania with 515 and in Illinois with 472. There were 203 non-graduates registered in five states, 110 having been registered in Tennessee, seventy-four in Mississippi, eleven in Massachusetts, seven in Oregon and one in Georgia. Altogether 6,824 physicians were licensed during 1911 as compared with 7,352 in 1910, and 7,865 in 1906.

Table L gives those registered without examination on presentation of satisfactory credentials, which included a license issued by some other state. This is usually described by the term "reciprocity," which conveys the idea that the state which accepts the license of another must be granted the same courtesy by the state issuing the original license. The term does not well describe this method of registration, however, since some state boards consider it more fair to the physician to accept his credentials, if satisfactory, whether the state board issuing the original license returns the favor or not. Had not reciprocal relations been established by the thirty-four states shown in the table, 1,128 physicians, the majority of whom have been in practice for many years, would have been compelled to undergo the ordeal of a second trying examination.

TABLE I.—Colleges Having Between 10 and 20 Per Cent. of Failures Before State Boards in 1911. Based on Table B.

| College. | Total Examined. | Number Passed. | Number Failed. | Per Cent. Failed. | No. of States. |
|---|---|---|---|---|---|
| ARKANSAS | | | | | |
| University of Arkansas, Medical Dept | 36 | 30 | 6 | 16.7 | 6 |
| CALIFORNIA | | | | | |
| College of Phys. and Surgs., Los Angeles | 12 | 10 | 2 | 16.7 | 2 |
| DISTRICT OF COLUMBIA | | | | | |
| Georgetown University, School of Med | 18 | 15 | 3 | 16.7 | 9 |
| Howard University, Medical Dept | 45 | 37 | 8 | 17.8 | 20 |
| GEORGIA | | | | | |
| Atlanta College of Physicians and Surgs | 71 | 61 | 10 | 14.1 | 9 |
| Atlanta School of Medicine | 68 | 57 | 11 | 16.2 | 7 |
| Medical College of Georgia | 41 | 33 | 8 | 19.5 | 5 |
| ILLINOIS | | | | | |
| College of Physicians and Surgeons | 116 | 93 | 23 | 19.8 | 17 |
| MAINE | | | | | |
| Medical School of Maine | 23 | 19 | 4 | 17.4 | 7 |
| MARYLAND | | | | | |
| Baltimore Medical College | 83 | 69 | 14 | 16.9 | 21 |
| College of Physicians and Surgeons | 85 | 71 | 14 | 16.5 | 17 |
| University of Maryland, School of Med | 103 | 86 | 17 | 16.5 | 18 |
| MASSACHUSETTS | | | | | |
| Tufts College Medical School | 92 | 80 | 12 | 13.0 | 11 |
| MICHIGAN | | | | | |
| Detroit Homeopathic College | 7 | 6 | 1 | 14.3 | 2 |
| NEBRASKA | | | | | |
| John A. Creighton Medical College | 58 | 50 | 8 | 13.8 | 12 |
| NEW YORK | | | | | |
| Columbia Univ., Coll. of Phys. and Surgs | 89 | 80 | 9 | 10.1 | 14 |
| University of Buffalo, Medical Dept | 54 | 47 | 7 | 13.0 | 5 |
| OHIO | | | | | |
| Cleveland-Pulte Medical College | 19 | 17 | 2 | 10.5 | 4 |
| PENNSYLVANIA | | | | | |
| Hahnemann Medical College and Hospital | 55 | 47 | 8 | 14.5 | 11 |
| TENNESSEE | | | | | |
| Vanderbilt University, Medical Dept | 33 | 29 | 4 | 12.1 | 12 |
| VIRGINIA | | | | | |
| University College of Medicine | 46 | 40 | 6 | 13.0 | 6 |
| Totals | 1154 | 977 | 177 | 15.3 | |

### Reciprocity and Educational Standards

As at present administered, reciprocal relations between some states are tending to lower rather than to elevate educational standards. A study of these statistics will show that in several instances such relations exist between states differing widely in their standards of education and in the methods and severity of their examinations. It can be seen, therefore, that a loosely administered provision for reciprocity provides a wide-open door through which unqualified candidates can obtain registration. There are some boards, however, which wisely reserve and exercise the right to reject any candidate who does not possess satisfactory credentials even though he is licensed in a state with which it ha reciprocal relations. Some boards also prudently require tha the applicant, before he is eligible to registration through reci procity, must have been engaged in the actual and reputable practice of his profession for at least a year in the state where the original license was granted. Without this provision a candidate may be tempted to obtain his original license in the state giving the easiest examination and, on the other hand, a state board may be tempted to make its examination less severe for the sake of obtaining additional fees.

Hence, without the one-year-residence clause, standards of examination are apt to be lowered. In the establishing of reciprocal relations, therefore, the state board should reserve and exercise the discretionary power to refuse to register any candidate who could not originally have registered in that state and secondly, the board should require that the applicant shall have been in the actual practice of medicine for at least a year before he is eligible to registration under the reciprocity provision.

In the light of the above statement in regard to reciprocity, it will be interesting to study Table M, which shows in what states the original licenses were granted of those who were registered elsewhere under the reciprocity provision during the last five years.

Note that of the 5,877 physicians licensed through reciprocity during the last five years the *original* licenses of 1,307 were obtained in Illinois, more than twice as many as came from any other one state. In New York 504 physicians took their original license examinations, 444 in Iowa, and 348 in Missouri.

### In Conclusion

In the publication of these statistics, the endeavor has been to give an absolutely fair presentation of facts, a knowledge of which is always beneficial. Without question this annual presentation of the results of state licensing examinations has had a most helpful influence on medical education and medical licensure in this country. We reiterate our acknowledgments to the state licensing boards, whose ready cooperation and complete reports have made the publication of these data possible.

TABLE J.—Colleges Having Over 20 Per Cent. of Failures Before State Boards in 1911. Based on Table B.

| College. | Total Examined. | Number Passed. | Number Failed. | Per Cent. Failed. | No. of States. |
|---|---|---|---|---|---|
| ALABAMA | | | | | |
| Birmingham Medical College | 35 | 26 | 9 | 25.7 | 5 |
| University of Alabama, Medical Dept. | 65 | 51 | 14 | 21.5 | 8 |
| CALIFORNIA | | | | | |
| College of Phys. and Surgs., San Francisco | 15 | 12 | 3 | 20.0 | 1 |
| GEORGIA | | | | | |
| Hospital Medical College, Atlanta | 2 | 0 | 2 | 100.0 | 2 |
| ILLINOIS | | | | | |
| Bennett Medical College | 55 | 32 | 23 | 41.8 | 15 |
| Chicago College of Medicine and Surgery | 109 | 83 | 26 | 23.9 | 21 |
| College of Medicine and Surgery, Ph.M. | 14 | 4 | 10 | 71.4 | 1 |
| Hahnemann Medical College and Hospital | 34 | 24 | 10 | 29.4 | 12 |
| Hering Medical College | 11 | 7 | 4 | 36.3 | 4 |
| Jenner Medical College | 14 | 7 | 7 | 50.0 | 1 |
| National Medical University | 6 | 2 | 4 | 66.7 | 1 |
| Reliance Medical College | 9 | 4 | 5 | 55.6 | 1 |
| KANSAS | | | | | |
| Kansas Medical College | 13 | 10 | 3 | 23.1 | 2 |
| KENTUCKY | | | | | |
| Louisville National Medical College | 10 | 4 | 6 | 60.0 | 6 |
| University of Louisville, Medical Dept. | 225 | 169 | 56 | 24.9 | 24 |
| LOUISIANA | | | | | |
| Flint Medical College | 3 | 1 | 2 | 66.7 | 1 |
| MARYLAND | | | | | |
| Maryland Medical College | 107 | 69 | 38 | 35.5 | 14 |
| MASSACHUSETTS | | | | | |
| College of Physicians and Surgeons | 42 | 23 | 19 | 45.3 | 7 |
| MINNESOTA | | | | | |
| Hamline University, Medical Dept. | 16 | 12 | 4 | 25.0 | 3 |
| MISSISSIPPI | | | | | |
| Mississippi Medical College | 27 | 9 | 18 | 66.7 | 2 |
| MISSOURI | | | | | |
| American Medical College | 14 | 10 | 4 | 28.6 | 4 |
| Barnes Medical College | 72 | 46 | 26 | 36.1 | 11 |
| Eclectic Medical University, Kansas City | 18 | 12 | 6 | 33.3 | 4 |
| Ensworth Medical College | 26 | 15 | 11 | 42.3 | 9 |
| Kansas City Hahnemann Medical College | 19 | 14 | 5 | 26.3 | 6 |
| St. Louis College of Physicians and Surgs. | 45 | 24 | 21 | 46.7 | 14 |
| University Medical College, Kansas City | 42 | 33 | 9 | 21.4 | 7 |
| NEBRASKA | | | | | |
| Lincoln Medical College | 12 | 8 | 4 | 33.3 | 2 |
| NEW YORK | | | | | |
| Albany Medical College | 60 | 43 | 17 | 28.3 | 6 |
| Eclectic Med. Coll., of City of New York | 20 | 15 | 5 | 25.0 | 3 |
| Fordham University, School of Medicine | 15 | 10 | 5 | 33.3 | 2 |
| Long Island College Hospital | 121 | 95 | 26 | 21.5 | 7 |
| New York Homeo. Med. Coll. and Hospital | 29 | 23 | 6 | 20.7 | 6 |
| N. Y. Med. Coll. and Hosp. for Women | 6 | 4 | 2 | 33.3 | 1 |
| Syracuse University, College of Medicine | 30 | 24 | 6 | 20.0 | 3 |
| NORTH CAROLINA | | | | | |
| Leonard School of Medicine | 48 | 22 | 26 | 54.2 | 10 |
| OHIO | | | | | |
| Eclectic Medical College | 35 | 27 | 8 | 22.9 | 9 |
| OREGON | | | | | |
| Willamette University, Medical Dept. | 3 | 1 | 2 | 66.7 | 2 |
| University of Oregon, Medical Dept. | 20 | 15 | 5 | 25.0 | 3 |
| SOUTH CAROLINA | | | | | |
| Med. Coll. of the State of South Carolina | 65 | 51 | 14 | 21.5 | 3 |
| TENNESSEE | | | | | |
| College of Physicians and Surgs., Memphis | 11 | 8 | 3 | 27.3 | 5 |
| Memphis Hospital Medical College | 98 | 60 | 38 | 38.8 | 10 |
| Meharry Medical College | 106 | 56 | 50 | 47.2 | 17 |
| Lincoln Memorial University, Medical Dept. | 25 | 14 | 11 | 44.0 | 9 |
| University of Tennessee, Medical Dept. | 57 | 44 | 13 | 22.8 | 17 |
| University of West Tennessee, Medical Dept. | 14 | 1 | 13 | 92.8 | 7 |
| Totals | 1823 | 1224 | 599 | 32.9 | .... |

TABLE K.—Registration by State Boards During the Year 1911.

| States. | By Examination. | | | By Reciprocity. | Without Written Exam. or Under Exemption. | Total Registered. |
|---|---|---|---|---|---|---|
| | Graduates, 1907-1911. | Graduates, 1906 and Previous. | Non-graduates. | | | |
| Alabama | 104 | 3 | .... | .... | .... | 107 |
| Arizona | 16 | 12 | .... | .... | .... | 28 |
| Arkansas | 89 | 19 | .... | 25 | .... | 133 |
| California | 136 | 91 | .... | .... | 6 | 233 |
| Colorado | 33 | .... | .... | 115 | .... | 148 |
| Connecticut | 66 | 7 | .... | 6 | .... | 79 |
| Delaware | 20 | 2 | .... | 9 | .... | 31 |
| District of Columbia | 24 | 1 | .... | 4 | .... | 29 |
| Florida | 56 | 31 | .... | .... | .... | 87 |
| Georgia | 136 | 11 | 1 | 46 | .... | 194 |
| Idaho | 27 | 14 | .... | .... | .... | 41 |
| Illinois | 413 | 19 | .... | 40 | .... | 472 |
| Indiana | 101 | 13 | .... | 44 | .... | 158 |
| Iowa | 69 | 6 | .... | 76 | .... | 151 |
| Kansas | 47 | 9 | .... | 34 | .... | 90 |
| Kentucky | 87 | 1 | .... | 18 | 3 | 109 |
| Louisiana | 115 | 8 | .... | 5 | .... | 128 |
| Maine | 76 | 10 | .... | 4 | .... | 90 |
| Maryland | 156 | 4 | .... | 23 | 1 | 184 |
| Massachusetts | 192 | 23 | 11 | .... | .... | 226 |
| Michigan | 121 | 6 | .... | 51 | 3 | 181 |
| Minnesota | 52 | 6 | .... | 72 | .... | 130 |
| Mississippi | 34 | 7 | 74 | .... | .... | 115 |
| Missouri | 171 | 11 | .... | 66 | .... | 248 |
| Montana | 27 | 17 | .... | .... | .... | 44 |
| Nebraska | 60 | 7 | .... | 48 | .... | 115 |
| Nevada | 2 | 6 | .... | 6 | .... | 14 |
| New Hampshire | 15 | 3 | .... | 9 | .... | 27 |
| New Jersey | 91 | 16 | .... | 30 | .... | 137 |
| New Mexico | 1 | 1 | .... | .... | 78 | 80 |
| New York | 491 | 45 | .... | 51 | 24 | 611 |
| North Carolina | 85 | 7 | .... | 10 | .... | 102 |
| North Dakota | 13 | 12 | .... | 18 | .... | 43 |
| Ohio | 166 | 4 | .... | 60 | .... | 230 |
| Oklahoma | 90 | 33 | .... | .... | .... | 123 |
| Oregon | 48 | 39 | 7 | .... | .... | 94 |
| Pennsylvania | 490 | 25 | .... | .... | .... | 515 |
| Rhode Island | 30 | 2 | .... | .... | .... | 32 |
| South Carolina | 88 | 6 | .... | 10 | .... | 104 |
| South Dakota | 41 | 12 | .... | .... | .... | 53 |
| Tennessee | 97 | 6 | 110 | 12 | 3 | 228 |
| Texas | 135 | 16 | .... | 85 | .... | 236 |
| Utah | 19 | 3 | .... | 15 | .... | 37 |
| Vermont | 47 | 4 | .... | 6 | .... | 57 |
| Virginia | 99 | 16 | .... | 16 | .... | 131 |
| Washington | 57 | 45 | .... | .... | .... | 102 |
| West Virginia | 74 | 14 | .... | 23 | .... | 111 |
| Wisconsin | 97 | 10 | .... | 75 | .... | 182 |
| Wyoming | 4 | 4 | .... | 16 | .... | 24 |
| Totals | 4708 | 667 | 203 | 1128 | 118 | 6824 |

This table shows the total number registered during 1911 in each state by the various methods. The first column shows the recent graduates registered, the second column, the old practitioners (graduates of 1906 and previous years), the third column the non-graduates, and the fourth column shows the number licensed through reciprocity. It is interesting to note that states which have registered large numbers through reciprocity have examined very few old practitioners. The chief exception is New York, which has arranged reciprocal relations with only seven other states. The fifth column shows those registered without written examination under various exemption clauses. The last column shows the total number of physicians registered by all methods in each state during the year.

TABLE L.—Physicians Registered Through Reciprocity by State Examining Boards During 1911.

| State Boards of | Total Reg. through Reciprocity, Ea. State. | Alabama | Arkansas | California | Colorado | Delaware | Dist. of Columbia | Georgia | Illinois | Indiana | Iowa | Kansas | Kentucky | Louisiana | Maine | Maryland | Massachusetts | Michigan | Minnesota | Mississippi | Missouri | Nebraska | Nevada | New Hampshire | New Jersey | New Mexico | New York | North Carolina | North Dakota | Ohio | Oklahoma | Pennsylvania | South Carolina | South Dakota | Tennessee | Texas | Utah | Vermont | Virginia | Washington | West Virginia | Wisconsin | Wyoming. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arkansas | 25 | ... | ... | ... | 1 | ... | 2 | ... | 6 | 2 | ... | ... | 1 | 5 | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | 2 | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 2 | ... |
| Colorado | 115 | 3 | ... | 1 | ... | ... | 3 | ... | 21 | 2 | 8 | 10 | 2 | ... | ... | ... | 2 | 1 | 1 | 3 | 12 | 4 | 1 | ... | 1 | 1 | 10 | ... | ... | 4 | 3 | 6 | 1 | 1 | ... | 3 | 1 | 2 | 1 | ... | 2 | 3 | 2 |
| Connecticut | 6 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Delaware | 9 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| District of Columbia | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | ... |
| Georgia | 46 | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | 3 | 1 | 7 | ... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 7 | ... | ... | ... | 1 | ... | ... | 11 | ... | ... | ... | 6 | ... | 4 | ... | ... |
| Illinois | 40 | ... | ... | ... | ... | ... | ... | ... | ... | 4 | 7 | 6 | 2 | ... | ... | 7 | ... | 5 | 3 | ... | 2 | 3 | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | 2 | ... |
| Indiana | 44 | ... | ... | ... | 1 | ... | ... | ... | 18 | ... | ... | ... | 2 | ... | ... | 2 | ... | 8 | ... | ... | 2 | ... | ... | ... | ... | ... | 2 | ... | ... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Iowa | 76 | ... | ... | ... | 1 | 1 | ... | ... | 33 | 3 | ... | 1 | 1 | ... | ... | 2 | ... | 2 | 1 | ... | 8 | 13 | ... | ... | 2 | ... | ... | ... | ... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5 | ... |
| Kansas | 34 | ... | ... | ... | 1 | 1 | ... | ... | 3 | ... | 3 | ... | 2 | ... | ... | 1 | ... | 1 | 1 | ... | 15 | 2 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 2 | ... | ... | ... | 1 | ... | ... | ... | ... |
| Kentucky | 18 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 11 | ... | ... | ... | 2 | ... | 1 | ... | ... |
| Louisiana | 5 | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Maine | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | ... | ... | ... | ... |
| Maryland | 23 | ... | ... | ... | ... | 2 | 1 | 1 | 1 | ... | ... | ... | 1 | ... | 2 | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | 10 | ... | ... |
| Michigan | 51 | ... | ... | ... | ... | ... | 2 | 2 | 16 | 4 | 1 | ... | 2 | ... | 1 | 2 | ... | ... | 2 | ... | 3 | ... | ... | ... | 1 | ... | 3 | ... | 2 | 4 | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | ... | 1 | ... | ... |
| Minnesota | 72 | ... | ... | ... | 2 | ... | ... | ... | 23 | ... | 12 | 1 | ... | ... | ... | 3 | ... | 6 | ... | ... | ... | 4 | ... | ... | 1 | ... | ... | 1 | 2 | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | ... |
| Missouri | 66 | ... | ... | ... | ... | ... | 2 | ... | 10 | 3 | 11 | 17 | 3 | ... | 1 | 1 | ... | ... | 3 | ... | ... | 9 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | ... | 1 | ... | 1 | ... | ... |
| Nebraska | 48 | ... | 1 | ... | 3 | ... | ... | ... | 13 | 3 | 7 | 4 | 1 | ... | ... | 1 | ... | 2 | 2 | ... | 5 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | 2 | 1 | ... | ... | ... | ... | ... | ... | ... |
| Nevada | 6 | ... | ... | ... | ... | ... | ... | ... | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| New Hampshire | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 4 | ... | ... | ... | ... | ... |
| New Jersey | 30 | ... | ... | ... | 3 | 4 | ... | ... | 4 | ... | ... | ... | 1 | ... | 5 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 8 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 2 | ... | ... |
| New York | 51 | ... | ... | ... | ... | 1 | ... | ... | ... | 4 | ... | ... | ... | ... | ... | ... | ... | 17 | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | 4 | ... | ... | ... | ... | ... | ... | ... | 22 | ... | ... | ... | 1 | ... |
| North Carolina | 10 | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 3 | ... | ... | 1 | ... |
| North Dakota | 18 | ... | ... | ... | ... | ... | ... | ... | 5 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 9 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... |
| Ohio | 60 | ... | 1 | ... | ... | ... | ... | ... | 8 | 5 | 1 | ... | ... | ... | 1 | 5 | ... | 12 | ... | ... | ... | 1 | ... | ... | 2 | ... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 3 | ... | ... | 11 | ... | ... |
| South Carolina | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4 | ... | 3 | ... | ... |
| Tennessee | 12 | ... | ... | ... | ... | ... | ... | 2 | ... | 1 | ... | ... | 5 | ... | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... |
| Texas | 85 | ... | 6 | ... | ... | ... | 3 | ... | 18 | 1 | 4 | 5 | 10 | ... | 1 | 3 | ... | 1 | 1 | ... | 10 | 6 | 1 | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 7 | 5 | ... |
| Utah | 15 | ... | ... | ... | 1 | ... | ... | ... | 4 | ... | 4 | 1 | ... | ... | ... | ... | ... | 2 | ... | ... | 1 | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Vermont | 6 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... |
| Virginia | 16 | ... | ... | ... | ... | ... | 7 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 6 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| West Virginia | 23 | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | 6 | ... | ... | 6 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | 6 | ... | ... | ... | ... |
| Wisconsin | 75 | ... | 1 | ... | ... | ... | ... | ... | 38 | 2 | 4 | 2 | ... | ... | ... | 4 | ... | 4 | 4 | ... | 1 | 2 | ... | ... | ... | ... | 2 | ... | 2 | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 7 | ... | ... | ... |
| Wyoming | 16 | ... | ... | ... | 3 | ... | ... | ... | 7 | ... | 1 | 3 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| *Total | 1128 | 3 | 11 | 1 | 16 | 9 | 23 | 7 | 236 | 37 | 63 | 50 | 42 | 8 | 14 | 52 | 2 | 69 | 29 | 3 | 59 | 46 | 2 | 6 | 14 | 1 | 42 | 16 | 7 | 40 | 3 | 12 | 4 | 2 | 28 | 10 | 2 | 36 | 28 | 7 | 45 | 41 | 2 |

* Total received from each state through reciprocity.

This table shows the number of physicians registered by each state through reciprocity during 1911. "Reciprocity" is not the best term to use, however, since some states, Colorado for instance, register candidates who have satisfactory credentials including licenses, regardless as to whether the state issuing the original license reciprocates with those or not. Taking New York as an example, reading from left to right, the table shows that New York registered a total of 51 applicants through reciprocity during 1911, of which number 1 came from Delaware, 4 from Indiana, 17 from Michigan, 2 from New Jersey, 4 from Ohio, 22 from Vermont and 1 from Wisconsin. Reading from above downward, the table shows that 42 physicians left New York during 1911 and registered in other states under the reciprocity provision, of which number 10 registered in Colorado, 5 in Connecticut, 2 in Indiana, 3 in Michigan, 8 in New Jersey, 1 in North Carolina, 9 in Ohio, 2 in Utah and 2 in Wisconsin. Colorado leads, having registered 115 physicians through reciprocity, followed by Texas which registered 85, Iowa with 76, Wisconsin with 75, Minnesota with 72 and Missouri with 66. It is interesting to note in what states the original licenses were issued. The table shows that of the 1,128 applicants registered through reciprocity 236, or 20.9 per cent. obtained their original licenses in Illinois and 69 the next largest number, were first registered in Michigan. The states which furnished the three next highest numbers were Iowa with 63, Missouri with 59, Maryland with 52 and Kansas with 50.

TABLE M.—Reciprocal Registrations in Five Years
Showing What States Issued the Original Licenses

| State. | Physicians Going from States Named During | | | | | Totals. |
|---|---|---|---|---|---|---|
| | 1907 | 1908 | 1909 | 1910 | 1911 | |
| Alabama* | 2 | 4 | 2 | .. | 3 | 11 |
| Arizona* | .. | 1 | 2 | .. | .. | 3 |
| Arkansas | 1 | .. | 1 | 52 | 11 | 65 |
| California* | 2 | 2 | 1 | 2 | 1 | 8 |
| Colorado | 5 | 10 | 12 | 13 | 16 | 56 |
| Connecticut* | .. | 2 | 2 | .. | .. | 4 |
| Delaware | 1 | 2 | 1 | 6 | 9 | 19 |
| District of Columbia | 15 | 14 | 13 | 11 | 23 | 76 |
| Florida* | .. | .. | 1 | 1 | .. | 2 |
| Georgia | 10 | 18 | 10 | 14 | 7 | 59 |
| Idaho* | .. | 1 | 1 | .. | .. | 2 |
| Illinois | 240 | 225 | 320 | 286 | 236 | 1307 |
| Indiana | 30 | 33 | 46 | 50 | 37 | 196 |
| Iowa | 126 | 94 | 77 | 84 | 63 | 444 |
| Kansas | 33 | 32 | 41 | 63 | 50 | 219 |
| Kentucky | 21 | 53 | 30 | 74 | 42 | 220 |
| Louisiana | 3 | .. | 2 | 9 | 8 | 22 |
| Maine | 16 | 24 | 18 | 15 | 14 | 87 |
| Maryland | 25 | 30 | 25 | 41 | 52 | 173 |
| Massachusetts* | 6 | 3 | 3 | .. | 2 | 14 |
| Michigan | 62 | 63 | 51 | 51 | 69 | 296 |
| Minnesota | 29 | 23 | 35 | 31 | 29 | 147 |
| Mississippi* | 1 | 1 | 1 | 1 | 3 | 7 |
| Missouri | 79 | 61 | 58 | 91 | 59 | 348 |
| Montana* | .. | .. | .. | 3 | .. | 3 |
| Nebraska | 30 | 47 | 53 | 42 | 46 | 218 |
| Nevada | 2 | 4 | 2 | 3 | 2 | 13 |
| New Hampshire | 1 | 2 | 8 | 1 | 6 | 18 |
| New Jersey | 27 | 46 | 29 | 16 | 14 | 132 |
| New Mexico* | .. | 1 | 7 | 1 | 1 | 10 |
| New York | 79 | 100 | 59 | 224 | 42 | 504 |
| North Carolina | 1 | 4 | 7 | 7 | 16 | 35 |
| North Dakota | 3 | 6 | 5 | 8 | 7 | 29 |
| Ohio | 39 | 35 | 47 | 45 | 40 | 206 |
| Oklahoma | 4 | 3 | 5 | 21 | 3 | 36 |
| Oregon* | .. | 1 | .. | .. | .. | 1 |
| Pennsylvania | 15 | 15 | 7 | 21 | 12 | 70 |
| Rhode Island* | .. | 1 | 1 | .. | .. | 2 |
| South Carolina | 2 | 4 | 7 | 5 | 4 | 22 |
| South Dakota | 4 | 1 | 1 | .. | 2 | 8 |
| Tennessee | 5 | 14 | 21 | 45 | 28 | 113 |
| Texas | 12 | 10 | 4 | 23 | 10 | 59 |
| Utah | 1 | 3 | 4 | 1 | 2 | 11 |
| Vermont | 12 | 20 | 24 | 27 | 36 | 119 |
| Virginia | 11 | 15 | 26 | 31 | 28 | 111 |
| Washington* | .. | .. | .. | 2 | 7 | 9 |
| West Virginia | 6 | 21 | 36 | 45 | 45 | 153 |
| Wisconsin | 27 | 42 | 46 | 31 | 41 | 187 |
| Wyoming | 1 | .. | 2 | 1 | 2 | 6 |
| U. S. Army | .. | .. | 3 | .. | .. | 3 |
| U. S. P. H. & M.-H. Serv. | .. | .. | .. | 2 | .. | 2 |
| Canada | .. | .. | .. | 2 | .. | 2 |
| Foreign and Misc. | .. | .. | 10 | .. | .. | 10 |
| Totals | 989 | 1091 | 1167 | 1502 | 1128 | 5877 |

This table shows that 5,877 candidates were registered through reciprocity during the last five years and that until 1911 there was a positive increase each year over the registration of the previous year. A study of the totals for the different states shows that of the 5,877 registered during the four years 1,307 or 22.2 per cent. obtained their original licenses in Illinois. This is more than twice the number coming from any other state. The states furnishing the next highest numbers are New York, with 504, Iowa, with 444, and Missouri with 348. The states marked with an asterisk (*) do not have reciprocal relations and would not appear in this table except for the fact that some states, like Colorado and New Jersey, will accept a physician's credentials if satisfactory, whether the state issuing his original license returns the favor or not.

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SATURDAY, MAY 25, 1912

## STATISTICS OF STATE BOARD EXAMINATIONS

We are presenting this week, for the ninth consecutive year, tabulated statistics based on examinations conducted by state medical licensing boards. With the exception of one minor sectarian board, our returns for the year 1911, published in this issue, are complete; at no previous time have we had such ready cooperation on the part of state licensing boards. This is in marked contrast with conditions in 1903, when reports from a large number of boards could not be obtained, owing, in most instances, to the fact that records of examinations and licensure were not kept. The various statistical tables are worthy of careful study. A few comments will not be out of place, although the reader must take them as suggestive of further study of the tables themselves.

### FACTS REGARDING EACH STATE

The various tables give much information regarding medical licensure in each state. For example, Tables A and B show the medical colleges from which the applicants received their degrees, the total number of applicants examined, the number registered, the number rejected and the percentage rejected. These tables also allow of comparison of the results in any one state with the results in other states. Table F shows that occasionally a board appears to be lenient with graduates of medical schools located in its own state, although in other states a larger percentage of graduates of those schools may be rejected. Table G shows the totals registered by each state for the last five years. Table K shows the totals registered by all methods, including those registered by reciprocity and under exemption clauses; it also shows what states registered nongraduates. Table L shows the number of physicians licensed through reciprocity as well as the states where these physicians received their original licenses, and Table M gives the totals of physicians leaving each state during the last five years to obtain licenses elsewhere through reciprocity.

### FACTS REGARDING EACH COLLEGE

The tables also give much information regarding medical colleges. For example, Tables A and B show in what states graduates of each college were examined; they show the number who passed and the number who failed in each state, the total examined in all states, the number who passed, the number who failed and the percentage of failures. In fact, Tables A, B and C permit a comparative study of medical colleges and furnish an important side-light on any investigation of medical colleges which may be undertaken. Table D shows the results for the medical colleges grouped by states; Table E furnishes an interesting study of the larger colleges — those having fifty or more graduates examined during the year — and allows of comparison between colleges of nearly equal size. The mere fact that a college has large classes is no indication that it furnishes a better medical training. In fact, these data show that often the contrary is true. Tables H, I and J give a classification of medical colleges based on the failures of their graduates at state board examinations. This classification should not be taken alone in forming conclusions regarding medical colleges. Occasionally low-grade colleges may have less than 10 per cent. of failures, owing probably to the fact that only a few graduates were examined, or that they were all examined in the home state. On the other hand well-equipped and fairly good colleges may occasionally have between 10 and 20 per cent. of failures, especially if they are in states having more rigid examinations. It is very seldom, however, that a well-equipped and well-conducted medical college receives more than 20 per cent. of failures of its graduates at state licensing examinations. This classification of colleges is interesting, however, and throws an important side-light on the classification prepared by the Council on Medical Education following an actual inspection of the colleges.

### TOTAL REGISTRATION IN ALL STATES

These statistics also show the number of candidates coming from Canadian and other foreign medical colleges. In short, they give an accurate record of the number and source of those who are entering the practice of medicine each year in this country. Without the data published this week, it could not be known that 6,824 physicians were licensed in this country during 1911, and that this included 5,578 who were registered by examination, 118 who were registered under the various exemption clauses, and 1,128, mostly old practitioners, who were registered under the provision for reciprocity.

### STATISTICS ACCURATE AND RELIABLE

The work of collecting and publishing these statistics was begun by The Journal in 1903, but since the creation of the Council on Medical Education they have been developed as an important part of the Council's work. Every report received from the state licensing boards is now carefully checked, duplications are avoided, errors are corrected and the statistics are thereby rendered accurate and reliable. This is made possible through the enormous amount of data collected by the Council regarding medical colleges, students and graduates. Through the possession by the Council of complete alumni lists of all existing medical colleges, the Council is in position to avoid charging a college with a failure which may have been erroneously accredited to it when, in fact, the candidate who failed was a graduate of some other college.

### INFLUENCE ON MEDICAL LICENSURE

These statistics have been much more than a mere numerical record of physicians examined and licensed, however, and probably no one has recognized their value more than have the state licensing boards themselves. As a result, in many states splendid systems of record-keeping are now to be found where formerly, in several states at least, no records whatever were kept, and in several other states the systems were far from perfect. During the last four or five years, furthermore, they have furnished abundant argument for practical tests in state license examinations and have undoubtedly had much to do with the improved character of these examinations and the better methods of conducting them.

### INFLUENCE ON MEDICAL COLLEGES

But medical colleges also have been largely influenced by the publication of these statistics. Where previously they may have been unaware of the weaknesses in their methods of teaching, these statistics have shown them how frequently their graduates fail at the state license examinations. The results have been marked improvements in their equipment, the securing of better teachers and the adoption of better methods. In fact, a review of the statistics published during the last several years shows that a number of colleges have materially reduced the failures of their graduates at state license examinations.

### COOPERATION MUTUALLY ADVANTAGEOUS

As will be understood by the careful reader, these statistics have their greatest value when taken in connection with other known facts regarding medical education. They are made more accurate and reliable through the data kindly furnished by medical colleges; they are based on reports received direct from state boards, but through the careful checking of those reports, errors are frequently corrected, the state boards are notified, and in this way state records are also made more accurate. The statistics published this week, therefore, have been made possible only through the cordial cooperation of both the state boards and medical colleges and for this cooperation we again express our acknowledgments.

## SMALL-POX AND VACCINATION IN THE UNITED STATES

To those interested in preventive medicine and the public health the practice of vaccination for the prevention of small-pox is always a subject of interest. In the countries where vaccination has been consistently and uniformly practiced, small-pox, which formerly was one of the most common diseases, has become one of the rarest. This is notably true in Cuba, Germany, France, England, Porto Rico and the Philippine Islands. In the continental United States small-pox has been widely prevalent for a number of years, thousands of cases being reported annually. No section of the country seems to be free from the disease, although during some years certain states have had but few reported cases. This prevalence of the disease indicates a general disuse of the practice of vaccination, or its limited application. In this country a general vaccination law is impossible of enactment, as the authority to legislate on matters of this kind is vested in the several states. The effect of a general law might be attained by the enactment of similar measures in the several states, but uniformity of results would still be lacking because of varying degrees of enforcement.

In a recent bulletin issued by the Public Health and Marine-Hospital Service[1] the laws and regulations of the several states relating to vaccination have been compiled and analytically compared. It is shown that there is a marked lack of uniformity, and that legal requirements for compulsory general vaccination exist only in Kentucky, the Philippine Islands and Porto Rico.

In Kentucky, the law requires that children shall be vaccinated within twelve months after birth. All minors and adults are also to be vaccinated. Persons coming into the state to reside are to be vaccinated within six months. But there seems to be no penalty for violation of the law and the statute has not been enforced. The state board of health recommends that all persons be revaccinated as often as once in five years, although this is not compulsory. In the Philippine Islands, every parent or person in charge of a child over 3 months of age is required to present it for vaccination. Every person not furnishing satisfactory evidence of immunity to small-pox must be vaccinated as often as required by the health authorities. Provision is made for public vaccinators and gratuitous vaccination. In Porto Rico, the board of health requires that every person shall possess a certificate of vaccination. Provision is made for public vaccinators to vaccinate gratuitously all persons making application.

Arizona, Hawaii, Maryland, New Mexico and North Dakota have laws requiring the vaccination of children, which, if enforced, would in time produce a population of which a large proportion would have been vaccinated at least once. In Arizona the law specifies that parents and guardians shall cause minors or other persons in their care or custody to be vaccinated. In Hawaii, every child is to be presented for vaccination within six months after birth. In Maryland, it is made the duty of parents and guardians to have children under their care vaccinated within twelve months after birth or as soon thereafter as practicable. Guardians are also to have other persons under their control vaccinated prior to November 1 each year, unless such persons have been previously vaccinated. In New Mexico, it is the duty of the county school superintendents to see that all children of school age in their respective counties are vaccinated or have been vaccinated within a year. In North Dakota, parents or guardians are to cause minors or other persons under their care or custody to be vaccinated.

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[1] Kerr, J. W.: Vaccination, an Analysis of the Laws and Regulations Relating Thereto in Force in the United States, Pub. Health Bull. 52.

The effect of a law depends entirely on the manner and extent of its enforcement, and these in turn are determined to a large extent by the appropriation made available for the purpose. For this reason the presence of a law on the statute books does not always mean that its requirements are being carried out.

Although small-pox has been widely prevalent in the United States for years, it has, probably because of its general extreme mildness, received less attention than should have been given to it. In many sections it has been so mild that the case death-rate has been as low as 0.2 per cent., or one death in 500 cases. This is quite at variance with the usual experience with the disease. In most countries, the case death-rate varies from 15 to 40 per cent. and this was apparently true in the United States previous to 1898. The general mildness of the present form of small-pox should not produce the belief that the people of this country are peculiarly immune or resistant to the disease, as it has been shown by repeated local outbreaks of the virulent form that no such immunity exists. The fact that the disease is at present usually mild in no wise removes or lessens the need for the general practice of vaccination and revaccination.

The existing prevalence of the disease offers an unusual opportunity for the collection of data showing the prophylactic value of vaccination and the infrequency with which the disease attacks those protected by this means. For this reason health authorities would do well to ascertain in each case reported whether the patient had ever been vaccinated, and if so, how long before the attack An array of evidence would thus be accumulated which would go far toward convincing any who might otherwise not appreciate that vaccination is the least expensive, most direct and only sure means by which the disease can be efficiently controlled.

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## LIFE WITHOUT BACTERIA

The question whether or not life is possible without bacteria was propounded years ago by Pasteur. That some of these lower forms are not indispensable we are reminded by the experiences of their undesired invasions and the consequent manifestations of disease. Yet in the midst of superlative health still other microorganisms are continually with us in countless numbers. They inhabit the alimentary tract and become our constant companions from birth until death. A single milligram of intestinal contents may contain 150 millions of bacteria. Such statistics make one pause to inquire whether the existence of the individual has not, after all, become adapted or adjusted to this elaborate intestinal flora, and whether the interrelation has not in truth become an indispensable requisite of comfortable existence. In other words, is not the symbiosis of host and visitor mutually advantageous?

Science has made numerous endeavors to answer the questions here raised, for they touch on some of the fundamental factors of our existence. The chapters of the story of these experimental attempts are full of entrancing interest. The repeated failures, the tentative successes, the unexpected complications, the renewal of hope and reduplication of efforts—these are the experiences encountered. We often wonder why our popular writers go so far afield in search of inspiring themes when tales of fascinating truth remain untold on almost every page of the history of science. Somehow the interest of the uninitiated always seems to center in far-away doings.

The first positive answer was formulated by Nuttall and Thierfelder[1] in Berlin as the result of most laborious investigations which seemed, once for all, to settle the question. They removed guinea-pigs under aseptic conditions from the mother by cesarean section, maintained them in an atmosphere of sterilized air and fed them on sterilized food. Despite the complete absence of bacteria in their intestines from birth on, the animals were able to thrive for a period of ten days during which they were constantly cared for.

Professor Schottelius,[2] who has just retired from the chair of hygiene at Freiburg in Baden, soon objected to the brief duration of the classic experiments of Nuttall and Thierfelder. He turned to a new experimental possibility early suggested by Pasteur, namely, the hen's egg. By a series of painstaking precautions and most ingenious devices Schottelius succeeded in keeping fertilized eggs bacteriologically sterile and in artificially hatching chicks free from bacteria. These young animals ate the sterilized foods furnished to them; nevertheless they sickened and died. But, if in due season a culture of bacteria derived from hen's excrement was added to their sterile food, the chicks throve thereon and developed vigorously. Accordingly Schottelius regards intestinal bacteria as indispensable for the normal nutrition of vertebrates, including man. He conceives that the usefulness of the microorganisms lies in the favorable modifications which they bring about in the foods by making them more suitable for absorption. They also are assumed to stimulate the intestinal wall and induce normal peristalsis; while some of the alimentary species act as antagonists to unfavorable invaders of the gastrointestinal tract. The views of Schottelius received substantiation from observations of Moro,[3] who noted that the larvæ of certain lower forms, cultivated in a sterile medium, showed severe symptoms of abnormal growth. Similar experiences were reported by Mme. Metchnikoff.[4]

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[1] Nuttall, G., and Thierfelder, H.: Ztschr. f. physiol. Chem., 1895, xxi, 109; xxii, 62; xxiii, 231.

[2] Schottelius, M.: Arch. f. Hyg., 1908, lxvii, 177.

[3] Moro: Jahrb. f. Kinderh., 1905, lxii, 467.

[4] Metchnikoff, Mme.: Ann. de l'Inst. Pasteur, 1901, p. 603.

The confusion of results has served only to stimulate interest. In Metchnikoff's laboratory at the Pasteur Institute in Paris, Cohendy[5] has repeated the work of Schottelius, profiting by the failures of the latter. The trials were far more prolonged. The answer was clear. Life without bacteria is possible for at least one species, the chick, normally provided with a rich microbial flora. This aseptic life is not attended with any detriment to the organism.

Positive experiments always supersede failures. The victory for the moment is against the bacteria. It appears that Cohendy has carried the chicks beyond the stage, if there be such, at which their digestive functions still require microbial assistance. No undue accumulation of alimentary débris was noted in the aseptic animals, nor was there evidence of impaired digestion. We conclude, therefore, that while the intestinal flora may be useful to the animal it is not indispensable. Another fact deserves to be noted. The introduction of saprophytic microorganisms in large numbers into sterile chicks in a single day was not attended by direful consequences. This suggests that the tolerance for bacteria is hereditary rather than gradually acquired by the individual.

Obviously the method of experimentation so successfully employed by Cohendy lends itself to the investigation of many problems regarding the rôle of specific bacteria. It will henceforth be possible to infect an organism that is free from microorganisms and study the consequences. If the experiences just reported can be confirmed on other species, the supposed biologic interrelation between the individual and his bacteria will no longer appear in the light of a compulsory companionship; and our attitude toward the microbial population inhabiting our digestive tube will in consequence assume a different significance.

## A BIOLOGIC DIAGNOSIS OF PREGNANCY

The so-called immunity reactions of the living organism, which have been the subject of intensive study in recent years, afford illustrations of responses which are little short of marvelous. Such phenomena as the development of the precipitin reaction when foreign serum is introduced into the body, the remarkably specific character of the various manifestations of anaphylaxis in animals and man, the development of typical agglutination powers or hemolytic tendencies when products strange to the individual enter the circulation — all of these behaviors bear testimony to the chemical alertness, so to speak, with which foreign invasions are met and anticipated.

In connection with the modern study of these features it has been ascertained that foreign proteins in particular, and in no small degree fats and complex carbohydrates also, behave like a distinctly extraneous substance when they are introduced directly into the circulation, despite the fact that they constitute our familiar nutrients. In many respects there is a remarkable similarity between human blood and sheep's blood. Each has its plasma and its corpuscles, and the resemblances in physical and chemical characters are manifold. Yet the substitution of one blood for the other is physiologically impossible. The organism protests with a series of immunity responses. The same is true when foreign food products, such as were previously mentioned, find their way into the blood. Indeed, the alimentary tract has as one of its chief duties the task of making the entrance of the unchanged foreign foodstuffs impossible. Everything ingested must, as far as possible, first be converted into a physiologic product assimilable by the species involved. Beyond the alimentary barrier everything assumes a "native" character; for its foreign features have been transformed in the preparation which foodstuffs experience in the digestive tube.

Curiously enough, it seems from recent investigations which we owe in particular to Abderhalden[1] that the immediate response of the organism to the introduction of foreign proteins, fats or carbohydrates directly into the circulation — the parenteral mode of introduction, as it is now called in distinction from the enteral path—is the appearance of enzymes adapted to digest the unusual components of the blood. In part, of course, the parenterally introduced foodstuffs are at once eliminated by the kidneys like any foreign substance not directly utilizable in the body; but evidently provision is also made to denaturize the foreign proteins, etc., immediately by digestive disintegration — in other words, ultimately to render them homologous. When, for example, cane-sugar is injected into an animal, inverting enzymes are said to make their appearance in the blood plasma. If fats are introduced without digestive preparation, the lipolytic power of the blood becomes enhanced. Truly, if these findings of Abderhalden are substantiated we are face to face with a remarkable protective response on the part of the organism.

The question has arisen as to whether there are ever liberated into the blood substances which, though components of some part of the organism as a whole, are in reality foreign to the blood. A case in point is furnished by the conditions pertaining in pregnancy. Are derivatives of placental or fetal tissues liberated into the maternal circulation and, if so, does the maternal organism respond by some protective scheme? Abderhalden[2] has found indications in the blood of pregnant individuals of the presence of enzymes capable of digesting placenta protein derivatives. These "protective enzymes," as he terms them, are never found in the blood of non-gravid females; but they are present in the blood during the entire course of pregnancy. Appropriate tests for these enzymes have made it possible to diagnosticate pregnancy with great certainty by a simple biochemical examination of the blood.

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[5] Cohendy, M.: Expériences sur la vie sans microbes, Ann. de l'Inst. Pasteur, 1912, 106.

[1] Abderhalden, E.: Synthese der Zellbausteine in Pflanze un Tier, Berlin, 1912.

[2] Abderhalden, E., and Kiutsi, M.: Biologische Untersuchungen über Schwangerschaft, Ztschr. f. physiol. Chem., 1912, lxxvii, 249.

If it shall be found that such "protective" responses are a characteristic reaction to the escape of "foreign" substance into the circulation, it is easy to believe that similar "protective enzymes" may be liberated into the blood-stream in carcinoma and related conditions. The field is a fertile one and a good harvest of discovery is promised.

## ORGANIC AND INORGANIC PHOSPHORUS COMPOUNDS

The alleged unique value of so-called "organic" phosphorus compounds in nutrition has been so largely exploited that it becomes desirable to consider the evidence from every available direction.[1] The need for phosphorus as a constituent of tissues and secretions does not call for serious comment any more than does the requirement of oxygen or of nitrogenous compounds for the maintenance of life. When, therefore, simple salts of phosphorus are elevated to the importance of life-sustaining elixirs or marvelous tonics it is quite justifiable to inquire wherein this supreme efficiency manifests itself. The claim of phosphates as brain foods and as antidotes to mental fatigue has lost its appealing force even in the lay press, where it used to be in vogue in the advertising columns.

The best refutation of a dubious claim is a conclusive experiment. If individuals can grow and build effective tissues out of inorganic phosphates as well as from organic forms of phosphorus the subtle superiority of the latter at once begins to vanish. Since our last reference[1] to the ease with which inorganic phosphates can be utilized for synthetic purposes in the organism, further experimental contributions have appeared. They deal with the relative availability of various organic and inorganic phosphorus compounds — lecithin, phytin, nucleoprotein, casein, nucleic acid and disodium phosphate — in the production of milk, a secretion notably rich in phosphorus in various forms of which casein is most conspicuous. What is the comparative rôle of these phosphorized food-substances in the elaboration of the mammary secretion?

It would be easy and even fascinating to postulate some individual part for each of these unlike compounds to play in nutrition—a possibility suggested by the very diversity of their occurrence in the economy of nature. Fingerling[2] has attempted to ascertain to what extent each of the compounds referred to can alter or enrich the phosphorus content of milk. The effectiveness of his experiments, on goats, was enhanced by the fact that the materials to be tested were added to a ration already deficient in phosphorus, thus giving every opportunity for special advantages to manifest themselves. None of the substances exerted any specific influence whatever on the activity of the mammary glands. Neither the quantity of milk nor its individual constituents were increased. Furthermore — and this calls for especial emphasis — the organic phosphorus products exerted no more favorable influence than the inorganic ones, giving further proof that the animal organism can satisfy its need of phosphorus adequately by means of inorganic phosphates. It is quite possible, according to Fingerling, to cover the needs of milk production in respect to lime and phosphoric acid in this way, without fear of any detriment to the physiologic integrity or functioning of the mammary gland. Incidentally, in connection with these facts we may again point out how little the food factor modifies the quality of the milk.

In reiterating some of these recent observations from time to time it is not our purpose to deny the possibility of the specific effects of food constituents or to prejudge the value of special nutrients. The important point rather is to insist on the insufficiency of pure empiricism or personal impression to settle the problems of dietotherapy once for all, even when the opinions are promulgated with the authority of a prominent name. Points of view change in science.

## LATENT MENINGITIS AND ENCEPHALITIS IN ACUTE INFECTIOUS DISEASES

It has long been noted that nervous symptoms may arise in the course of familiar infectious diseases, such as typhoid fever, without any apparent anatomic changes either in the meninges or in the brain ("meningismus," "meningitis without meningitis"). On the other hand, definite meningitis and encephalitis, easily recognizable with the naked eye, may be found after death in such diseases, and yet the symptoms observed during life may have differed in no way from those presented by the first group.

Studying the relation between the symptoms and the anatomic changes in cases of this kind, Oseki[1] found that in some instances, diagnosed as meningitis clinically, the post-mortem examination showed no gross changes except perhaps a moderate amount of edema and occasionally a very slight opacity of the membranes. On microscopic examination, however, there were found definite acute inflammatory changes with leukocytic and lymphocytic infiltration both in the meninges and in the brain substance; in some cases cells had accumulated about ganglion cells which were more or less changed and disintegrated; definite foci of necrosis were occasionally found also in both the brain and the spinal cord. The inflammatory infiltration was particularly pronounced about the small blood-vessels. Here, consequently, there was an acute meningo-encephalitis, and as the process in the brain substance was most marked next to the meninges it seemed reasonable to assume that the cause of the process spread downward from the meninges. In another group of cases, however, in which similar meningeal symptoms were present during the patients' lives, the changes were confined entirely to the brain substance, showing that in encephalitis the meningeal symptoms may predominate as previously described by others. Clinically the patients presented symptoms of hallucination, great motor restlessness, stiffness of the back and neck, loss of consciousness, jerking of the extremities, differences in the pupils, etc. In most of the cases referred to the bacteria found in the central nervous system were the same as those of the primary disease.

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[1] The Nutritive Value of Inorganic Phosphates, The Journal A. M. A., April 20, 1912, p. 1198; also the discussion of Sanatogen, ibid., p. 1216.

[2] Fingerling, G.: Einfluss organischer und anorganischer Phosphorverbindungen auf die Milchsekretion, Biochem. Ztschr., 1912, xxxix, 239.

[1] Oseki: Beitr. z. path. Anat. u. z. allg. Path. (Ziegler's), 1912, lv, 538.

It is of special interest to note that in the course of his work, Oseki encountered cases of pneumonia in which meningitis and encephalitis were found to be present after death but of which there had been no symptoms whatsoever during life. In only one such case could the changes in the meninges be recognized with the naked eye. This fact, namely, that meningitis may occur in the course of pneumonia without typical symptoms, indicates that our figures as to the frequency of this complication in pneumonia really do not mean very much because they are not based on the study of cases that have been examined thoroughly after death, microscopically as well as macroscopically. The four cases of clinically latent meningitis described by Oseki happened to occur in a series of ten. Accurate figures as to the relationship between pneumonia and meningo-encephalitis can be obtained only by the systematic and complete study of all the cases of pneumonia.

Speaking generally, we may say that in acute infectious diseases meningitis and encephalitis may be latent in the sense that in cases with definite symptoms the changes may be microscopic only, and also in the sense that in pneumonia at least there may be no observable clinical symptoms in cases with definite microscopic changes. In the cases of so-called "meningismus," gross examination is not sufficient to exclude actual meningitis or encephalitis; careful microscopic examination must be made. No doubt much light would be thrown on the problems of diagnosis and prognosis in cases of the kind in question if the conditions found in the nervous system after death in a large series of cases could be correlated with the results of complete clinical observations including examination of the cerebrospinal fluid.

## *Current Comment*

### NO FILTH, NO FLIES

"Swat-the-fly" campaigns for 1912 are well on. The elimination of this filthy and dangerous insect is a desirable end. As we have observed already,[1] the house-fly, in addition to being a demonstrated agent in the spreading of typhoid, is strongly suspected, on more or less conclusive evidence, with relation to a large number of infections, including cholera, dysentery, the infantile diarrheas, diphtheria and contagious ophthalmia. In an excellent paper, Stockbridge[2] remarks that about a billion flies were killed in various campaigns of 1911 — a statement which seems impressive until one considers the number of flies which escaped the slaughter. In Washington, D. C., alone, some 7,000,000 flies were killed by the "swat," the trap, drowning, sulphur fumes and even by electrocution. Dr. Howard, of the Bureau of Entomology, points out that in the congenial climate of that city seven generations of flies may be produced in a single summer. One female fly will lay on an average a batch of 120 eggs; and if all these eggs from a batch laid in the middle of April should hatch and reproduce their kind in like manner, there would be by autumn, from a single female fly, a progeny of nearly six thousand billion. And as each female may lay four batches of eggs, the figures for their unchecked development through a summer stagger the imagination. To "swat the fly" by the billion, therefore, means little so long as those that survive have unchecked opportunity for breeding. There is even more weight, therefore, in Stockbridge's statement that during 1911 filthy breeding-places were cleaned up, which, if left alone, would have given opportunity for the propagation of incalculable billions. Better than "swatting" the fly is the prevention of its breeding by cleaning up the places where it thrives — the insanitary privy, the dead dog and horse allowed to lie unburied until putrid, the dung-heap, the uncovered garbage can and the spittoon. Some of the methods by which such insanitary conditions may be eliminated, or at least minimized, were mentioned some time ago.[3] Descriptions of the details are freely provided by the health departments of many states and municipalities, and by civic leagues and like organizations.

### EXPERIMENTAL ALKAPTONÚRIA

That rare perversion of metabolism known as alkaptonuria, which discloses itself to the eye of the untrained by the almost black color assumed by the urine on standing, still remains obscured in mystery. The chemical nature of the compound, homogentisic acid, to which the alkapton color is attributable, is now well known. It is unquestionably a derivative of the proteins; and numerous clinical investigations of alkaptonuric individuals have shown that the excretion of the characteristic compound is increased by, or practically proportional to, the metabolism of protein. Indeed, the effective agents in its production are two of the amino-acid complexes of the albuminous bodies, namely, phenyl-alanin and tyrosin. These aromatic derivatives may be fed as such, or in the form of proteins which yield them, or they may arise from the destruction of tissue protein; in any event the output of homogentisic acid in alkaptonuria corresponds with their liberation in the organism. The facts just outlined have raised the question whether the alkapton substance is ordinarily an intermediary product of the metabolism of the two mentioned aromatic amino-acids in every individual — a stage in their transformation which never comes to light except in these rare patients who have lost the capacity of further destroying a substance which is easily oxidized in a normal individual — or, whether the pathologic feature involved represents an unusual course of metabolism rather than an abnormal interruption of a normal physiologic reaction. It has not been possible to decide definitely between these views, chiefly because of the failure heretofore to reproduce alkaptonuria experimentally. This lends great interest, therefore, to a successful attempt by Abderhalden.[1] By feeding tyrosin in the enormous quantities of fifty grams in a single day (corresponding to many hundred grams of pure protein) he has succeeded for the first time in inducing an experimental alkaptonuria in a healthy man who had never shown any symptoms of this condition. Although this result by no means demonstrates the nature of the perversion effected, the relation of the abnormal product to the aromatic radicals in the proteins becomes established with added certainty.

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[1] House-Flies and Bacteria, The Journal A. M. A., May 11, 1912, p. 1445.

[2] How to Get Rid of Flies, World's Work, April, 1912.

[3] The Fly and Typhoid, The Journal A. M. A., Aug. 28, 1909, p. 720.

## FEDERAL MEAT INSPECTION

A few months ago we called attention to the fact that the borax trust and other interests unfriendly to Dr. Wiley, in criticizing the ex-chief of the Bureau of Chemistry, took occasion to laud the Bureau of Animal Industry. The latter bureau has charge of examining the meat-supplies of the country and the argument of the anti-Wiley forces was that, while the Bureau of Chemistry has had a somewhat stormy career, the Bureau of Animal Industry was conducted "without friction." We suggested at the time that any department of government service, supposed to be operated in the interest of the public, which got along "without friction" was to be viewed with suspicion. Recent developments seem to point to the source of the lubricant which has permitted the Bureau of Animal Industry to operate without any friction developing between itself and the vested interests concerned. The Bureau of Chemistry has, it is true, been much criticized in the last four or five years — but the criticisms have come, not from the consumers, but from the manufacturers. Now the Bureau of Animal Industry is coming in for its share of criticism, but with this difference, that representatives of the consumer and not of the packing-houses are the critics. Charges have been made by competent and unbiased observers that the federal meat inspection laws are administered in the interest of the packers rather than for the protection of the public, and that meat that would not be accepted at the ports of entry in Europe is passed by the federal meat inspectors for home consumption. As might be expected, the investigation of the Bureau of Animal Industry exhibits Secretary Wilson and Solicitor McCabe "running to form" as special pleaders for the "interests." The enormous harm done to the health of the American people through the maladministration of the Food and Drugs Act and the federal meat inspection law can hardly be estimated. The responsibility for it rests on Secretary Wilson and Solicitor McCabe, whose incompetency — or something else — has rendered the enforcement of these laws a joke.

## GRADUATION REQUIRED IN MISSISSIPPI

During the recent session of the Mississippi legislature the medical practice act was amended so that hereafter a candidate seeking license to practice medicine in that state must have graduated from a reputable medical college. He must also present credentials showing that he has had a preliminary education at least equal to the course of a standard high school. . The securing of this amendment takes Mississippi out of the group of states having practically no requirements either of preliminary or medical education and brings it at once among those which are in position to enforce reasonably high standards. The securing of this legislation in Mississippi shows that the south is having its share in the rapid progress now being made in the regulation of the practice of medicine.

## WHAT IS THE MATTER WITH TENNESSEE?

The recent success in Mississippi of securing an amendment to its practice act leaves only one state in the south—Tennessee—which still furnishes a wide-open door for practically any candidate who applies regardless of his lack of preliminary or medical education. Whether the examinations given constitute a sufficient safeguard to the public against these incompetents may be doubted since the statistics published this week show that out of the 213 candidates registered by examination in that state during 1911, 110, or 51.6 per cent., were non-graduates, and that in 1910, out of 315 candidates licensed, 142, or 45.1 per cent., were non-graduates. How long will the people of Tennessee tolerate these conditions? Unless that state can join in the modern movement for progress and secure a better medical practice act, it is clearly destined to be the dumping-ground of the illiterate and incompetent who are being turned away from the surrounding states. We shall be surprised if we do not hear of progressive measures being adopted in this state before long.

## A CLEAN DAILY

Whatever one may think of the religious views and scientific vagaries of the followers of Mrs. Eddy, in one particular at least they have set a high and consistent example to other religious sects. The *Daily Christian Science Monitor* is the recognized organ of this church. While it follows the general plan of other dailies, even the casual observer is struck at once by the character of the advertising. The "patent medicine" display and the "quack doctor" advertisement are absent. So are the alluring promises of the get-rich-quick schemer, the promoter and the faker. One can realize the part which newspaper advertising has played in developing the nostrum business, by placing the *Monitor* beside the ordinary newspaper and comparing them page by page.

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[1] Abderhalden: Bildung von Homogentisinsäure nach Aufnahme grosser Mengen von l-Tyrosin per os, Ztschr. f. physiol. Chem., 1912, lxxvii, 454.

In one, the lies of the swindler and the faker are everywhere; Pink Pills, Woman's Friend, Pure Malt Whisky, Sure Cure for Consumption, Cancer Cure, Headache Cure, Rheumatism Cure, dopes and frauds for all ills, cover the pages. Even the personal columns and the want ads are not safe, for here appears that miracle of benevolence, that kind woman, who, having found a cure when all hope was lost, will send it to you free — and will at the same time send your name and address to the quack for whom she is a stool-pigeon. In the Christian Science daily all these are absent. On reading its pages one realizes that printer's ink has been quackery's best friend. If every other religious paper would adopt an advertising policy similar to that of the *Christian Science Monitor,* much of the support of medical frauds would be destroyed. Probably some of these papers, deprived of the revenue furnished by swindlers, might be compelled to suspend publication, but this would only emphasize the extent to which they were dependent for life on quackery.

## A SUMMER HEALTH SCHOOL IN KANSAS

Since the secretary of the Kansas State Board of Health started the slogan "swat the flies," and led the way in the campaign against common drinking-cups, roller-towels and other long-accepted abominations, the public has come to look to Kansas for advanced ideas on health matters. The announcement of the second annual summer school for Kansas physicians and health officers, to be held at the state university, June 10-15, is another evidence of progress in the sunflower state. County and city health officers and physicians interested in public health work are to devote a week to the study of methods of sanitation, water-supply, sewage-disposal and other sanitary measures. Medical officers of the United States Public Health and Marine-Hospital Service and other well-known scientific men are to lecture, conduct laboratory courses and give demonstrations of food, drug and house inspections for the benefit of those in attendance. This plan will without doubt be of great value in developing competent local health officers and in improving the health of the people of the state.

## THE CENTENNIAL OF THE RHODE ISLAND MEDICAL SOCIETY AND ITS NEW HOME

A year or more ago we noted in our news columns that plans had been completed by the Rhode Island Medical Society for the erection in Providence of a library building which was to be the permanent home of the state association. An architect's drawing of this handsome building has been on display in our reception-room for some months. This project, which with that of Maryland, sets a splendid example for other state associations, is now consummated and on the hundredth anniversary of the Rhode Island Medical Society, June 12 and 13, both events will be celebrated by a scientific and material feast covering the two days. Details of the program will be found in the news columns. The society and its officers are to be congratulated on these two auspicious events and we offer them our heartiest felicitations.

## SANITARY REFORM A SOCIAL MOVEMENT

In an unusually broad and far-sighted editorial in a recent issue, the Toledo (Ohio) *Blade* in a few lines practically sounds the key-note of the public health campaign. Commenting on a circular recently issued by one of the large life-insurance companies, the *Blade* says, "The conservation of public life is becoming a great social question, one in which society is taking over responsibilities and functions left heretofore in the hands of the individual." This sums up the entire situation and also indicates the cause for the marked change taking place in the attitude of the public toward the prevention of disease. Previous to our present knowledge regarding the transmission of contagious diseases, sickness was largely a personal matter between the patient, the family and the physician. In cases in which the fact but not the manner of contagion was known, local health officials could quarantine the patient and prevent others from coming into contact with him. Until thirty-five years ago, however, no one knew exactly what caused the various contagious diseases or how this cause was transmitted from one individual to another. To-day, we know that yellow fever and malaria are transmitted by the mosquito, bubonic plague by the rat and the flea, hookworm disease through infected soil, typhoid through contaminated water or milk, or by flies or personal contact; tuberculosis, diphtheria and other contagious diseases through the discharges of patients. Disease is no longer a matter which concerns the individual alone. All the conditions of life and of living enter into the causation or suppression of disease. Many of these factors are beyond the control of the individual. They can be controlled only by society, acting in an orderly and effective manner, that is, by the state. As a result, most of the effective measures for public health of recent years have been more largely social and economic than medical. School inspection, tenement-house inspection and reform, improved conditions in workshops, stores and factories, efforts to secure pure food, pure water and pure milk for the community, free parks and play-grounds, municipal baths—all these, although not medical in the old sense of the word, are primarily for the health of the individual and of the community. Yet they are all of them possible only through the collective efforts of the state or of the municipality. The *Blade* is right in characterizing the public health movement as a great social movement, and in predicting "a broad and enormously endowed campaign for the preservation of public health leading to free aid for all and the building of insurmountable barriers against disease."

## AMERICAN MEDICAL DIRECTORY

In order to give our readers an idea of the new American Medical Directory, there is inserted in the advertising pages in the front part of this issue a colored picture of the volume displaying the cover and new thumb-index. Extracts from the various parts of the book, showing the style and contents, accompany the picture, while the explanatory notes state what the work is and the reasons for its existence.

# Medical News

## ARIZONA

**Medical Bill Killed.**—The bill recently passed by the senate, providing that the state medical board should give representation to more than one school of medicine, was defeated in the state assembly, May 8, by a vote of 19 to 16.

**State Association Meeting.**—The twenty-first annual meeting of the Arizona Medical Association was held in Bisbee, May 7-9, under the presidency of Dr. Francis E. Shine, Bisbee. The annual essay was presented by Dr. W. Warner Watkins, Phoenix, on "Tuberculosis, a Disease of the Individual;" the address on medicine, by Dr. P. V. K. Johnson, Los Angeles, was on "Infant Feeding;" and that on surgery, by Dr. Andrew S. Lobingier, Los Angeles, was on "The Surgery of the Right Hypochondrium in the Light of Newer Pathology." President A. H. Wilde of the State University, made an address on "The Relation of the University of Arizona to the Arizona Medical Association." Globe was selected as the next place of meeting and the following officers were elected: president, Dr. John E. Bacon, Miami; vice-presidents, Drs. Ira E. Huffman, Tucson; E. W. Adamson, Douglas, and Roy E. Thomas, Phoenix; secretary, Dr. W. Warner Watkins, Phoenix; treasurer, Dr. George A. Bridge, Bisbee; councilors, Dr. William I. Simpson, Phoenix; R. D. Kennedy, Globe, and John R. Whitesides, Kingman, and essayist for 1913, Dr. Mark A. Rodgers, Tucson. The first day's session was held in Bisbee and that of the second day in Douglas.

## ILLINOIS

**Personal.**—Dr. W. B. Arnold, Rockford, is reported to be seriously ill at his home.——Dr. D. D. Kirby, Canton, will sail for Germany immediately after the meeting of the American Medical Association, Atlantic City.——Dr. A. L. Mann has been appointed city physician of Elgin.

**Egyptian Medical Society.**—The twelfth annual meeting of the Egyptian Medical Society, composed of representatives from Williamson, Johnson, Massac, Pope, Saline, Hardin and Pulaski counties, will be held at Creal Springs, June 13 and 14, under the presidency of Dr. C. E. Trovillion, Metropolis.

### Chicago

**Personal.**—Dr. Frank Billings has started for Europe.——Dr. and Mrs. Fenton B. Turck have returned from abroad.——Dr. Daniel H. Williams has resigned as a member of the board of trustees and of the surgical staff of Provident Hospital.——Dr. Blackburn has assumed his duties as a member of the staff of the Mount Pleasant (Ia.) State Hospital.——Dr. Emil Beck was the guest of honor at a dinner given by the Detroit Academy of Medicine, May 14.

**Industrial Plants and Tuberculosis.**—The plan of the Chicago Tuberculosis Institute for the prevention and suppression of tuberculosis in the great industrial plants has recently been adopted by Swift and Company, packers. The plan is in operation either wholly or in part at the plant of the International Harvester Company, Montgomery, Ward and Co., and the Chicago Telephone Company. The Sears, Roebuck Co. have been using a similar system. This plan was formulated by Dr. Theodore B. Sachs, chairman of the committee on factories and calls for a tuberculosis clinic. First preventive and suppressive measures are taken and afterward oversight is exercised over those afflicted with tuberculosis.

## MICHIGAN

**State Will Not Let Leper Reenter.**—Secretary Dixon of the State Board of Health has notified the health authorities of Iowa that Herman Hirschfield, a leprosy suspect, and formerly an alderman of Bay City, cannot be returned to Michigan from Centerville, Ia., where he is now held in quarantine.

**Clean-Up-Day.**—By proclamation of the governor, the State Board of Health and the Department of Fire Marshals of Michigan agreed on May 15 as a day to be devoted to cleaning up and improving sanitary conditions. On this day the people were requested to do those things which would tend to materially lessen the danger to human life from disease and fire.

**Recent Work of State Board.**—Among the recent activities of the Michigan State Board of Health are the engagement of Prof. Edward D. Rich, professor of sanitary engineering in the State University, Ann Arbor, to inspect the summer resorts. Special consideration is to be paid to the water supply and the disposal of garbage, sewage, etc.; a complete survey and investigation of public water supplies is to be begun immediately, under the charge of a competent engineer, samples from each supply being examined in the State Board of Health laboratory. The investigation of the extent, distribution and causes of feeble-mindedness will be continued for a second six months. A hotel inspector has been set to work, who represents the Departments of Labor, Dairy and Food, and Health.

## MISSOURI

**Price Set on Flies.**—In order to give the fly-killing campaign an impetus, the St. Joseph Board of Health at its last meeting decided to pay ten cents a hundred for dead flies delivered to the clerk of the board, from the first to the fifteenth of May.

**Sanitary Railway Stations and Cars.**—The State Board of Railway and Warehouse Commissioners, at its meeting in Kansas City, April 30, issued an order affecting all depots serving towns of more than 200 inhabitants. The order provides that water tanks must be installed, kept clean and filled with pure and clean water; that a tank shall be placed in each waiting room and that the attendant shall be permitted to keep sanitary cups for sale cheap; and furthermore that all depots, passenger stations and passenger coaches shall be provided with water closets and lavatories.

### St. Louis

**Appropriation for Mosquito Warfare.**—The municipal assembly has appropriated $5,000 for the local war on mosquitoes.

**The Outten Tablet.**—There will be unveiled in a few days, without public ceremony, in the building of the St. Louis Medical Library and Medical Society, a bronze tablet to the memory of the late Dr. Warren B. Outten, bearing the inscription: "Erected by the Surgeons Who Served Under Him."

**Personal.**—Dr. David Linn Edsall, formerly professor of medicine in the University of Pennsylvania, but for the last year professor of preventive medicine in Washington University, St. Louis, has been elected Jackson professor of clinical medicine in Harvard Medical School, vice Dr. Frederic Cheever Shattuck, Boston.——The City Council has approved the mayor's appointments of Drs. W. John Harris, J. B. Shapleigh and Martin F. Engman as members of the City Hospital Board.

## MONTANA

**Personal.**—The accidental discharge of a target rifle inflicted a painful wound in the shoulder of Dr. B. E. Wiley, Kalispell, May 6.——Dr. J. P. Aylen, chief surgeon of the Northern Pacific Hospital, Missoula, was seriously injured in an automobile accident in that city recently.

**State Society Meeting.**—The thirty-first annual meeting of the Montana State Medical Association was held in Helena, May 7, 8 and 9, under the presidency of Dr. T. C. Witherspoon, Butte, and the following officers were elected: president, Dr. J. M. Scanland, Warmsprings; vice-presidents, Drs. George McGrath, Hamilton, and J. H. Irwin, Great Falls; secretary, Dr. H. D. Kistler, Butte (reelected); treasurer, Dr. C. T. Pigot, Roundup (reelected); and delegate to the American Medical Association, Dr. Donald Campbell, Butte. The next meeting of the association will be held in Great Falls.

## NEBRASKA

**Amendment Not Adopted.**—In The Journal, April 13, it was stated that the Douglas County Medical Society, at its March meeting in Omaha, had adopted an amendment opposing contract practice. The amendment was proposed at the March meeting, but was overwhelmingly defeated at the April meeting, and the censors of the society were asked to present a definition of contract practice at a subsequent meeting.

## NEW HAMPSHIRE

**New Officers.**—Hillsboro County Medical Society, at Manchester: president, Dr. C. H. Colcombe, Brookline; secretary-treasurer, Dr. George S. Foster, Manchester.

**State Society Election.**—At the one hundred and twenty-first annual meeting of the New Hampshire Medical Society, held in Concord, May 8-9, under the presidency of Dr. George W. McGregor, Littleton, the following officers were elected: president, Dr. John W. Staples, Franklin; vice-president, A. W. Mitchell, Epping; secretary, Dr. D. E. Sullivan, Concord; treasurer, Dr. D. M. Currier, Newport; trustees, Drs. Charles R. Walker, Concord; Herbert L. Smith, Nashua, and John M. Gile, Hanover; delegate to the American Medical Association, Dr. John Z. Shedd, North Conway, and alternate, Dr. Irving A. Watson, Concord.

## NEW JERSEY

**Diphtheria at Camden Hospital.**—Owing to the presence of diphtheria in the Cooper Hospital, Camden, no visitors will be admitted to the wards for at least two weeks. More than eighty persons in the surgical ward were treated with antitoxin.

**Advance Antituberculosis Legislation.**—A bill just passed by the New Jersey legislature and signed by the governor provides that tuberculosis patients who refuse to obey the regulations laid down by the State Board of Health concerning the prevention of their disease, and thus become a menace to the health of those with whom they associate, shall be compulsorily segregated by order of the courts, in institutions provided for this purpose. If such a patient refuses to obey the rules and regulations of the institutions in which he is placed, he may "be isolated or separated from other persons and restrained from leaving the institution." The law further provides that all counties in the State of New Jersey shall within six months from April 1, make provision in special institutions for the care of all persons having tuberculosis in these counties. The state treasury will subsidize each county to the extent of $3.00 a week for each person maintained in these institutions except for those who are able to pay for the cost of maintenance.

## NEW YORK

**Personal.**—Dr. William F. Matthews of the borough of Queens has been appointed Fourth Deputy Health Officer of the port of New York.——Dr. J. R. Williams, Rochester, sailed for Europe, May 1.

### New York City

**Personal.**—Dr. S. J. Meltzer, of the Rockefeller Institute for Medical Research, has been elected a member of the National Academy of Sciences.——Capt. Arthur R. Jarrett, assistant surgeon of the 13th Infantry, N. Y. N. G., will succeed Major De Forest, the regimental surgeon, who has resigned.

**Excursions for Sick Children.**—The Sanitarium for Hebrew Children at Rockaway Park announces that there will be excursions for mothers living in the congested districts of New York on certain days from July 3 to September 3. On these occasions the mothers and children are provided with food and other accessories for a day's outing.

**Need More Prevention Camps.**—The waiting list of applicants for the Tuberculosis Preventorium for Children is so large that two more open camps with a capacity of thirty-two beds apiece are needed. These camps will cost $12,000 each, toward the construction of which Jacob Schiff has just offered $5,000 contingent on the collection of the balance or $20,000.

## NORTH CAROLINA

**Public Health Meeting.**—A public health meeting was held in Canton, May 10, at which addresses were delivered by Drs. A. A. Kent, Lenoir, president of the Medical Society of the State of North Carolina; Dr. J. Howell Way, Waynesville, president of the State Board of Health, and Dr. W. S. Rankin, Raleigh, secretary of the State Board of Health. After the meeting, the local profession entertained the visiting physicians and the Haywood County Medical Society at an elaborate banquet.

**Honorary Degrees Conferred.**—At the convocation of the University of North Carolina, May 8, at which the new medical building was dedicated, the honorary degree of doctor of laws was conferred on Dr. R. H. Lewis, Raleigh; Provost Edgar F. Smith of the University of Pennsylvania, Philadelphia, and Dr. Charles Wardell Stiles, U. S. P. H. and M.-H. Service, Washington, D. C. Dr. Smith presented the University Medical Library with a copy of a rare volume containing the original lectures of Dr. John Morgan, the founder of the medical department of the University of Pennsylvania.

## NORTH DAKOTA

**Personal.**—Drs. E. P. Quain, Bismarck; E. M. Darrow, Fargo; B. D. Verret, Rolla, and J. Grassick, Grand Forks, have been appointed delegates at large to the Congress on Hygiene and Demography.——Dr. G. M. Olson has been appointed health officer of Fargo.

**State Society Meeting.**—The annual meeting of the North Dakota State Medical Association was held in Valley City, May 14-15, and the following officers were elected: president, Dr. A. J. McCannel, Minot; vice presidents, Drs. M. MacGregor, Fargo; R. H. Beek, Lakota, and E. P. Quain, Bismarck; secretary, Dr. H. J. Rowe, Casselton (reelected); treasurer, Dr. F. J. King, St. Thomas; and councilors, Drs. J. D. Taylor, Minot; E. A. Pray, Valley City, and G. Goldseth, Jamestown.

## OKLAHOMA

**State Association Meeting.**—The twentieth annual meeting of the Oklahoma State Medical Association was held in Shawnee, May 7, 8 and 9, under the presidency of Dr. C. L. Reeder, Tulsa. The following officers were elected: president, Dr. J. L. Shuler, Durant; vice-presidents, Drs. J. A. Walker, Shawnee; J. M. Byrum, Shawnee, and J. H. Barnes, Enid; secretary, Dr. Claude A. Thompson, Muskogee. Enid was selected as the next place of meeting.

## PENNSYLVANIA

### Philadelphia

**Alumni Week at Jefferson.**—Jefferson Medical College has issued a special roster of lectures, clinics and demonstrations for alumni week, May 27 to June 1, inclusive; also June 7 and 8, to which all graduates of medicine will be welcome.

**Alumni Appeal for Funds.**—An appeal for funds for the erection of an addition to the maternity department of the University Hospital has been issued to the alumni of the University of Pennsylvania by Dr. Barton Cooke Hirst. The estimated cost of the addition will be $80,000 and room will be provided for 100 beds.

**Flexner Portrait Presented to University.**—The portrait of Dr. Simon Flexner, professor of pathology in the University of Pennsylvania from 1899 to 1903, which was recently presented to the university, has just been hung in the Medical Laboratory Building. The picture was painted by Adele Herter, of New York.

**Changes in the University Medical Department.**—Dr. Allen J. Smith, dean of the Medical Department of the University of Pennsylvania, announced, May 18, the reorganization of the Medical Department and the amalgamation of the University Hospital and the John H. Musser department of Medical Research, with Dr. Alfred Stengel as directing head. Drs. David Riesman and Joseph Sailor, formerly assistant professors, have been made professors of clinical medicine. Dr. Stengel will have two newly appointed associates, Drs. J. Harold Austin and O. H. Perry Pepper, who will devote practically their entire time to the university work and will be occupied with the care of hospital patients, teaching and medical research. Dr. Richard M. Pierce, occupant of the John H. Musser professorship of medical research, will continue in that position, and the two newly-elected professors of clinical medicine will have general supervision of the extramural teaching at the Philadelphia General Hospital.

**The Baby-Saving Show.**—Philadelphia's first Baby-Saving Show held in Horticultural Hall, was formally opened May 18, at 3 o'clock by Director Porter of the Department of Public Safety, who officiated in the absence of Mayor Blankenburg. The other speakers were: Dr. Joseph S. Neff, Director of Public Health and Charities and Edwin D. Solenberger, general secretary of the Children's Aid Society of Pennsylvania. Dr. Joseph S. Neff presided at the evening session and the speakers were: Drs. L. T. Royster, of Norfolk, Va., and M. Howard Fussell, professor of applied therapeutics in the Medical Department of the University of Pennsylvania. On the second floor, series of booths portray the contributing causes of infant mortality, showing actual conditions of the slum districts: open air markets with food fly-covered, city dumping grounds within a block of public schools, objectionable pig pens in the lower section of the city, neglected lots, foul with refuse, etc. In all, there are twenty-seven exhibits. There are model kitchens and model living rooms and much attention is paid to the demonstrations of feeding of babies. The mothers' clubs and other women's clubs have joined in the show and beside their exhibits there are those of the Bureau of Chemistry of the United States Department of Agricultur the Russell Sage Foundation, the Pennsylvania State Department of Health, the New York Diet Kitchen Association, the Board of Health of Richmond, Va., the Thomas Wilson Sanatorium of Baltimore, the Infant Welfare Society of Chicago and the United States Public Health and Marine-Hospita Service. Importance of the care of the eyes of babies a birth and the results of negligence will be dealt with by th exhibit of the New York Association for the Protection o the Blind. The department of health and charities has separate display, showing the need for immediate report o communicable diseases and telling of the precautions to b taken in a neighborhood where children have whooping coug and where measles are prevalent. . The Infant Hygiene Confe ence in connection with the show was held the evening May 22 and the morning of May 23.

## RHODE ISLAND

**New Officers.**—Washington County Medical Society: president, Dr. John L. May; secretary-treasurer and censor, Dr. John Howard Morgan, both of Westerly.

**Personal.**—Dr. F. S. Graves, a member of the pathologic and clinical staff of the Rhode Island Hospital, Providence, has resigned and will continue pathologic work in the Boston City Hospital.

**Centennial of State Medical Society.**—On June 12 and 13 the centennial celebration of the Rhode Island Medical Society will be held in Providence. On the first day, an outing will be held at Rocky Point, with entertainments including a ball game, wrestling match and a shore dinner. In the evening the new Rhode Island medical library will be formally opened with a reception to the invited guests. On the second day there will be an automobile tour of Providence and vicinity, and the delegates and invited guests will be the guests of the president at luncheon at the Wannamoisett Country Club. In the afternoon the annual meeting will be held, the oration being given by Dr. Abraham Jacobi, New York City, president-elect of the American Medical Association. This will be followed by the presidential address, the delivery of the keys of the new Rhode Island Medical Library to the society and the induction of the new officers. In the evening the annual banquet will be held at the Eloise. Dr. John Champlin Westerly will act as anniversary chairman and Hon. George H. Utter, M.C., and S. H. Davis, Esq., will be the speakers. The new library building is intended as a permanent home for the society and its library, and has been erected at a cost of $50,000, the bulk of which has been contributed by the medical profession of the state.

## GENERAL

**Meeting of Tropical Medicine Society.**—The ninth annual meeting of the American Society of Tropical Medicine will be held at the Hotel Rudolph, Atlantic City, June 3, under the presidency of Dr. Joseph H. White, U. S. P. H. and M.-H. Service, New Orleans. The subject of the presidential address will be "The Eradication of Malaria." At the afternoon session there will be a general discussion on beriberi.

**Climatologists to Meet.**—The second annual meeting of the American Climatological Association will be held in Hartford, Conn., June 10-12, under the presidency of Dr. A. D. Blackader, Montreal. The annual dinner will take place on June 11 and June 13 has been set apart as a day of recreation. The automobile ride for the members and their ladies will include a visit to the Gaylord Farm Sanatorium at Wallingford.

**New England Jefferson Alumni Meet.**—The New England Associates of the Graduates of Jefferson Medical College, Philadelphia, held its annual meeting and dinner May 8, Dr. John C. Berry, Worcester, Mass., acting as toastmaster. The following officers were elected: president, Dr. John C. Berry, Worcester (reelected); vice-president, Dr. P. F. Gahan, Medford, Mass.; secretary, Dr. Angus MacOdrum, Cambridge, Mass., and treasurer, Dr. Frank I. Payne, Westerly, R. I.

**Laryngologists Elect Officers.**—The American Laryngological Society closed its eighteenth annual meeting with the election of the following officers: president, Dr. H. Holbrook Curtis, New York; vice-president, Eastern section: Dr. George C. Stout, Philadelphia; Southern section: Dr. J. W. Jervery, Greenville, S. C.; Middle section: Dr. William E. Sauer, St. Louis; and Western section: Dr. Hill Hastings, Los Angeles; secretary, Dr. Thomas J. Harris, New York City, and treasurer, Dr. Ewing W. Day, Pittsburg.

**Conference on Industrial Diseases.**—The second National Conference on Industrial Diseases will be held at the Hotel Marlborough, Atlantic City, June 3-5. On the second day, the morning session will be devoted to the investigation of industrial diseases; the afternoon session to health problems in modern industry and the evening session to the state promotion of industrial hygiene. June 5, in the morning, a joint session will be held with the Section on Preventive Medicine and Public Health of the American Medical Association, when industrial diseases will be considered. In the afternoon the immediate legislative program for the promotion of industrial hygiene will be taken up. There will be also an industrial hygiene exhibit, illustrating the industrial processes dangerous to health and the evil effects of occupational diseases.

**Conference of Charities and Correction.**—The thirty-ninth National Conference of Charities and Correction will be held in Cleveland, June 12-19. The following societies in affiliation with the conference will hold meetings in Cleveland: The National Conference on the Education of Dependent, Truant, Backward and Delinquent Children, June 10-12; the Seventh Biennial National Conference of Jewish Charities, June 9-12; the National Association of Public Relief Officials; the National Probation Association, beginning June 11; and the National Association of Societies for Organizing Charity, June 12. The topics to be discussed include "Children," "Families and Neighborhoods," with the central thought "The Maintenance of the Family;" "The Relation of Medical and Social Work," which is to be the special topic to be considered at the general session on June 17; "Housing and Recreation;" "Public Supervision and Administration;" "Standards of Living and Labor;" "Immigration;" "Sex Hygiene," and "Courts and Prisons." The Section on the Relation of Medical and Social Work, of which Dr. J. Alexander Miller, New York City, is chairman, appears for the first time on the program. The committee has been divided into seven subcommittees, which have made studies of the medical and social interrelations of the following forms of social work: hospital social service; visiting nursing; industrial diseases and accidents; infant mortality; blindness; insanity and epilepsy and important social diseases including tuberculosis, syphilis, uncinariasis and alcoholism. Dr. Richard C. Cabot, Boston, will give the address on "The Educational Aspect of the Subject" at the general session in which the work of this section is discussed.

## LONDON LETTER

*(From Our Regular Correspondent)*

London, May 12, 1912.

### The Campaign Against the National Insurance Act: The British Medical Association's New Pledge

It has been shown in previous letters to The Journal that the medical profession has been completely united by means of the British Medical Association to resist the medical attendance portion of the national insurance act if the demand for the "six points" is not conceded. But there remains one weak point in the strong position occupied by the profession. If the profession will not agree to terms offered to it, one course open to the government is to drop medical benefit entirely and pay the capitation fees to the various benefit societies and leave them to make their own arrangements with the physicians. Now the friendly societies have at present some 7,000,000 members and a large proportion of the profession as medical officers. The passing of the insurance act has greatly increased the membership of the societies, and probably only a very small minority of the insured will remain outside of them. The profession is therefore confronted with the possibility that if it refuses to work the act, it may have to attend the insured under the contract system of the friendly societies—conditions worse than the terms offered in the act. Indeed, one of the six points of the profession is freedom from friendly society control, which has been attained to a certain extent under the act, which is to be administered by committees appointed by government and not by the friendly societies. On the committees, however, is a large friendly society representation, amounting to three-fifths. Friendly society practice has always been unpopular with the profession, as it is badly remunerated, but competition has in most parts of the country provided physicians to work it. Long before the passage of the insurance act was contemplated the British Medical Association endeavored to tackle the problem and improve the condition of friendly society practice, but without much success. When the profession began to organize to resist the insurance act the evils of the contract system in vogue under the friendly societies were frequently mentioned at the meetings and suggestions to abolish contract practice entirely were received with applause. But the problem is a more difficult one than resistance to the act, for contract practice has existed for more than half a century and many physicians derive a considerable portion of their income from it. Nothing was done at first; the profession confined its attention to resisting the act. Now that it is seen that the present system of contract practice is not only an evil but the weak point in the profession's organized resistance against the act, the British Medical Association has made a bold move and attacked the whole contract system. It has framed a supplementary pledge to which it desires to obtain the signature of every physician who signed the previous pledge (i.e., practically the whole profession) not to work the act if the terms are not satisfactory to the British Medical Association. In view of the possibility of the suspension of medical benefit or of its administration in any way contrary to the wishes of the profession, every physician is asked to place in the hands of the local secretary his resignation of contract practice appointments in so far as they extend to insured persons and to undertake not to accept any appointment so resigned. This would practically amount to the cessation of all contract practice. He is also asked to declare that, after the act comes into operation, he will not render services to any insured person through any voluntary charity, except in cases of urgent necessity, until the terms of the act have been approved by the profession, and not to cooperate with any member of the profession who is under contract to render service to insured persons on terms not approved by the profession. No use will be made of these resignations until the insurance committee of the association is of the opinion that the time is ripe throughout the whole or in certain parts of the country. A defense fund is also being established for the purpose of compensating physicians who may lose by resigning friendly society appointments. Contributions of $50 are being solicited from the whole profession.

### The Government Inquiry Into Nostrums: Alarm of the Venders

The government recently appointed a select committee to investigate the sale of "patent medicines" (nostrums) and their advertisement. The venders have immediately taken alarm and under the chairmanship of Sir Joseph Beecham, the proprietor of "Beecham's pills," a committee of the "Owners of Proprietary Articles Section" of the London Chamber of Commerce has met for the purpose of defense. There are some 300 firms engaged in the manufacture of proprietary medicines and foods. The magnitude of the trade interests involved may be judged from the fact that the revenue derived from the tax on proprietary medicines (there is no tax on proprietary foods) amounted last year to $1,600,000. The committee of nostrum-owners has issued a pamphlet setting forth the position of its members. This deals principally with the suggestion made by the medical profession that the composition of all advertised remedies should be stated on the label. The attempt to argue against the suggestion is extraordinarily weak—so weak that it is surprising the nostrum-owners have not preferred silence. They say that such a declaration would not protect the public and would enable unscrupulous persons to manufacture similar articles and to trade on the expenditure and reputation of the original manufacturers. At present, they say, "the public know that when they purchase a well-known proprietary article such article is always of uniform quality and efficiency. If the formula is thrown open to the world and a similar article is manufactured by others there would be varying standards, and the qualities of the article would not be guaranteed or maintained." The pamphlet further states that "the agitation against proprietary medicines and foods has been mainly propagated by the medical profession and is largely founded on the desire of the profession to extend their monopoly and to require the public to purchase medicines only on a medical prescription." The public, it is added, "is protected at the present time when the drug proprietary article contains poison even in an infinitesimal degree, as all such preparations have to be labeled 'poison' in large letters." It will be noticed that the main charge against the present system—that it allows the most extravagant and fraudulent claims to cure all sorts of diseases to be made freely by the proprietors of patent medicines—is absolutely unmentioned in this attempt at defense. The sincerity of the objection that declaration of the composition on the label would lead to imitation may be judged by the fact that the composition of all these articles has been ascertained by analyses made for the British Medical Association and published in a book which has had a large sale.

### The National Health Week

The increasing interest taken by the public in the national health is manifested in a new form. A remarkably successful organization, called the "Agenda Club" (things to be done), was founded last year by a group of engineers for the purpose of improving the national health. The means adopted are exceedingly practical, for example kinetograph films are exhibited showing: 1. How to dust a room. 2. How to wash a baby. 3. How rats spread disease. 4. What unfiltered water contains. 5. The right and wrong kind of girl to marry. Local committees have been formed all over the country at places having an aggregate population of 3,000,000 for the purpose of giving synchronized attention to problems of public health in and through any agency, official, public, or private, which at any point touches the problem of health. The object is not only to combat ignorance and apathy among the poor and ignorant but to win the intelligent support of citizens for the constructive work of health officers and school medical officers. It is proposed to collect not money, but services, to this end, and in a thousand ways along the lines of each one's profession or opportunities, and to drive home the concrete statistical facts of the waste of national health and life—tragical facts of death and disease, hopeful facts as to what has been accomplished and what can be accomplished. The results achieved are already far beyond the highest expectation of the club. The latest project is the establishment of what is called "the National Health Week" and this has been taken up all over the country. In a considerable number of churches of all creeds the affinity of cleanliness to godliness and other hygienic points were emphasized last Sunday. One preacher contrasted the loss of 1,600 lives on the *Titanic* with the 50,000 preventable annual deaths from tuberculosis. Another referred to the fact that out of 1,000,000 children born in a year 106,000 died before they were a year old and that many of these deaths could have been prevented.

## PARIS LETTER

*(From Our Regular Correspondent)*

Paris, May 3, 1912.

### Intramuscular Etherization

Intravenous etherization, recommended by Burkhardt, has not become popular in practice for it is not free from danger. In experimenting with this process, Dr. Descarpentries, surgeon of the hospital La Fraternité at Roubaix, devised the method of introducing ether into the organism by the intramuscular route which would avoid the formation of thrombi. He has just made an important report on this subject before the Société de chirurgie of Paris. The instruments needed are a good ether-tight syringe of 10 to 20 c.c. capacity, and a platinum needle 7 cm. long and very slender (0.6 mm.), so that it perforates the muscle with as little injury as possible to the fibers and especially the aponeuroses. After having determined the point of injection the needle, previously sterilized, is inserted so as to make sure that it does not perforate a venule. The ether injection is made slowly and the needle withdrawn little by little. If the subject is thin, the needle strikes bone. It is then necessary to withdraw it about 1 cm. so that the injection may be made into the muscle, otherwise the ether might pour out along the bone toward the ischiatic notch and cause a neuralgia or a sciatic neuritis. In the adult the injections may be made successfully in each of the gluteal regions at intervals of a few minutes so as to avoid producing too much ether vapor and injuring the muscle too much. A black bandage is placed over the patient's eyes in the dark so that he may lose consciousness more quickly and completely. Some patients awaken suddenly as soon as the bandage is removed from the eyes and the light irritates the pupil, but go to sleep again when the eyes are bandaged again. At the time of the first injection, the patient feels a great but very transient pain followed immediately by heaviness of the injected limb. He complains of indefinable malaise wants to talk and makes some movements; his breath smells of ether. Little by little his speech becomes slow and stammering and he falls into a light slumber broken by incoheren words and slow movements. The sleep becomes more profoun and the limbs hang inert. At this point some nausea ofte appears. The eyes show a sort of nystagmus and sensatio disappears little by little. In from fifteen to twenty minutes anesthesia is obtained. The slumber is very quiet; the face i pale; the pupils show miosis; the respiration is slow, regula and calm. There is no salivation or bronchial secretion and n cyanosis. The heart-beats are strong and their rhythm i slightly accelerated. Muscular relaxation is often perfec The lid-reflex does not disappear. The patient awaken very slowly. At the end of about one-half hour, sensatio reappears. Consciousness seems to return before complet sensation; the patient talks, but does not complain if his lim are pinched. Generally speaking, to obtain anesthesia it necessary to inject a few more cubic centimeters of ether tha the subject weighs in kilograms. For a woman weighing abou 55 kilos (121 pounds), 60 c.c. of ether may be injected six doses of 10 c.c. each or better in twelve doses of 5 c.c. eac This quantity of anesthetic may be reduced in depresse anemic or obese patients. It must be increased in nervou agitated or emotional patients, or in those who do not want are afraid to lose consciousness. Alcoholics seem to go und the influence of the ether more rapidly than other persons. too small a quantity of ether is injected the subject does n lose consciousness at the end of twenty minutes. He may th be made to inhale one or two additional doses of 10 c.c.

obtain anesthesia a few minutes afterward. If the anesthesia does not last long enough or is not complete enough the patient may be made to inhale a little chloroform or ethyl chlorid. Descarpentries even employs systematically a preliminary inhalation of ethyl chlorid before the intramuscular ether injection in order to obtain a more rapid anesthesia and to avoid causing the patient pain by the two first injections. Dr. Descarpentries has performed within six months about 150 operations (hysterectomy, operation for vesicovaginal fistula, staphylorrhaphy, perineorrhaphy and reduction of congenital dislocations of the hip) even in children aged 5 and old people of 61 without any complications or bad after-effects, such as pneumonia or pulmonary congestion. He has observed in some cases hemoglobinuria, which appears also after intravenous etherization, but disappears in twenty-four hours. Intramuscular etherization seems the anesthesia of choice for operations on the face, the mouth and the respiratory passages. The method seems especially adapted to be of service in the country and in military surgery since it permits the performance of an operation under general anesthesia without any assistant.

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, May 3, 1912.

### Scientific Research on Apes at the Canary Islands

The scientific investigations at Teneriffe have received a new extension by the erection of a station for observing anthropoid apes. Professor Rothmann of Berlin and Frau Professor Selenka of Munich have been sent to Teneriffe by the department of education to make preparations to this end, since it may be expected that in the uniformly warm climate there the animals may be kept in the open air through the entire year under the conditions of life that are natural to them.

### Eradication of Diphtheria

A treatise has just appeared entitled "Einführung in die Lehre von der Bekämpfung der Infektionskrankheiten" (Principles of Suppression of Infectious Diseases), written by Professor von Behring, who has so far recovered from the nervous disease from which he has suffered for many years that he has again taken up his scientific work. The treatise discusses ways and means to stamp out diphtheria, emphasizing that prophylaxis is effective only if the conveyance of infection from person to person is avoided. In school epidemics the closing of the school and the disinfection of the school rooms are of no service because the bacillus-carriers continually reintroduce the virus. According to Behring, one must proceed on the assumption that diphtheria, which was not always an endemic disease in European countries, can again be driven out, like small-pox, which after it had prevailed for centuries in middle Europe, has again become for us an exotic disease. This hope is justified, he says, because the diphtheria bacilli with us do not maintain a vegetative existence in the external world, and because the diphtheria virus does not find in animals favorable conditions for existence, and the diphtheria bacillus is found only in human beings, in cases in which clinical diphtheria is present or has been observed shortly before. All that is necessary, therefore, is a well planned preventive diphtheria campaign, similar to vaccination for small-pox. Two circumstances have worked against this obvious idea. First, the great therapeutic efficiency of the antitoxin, which allows us to count with certainty on the cure of the patient; secondly, the circumstance that the so-called serum sickness may be occasioned by anaphylaxis on repeated injection of the serum. Behring has now succeeded in producing a curative serum which reduces this annoying by-effect to a minimum, so that even hypersusceptible individuals are not liable to develop serum sickness. Moreover he believes that by local treatment with the serum of the nose and throat of bacilli-carriers it may be possible to reduce the opportunities for infection.

### Reduction of the Excess of Births in Prussia

Recently published official statistics for 1910 and 1911 show a striking phenomenon of the last two years, namely, the diminishing number of births in connection with increased numbers of marriages. The births for 1910 were 35,119 and for 1911, 69,098 below the average for the decade 1901 to 1910, while the number of marriages in the first year was 10,154 and in the latter 20,897 above the average in that period. It is therefore evident that the fertility of married women has shown a considerable decrease. For each 1,000 of the population there occurred in 1911 30.2 births as contrasted with 31.5 in 1910, 32.7 in 1909, 33.7 in 1908 and 37.4 in 1901, so that in ten years the birth rate has dropped by 7.2 per thousand. The number of deaths in 1911 was 18.1 per thousand, as contrasted with 16.9, 17.9, 18.9 and 21.7 in the four preceding years. According to these figures, the excess of births for 1911 was only 12.1, as contrasted with 14.6 in 1910, 14.8 in 1909 and 1908 and 15.7 in 1901.

### The Annual Meeting of the German Internists

The twenty-ninth Deutscher Kongress für innere Medizin was held this year, as usual, in the middle of April at Wiesbaden, under the presidency of Stintzing and it was unusually well attended. This circumstance was chiefly due to the widespread interest in the one and only topic on the order of the day, the "Roentgen Method in the Diagnosis and Treatment of Gastro-Intestinal Diseases." Not only numbers of internists but also of surgeons and many roentgenologists and specialists in digestive diseases were present at Wiesbaden to hear the leading address by Professor Rieder of Munich, who has already done marked service in this field, and the papers and discussions which followed it. There were also present more internists from abroad than usual. It is true that no considerable amount of new facts were presented, but the confirmation of the facts hitherto learned in the field of gastro-intestinal diseases was of great interest, so much the more that certain points in dispute were settled and many extravagant hopes were reduced to their correct measure. In particular it was unanimously established that kinematographic Roentgen pictures possess no essential value either for diagnosis or instruction. Furthermore the fully justified warning was emphasized to regard the examination with the Roentgen rays of the gastro-intestinal canal merely as a diagnostic aid and not as the exclusive basis for conclusions in the clinical case. As a matter of fact, there has been a marked tendency in the articles of many surgeons to neglect the hitherto used methods of examination of the gastro-intestinal tract in favor of the examination by the Roentgen rays. Another point of interest was the difference of opinion on radium and thorium, especially with reference to their therapeutic influence in gout. In this matter also a positive conclusion has not yet been reached. The communications from the clinics of von Noorden at Vienna and Kraus at Berlin on the influencing of leukemia by thorium are full of hope. Of the numerous other communications (of which there were not less than 118 on the program which with a few exceptions were presented within four days) the investigations of Liebermeister (a son of the formerly noted Tübingen clinician) on the almost ubiquity of tubercle bacilli in the blood may be mentioned as exciting particular attention; he claimed after painstaking and extensive researches to have found tubercle bacilli in the blood not only in nearly all his cases of phthisis, but also in patients free from tuberculosis, for instance, in cases of joint disease, sciatica, etc. Professor F. Klemperer of Berlin and following him two other directors of hospitals reported on the curative action of salvarsan injections in scarlet fever. The substance of both of these reports will need to be submitted to a careful reinvestigation before they can be regarded as definitely settled.

Aside from the scientific proceedings, a very important feature of the meeting was the report of a committee on materia medica, appointed by the congress, to which had been referred the task of testing the remedies and food preparations advertised in the medical journals, in order to determine which were objectionable so as to protect physicians and through them their patients against the possibility of imposition. The committee and in conjunction with it the executive committee of the congress presented the following principles as rules to govern the judgment of advertisements: No article will be accepted for inclusion in the list of the congress (1) whose composition is secret. In this sense, "composition" means for simple chemical substances, the scientific name, the empirical formula, and so far as known, the structural formula; for mixtures, the amount of each different constituent in a definite amount of the commercial product; (2) those for which misleading claims are made in the advertisements regarding their origin, preparation, composition and tests for identification; (3) those which show essential differences in composition in different commercial samples. By an essential difference is meant marked variation in appearance, taste, absorbability, or the quality or quantity of action; (4) those substances which being mixtures of well-known substances bear a new name although they show no essential difference from the already well-known mixtures; (5) those regarding whose curative value or innocuousness, unwarranted and misleading claims are made in the advertisements; (6) those whose exploitation is contrary to the true interests of the patients.

# Association News

## HEALTH TALKS IN ATLANTIC CITY CHURCHES

### Preventive Medicine, the Gospel of Hygiene, to be Ably Presented to the Public

Following the excellent plan inaugurated at the Los Angeles session in 1911, by Dr. W. A. Evans, then Chairman of the Section on Preventive Medicine and Public Health, the Council on Health and Public Instruction has arranged to furnish speakers for the churches of Atlantic City for Sunday, June 2, the day preceding the annual session. Speakers have been provided for twenty-two meetings. Of these, one, the address before the Jewish Synagogue, will be given on Saturday morning, June 1. Of the Sunday meetings, six addresses will be given at the morning services, four at afternoon meetings, and eleven in the evening. The following schedule shows the church, the name of the pastor, the time of the meeting, the speaker and his subject, except in a few cases in which the subject is not yet furnished.

Chelsea Baptist Church: Rev. Thomas Cross, 1925 Pacific Avenue. Evening: Tuberculosis, Dr. M. P. Ravenel, Madison, Wis.

First Baptist: Rev. Birney S. Hudson, 15 Mt. Vernon Avenue. Afternoon: Public Health, Dr. W. A. Jones, Minneapolis. Evening: Cleaning Up a State, Dr. Oscar Dowling, President, Louisiana State Board of Health, Shreveport, La.

Central M. E.: Rev. Sherman G. Pitt, 33 S. Maryland Avenue. Evening: Public Health Question, Dr. John A. Witherspoon, Nashville, Tenn.

First M. E.: Rev. U. G. Hagaman, 324 Atlantic Avenue. Evening: The Gospel of Hygiene, Dr. J. N. Hurty, Secretary, Indiana State Board of Health, Indianapolis.

Chelsea Presbyterian: Rev. H. R. Rundall, 49 S. Sovereign Avenue. Evening: Progress of Prevention, Dr. Ennion G. Williams, State Commissioner of Health of Virginia, Richmond, Va.

First Presbyterian: Afternoon: The Medical Profession and Public Health, Dr. Harvey W. Wiley.

Olivet Presbyterian: Rev. Newton Cadwell, 311 Atlantic Avenue. Evening: The Dawn of the Health Age, Dr. W. A. Evans, Chicago.

Westminster Presbyterian: Rev. John McMillan, 25 S. Massachusetts Avenue. Morning: Human Life, Dr. J. W. Foss, Phoenix, Ariz. Evening: The Advantages Gained by Keeping Well and How to Do It, Dr. C. A. Harper, Secretary, Wisconsin State Board of Health, Madison, Wis.

St. Paul's M. E.: Rev. M. E. Snyder, 32 S. Ohio Avenue. Evening: Dr. W. W. Grant, Denver.

German Presbyterian: Rev. John Kliefken, 1304 Pacific Avenue. Evening: A Citizen's Duty in the Fight Against Tuberculosis, Dr. S. A. Knopf, New York.

Christ M. P.: Rev. G. D. Sinkinson, Belmont and Pacific Avenues. Morning: Health in the Schools, Dr. Edward Jackson, Denver.

Trinity M. P.: Rev. George D. Jones, 408 N. Ohio Avenue. Morning: Responsibility for Tuberculosis Control, Dr. F. A. Tucker, President, Indiana State Board of Health, Noblesville, Ind.

People's Church: Rev. Emma E. Nutter Cairns, 2213 Arctic Avenue. Evening: The Religion of the Human Body, Dr. A. B. Cooke, Nashville, Tenn.

Y. M. C. A., 1307 Pacific Avenue. Afternoon: Influence of Disease on Civilization, Dr. Victor C. Vaughan, Ann Arbor, Mich.

Congregation Beth Israel: Rabbi H. M. Fisher. Saturday Morning: Efficient Charity, Dr. John A. Hornsby, Chicago.

Shiloh Baptist: Rev. John H. Henderson, 28 N. Ohio Avenue. Morning: Responsibility of the People in Protecting the Public Health, Dr. E. C. Levy, Health Officer, Richmond, Va. Evening: The Conservation of Life, Dr. F. Park Lewis, Buffalo, N. Y.

Guild Hall, Ascension Church: Rev. Charles M. Niles. Afternoon: Dr. Charles A. L. Reed, Cincinnati.

St. James A. M. E.: Rev. Anderson. Morning: Tuberculosis, Dr S. A. Knopf, New York.

Colored Y. M. C. A.: Afternoon: Dr. C. E. Cantrell, Greenville, Texas.

## HOTELS AT ATLANTIC CITY

### Reference to the Atlantic City Number, Which Contained Full Information

In view of the fact that there are repeated requests for a list of the Hotels of Atlantic City, and their rates, the committee calls attention to the fact that a full list of the hotels was published in The Journal, May 4, 1912, pages 1373 and 1374. Full information as to rates and location may be obtained by referring to that issue.

The committee will be very glad to advise members in reference to hotels, or to make reservations for them so that they may be comfortably located. No time should be lost, however, in applying for accommodations, as some of the hotels are already booked to their capacity for the meeting and are turning applicants away.

William Edgar Darnall, M.D., Atlantic City,
Chairman Hotel Committee.

The Journal emphasizes what Dr. Darnall says in reference to the list of hotels which has already been published. Letters are continually being received asking for the information which was given in the Atlantic City Number of The Journal. This issue contained, besides the list of hotels, an illustrated description of Atlantic City, the preliminary programs of all the sections, a list of entertainments, details of railroad rates, a list of the clinics of the Association at Atlantic City, a new feature of this session, and much other information.

### Alumni Gatherings

In addition to the alumni entertainments already announced, notice has been received of the following:

Jefferson Smoker, June 4, 8:30 p. m., Schlitz Hotel, Ocean Avenue and Boardwalk.

### Clinics at Atlantic City

Attention is here called to the fact that a series of clinics will be given on the Steel Pier at Atlantic City under the direction of the committee of the Association appointed for the purpose. The program of clinics for Monday, June 3, was given in the Atlantic City Number of The Journal, May 4, page 1375.

### Clinics at Philadelphia

Special clinics have been arranged for visiting physicians in Philadelphia, in eye, ear, nose and throat subjects, for May 30 and 31, and June 1, 3, 7 and 8. Regular schedules have been made, and will be posted on the bulletin boards of the various teaching hospitals, and at the College of Physicians.

# Marriages

Mable C. Cruttenden, M.D., Watertown, Conn., to Charles Stanley Raymond, M.D., of South Hadley, Mass., May 6.

G. Carl Fisher, M.D., Chicago, to Miss Irma Sophie von Bereghy, of Harrisburg, Pa., at Hammond, Ind., May 6.

Harry B. Roop, M.D., Columbia, Pa., to Miss Martha Baldwin, of Huntingdon, Pa., in New York City, April 30.

Paul Martin Lennox, M.D., Colorado Springs, Colo., to Miss Jetta Gunsolus, of Manitou, Colo., May 8.

Joseph Corwin Howell, M.D., Orlando, Fla., to Miss H Pearl Markham, of Binghamton, N. Y., May 9.

Gilbert Capson McCormick, M. D., to Miss Pearle Viole Neafus, both of Wichita, Kan., May 8.

Walter Nordal Lee, M.D., Hopkins, Minn., to Miss Rut Rebok, of Toledo, Iowa, May 1.

Elbert English Lafferty, M.D., to Miss Ethel Wilco both of Bogalusa, La., May 4.

Edward Dorsey Ellis, M.D., to Miss Mary E. Stebbin both of Baltimore, May 8.

Simon Kimmelman, M.D., to Miss Bertha Brown, both Philadelphia, May 5.

# Deaths

**Charles Tweed Rodgers, M.D.** New York University, New York City, 1874; a member of the Hawaiian Territorial Medical Society; for thirty-six years a resident of the Hawaiian Islands; acting editor of the *Honolulu Commercial Advertiser* in 1889; one of the founders and up to the time of his death a trustee of the Honolulu Public Library; during the period before the overthrow of the monarchy secretary of the annexation committee and also secretary of the executive and advisory councils under the provisional government; later for several years secretary of the Territorial Board of Education and in 1890 acting superintendent of the census of Hawaii; died at the home of friends at Manoa Valley, April 24, aged 76.

**William Sanderson Cheesman, M.D.** College of Physicians and Surgeons, New York City, 1879; a member of the American Medical Association and New York Academy of Medicine; one of the most prominent surgeons of Central New York and a member of the editorial staff of the *New York Medical Journal;* a member of the board of education of Auburn; attending surgeon to the Auburn City Hospital and a member and trustee of the Seymour Library Association; died at his home in Auburn, May 7, from subacute combined spinal sclerosis, aged 59.

**George Long Reagan, M.D.** University of Vermont, Burlington, 1865; a member of the Medical Society of the State of Pennsylvania; formerly president of the Schuylkill County and Columbia County (Pa.) medical societies; for the last thirty-one years a resident of Berwick; died at his home in that place, April 7, from cerebral hemorrhage, aged 76.

**Eugene Burt Horton, M.D.** University of Buffalo (N. Y.) 1902; of Niagara Falls, N. Y.; a member of the American Medical Association; city bacteriologist of Niagara Falls and surgeon to the International Traction Company; died in the Buffalo General Hospital, May 6, from meningitis following an operation on the nose, aged 39.

**Alvan Jay Rosenberry, M.D.** University of Michigan, Ann Arbor, 1880; a member of the American Medical Association; a practitioner of Menominee, Mich., Wausau, Wis., and Oak Park, Ill., until 1906 and thereafter a resident of Benton Harbor, Mich.; died at his home in Benton Harbor, May 7, from uremia, aged 60.

**Anna Lenora White, M.D.** New York Medical College and Hospital for Women, New York City, 1888; of New York City; a member of the Medical Society of the State of New York; died in the French Hospital in that city, May 7, from the effects of injuries received in a fall several months before.

**Humphrey E. Bowman, M.D.** University of Maryland, Baltimore, 1839; formerly a practitioner of Shelbyville and Newark, Mo., and for more than half a century a resident of Farmington, Ia.; died at the home of his daughter in that place, April 29, from senile debility, aged 93.

**Robert Tracey, M.D.** Queen's University, Kingston, Ont., 1862; for several years local surgeon of the Grand Trunk System at Belleville, Ont.; surgeon-lieutenant-colonel during the Riel Rebellion in 1885; died in the Belleville General Hospital, April 20, aged 76.

**John W. Lodge, M.D.** Medical College of the State of South Carolina, Charleston, 1859; surgeon of Volunteers during the Civil War; for many years resident physician to the Philadelphia Hospital; died at his home in Merion, Pa., May 4, from heart disease, aged 74.

**Daniel O'Doherty, M.D.** Rush Medical College, 1880; a member of the American Medical Association; for many years a practitioner of Charlotte, Ia.; died at the home of his brother in Danville, Ia., May 2, from cerebral hemorrhage, aged 71.

**Samuel Josephus McCurry, M.D.** Atlanta (Ga.) Medical College, 1881; a member of the Medical Association of the State of Alabama, and vice-president of the Calhoun County Medical Society; died at his home in Anniston, April 13.

**Henry George Davis, M.D.** Medical College of Alabama, Mobile, 1872; a member of the Medical Association of the State of Alabama and for the last fifteen years postmaster of Gainestown; died at his home, May 1, aged 79.

**Maria Louise Graham Brown, M.D.** University of Michigan, Ann Arbor, 1895; a practitioner of Dorchester, Mass., until 1907; died at her home in Marlboro, Mass., April 23, aged 49.

**James W. Laughlin** (license, Maryland); for more than fifty years a practitioner of Deer Park; died at his home in that place, April 30.

**John W. Wright, M.D.** McGill University, Montreal, 1878; L.R.C.P., London, 1879; a member of the Ontario Medical Council from 1881 to 1885; died at his home in Picton, February 29, from pneumonia, aged 58.

**Robert A. Miller, M.D.** Texas Medical College and Hospital, Galveston, 1871; a member of the Sonoma County (Cal.) Medical Society; a veteran of the Civil War; died at his home in Sebastopol, Cal., April 20, aged 79.

**Ernest Moraweck, M.D.** University of Louisville, Ky., 1895; a member of the American Medical Association; of Louisville; aged 59, was a passenger on the steamship *Titanic*, which was sunk off Newfoundland, April 15.

**Roscoe L. Hale, M.D.** Rush Medical College, 1854; a surgeon of Volunteers during the Civil War and for more than forty years a practitioner of Sedalia, Mo.; died at his home, April 16, from senile debility, aged 82.

**Truman Merrill Griffin, M.D.** New York University, New York City, 1883; a member of the American Medical Association; died at his home in Pittsfield, Maine, April 8, from disease of the kidneys, aged 58.

**Robert Edward Nelson Heysett, M.D.** Rush Medical College, 1890; of Baldwin, Mich.; a member of the Michigan State Medical Society; died in Chicago, May 18, after an operation for appendicitis, aged 43.

**Joseph C. Benzinger** (license, Maryland, 1909); a practitioner of Baltimore since 1863; surgeon of Volunteers during the Civil War; died at his home, May 4, from heart disease, aged 68.

**Frank Leslie Newman, M.D.** Jenner Medical College, Chicago, 1906; a member of the American Medical Association; died at his home in Chicago, April 20, from pneumonia, aged 31.

**Willard Wheeler Freeman, M.D.** (license, Colorado, 1906); formerly a practitioner of Minnesota; died at his home in Eads, Colo., April 13, from arteriosclerosis, aged 72.

**Thomas Edmund Hall, M.D.** Rush Medical College, 1875; for more than thirty years a practitioner of Minnesota; died at his home in La Crosse, Wis., May 5, aged 57.

**John W. Sale, M.D.** University of Pennsylvania, Philadelphia, 1850; since 1848 a practitioner of Bedford City, Va.; died at his home from acute laryngitis, aged 85.

**Archibald Nicholson, M.D.** Baylor University, Dallas, Tex., 1907; a member of the State Medical Association of Texas; died at his home in Dallas, April 30, aged 44.

**Horatio Whittmore Pratt, M.D.** Harvard Medical School, 1909; of Louisville, Ky.; died at his home in that place, April 25, from congestion of the brain, aged 28.

**Carl A. Honell Anderson, M.D.** Western Reserve University, Cleveland, Ohio, 1886; of Cleveland, died in the Lakeside Hospital, in that city, April 26, aged 62.

**W. L. McCool, M.D.** Atlanta (Ga.) Medical College, 1867; died at his home in Jonesboro, Ark., April 20, aged 75, as a result of injuries inflicted by a horse.

**Daniel W. Carroll, M.D.** Victoria College, Coburg, Ont., 1860; of Ingersoll, Ont.; died suddenly in West Oxford, Ont., April 25, from heart disease, aged 75.

**Talbert Smirl** (license, years of practice, Illinois, 1892); died at his home in Belleville, Ill., April 19, from chronic interstitial nephritis, aged 78.

**Noble F. Nash, M.D.** University of Louisville, Ky., 1853; died at the home of his daughter in Waddy, April 27, from arteriosclerosis, aged 81.

**Mary L. Phillips, M.D.** College of Physicians and Surgeons, Kansas City, Kan., 1897; of Kansas City, Mo.; died in Mineral Wells, Tex., April 17.

**Joshua Betterton Owsley, M.D.** Medical College of Ohio, Cincinnati, 1862; died at his home in Jacksonboro, Ohio, April 30, aged 80.

**Alexander Barack von Wefelsburg, M.D.** New Orleans School of Medicine, 1870; of San Francisco; died April 23, from paresis.

**Carroll Cleveland Elliott, M.D.** University of Southern California, Los Angeles, 1907; died at Soldiers Home, Cal., May 7, aged 33.

**Albert David Pyke, M.D.** Rush Medical College, 1880; died at his home in Romney, Ind., April 18, from tuberculosis, aged 53.

**Ralph G. Turner, M.D.** Atlanta (Ga.) Medical College, 1883; died at his home in Augusta, Ga., April 10, aged 49.

**James Bacon, M.D.** Jefferson Medical College, 1865; of Baltimore; died April 27, from heart disease, aged 65.

## The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

### THE FRAUD ABOVE THE LAW

By Samuel Hopkins Adams

[Reprinted from *Collier's,* with additions.]

[Swamp Root, one of the most impudent of fraud "patent medicines," was analyzed by the government chemists who reported that it was "a syrupy liquid containing 8.55 per cent. alcohol by volume and 43.3 per cent. total solids including 42.6 per cent. sugars with a small amount of an aromatic balsam and a laxative principle. There was also present wintergreen, juniper and cardamon." The following article from *Collier's,* May 11, 1912, is of such interest that it is given in its entirety. We have added three illustrations and the information contained in the legends under them.—ED.]

Many patent-medicine frauds escape the law because of their inconspicuousness. Some more important nostrums evade the law by the skill of lawyers, the amiable interpretations of the courts, or their own finesse in discovering loopholes. One triumphantly overrides the law. That one is Swamp Root. It is the greatest, the most profitable, the most widely exploited, and, on the whole, the most profoundly and dangerously fraudulent of all the quack nostrums now conspicuously before the public.

The Post Office Department has been after it. Evidence far more than sufficient for the issuance of a fraud order, shutting Swamp Root out of the mails, was obtained. The evidence was never followed up. No fraud order was issued. What the United States district attorney in the proceedings at first characterized as a sound case for criminal prosecution was prepared for the Department of Justice. Where is that sound case now? Vanished. Dissipated like mist. Forgotten—at least, officially. The Bureau of Chemistry, to which the investigation of offenses against the Food and Drugs Act is intrusted, sought repeatedly to bring Swamp Root into court. Scores of other fraud medicines, less flagrant in offense and less dangerous in effect, had been forced to face prosecution and its attendant distasteful publicity; but not Swamp Root. In the very department of the government upon which the law's enforcement depends, it found a friend in the now notorious McCabe, solicitor for the Department of Agriculture, to which the bureau is subordinate. Delay after delay was granted to it. It parleyed and paltered and postponed. And finally, while lesser malefactors were being cited, prosecuted, fined, and exposed in government print daily, Swamp Root, always immune, brought itself by slow degrees to conform to the letter of the law, though never to its spirit. That immunizing vapor rising from the Swamp Root bottle, which had blinded the Post-Office and drugged the Department of Justice into somnolence, proved equally paralyzing to the Department of Agriculture, and the quack medicine finally came off unscathed.

#### THE LEADING INDUSTRY OF BINGHAMTON

Two Kilmers—father and son—Jonas M. and Willis Sharpe, manufacture and vend Swamp Root. It is to-day the leading industry of the lively and progressive little city where it is made, Binghamton, New York. The fortune derived from it is variously estimated at from ten to fifteen millions, all accumulated in the last twenty years. The Kilmer house is the most expensive in Binghamton. The two Kilmer buildings are the finest business blocks in the city, with one exception. The Kilmers' newspaper, the Binghamton *Press,* has the largest circulation in that part of the state. The People's Bank (Jonas Kilmer, president; Willis Sharpe Kilmer, vice president) is a strong and growing financial institution. Jonas Kilmer has been police commissioner of the city. Willis Kilmer has had congressional aspirations. In every phase of existence in Binghamton, except perhaps in the social phase, the Kilmers are powerful—and feared. All this wealth, all this power, all this influence rests on a foundation of pure fraud and knavery; has been built up by a business acumen as disreputable as that of the card sharp, as ruthless as that of the burglar who will kill, if need be, in order to make his haul.

For Swamp Root, "the great kidney remedy," is far more likely to kill than cure. Make no mistake about that, you unfortunates who are lured by its seductive advertising. Its curative power is nil. Its dangerous qualities are many; and they become potentially murderous in the very ailments to whose victims they hold forth the promise of rescue. There is an ugly passage of Stevenson's where that most diabolical character in modern fiction, the Master of Ballantrae, reaches forth a hand to a companion struggling in a morass, and, as the man yields to the proffered aid, stabs him in the back. Swamp Root is the Ballantrae of fraud medicines.

What is Swamp Root? Essentially it is alcohol, sugar, water, and flavoring matter, with a slight laxative principle. According to its label, it "contains the active medicinal properties of Swamp Root, Field Herbs, and Healing Balsams." But these ingredients are of such inconsiderable potency in the small amount contained, that they are practically negligible. Alcohol is the chief drug constituent of the mixture, the alcoholic strength being 9 per cent., about that of champagne. The prescribed dose is one, two, or three teaspoonfuls *or more* (without limit), four times a day. That is, the patient who takes Swamp Root according to directions is getting a steady and considerable dosage of alcohol. And this, bear in mind, is prescribed for all kidney, bladder, and liver diseases. To a physician who has had large experience in this class of illness, I put the question:

"In what kidney diseases is alcohol given?"

"None, that I know," said he.

"In what bladder troubles?"

"Alcohol increases every form of bladder trouble."

"Is that the opinion of the profession in general?"

"Certainly. A physician who would give alcohol in kidney or bladder troubles is either a fool or a rascal."

"What about affections of the liver?"

#### A DOCTOR'S OPINION

The doctor laughed. "Caused by excessive use of alcohol, many of them. Cirrhosis of the liver, for instance, is commonly known as 'gin-drinkers' liver.' To prescribe alcohol for that would be like trying to put out a fire with kerosene."

I stated the alcohol content of Swamp Root and the prescribed dosage. "What would be the result," I asked, "of that treatment in Bright's disease?"

"It would kill the patient before his time."

Swamp Root is specially recommended for Bright's disease.

The principal solid in Swamp Root is sugar. It constitutes about one-third of the medicine. Now, there are certain forms of diabetic trouble in which sugar is absolutely prohibited b the consensus of all schools of medicine. Stating to my doctor the percentage of sugar in Swamp Root, I asked him wha would be the effect of the prescribed dosage on a case o diabetes mellitus.

"Malnutrition would follow, and the patient would wast away and die," was the answer.

Swamp Root is on record as promising to cure diabetes.

To sum up: While there is nothing in Swamp Root whic will cure the patient of any of the diseases specified in it promises, there are at least two main ingredients which wil in afflictions for which the nostrum is prescribed, give th sufferer a helping hand toward the grave.

Under the former interpretation of the law, forbidding fals representations on the label, Swamp Root dropped from it carton the legend: "Kidney, Liver, and Bladder Cure." Th claim of cure was untrue, and the Kilmers, knowing it t untrue, did not dare face the issue. Had they labeled the mixture "Kidney, Liver, and Bladder Poison," they mig have preserved the label unchanged.

In the grand Parade of Confession which the Food and Drugs Law set a-marching (before the United States Supreme Court pulled the law's teeth), Swamp Root was a conspicuous penitent. Applying the parallel column treatment, its admitted mendacity fairly smells to the skies:

| OLD LABEL | NEW LABEL |
|---|---|
| Dr. Kilmer's Swamp Root, Kidney, Liver and Bladder Cure | Swamp Root, Kidney, Liver and Bladder Remedy |
| This great remedy cures all kidney, liver, bladder and uric-acid troubles, and disorders due to weak kidneys, such as catarrh of the bladder, gravel, rheumatism, lumbago, and Bright's disease, which is the worst form of kidney disease. | Numerous testimonials are to the effect that it has been used with benefit in cases which have been diagnosed as acute and chronic kidney, liver, bladder, urinary disorders, pain in back, joints, bones and rheumatism and Bright's disease. |

Was ever change of claim more significant! The revised label sedulously refrains from any misstatement of fact. Incidentally, and by omission, it admits the lies which the old label carried, *and which the Swamp Root advertising is still, in part, carrying.* Here are the falsities which the Kilmers mentioned on their labels as long as they dared; and abandoned only when it appeared that not even their phenomenal pull could save them from at length having to defend the indefensible in court.

### THE LIES

That Swamp root is a cure.

That it cures all kidney, liver, bladder, and uric acid troubles.

That it cures disorders due to weak kidneys.

That it cures catarrh of the bladder.

That it cures gravel.

That it cures rheumatism.

That it cures lumbago.

That it cures Bright's disease.

In its exploitation Swamp Root is purely fraudulent. There is practically nothing about it that isn't a fake. It possesses that rounded completeness, that realization of every opportunity for knavery, which suggests a truly artistic instinct joyously bent on fulfilling itself.

One of Swamp Root's most insistent assets is the mild, whisker-fringed face of Dr. S. Andral Kilmer. This appears not only in the nostrum's literature but also upon the carton in which the bottle is sold. The implication is that Dr. Kilmer, "the eminent kidney and bladder specialist," is the guiding spirit of the Swamp Root establishment.

In his sworn guarantee, Jonas M. Kilmer, the senior quack of the concern, says:

> Swamp Root was discovered through scientific research and study by Dr. Kilmer, who graduated with honors and is now actively engaged in the practice of his profession, which calling he has successfully followed for many years.

The incorporated name of the Swamp Root concern is Dr. Kilmer & Co. Prospective patrons naturally suppose that the Dr. Kilmer who "discovered" Swamp Root is still "engaged in the practice of his profession" on behalf of the Swamp Root firm. It is all a hollow sham. There is no more any Dr. Kilmer in Swamp Root than there is any Lydia E. Pinkham in the Pinkham fake-factory.

Unlike Lydia E. Pinkham, however, who is long dead, Dr. S. Andral Kilmer is alive; but he has not for many years had the slightest connection with Swamp Root or any of its affairs. Very much alive, the old man is and has now two suits pending against the other Kilmers, one of them based on the opening of his mail by the Swamp Root employees. In his complaint Dr. S. Andral Kilmer swears that:

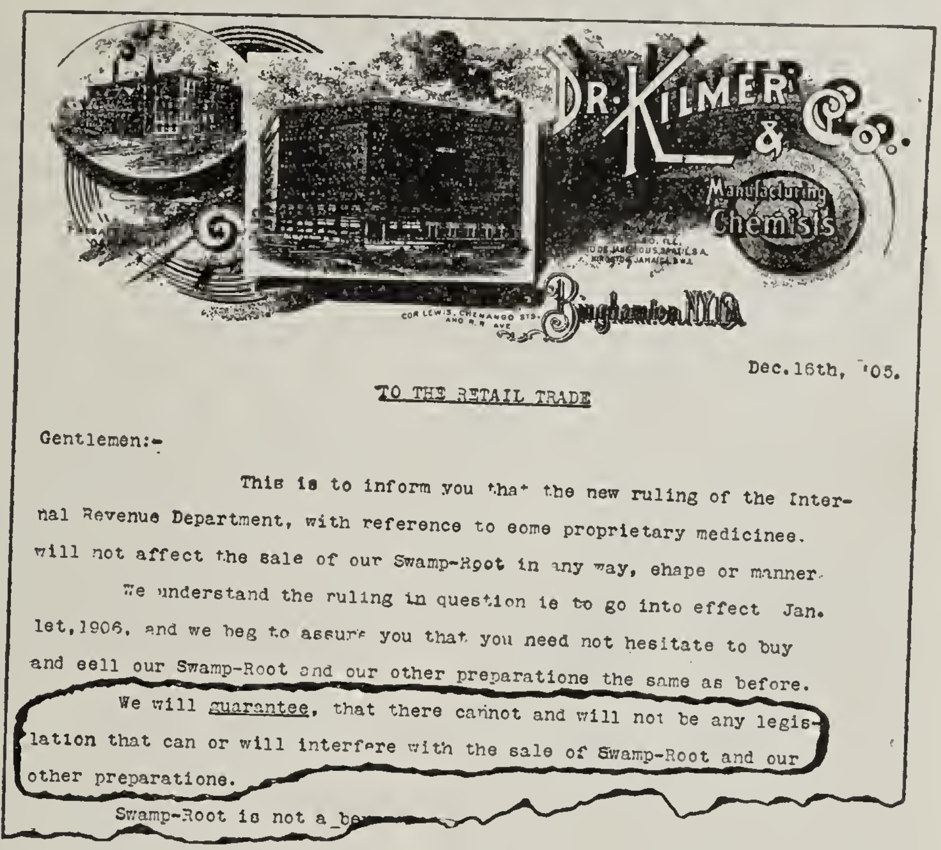
"Defendant [Dr. Kilmer & Co.] holds out and represents to the public that plaintiff is the duly licensed, qualified and acting physician in charge of the medical department of said defendant; that it represents, holds out, and pretends to give medical advice and prescribe medicines for disease which it pretends to diagnose."

The Swamp Root Kilmers admit using the name of Dr. Kilmer, the title Dr. and the affix M.D., and they make no pretense of any right to do so, other than that, years ago, they had "license and authority from the plaintiff." Not a word of excuse for, or palliation of, the fraud perpetrated upon the public.

Now comes a darker chapter. In its circulars Swamp Root carries this message to prospective patients:

> HOW TO FIND OUT
>
> *Fill a bottle or common glass with urine and let it stand for twenty-four hours; a sediment or settling usually indicates an unhealthy condition of the kidneys.*

It usually indicates nothing of the sort. All urine deposits a sediment after standing twenty-four hours. Yet the Kilmers deliberately circulate this falsehood in millions of homes in this country, endeavoring to frighten sound and well people into believing themselves endangered, in order to lure into the toils the readily impressionable. And the damnable feature of the matter is that it is actually possible to scare a certain type of person into becoming ill. Hence we see Swamp Root in another phase of devil-work; not only preying on the sick, but even striving to inspire disease from which to wring blood-money.


Dr. Kilmer & Co.
Manufacturing Chemists
Cor. Lewis, Chenango Sts. and R. R. Ave.
Binghamton, N.Y. U.S.A.

Dec.16th, '05.

TO THE RETAIL TRADE

Gentlemen:-

This is to inform you that the new ruling of the Internal Revenue Department, with reference to some proprietary medicines. will not affect the sale of our Swamp-Root in any way, shape or manner.

We understand the ruling in question is to go into effect Jan. 1st, 1906, and we beg to assure you that you need not hesitate to buy and sell our Swamp-Root and our other preparations the same as before.

We will guarantee, that there cannot and will not be any legislation that can or will interfere with the sale of Swamp-Root and our other preparations.

Swamp-Root is not a be

Fig. 1.—When the Swamp Root case was being juggled in the Department of Agriculture the attorney for the Kilmers is reported as stating that the case would never go to court. It is easy to prophesy when one has inside information! Here is a photographic facsimile of a letter sent out in 1905 by the Swamp Root people notifying retailers that Dr. Kilmer & Co. "will guarantee that there cannot and will not be any legislation that can and will interfere with the sale of Swamp Root." (Illustration and legend not in *Collier's* article, but provided by The Journal.)

At one time the Swamp Root quacks pursued this method even further, and this it was which brought them their first conflict with and triumph over the law of the land. Analysis of urine is the accepted method of determining kidney disease. Some years ago the Kilmers, with their keen instinct for pseudo-scientific pretense, offered to make urine analyses to diagnose cases by that procedure, and to prescribe the proper remedy. The specious offer came to the notice of a certain post office inspector. From different towns he mailed samples for analysis to the Swamp Root "Laboratories." Some were weak tea. Some were horse urine.

On all of these he got an "analysis" announcing a dangerous condition of the kidneys and an earnest recommendation to take Swamp Root and be saved!

Not long after, the inspector went to Binghamton and presented himself, with his credentials, at the Swamp Root building. He was received by the general manager, who asked what he wanted to see.

"Everything," said the post office man.

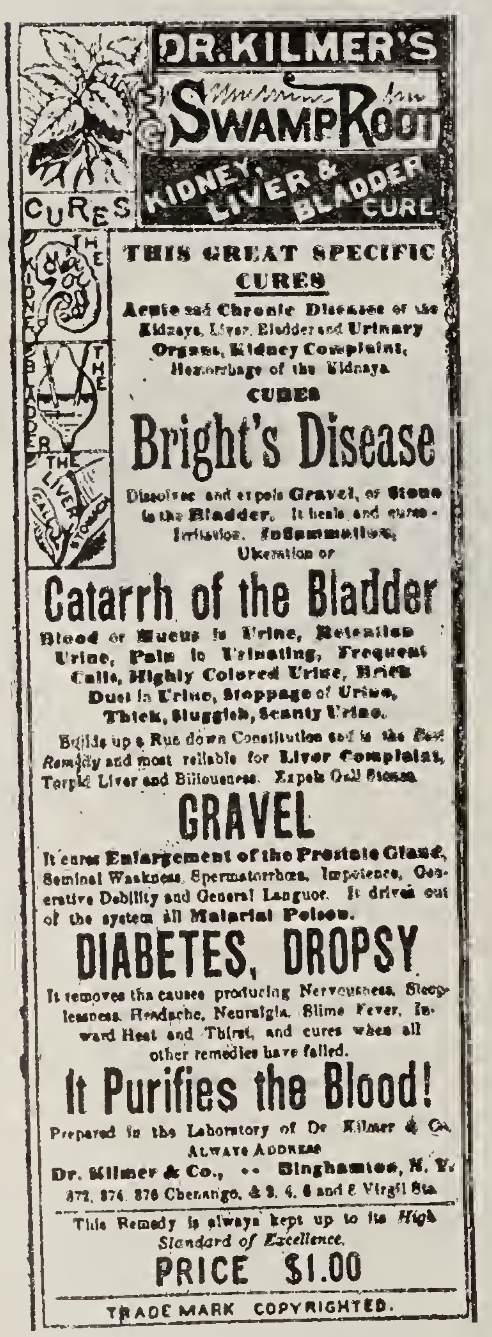
They went through the building without the inspector observing anything in the nature of analytical work.

"Where's your laboratory?" he inquired.

"Laboratory?" repeated the manager, looking puzzled. "You mean where we compound our medicines?"

"No. Where you make your analyses."

"Oh, that!" He led the visitor to a small room on an upper floor in which a number of employees were handling "form" letters, and pointed out a young girl of apparently 18 or 19 years of age as being in charge of the analytical work. This was a Miss Maillette. Miss Maillette is now the society reporter of the Binghamton *Press*, the Kilmers' newspaper. She is not a qualified chemist and is utterly incompetent to make proper urine analyses. Rigid questioning by the inspector failed to elicit any satisfactory information as to the processes by which the analytical work was carried on. The inspector went away and recommended the issuance of a fraud order. The fraud order has never been issued.


CURES
THE KIDNEY
THE BLADDER
THE LIVER
GALL
STOMACH

DR. KILMER'S
SWAMP ROOT
KIDNEY, LIVER & BLADDER CURE

THIS GREAT SPECIFIC
CURES
Acute and Chronic Disease of the
Kidneys, Liver, Bladder and Urinary
Organs, Kidney Complaint,
Hemorrhage of the Kidneys.
CURES
Bright's Disease
Dissolves and expels Gravel, or Stone
in the Bladder. It heals and cures
Irritation, Inflammation,
Ulceration or
Catarrh of the Bladder
Blood or Mucus in Urine, Retention
Urine, Pain in Urinating, Frequent
Calls, Highly Colored Urine, Brick
Dust in Urine, Stoppage of Urine,
Thick, Sluggish, Scanty Urine.
Builds up a Run down Constitution and is the Best
Remedy and most reliable for Liver Complaint,
Torpid Liver and Biliousness. Expels Gall Stones.
GRAVEL
It cures Enlargement of the Prostate Gland,
Seminal Weakness, Spermatorrhœa, Impotence, Generative Debility and General Languor. It drives out
of the system all Malarial Poison.
DIABETES, DROPSY
It removes the causes producing Nervousness, Sleeplessness, Headache, Neuralgia, Slime Fever, Inward Heat and Thirst, and cures when all
other remedies have failed.
It Purifies the Blood!
Prepared in the Laboratory of Dr. Kilmer & Co.
Always Address
Dr. Kilmer & Co., •• Binghamton, N. Y.
872, 874, 876 Chenango, & 3, 4, 6 and 8 Virgil Sts.

This Remedy is always kept up to its *High Standard of Excellence.*
PRICE $1.00

TRADE MARK COPYRIGHTED.

Fig. 2.—Photographic reproduction (reduced) of the old Swamp Root carton. Practically every line contains a falsehood. Believing that the Food and Drugs Act prohibited such lies, Kilmer & Co. modified the carton label so as to prevaricate by inference rather than directly. Subsequent developments showed that they need not have done this, for the Supreme Court decided that the Food and Drugs Act does not prohibit such falsehoods. AS THE LAW IS NOW INTERPRETED BY THE SUPREME COURT OF THE UNITED STATES THIS OLD LYING LABEL WOULD STILL BE PERMISSIBLE. (Illustration and legend not in *Collier's* article, but provided by The Journal.)

### SWAMP ROOT'S ENCOUNTERS WITH THE LAW

Not only did the official recommend the stoppage of the Swamp Root mail, but he also laid the evidence in the case before United States District Attorney George Curtiss as basis for a criminal prosecution. Mr. Curtiss at this time expressed openly and in vivid terms his intention of making things hot for Swamp Root and the Kilmers and his opinion that he had the proper ammunition. The papers were sent to Washington, however, not with a recommendation to prosecute, but with a note advising against prosecution. There they still lie; mere invalid, outlawed wisps of paper, of interest only as witnesses to the impotency of the law as against a powerful fraud like Swamp Root.

Why did the United States district attorney so suddenly alter the opinion which he had expressed to his friends? It is the belief of those "on the inside" in Binghamton that the answer is to be found in a sudden change of front on the part of the Binghamton *Press*, the Swamp Root newspaper. At the time of the postoffice inspector's investigation the *Press* was conducting a lively fight against the old-line Republican machine of which George W. Dunn was leader, with the United States district attorney as his lieutenant. Dunn and the Kilmers "got together." The cases against Swamp Root, both in criminal and fraud order proceedings, lapsed. Shortly after the Binghamton *Press* ceased its attacks on the Republican machine, discharged its managing editor, a determined opponent of George W. Dunn, and straightway became "good."

When I inquired of George B. Curtiss, recently, why the Kilmers had been let off, he said that the case against them was not strong enough to warrant criminal prosecution. Not strong enough! Here was a concern using the United States mails in a device to obtain money under false pretenses, with at least three fraudulent phases:

First—Purporting to report findings from analysis of urine which was not made.

Second—Diagnosing and prescribing for disease without a license to practice medicine.

Third—Selling Swamp Root to persons entirely free of kidney disease, on false representation that they were suffering from such disease.

All these points were provable. It was also provable that there was no proper analytical laboratory or qualified analytical chemist in the Swamp Root concern. Nevertheless, when the Binghamton *Press* "swung," the case dissolved. Great is the power of the "Press."

Swamp Root's next and latest encounter was with the Bureau of Chemistry and the Board of Food and Drug Inspection. On these governmental agencies the enforcement of the Pure Food and Drugs regulations devolves. Prosecution for the misbranding of drugs usually follows complaint with reasonable celerity. Not so with this law-paralyzing nostrum. On February 17, 1909, the chief inspector of the Bureau of Chemistry recommended prosecution of Swamp Root for misbranding, on the ground that the name itself is not justified by the nature of the nostrum and that various claims, made on the label, of preventive and curative virtues were false. On May 7 Dr. Wiley recommended that Dr. Kilmer & Co. be cited for a hearing before the Board of Food and Drug Inspection, consisting of himself, George P. McCabe, the solicitor for the board, and F. L. Dunlap. At this time there was developing, with Secretary of Agriculture Wilson's aid, that scandalous plot to nullify the pure food law and to hamper and eventually discredit and discharge Dr. Wiley, which Congressman Moss' committee has recently exposed and frustrated. McCabe, the self-confessed falsifier of a government record, was Secretary Wilson's agent in the board, and Dunlap was McCabe's echo. Against those two Dr. Wiley was powerless. The hearing of the board on the Swamp Root case was set for June 9. Then began the long series of procrastinations. The case was set over to August 9. Meantime, Warwick M. Hough, the legal prop and bulwark of the patent medicine fakers and the food adulterators, had been brought into the case as counsel for Swamp Root. There was an immediate postponement to September 3. Then, by Hough's request, the hearing was set over to October 1 and again to October 15, at which time it was actually opened and conducted for part of one day. At this point Mr. Hough got a four weeks' adjournment to November 12, when the hearing was closed. Dr. Wiley and Dunlap then formally recommended prosecution. But McCabe, the obstructionist, recommended "temporary abeyance," and the supple Dunlap turned a back somersault in order to concur. (This was but one of a hundred cases in which he did the same thing.) However, it appears that a brief delay was all that McCabe was then playing for, since on December 14 he recommended prosecution, and, Dunlap concurring, the case was turned over to McCabe on January 8, 1910, for legal preparation.

### THE DELAYS OF McCABE

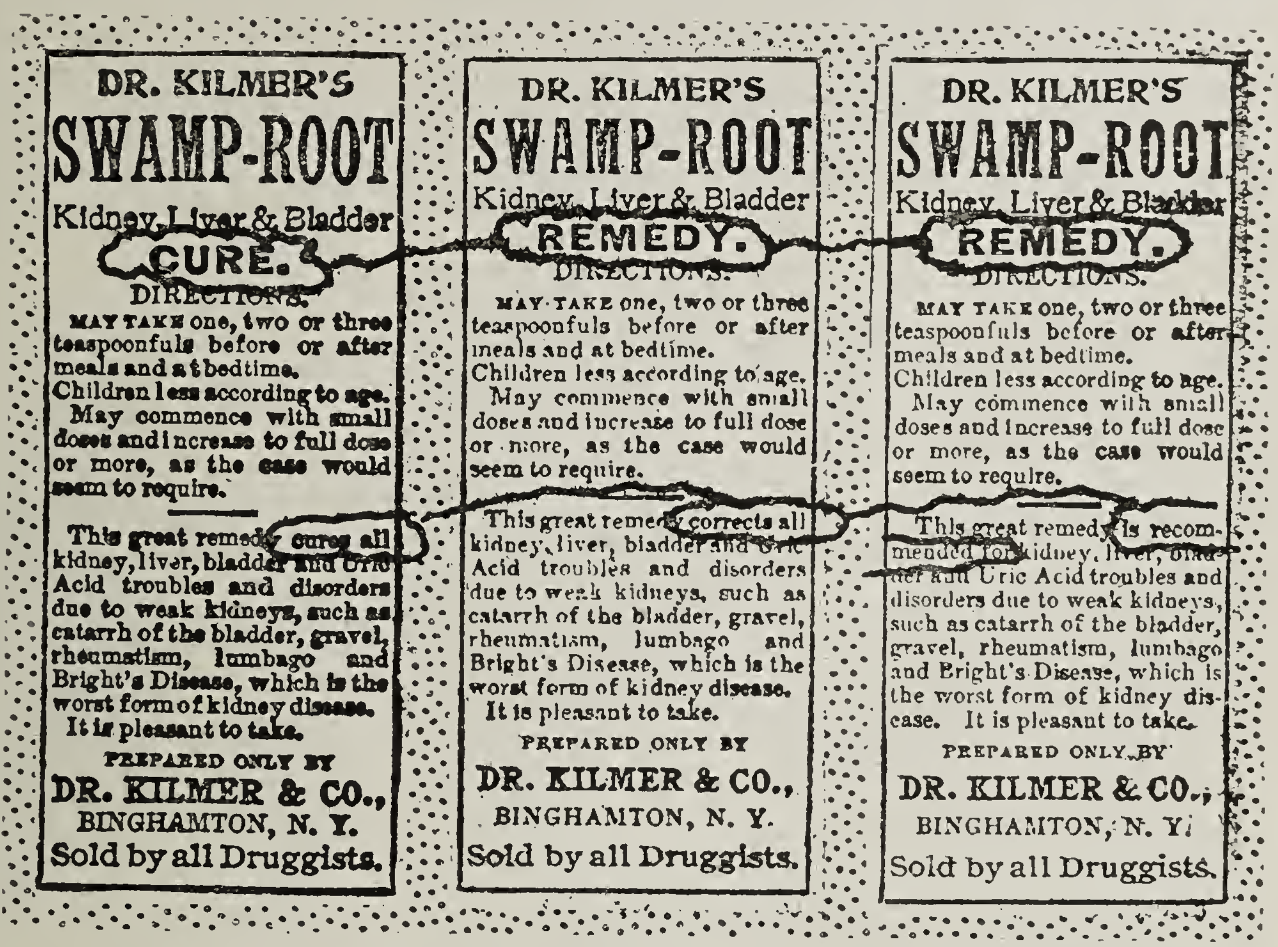
Did he prepare it? Not at all. Instead, he presented a revised label, which the Swamp Root people, taking advantage of the blocking of the wheels of justice, had leisurely fixed up. This was on March 26. On April 4 McCabe treated himself to a little joke. He issued a memorandum in which he ascribe the long delay to the drug division of the Bureau of Chemistry

To this the drug division replied, with equal heat and justice, that its material had been ready at all times and that the main delay was of the solicitor's own contriving. Then Dr. Wiley urged action on the board. Again the case was referred to the solicitor, who thereupon proceeded—to prosecute? Certainly not! To accord the Swamp Root people another hearing! They had already had their full day in court, and more. They had revised their label, which still remained fraudulent. And yet McCabe gave them another chance. This was set for May 10, 1910, a year and three months after the first move in the case. At this session Lawyer Hough presented a still further revised label which is a model of deceptiveness and fraudulent intent, but which, nevertheless, does not lie specifically enough to bring it within the scope of the law. Finally the matter was closed on July 14, 1910, by the government accepting the revised label. The Swamp Root fraud had, by a series of special favors and privileged delays, beaten the law in its very stronghold, and victoriously reestablished its immunity, not only from punishment for obvious lawbreaking, but also from the more greatly feared process of facing a court ordeal which would have officially proclaimed its fraudulency.

There remains to be written one more chapter of this ugly record: the relations of Swamp Root to the newspaper press. So far as I know, Swamp Root is the only patent medicine whose proprietors directly own a newspaper.

They started the Binghamton *Press*, a lively, able, but unprincipled evening publication, because they were unable to control to their own purposes the press of the locality. Let me state, briefly, the attitude of the patent medicine business toward the newspapers in general. It is this:

"We are your chief support. We pay you more money for advertising than any other form of industry. Therefore you owe us special consideration. We expect you to give us special business favors; to fight our battles in the legislatures; to publish our tainted news and canned editorials; and to suppress such news about patent medicines as might injure our business."



DR. KILMER'S
SWAMP-ROOT
Kidney, Liver & Bladder
CURE.
DIRECTIONS.
MAY TAKE one, two or three teaspoonfuls before or after meals and at bedtime.
Children less according to age.
May commence with small doses and increase to full dose or more, as the case would seem to require.

This great remedy cures all kidney, liver, bladder and Uric Acid troubles and disorders due to weak kidneys, such as catarrh of the bladder, gravel, rheumatism, lumbago and Bright's Disease, which is the worst form of kidney disease.
It is pleasant to take.
PREPARED ONLY BY
DR. KILMER & CO.,
BINGHAMTON, N. Y.
Sold by all Druggists.

DR. KILMER'S
SWAMP-ROOT
Kidney, Liver & Bladder
REMEDY.
DIRECTIONS.
MAY TAKE one, two or three teaspoonfuls before or after meals and at bedtime.
Children less according to age.
May commence with small doses and increase to full dose or more, as the case would seem to require.

This great remedy corrects all kidney, liver, bladder and Uric Acid troubles and disorders due to weak kidneys, such as catarrh of the bladder, gravel, rheumatism, lumbago and Bright's Disease, which is the worst form of kidney disease.
It is pleasant to take.
PREPARED ONLY BY
DR. KILMER & CO.,
BINGHAMTON, N. Y.
Sold by all Druggists.

DR. KILMER'S
SWAMP-ROOT
Kidney, Liver & Bladder
REMEDY.
DIRECTIONS.
MAY TAKE one, two or three teaspoonfuls before or after meals and at bedtime.
Children less according to age.
May commence with small doses and increase to full dose or more, as the case would seem to require.

This great remedy is recommended for kidney, liver, bladder and Uric Acid troubles and disorders due to weak kidneys, such as catarrh of the bladder, gravel, rheumatism, lumbago and Bright's Disease, which is the worst form of kidney disease. It is pleasant to take.
PREPARED ONLY BY
DR. KILMER & CO.,
BINGHAMTON, N. Y.
Sold by all Druggists.

Fig. 3.—Photographic reproduction of three labels from the Swamp Root fraud in various stages of evolution from the "lie direct" to the "lie with circumstance." (Illustration and legend not in *Collier's* article, but provided by THE JOURNAL).

### THE RED CLAUSE CONTRACT

In this spirit was devised by Frank Cheney, president of the Patent Medicine Trust (the Proprietary Association of America), the noted "red clause contract" providing that the patent medicine advertiser might withdraw his advertising from a newspaper if any legislation inimical to patent medicines was passed by the state legislature. Mr. Cheney frankly expressed the opinion that his scheme just about compelled the newspapers to fight the patent medicine men's battles for them.

In justice to the newspapers it should be said that he underrated their independence; that a large majority of the standard publications refused to bow down to this form of tyranny; and that the "red clause" has lost most, if not all, of its potency. Now, Willis Sharpe Kilmer is an enthusiastic believer in the bludgeon and blackjack methods of Mr. Cheney.

It was the younger Kilmer who, when a patent medicine labeling bill was up in the Massachusetts legislature, sent the following telegram broadcast to the newspapers carrying Swamp Root advertising:

BINGHAMTON, N. Y., March 10, 1905.
SPY, Taunton.

House bill eight hundred and twenty-nine discriminating against proprietary medicines passed lower house. Up in senate Monday. Quick work necessary. Use your influence.

WILLIS SHARPE KILMER, Adv. Agt.

Having imbibed the pleasing theory that the press is the slave of the advertiser, Willis Kilmer, with the aid of his father, proceeded to give it a local and extreme application in Binghamton, with far-reaching results. And because this case is so typical of patent medicine tyranny, and because the Kilmers pushed it to the extreme of seeking immunity from personal criticism and comment, I am compelled here to touch briefly on certain unpleasant episodes in the career of Willis Sharpe Kilmer.

Before the *Press* was founded, the evening paper of Binghamton was the *Herald*, then owned by Guy F. Beardsley. I am doing Mr. Beardsley no injustice in stating that he has never yet seriously strained himself by undue endeavors to run away from a fight. As far back as 1894 Mr. Beardsley's *Herald* was criticizing George E. Green, then mayor of Binghamton, and afterward mixed up in the postoffice graft scandals. Mr. Green was a friend of the Kilmers. One day a copy of the *Herald* with a blue-penciled circle around an editorial attacking Green, was sent to Mr. Beardsley by the Kilmers with a note on the margin:

"If you don't quit this we shall stop advertising with you."

The *Herald* did not quit. The Swamp Root advertising was withdrawn. Six months later it was put back, the Kilmers perhaps deeming that they had sufficiently punished the recalcitrant editor. Then, one day, Willis Sharpe Kilmer, driving his tandem through one of the principal streets, became incensed at a bicyclist who failed to give him what he considered due space when he shouted (the man was quite deaf and couldn't hear him), so he horsewhipped the offender. The bicyclist sued and the *Herald* printed the complaint in the case. Down came Willis Sharpe Kilmer in great excitement to see Mr. Beardsley, demanding to know why the article had been published.

"Because," said the editor, "it was and is a matter of court procedure."

"Why didn't you come to me? I could have fixed that all right."

"What do you mean?"

"I mean that I would have made it right with you. I would have made it worth something to you to keep it out."

So much for Willis Kilmer's opinion of the press of his city. On finding that he was in error and that his bribe would not have been accepted in any case, he went out in a rage. Again the Swamp Root advertising was withdrawn. Incidentally, the assaulted bicyclist won his case and Kilmer was mulcted in considerable damages.

For a long time Swamp Root withheld its exploited knaveries from the pages of the *Herald*. When the familiar "copy" did return, no explanation accompanied it. None was needed. Willis Kilmer's wife, to whose family the Kilmers owe most of their success, was about to sue him for divorce, and the quacks were desirous of keeping the matter out of the papers. They were ready to fight the case but they weren't willing to face the publicity, for the evidence was of a most sensational and unsavory nature. When the case was called, the *Herald*, declining to regard the Swamp Root advertising as a bribe for the suppression of news, printed an account of the proceedings with the list of fourteen corespondents. Instantly Willis Sharpe Kilmer abandoned his defense, paid his wife $25,000. and allowed her to get a divorce in another state. At the same time he made statements viciously reflecting on her character, which were wholly baseless. His behavior in this matter sufficiently characterizes the man; any comment on it would be superfluous. This time the Swamp Root support was not taken from the *Herald* because the Kilmers wanted a statement of their side of the case published in its columns, which was done.

A year later the *Herald* printed a rather feeble little joke about patent-medicine advertising. At this Jonas Kilmer took great umbrage, denounced Mr. Beardsley, and again ordered the Swamp Root advertising discontinued. Later still he brought suit against the *Herald* for libel, in connection with a charge of arson made against his nephew. In vain did the *Herald* strive to get into court on this suit; the Kilmers got postponement after postponement, meantime trying to retain all the available lawyers, including Mr. Beardsley's own counsel. Finally the suit was dropped, but not before the judge, from the bench, made a remarkable statement which serves to show what the Kilmers' enemies have to fear from the Kilmer millions. The *Herald* as *defendant* had asked for an extra allowance of costs on the ground that they had been put to great expense, and the court, in granting this, said:

"If the rule of damages to the defendant was not applied, men of wealth might absolutely crush the press in every community if they started out to do so. . . . It looks as if the Kilmers employed every attorney in the city, and with their wealth and position tried to make the *Herald* go out of town to find a lawyer. Their ambition seemed to be to crush the defendant at all hazards."

Eventually the Kilmers started the Binghamton *Press*, Willis Kilmer stating with great frankness that he was after the *Herald*.

"That damned sheet won't last long after I get after it," he announced.

### THE SITUATION TO-DAY

However, the *Herald* is still alive, though Mr. Beardsley no longer owns it, and it *is* getting along, though without the Swamp Root advertising. For a time it had to get along without other patent-medicine advertising as well, for there developed, in the course of the Kilmer fight, an interesting instance of how the quacks combine to bludgeon any paper exhibiting the slightest signs of independence or revolt. On the *Herald's* editorial page had been printed an obviously jocular patent-medicine testimonial, stating that a man in California, who had taken ten bottles of Dr. Jiggem's Kidney Invigorator and who had died of another ailment, still maintained the vitality of his kidneys to such an extent that the undertaker had to kill them with a club before the man could be buried. Shortly after the publication of this, the Lydia E. Pinkham advertising was withdrawn. When the *Herald* asked why, the famous dead lady replied (per living secretary) that the paper was attacking patent medicines, and *cited the Kilmers*. Another quack concern, the Dr. Pierce Medical Company of Buffalo, insisted on stopping its advertising at about the same time, and did so, although compelled to pay the full amount of its contract. Yet the Proprietary Association of America indignantly denies that there exists any conspiracy to muzzle the free press!

Of late the sales of Swamp Root have somewhat decreased in this country. Abroad it is flourishing, particularly in England, where, in the absence of any sufficient legal restraint, it still blazons on its bottles the full and flagrant lies which it perforce abandoned in this country. Signs are not wanting that, though the fraud is above the law of this land, it is not exempt from the danger of popular enlightenment; and that the public is beginning to learn about it. For the benefit of those who may be tempted by its specious advertising, I will state once more as definitely as possible—and if I am wrong in any one of these statements, both *Collier's* and myself are liable for libel—three facts to be borne in mind:

### THREE FACTS

That Swamp Root will not and cannot cure kidney, liver, or bladder disease;

That, used in such diseases, it will often be harmful; and

That it may sometimes even kill.

The way to end Swamp Root's career of fraud is to spread understanding of what it really is: a compound of false promises and harmful drugs, protected by political pull, and backed up by a conscienceless newspaper; in all the realm of medical knavery, the most dangerous and law-destroying combination extant—the copartnership of quackery, blood-money, and fraud-nurtured journalism.

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## DESCRIPTION OF CHINOSOL MODIFIED

The Council has modified the statements regarding the actions, uses and dosage of chinosol to read as follows:

*Action and Uses.*—So far as experimental evidence and experience goes, chinosol is non-toxic. It is a powerful antiseptic, somewhat stronger in this respect than mercuric chlorid and considerably stronger than phenol. It has been found to exert an antiseptic action in solutions containing 1 part to 10,000. It is a feeble germicide, being weaker than phenol and much weaker than mercuric chlorid. It is incompatible with alkaline substances (soap) and with salts of mercury and iron. Chinosol does not coagulate albumin or injure the mucous membranes or tissues. The sensitiveness of patients to its solution varies considerably. In some it produces a pronounced stinging when applied to mucous membranes even in dilute solutions (1 to 2,000) but it is claimed not to cause harmful irritation in any strength. It is claimed to possess marked analgesic power and to be an efficient deodorant.

*Dosage.*—For internal use 0.3 gm. (5 grains) three times daily. As an antiseptic the average strength of solution used is 1 to 1,000; as a nasal spray or douche the strength used is 1 to 3,000, as a gargle 1 to 2,000, and as an eye-wash 1 to 4,000, gradually increased in each case according to the tolerance of the patient up to 1 to 500. As a vaginal douche the initial strength used is 1 to 1,000 increased to 1 to 100 if necessary.

This appears in the new edition of New and Nonofficial Remedies, 1912, page 56, just from the press.

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# Correspondence

## The Caffein Investigations: A Further Reply

*To the Editor:*—My attention has been called to a letter from Dr. Wiley in The Journal (May 11, p. 1463), with reference to my recent experiments with caffein alkaloid. I desire to reply to some of the remarks and insinuations contained in that letter, and to thank you for your expression o confidence in the honesty of my work. The irrelevant parts o Dr. Wiley's letter, concerning my proper official title, my correct business address, etc., need no comment, since their connection with the influence of caffein is not clear. Moreover al of these facts are correctly stated on my monograph (The Influence of Caffein on Mental and Motor Efficiency. *Arch. Psychol.*, Columbia University, No. 22, April, 1912), which appeared in April, some four weeks before the appearance of Dr. Wiley's letter.

Moreover, in the preface of that monograph, a copy of which has been for some time in Dr. Wiley's possession, appears the following statement: "An investigation was made possible by an appropriation by the Coca-Cola Company sufficient to cover all the expenses of the experiments." I agree with you most thoroughly that "it is also important that the readers of the results of scientific investigations should know why and under what auspices they were undertaken." My preface of a page and a half is entirely taken up with a full statement of the circumstances under which the investigation was made, and to a frank discussion of the possibilities of bias in such researches, the scientific technic for avoiding such possibilities of bias, etc. Since these facts are the first things stated in my monograph of 167 pages, I do not feel that Dr. Wiley is justified in stating that the facts were "discovered" by him, nor do I relish the insinuation that any attempt was made to conceal these facts. I trust you will be kind enough to publish this letter in order that those of your readers who may chance to be interested in my researches may be able to get their knowledge of them from the original sources.

If a further suggestion is permissible, I should like to correct your statement that my results are in disagreement with those of other investigators. No reliably controlled experiments in the literature to which I have had access (some twenty or more investigations are summarized in my chapter on "Previous Investigations") on the influence of caffein on mental and motor efficiency present results in any way different from the picture of caffein action given in my monograph.

H. L. HOLLINGWORTH, New York.

## Pellagra in New England

*To the Editor:*—In reporting his interesting case of pellagra Dr. Davenport White in THE JOURNAL (April 27, 1912, p. 1279) says it is "the second in New England."

To aid in keeping the record straight I beg to call attention to other cases of pellagra in that section of the country, of which I happen to have memoranda.

In an article on the prevalence of pellagra, read by me at the sixty-sixth annual meeting of the American Medico-Psychological Association in Washington, May, 1910, three cases of the malady are noted from Massachusetts and one from Vermont. (The Prevalence of Pellagra, *Jour. South Carolina Med. Assn.*, September, 1910; *Am. Jour. Insanity*, January, 1911; *Proc. Am. Med.-Psych. Assn.*, 1910, and Senate Document No. 706, Sixty-First Congress, third session, Washington, 1911.)

In 1864, Dr. Tyler of the McLean Asylum, then at Somerville, Mass., reported a case that he had under observation for five or six years. This is one of the two earliest recorded cases of the disease, so far discovered in this country. As recorded by Dr. White, Dr. Clara P. Fitzgerald of Worcester reported in the *Journal of Cutaneous Diseases*, in 1910, a case strikingly typical of pellagra occurring in Massachusetts. It is probably this case that is noted in the report of the Massachusetts State Board of Health for 1910, p. 564. In the same year a case of pellagra was under observation at the Massachusetts General Hospital, Boston. In 1911, I was informed by an asylum officer in Massachusetts that cases of pellagra had been discovered in several of the state hospitals of that commonwealth.

Dr. H. F. Powers, while intern at the Fanny Allen Hospital, Burlington, Vt., is said to have diagnosed the first recognized case of pellagra in that state in April, 1910. In July of the same year a fatal case was reported from Bridgeport. At the quarterly meeting of the Rutland County (Vt.) Medical and Surgical Society, held April 9, 1912, three cases of this "southern disease" were reported and discussed by Drs. Caverly, Eddy and Martin. In July, 1910, it was announced that pellagra had claimed its first victim at the state almshouse at Cranston, R. I. Subsequently other cases are said to have been observed in the Rhode Island charitable institutions. In December, 1910, Dr. G. T. Swarts, secretary of the State Board of Health of Rhode Island, reported to Dr. C. F. Williams of the South Carolina State Board of Health these statistics on seven cases of pellagra from the charitable institutions of his state: Five patients had been in the hospital for insane and two in the almshouse; three were men and four were women. Two men and two women had died.

At the meeting of the American Medico-Psychological Association, held in Denver in June, 1911, a case of pellagra was reported from one of the Maine asylums by Dr. H. W. Miller. This case was also reported, I believe, before the Maine Medical Association. Dr. White's report of a case of pellagra from Connecticut leaves New Hampshire the only New England state from which the disease has either not been reported or at least no records of it from that state have come to my attention. Yet we are learning that it is more widely spread than has generally been supposed. The disease has now been reported from thirty-nine states, including all sections of the country, as well as from Porto Rico, the Canal Zone and the Philippine Islands. It is not likely, nor is it claimed, that the pellagra records as given above are complete, since they are the notes of an isolated student of the disease. In the matter of priority in discovering and reporting pellagra from various localities, many claims have been made and much enthusiasm expended, without sufficient investigation of the records. And in conclusion, it must be admitted that pellagra statistics, like those from Italy, still "leave much to be desired in point of accuracy."

J. W. BABCOCK, M.D., State Hospital, Columbia, S. C.

## Petition for a Section on Physical Therapeutics

*To the Editor:*—Referring to the petition now forming in the hands of Dr. G. Betton Massey and myself asking for the creation of a new Section on Physical Therapeutics, I wish to say that we have received several letters stating that the writers would be glad to see the section formed, but did not sign the petition, as they are not now members of the American Medical Association, but that they would join the American Medical Association especially to become identified with this new section, if created. We consider each such letter to give our petition additional weight and we will thank our friends to send all such letters obtainable to Dr. G. Betton Massey, 1831 Chestnut Street, Philadelphia, or Dr. Gustavus Werber, 1353 Q Street, N.-W., Washington, D. C.

GUSTAVUS WERBER.

## Relation of Albuminuria to Indicanuria

*To the Editor:*—I note in THE JOURNAL (March 2, 1912, p. 633). Dr. Israel Bram's comments on the paucity of comparative data on the frequency of occurrence of albumin and indican in the urine.

Being curious to know how my results compare with those given by Dr. Bram, I have tabulated the results of 145 consecutive tests showing albumin or indican as taken from the records of this laboratory. The following are the results:

| Albumin. | Indican. | No. |
|---|---|---|
| Considerable | None | 42 |
| Considerable | Traces | 1 |
| Considerable | Considerable | 1 |
| Traces | Considerable | 4 |
| Traces | Traces | 11 |
| Traces | None | 69 |
| None | Considerable | 5 |
| None | Traces | 12 |
| Total number of examinations | | 145 |

| | No. | Per Cent. |
|---|---|---|
| Albumin but no indican | 111 | 76.55 |
| Albumin and indican | 17 | 11.72 |
| Indican but no albumin | 17 | 11.72 |
| Total with albumin | 128 | 88.27 |
| Total with indican | 34 | 23.44 |

The above figures show that two out of every fifteen containing albumin also contain indican while, on the other hand, we find albumin present as often as we find it absent in urine showing indican.

The tests employed were the layer-heating method with dilute acetic acid and the Roberts layer test (using a solution of nitric acid and magnesium sulphate) for the albumin. For indican the Obermayer reagent (hydrochloric acid with ferric chlorid) was employed by taking 5 c.c. each of urine and of the reagent, and 2 c.c. of chloroform to extract the colored product. When found, thiosulphate solution was employed to remove any possible iodin, etc., present.

Henry J. Goeckel, Ph.G., Phar.D., New York.

### Want Less Duty on Physicians' Apparatus

*To the Editor:*—In The Journal for May 18, p. 1534, you refer to the resolution which I introduced before the House of Delegates of the Ohio State Medical Association, and which refers to tariff reduction on chemical glassware, also on optical instruments, and then further state that it implies an amendment to the customs rule "whereby a physician may import optical instruments," when it should state that we seek "an amendment to the customs rules such as will permit a physician to bring into this country surgical instruments, as tools of his trade." It was also implied that surgical instruments in this case referred to all instruments used either by surgeons or physicians. This covers a much wider field than the reference to optical instruments. The preambles and resolutions were:

> Whereas, There is no one in the United States to-day manufacturing chemical glassware, although there is much demand for it in commercial as well as in charity and scientific work, in the latter two of which our profession lead, and
>
> Whereas, The optical instruments, especially microscopes and instruments of optical precision, produced in this country are undoubtedly inferior to those produced in foreign countries, although the price is just a little lower than that asked for the foreign article plus duty, and many instruments are not produced at all in this country, and
>
> Whereas, As many of our surgical instruments, which are really our tools of trade, are made in foreign countries and then imported by instrument houses into this country at a very small duty and then polished by these instrument houses, whereas we are charged 60 per cent. to bring in the same instruments, except that they are already polished; therefore be it
>
> *Resolved*, By the House of Delegates of the Ohio State Medical Association, that our state delegates to the American Medical Association for its next annual session be hereby instructed to prepare resolutions bearing on these propositions, urging the proper committee of the American Medical Association to take the necessary steps looking to the accomplishment of the following:
>
> First, a reduction or abolition of the tariff on chemical glassware.
>
> Second, a reduction on optical instruments made in part or in whole abroad.
>
> Third, such change in the customs rulings as will permit a physician to bring into this country at least a reasonable amount of surgical instruments, as tools of his trade.

Under the present ruling, a physician can bring in only such instruments as he uses during the voyage. In Ohio we feel that the physician has just as good a right to bring into this country, free of duty, such instruments and appliances as he uses in his trade, as any one engaged in any other work. We believe that every reasonable-minded person will agree with this interpretation, and that if the attention of the Treasury Department is called to the injustice of the present ruling, it will be remedied.

Charles W. Moots, Toledo, O.

### Warning Against Indiscriminate Use of the Bismuth Paste in Acute Suppurations

*To the Editor:*—In The Journal (May 4, p. 1339) Dr. Bell reports very satisfactory results in treating acute and subacute suppurative conditions with bismuth paste. I note that in two of his cases symptoms of bismuth absorption occurred, and while in his cases the progress of the poisoning was checked by proper treatment, others employing this treatment in similar cases might be less fortunate and thus encounter serious complications.

I feel prompted, therefore, to issue a warning against the use of the bismuth paste as a substitute for the drainage-tube shortly after abdominal operations. In such acute cases our old methods of drainage are entirely satisfactory, and bismuth paste should not be injected unless the suppuration continues for an unusually long period. Under such conditions its injection is permissible, as by that time the adhesions have become sufficiently firm to prevent their rupture through undue pressure caused by the injection of the paste. In fresh wounds the surfaces are apt to absorb the bismuth and lead to bismuth poisoning. This occurred in two of the cases Dr. Bell reports, but fortunately the condition was recognized early enough to prevent poisonous effect.

This danger is not present in cases of fecal fistulas, the paste having proved very efficient in the treatment of such cases in my hands, as well as in the hands of others, many successful cases having been reported in the literature.

I have not yet encountered any formation of bismuth stones, although this might be possible through the absorption of the petrolatum out of the paste, or through insufficient incorporation of the bismuth into the petrolatum.

In chronic ulcerations of the leg, application of the paste has proved satisfactory, but in more acute cases the condition was very much aggravated by such application. Dry bismuth should never be applied in burns. Several cases of bismuth intoxication resulting from this procedure have been reported by Kocher and others.

Emil G Beck, Chicago.

## Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### LOW BLOOD-PRESSURE

*To the Editor:*—I frequently see articles on increased arterial tension, but have not seen anything on lessened arterial tension.

I have two young women, 25 years old, under advisement at present with a pressure of from 85 to 95 mm., hemoglobin by Talqvist 95 per cent. They both complain of constant lassitude, dizziness and shortness of breath on exertion. They faint easily, but have no cardiac or kidney lesions; uncinariasis and malaria are negative. The condition has been maintained for several years. I believe if I can increase the tension, they will improve.

Strychnin has failed in one and digitalis in the other. Have you any suggestion?

G. H. Edwards, Orlando, Fla.

Answer.—Lowered blood-pressure has been noted in neurasthenia. It may be due to weakness of the heart action. It arises frequently from dilatation of the blood-vessels by the action of the vasomotors, especially when this affects the vessels of the splanchnic area. A careful investigation of all the conditions in the case should be made and the treatment should involve proper physical measures, such as massage, cold baths, etc. The following articles may be referred to:

Bishop, L. F.: Constitutional Low Arterial Tension in Children, The Journal, Nov. 24, 1906, p. 1734.

The Blood-Pressure in Renal Tuberculosis, The Journal, June 1, 1907, p. 1870.

Macnamara, E. D.: Blood-Pressure in Neurasthenic States and Effects of Treatment, *Lancet*, July 18, 1908; abstr. in The Journal, Aug. 15, 1908, p. 627.

Bishop, L. F.: Significance of Low Blood-Pressure in Arteriosclerosis, Arch. Diag., October, 1909.

Pearce, R. M., and Eisenberg, B. A.: Experimental Condition of Low Blood-Pressure, *Arch. Int. Med.*, August, 1910; abstr. i The Journal, Sept. 3, 1910, p. 886.

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### EXCESSIVELY LARGE FETUS

*To the Editor:*—I read with much interest the case of J. E. B. o Wisconsin in The Journal (May 11, p. 1464).

Aug. 3, 1910, I was called to attend Mrs. J. C., an American, age 30. She weighed 450 pounds and was the mother of four livin children. I found the patient in the first stage of labor; she ha been in labor for about fifteen hours with very little progress. Th child was of such abnormal size that it could not be born naturall I sent for Drs. M. R. Faulkner and L. F. Hatch of Vineland, wit whose assistance the patient was chloroformed, the child dismen bered and the woman delivered. On weighing the parts of the di membered body we were greatly surprised to find that the chil weighing 25 pounds. The mother said that two years before sl had had a still-born child which weighed 16½ pounds. The patie made a good recovery.

Charles M. Gray, Vineland, N. J.

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Journal Announcements, Knocks and Boosts, Books Received a changes in the Public Service will be found in the advertising s tion, commencing on the second page following reading matter.

## *Medical Economics*

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POSTGRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

### THE CHURCH AND THE PHYSICIAN

A well-marked and welcome evidence of increasing public interest in health matters is found in the efforts of representative clergymen to work hand in hand with the medical profession for better health conditions. The needs and advantages of such cooperation are obvious. Mutual support and cooperation in this field are inevitable, since, as has been frequently pointed out of late, public health, under present-day conditions, is quite as much a sociologic as a medical and a scientific problem. It is most refreshing and encouraging to find broad-minded ministers recognizing this fact and instructing their people as to the real issues involved. Through the interest and courtesy of a correspondent, we present to the readers of THE JOURNAL a few paragraphs from a sermon, delivered on May 12, by Rev. William T. Fishburn, D.D., Pastor of the West Adams Presbyterian Church of Los Angeles. The text was Matthew 2:20, "They are dead that sought the young child's life." After speaking of the duty of modern society to safeguard the mother and child and discussing child labor, Dr. Fishburn said:

THE AWFUL AMERICAN MEDICAL TRUST

"Not all of the enemies that seek the young child's life are dead. The existing enemies of the young child are many. Human greed is not dead; evil suggestions that flaunt themselves before the young child are not dead; the allurements of intemperance, and gaming, and the social evil, are not dead. The infantile diseases are not dead; the diseases produced by bad food, bad milk, bad sanitation are not dead.

"But we are doing something in our period to make the young child safe. In no other direction is progress being made more rapidly than in the direction of wholesome sanitation. Never before have wise physicians labored so hard to protect the child, and the child's parents, from disease and death by preventive medication as they are laboring today.

"Never before have men of substance given so largely toward the founding and endowment of institutions for the study of preventive medication as they are giving to-day. Never before has the hope been as large as it is to-day that some of the childhood diseases are going to be abolished, that some of the unwholesome Herods of disease that slaughter children, not by fifties as this ancient Herod did, but by millions on millions, are about to disappear.

"One would imagine that such study by patient men of cience would be universally applauded. But, do you know hat there exists an organization whose purpose is to halt all of this scientific progress? This hostile organization is known as the League for Medical Freedom.

"It is a winsome title, and many good persons have given their sanction to this League for Medical Freedom without being aware of what they are sanctioning. They do not know that the League for Medical Freedom asks that the doors be thrown wide open, and that every quack and charlatan be given a yet larger 'freedom' to exploit his ignorance on a sick and suffering public.

"Every maker of quack nostrums, every manufacturer of patent medicines, every devotee of an inane cult, every promoter of fraud and humbug, is standing behind this league and giving strength to its uninstructed hands.

"And every practitioner who could not diagnosticate the mumps from the measles, who would not know a nerve from a tendon, a muscle from a cartilage, is singing first tenor or first bass in the chorus for medical freedom!

"Verily, sirs, the people need to be protected from themselves when they lift up their foolish voices in dispraise of progressive medication, and clamor to be put back again into the hands of the hoodoo doctor and the witch healer, who will rub a rabbit's foot on the place to make it well. Being familiar with the progress that the science of preventive medication is making in our world, I feel that I am exhibiting great self-restraint in saying these things about the League for Medical Freedom as gently and as calmly as I am saying them now."

### POSTGRADUATE COURSE

#### Tenth Month—Second Weekly Meeting

#### UREMIA

ETIOLOGY

Occurrence in nephritis, obstruction of ureter, compression of renal vessels, cholera, etc.

THEORIES: (a) Retention or accumulation of excretory products, gradual or rapid, character of poisons. Bouchard's views. (b) Traube's views, localized or general edema of brain.

SYMPTOMS

Distinguish between acute and chronic uremia. Cerebral symptoms, slight to extreme; headache, somnolence, stupor and coma, or acute delirium. Convulsions, character, onset, severity, course, duration. Amaurosis and deafness. Respiratory symptoms, dyspnea. Gastro-intestinal symptoms. Pulse, rate and tension; temperature, urine.

#### HEMATURIA

ETIOLOGY: Renal causes,[1] inflammations, infarction, calculi and pyelitis, tuberculosis, malignant disease, parasites. Traumatism.

AFFECTION OF URINARY TRACT: (a) Ureter, calculi, traumatism, (b) bladder, calculi, malignant tumors, acute cystitis, varicose veins, (c) urethra, gonorrhea, calculi, parasites, traumatism.

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[1] Progressive Medicine, December, 1907.

General Diseases: Acute specific fevers, blood dyscrasiæ, chronic heart, lung or liver disease.

Diagnosis: 1. Presence of blood; color, sediment, chemical tests (Heller's, guaiaceum). Microscopic examination. Spectroscope. 2. Source of hemorrhage; mixture with urine, clot, molds, casts. Cystoscope, ureteral catheterization.

Hemoglobinuria

Toxic: (a) Poisons; phenol and pyrogallic acid, potassium chlorate, naphthol, phosphorus, carbon dioxid. (b) Poisonous fungi, muscarine. (c) Infectious diseases, scarlet fever, typhoid, malaria, syphilis, yellow fever, purpura. (d) Cold and exertion. (e) Burns, absorption of hemorrhagic effusion, transfused blood. (f) Epidemic hemoglobinuria in infants.

Paroxysmal:[2] Sex, age, cold, exhaustion. Association with Raynaud's disease. Pain, gastric disorders, jaundice. Urine; color, reaction, blood-tests. Microscopic examination. Methemoglobin.

# Society Proceedings

## COMING MEETINGS

American Medical Association, Atlantic City, N. J., June 4-7.

American Academy of Medicine, Atlantic City, May 30-June 2.
Amer. Assn. of Genito-Urinary Surgeons, Philadelphia, June 7-8.
American Association of Medical Examiners, Atlantic City, June 3.
American Climatological Association, Hartford, Conn., June 10-12.
American Gastro-Enterological Association, Atlantic City, June 3-4.
American Gynecological Society, Baltimore, May 28-30.
American Medico-Psychological Association, Atlantic City, May 28-31.
American Neurological Association, Boston, May 30-June 1.
American Ophthalmological Society, Atlantic City, June 12-13.
American Orthopedic Association, Atlantic City, May 30-June 1.
American Otological Society, Atlantic City, June 10-11.
American Pediatric Society, Hot Springs, Va., May 29-31.
American Proctologic Society, Atlantic City, June 3-4.
American Society of Tropical Medicine, Atlantic City, June 3.
American Surgical Association, Montreal, May 29-31.
American Therapeutic Society, Montreal, May 31-June 1.
Maine Medical Association, Portland, June 12-13.
Massachusetts Medical Society, Boston, June 11-12.
Nat. Assn. for Study and Prev. Tuberculosis, Washington, May 30-31.
National Association for Study of Epilepsy, Vineland, N. J., June 3.
New Jersey Medical Society, Spring Lake, June 11-13.
North Carolina Medical Society, Hendersonville, June 18-20.
Rhode Island Medical Society, Providence, June 12-13.

## INTERNATIONAL CONGRESS ON TUBERCULOSIS

*Held in Rome, April 14-20, 1912*

The congress was unfortunate in finding Italy engaged in a war at the time it convened. Of necessity this detracted somewhat from the interest of local officials and the profession. The attendance was undoubtedly lessened by the postponement from September of last year to April of this year.

### Confusion of Tongues

In the matter of language, this congress was only 33 per cent. worse off than its predecessors, the former having three official languages and the latter four. An attempt was made to overcome this difficulty by having the abstracts printed in four languages, but this was done with only a few of the reports. The majority appeared in only two languages; a few in only one, and a small number in three. In most instances the translating was so poor that the printed abstract gave a very imperfect idea of the contents of the report.

The confusion of tongues is a hopeless barrier to adequate discussion and thorough report of a scientific program. Delegates attending any international congress have a right to expect, and even demand, that the papers and discussions shall at least be translated in abstract into the three official languages of the world. Apparently no provision was made to report the discussions and it seems probable that the published transactions will contain only the original papers in the languages in which they were read. This will detract seriously from their international value.

The attendance at the congress was preponderatingly Italian and French; the scientific business was chiefly in those languages. The Germans were next most numerously represented; there were a few Englishmen, and a sprinkling of Americans. It was rather humiliating and very embarrassing to the English-speaking delegates to find that they had practically been ignored in the arrangements for the congress.

### Character of the Discussions

There was no striking discovery presented to the congress similar to that of Robert Koch when he announced the nonidentity of human and bovine tuberculosis. The sessions, as a whole, were largely devoted to threshing out old straw, and the exploiting of serums and vaccines that have been on the market under fanciful names for years for the cure of tuberculosis. There was very little of what can strictly be called original work, and none of it was of epoch-making importance.

It is evident that an international congress does not appeal to the research worker as an inviting field for the presentation of his contributions. This is probably largely due to the fact that original thinkers do not care to take the risk of having their work fail of proper consideration, as must necessarily be the case in the confusion attending an overcrowded program. It is true that there were many excellent reports submitted, and much in the proceedings will be found to be of great value. Less than this could hardly be expected in such a representative gathering containing a considerable proportion of the master-workers in the tuberculosis field. The program was overloaded. The five days devoted to the reading and discussion of reports were inadequate for the number of reports and papers. The scientific work was conducted in three sections with a subsection dealing with surgical tuberculosis. In all there were twenty-nine reports submitted by from one to three members. In a medical program in America they would be called symposiums. Certain topics were chosen and a number of men were assigned to discuss them. These occupied the morning hours of every session; the afternoon being taken up with the reading of voluntary papers. These numbered 223. It will be seen from this that the program was frightfully overcrowded.

### Relation of Bovine and Human Tuberculosis

The subject that attracted the most attention was the discussion of the relation of bovine and human tuberculosis. This was discussed very thoroughly in the conference which preceded the congress proper, and the discussion was participated in by the master-minds of the leading European countries. The discussion was characterized by eminent fairness and a disposition on the part of all to arrive at the truth. During the past three years and a half numerous investigators have been at work on this very important and very practical problem, and while the leaders are not yet in perfect accord, they are much nearer together than they were at the last congress; near enough, at least, to make it possible for them to agree unanimously to the following resolution:

> *Resolved,* First. The prophylaxis against tuberculosis must principally be directed against the suppression of contamination from man to man and principally in the family.
>
> Second. The contamination of man by bovine infection is of less frequency; nevertheless it is necessary to continue al measures against infection of bovine origin.

By way of explanation it may be said that this is a compromise resolution, and really represents the conservative view still held by the German school, which, while willing to admit the infection of man from bovine sources, does not regard it as a serious menace. The English and Scandinavian investigators regard it as a serious menace, with the French occupying a position somewhere between these two extremes.

In the discussions there were certain local conditions brought out in the several countries which may account for the difference in the findings of the several investigators. For example, in Germany and France milk is usually cooked, while in England and the United States it is usually taken raw There also seems to be more bovine tuberculosis in some countries than others, and especially in the colder climates, and also more tuberculous cattle in different localities in the sam country. It may be found later that these local condition have an important bearing in certain localities, and if so it will tend to fortify and strengthen the views expressed in the resolution.

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[2] Progressive Medicine, December, 1906.

The work of the British commission may fairly be regarded as the most reliable. Their work has been far more comprehensive and more open-minded. The British commission has no preconceived views, but is simply seeking the truth, while the members of the German school are apparently "followers" of Koch, and seem to be seeking to establish his views rather than to arrive at the truth.

The suggestions that attracted most attention from the standpoint of treatment was a revival of the method of treating unilateral pulmonary tuberculosis by the production of artificial pneumothorax, certain aspects of immunity, and heliotherapy. It was significant that very little was said on the influence of climate *per se* in the treatment of tuberculosis, except surgical forms in which the French insist on the virtue of sea air, while the Swiss insist just as strongly on the specific influence of mountain air and sunlight. Inasmuch as they are all securing substantially the same results, it is fair to assume that the final conclusion will be, as in the treatment of pulmonary tuberculosis, that the virtue of their methods consists in fresh air and sunshine rather than any peculiar attribute, either of sea air or mountain air. Both nations are to be congratulated on their excellent work in this important and much neglected branch of the work. The United States seems to be behind all the leading European nations in making provision for the systematic treatment of surgical tuberculosis.

### Social Defense

**Mlle. Chaptal** opened the section on social defense with a report on women's work in the restriction of tuberculosis. She maintained that their cooperation was essential and it remained for the United States to show what women could do in this field, as represented by the visiting nurse. The relation of women to this movement is beginning to be understood in Europe.

**Ellen N. La Motte**, nurse-in-chief of the tuberculosis division of the health department of Baltimore, spoke of the value of the visiting nurse in the homes of the tuberculous poor. She thought that the greatest value she had had in the movement was in recognizing and stating the conditions that made any effective prophylaxis impossible.

**D'Espine**, of Geneva, discussed tuberculosis and the schools and said that open tuberculosis among scholars was rare, but on the contrary latent tuberculosis was very common and the schools should be carefully studied in the contest with tuberculosis. Successful work should include the careful study of every scholar, and the exclusion of all pupils and teachers who are excreting bacilli and the notification of parents of all children with latent and closed lesions.

**Mery**, of Paris, and **Badaloni**, of Rome, discussed the problem largely from the standpoint of early diagnosis. The latter emphasized the importance of faulty positions in school as a predisposing cause.

**Homer Folks**, of New York, presented the data bearing on the extent of instruction in schools of the United States in relation to the nature, cure and prevention of tuberculosis. His paper discusses how far medical inspection has a bearing on the prevention of tuberculosis.

**Kutner**, of Berlin, said that the school was the most inviting field for attack on the tuberculosis problem. Adequate school inspection was of first importance, and this should be associated with instruction on the causes and prevention of tuberculosis.

**De Fleury**, of Paris, discussed combined action of charitable and sanitary agencies, based on what is done directly and indirectly in France, the study dealing especially with economic efficiency. Among the various agencies he places the sea-side sanatoriums, of which France has twenty-nine, in the first rank. It is of the utmost importance to improve the construction and sanitation of cheap dwellings, and the quality of food, particularly milk.

**Sture Carlsson** presented an excellent summary of the work of the Swedish National League against tuberculosis. The league has presented its work to former congresses. The successive reports show what can be accomplished by a voluntary organization. The report contains an excellent intensive study of a single parish in Sweden in which a house-to-house canvass was made to ascertain the incidence of tuberculosis. Another interesting study is by Nils Holmen of the metal workers of Eskilstuna. In all 3,923 workers were examined as well as their families and dwellings, the whole forming a valuable contribution on the relation of certain occupations to tuberculosis. A description in detail of the antituberculous dispensary service in Stockholm closes the report.

**Otis**, of Boston, and others, discussed institutions for the prevention of tuberculosis. General hygiene was emphasized and of the specific means, the first rank was given to sanatoriums, next dispensaries, then the "preventorium" in which persons of lowered vitality are treated, open-air schools which are just coming into vogue, the day and night camp, and the visiting nurse.

**Hope**, of Liverpool, and **Küss**, of Angicourt, discussed the notification of tuberculosis. They agreed that compulsory notification of all forms of tuberculosis should be the ultimate aim, but such rules should not be hastily adopted. At first a voluntary notification should be introduced. Later it should be made compulsory in hospitals and dispensaries, and among classes of the population least able to care for themselves. As public opinion becomes educated, the rule should be extended to all classes and cases.

**Paul Juillerat**, chief of the Bureau of Hygiene of Paris, discussed the sanitation of the house. For fifteen years this study has been carried on and has conclusively shown that the mortality of tuberculosis is directly influenced by the height of buildings and the amount of sunlight and air. In excessively crowded quarters, where light and air-space is small, no improvement of the interior has resulted in diminishing the mortality. In 816 houses where it was possible to alter them so as to let in air and light, there was a diminution of tuberculosis amounting to 16.60 per 10,000 inhabitants.

**G. Sims Woodhead** maintained that alcoholism and tuberculosis have a direct relation. The views were based on statistics giving the incidence of tuberculosis among drinkers and others, also its prevalence in workers prone to the abuse of alcohol. The occurrence of tuberculosis in families of drunkards and experimental infections in alcoholized animals all pointed to the direct relation of alcohol to tuberculosis.

**H. Triboulet**, of Paris, while not denying the etiologic importance of alcohol, claimed that the effect was indirect. Hereditary alcoholism altered the economic status of the family, which predisposed to infection. The same was true of drinkers who spend their money for liquor, instead of providing good food and proper dwellings. There is no question of the relation of the two conditions; the only difference was as to how they operated.

**John Robertson**, medical officer of health, Birmingham, said that tuberculosis was spread by work in the home. In England this class of work is done for so low a wage that the workers have to put in long hours and this lowers vitality.

**Carozzi**, of Milan, said that the problem was not so simple as stated, and that the character of dwelling and other factors played an important rôle. All were agreed that articles made in tuberculous homes were liable to spread the disease. When such articles were made by the tuberculous, they should be disinfected.

**H. Scurfield**, health officer of Sheffield, England, discussed the incidence of tuberculosis and measures for its prevention and used statistics of that city and the reports of the British government in illustration of the problem. He recognizes that the bacillus has no appreciable saprophytic existence, hence chance infections in the majority of cases do not produce recognizable disease. The mortality from consumption in England and Scotland has shown a marked decline in the last forty years, while that in Ireland has shown a slight increase. This is believed to be due to improved housing, better food, and higher wages, with better recognition of the conditions of labor. The death-rate from consumption in different parts of England varies. In inland manufacturing towns the death-rate for males is nearly double that for females. In coal-mining districts where the housing conditions are bad, the death-rate is high among women. In Sheffield, the male death-rate from tuberculosis has been much higher than the female. This is to be attributed to the grinding and cutlery trades. Importance is attached to the separate tabulating of deaths among women, men and children, as throwing light on local tuberculosis problems. The reporter hoped that the medical insurance act would work favorably in encouraging early applications for aid which will be accorded as a right without the pauper stigma.

G. Angulli, Naples, recommended inhalation of pulverized chalk. This was one of the most striking suggestions made to the congress in the way of treatment. The speaker declares that necrotic tissue has an affinity for chalk, which aids the caseating process. The scientific basis the author finds in the ease with which fine particles are carried to the alveoli in the inspired air, and the freedom of chalk workers from tuberculosis. He finds that the inhalations are accompanied by a symptomatic improvement, a lessening of fever, cough and expectoration, and a gain in nutrition.

### Immunity

Paul Courmont, of Lyons, discussed the different forms of immunity, both active and passive, and the raising of the power of resistance of the organism to tuberculosis. He finds the greatest advance in recent years to be the conception of anaphylaxis as applied to this disorder. Active immunity by tuberculin has given better results than the passive immunity obtained from serums.

Neumann, of Vienna, presented the active specific treatment of tuberculosis. Lung tuberculosis is peculiar in having a prolonged incubation period. It is important that latent, inactive, and active forms should be differentiated. The first is difficult of recognition, as it has few physical signs, but present views relating to allergy permit of identification. Among the many methods that have been proposed, the best are the von Pirquet, Moro and the conjunctival reaction, which can be used in succession, followed by the usual tuberculin reaction. Active tuberculosis is best detected by tuberculin injections beginning with a minute dose and increasing. This paper is too detailed to be abstracted.

A. Calmette, of Lille, says that the active treatment of tuberculosis is confined to the use of substances derived from the bacillus and generally called tuberculins.

Webb, of Colorado, showed that guinea-pigs could be inoculated with virulent bacilli without causing tuberculosis, providing the initial number was small and the quantity gradually increased. Monkeys were inoculated with gradually increasing numbers from 1 to 65,000. Two and one-half months later they reacted to tuberculin, but at post-mortem no signs of tuberculosis were found, and the test for antibodies was negative. Two children, aged 3, of tuberculous parents, received thirteen inoculations of living bacilli from 1 to 150 each in three months, the whole number of germs used amounting to 607. The von Pirquet test was found negative at the end of four months and the children healthy.

Maragliano, in a special communication, spoke of the possibility of preventive vaccination in man. He has been doing this for ten years. He distinguishes between the tubercle bacilli in the organism and tuberculous disease which originates only when the defenses of the organism have yielded. Every individual has specific means of defense represented by the reaction of the organism. To give relative immunity he thinks it unnecessary to use the living bacilli. Dead organisms are quite as efficient. These are mixed with glycerin and used in the same way as the Jennerian vaccine. He commonly makes three injections in the outer part of the arm. He has now been using these vaccines in sufficient numbers and for a period that would justify him in strongly recommending their adoption in the treatment of tuberculosis.

Several communications supported the value of Finkler's remedy. It is spoken of as "a color substituted with iodin." This is suitable for subcutaneous or intravenous injections. The other is "a soluble chlorin composition of a heavy metal." These are sufficiently vague to warrant the liveliest expectations, especially when we are told that tuberculins and serums have not fulfilled expectations. Fortunately it is not thought that they will displace, at least for the present, dietetic and hygienic measures. This sort of thing in an international congress would seem to warrant some drastic revision of future programs.

Bayle, of Cannes, was the only one who advocated opotherapy. He uses the spleen of pigs, which after it has been filtered and made aseptic has, in the form of injections or by the mouth, the activity of an antituberculous serum. It is prepared in ampules of 5 c.c. If injections are to be used, they are to be given for twelve days, after which there is an interval of a week followed by another series of injections, after which results may be awaited with confidence.

### Specific Treatment

J. Teissier and S. Arloing, of Lyons, furnished the only report on the use of specific serums. They were guarded in their opinions, not being able to account for the discrepancies between animal experimentation and the disappointment attending the practical treatment of patients. The principal serums are those of Marmorek, Lannelongue, Achard, Rappin, Vallee, Jousset, S. Arloing and the bacteriolysin of Maragliano. Notwithstanding the frequent failures, they think that serums have a definite place in the treatment of a limited number of cases, and they may be used with advantage in connection with tuberculin and the hygienic-sanatorium management.

### Abortion

The interruption of pregnancy in tuberculosis brought out widely differing views; some holding that pregnancy should be interrupted, others that it should proceed to term.

Paul Bar, of Paris, said that pregnancy could awaken a latent tuberculosis and aggravate the evolution of the disorder. These untoward effects may occur early in the pregnancy but are most common during the last three months. Occasionally the disease assumes a rapid course after delivery. About two-thirds of the mild or latent cases are improved by the advent of pregnancy; those with crackling moist râles, bacilli in the sputum and fever are nearly always made worse; with cavities the prognosis is still worse, and in tuberculous septicemia pregnancy is a catastrophe. Those who do not interfere maintain that the results are quite as good, which is met by those who advise the termination of the pregnancy by the statement that operation is delayed and this accounts for bad results. Bar believes that a general rule is bad and that the question should be settled by the indications in individual cases. In every case there should be an active treatment of the tuberculosis.

A. Martin, of Berlin, advocated interference in all active cases of tuberculosis, the earlier the intervention the better the results. An expectant course should only be followed in latent cases. The method of terminating pregnancy is irrelevant providing it is done aseptically and without loss of blood.

L. M. Bossi, of Genoa, emphasized the importance of Bar's studies showing that the greatest danger was in the later months of pregnancy. The improvements in obstetric surgery and the facilities for caring for premature children, should make the record of terminated cases better than it has been in the past. He urged rapid mechanical dilatation as the proper method of interference. In forty cases terminated before the sixth month, there was noted a marked improvement in the disease in most cases, while in twenty-three cases after the sixth month very few were improved.

### Bovine Tuberculosis

B. Gosio, of Rome, H. Vallée, of Alfort, A. S. Griffith, of London, and H. Kossel, of Berlin, discussed the relation of animal and human tuberculosis. The latter affirmed that consumption was almost invariably due to human tubercle bacilli, transferred from man to man. Infection through milk and meat was of relatively little importance. Griffith declared that bovine, human and avian bacilli were fixed types. In the ox the infection is almost always of the bovine type, the human bacillus has not been found in the ox. All three types may be found in pigs. The avian variety alone occurs in birds. The human bacillus is the most frequent infection in adult humans, but the bovine type is very common in children. The bovine bacillus plays a not unimportant part in human tuberculosis. Vallée claims that 10 per cent. of human tuberculosis is due to the bovine bacillus.

Pannwitz, of Berlin, reviewed the studies that have been made since the last congress, which show that bovine infection is not rare in children and that it should be combated by appropriate means; that bovine infection is rare in adults, as the bovine type in pure culture was only found in two cases out of 800.

G. Sims Woodhead, of Cambridge, believes that the human and bovine types are morphologically identical but differ in cultural and pathogenic properties. Infections with each give similar clinical histories and identical lesions. The two types are variations of the same bacillus. A considerable proportion of tuberculosis in children is of bovine origin; for the most part the infection is transmitted in milk.

*(To be continued)*

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## MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND

*One Hundred and Fourteenth Annual Meeting, held in Baltimore, April 23-25, 1912*

*(Concluded from page 1536)*

### The Clinical Study of High Blood-Pressure

Dr. A. W. Hewlett, Ann Arbor, Mich.: While the resistance to compression of the arterial wall by the various instruments used may influence maximum pressure reading to some degree, the error from this source is negligible compared to variations in the readings themselves. Many factors give rise to marked rise of systolic pressure. It is well known that the pressure rises during emotional processes. Ordinarily, however, this rise is inconsiderable (10 to 13 mm.) and the pressure rapidly returns to the normal level. The marked rise of the blood-pressure during acute asphyxia is a well-known experiment, being due to strangulation of the vasomotor centers by the accumulation of carbon dioxid. Other conditions causing more or less marked rise of blood-pressure are acute cerebral compression, angina pectoris, renal disease and eclampsia. Hypertension is almost constant in uremia and eclampsia. In this latter condition the rise is of especial interest for the reason that after delivery, in favorable cases, the pressure returns to normal. In anuria, also, a moderate rise of blood-pressure is the rule. The chronic forms of arterial hypertension are usually associated with the presence of albumin in the urine. In my experience, the chronic nephritis associated with sepsis, especially chronic ulcerative endocarditis, usually showed no hypertension. The same is said to be true of amyloid kidney. In chronic glomerulonephritis and in the secondary contracted kidney, arterial hypertension is frequently present, but by no means constantly so. The most marked and the most common rise of arterial pressure occurs in chronic interstitial nephritis and related conditions.

Arteriosclerosis is not necessarily associated with high blood-pressure. It has long been known that chronic hypertension may exist in the absence of definite urinary findings. Of fifty cases in my series with continued high pressure, usually above 180 mm., eighteen showed no urinary changes other than rare traces of albumin or occasional casts.

As regards the relationship between the hypertension and the renal changes, we are more and more coming to the view that a high blood-pressure in many cases is primary and the involvement of the kidneys and arteries, perhaps only incidental. We are still uncertain concerning the manner of development of high blood-pressure. The most important effect of continued hypertension is the cardiac hypertrophy. Various measures have been used for the reduction of hypertension. In the treatment of hypertension the question arises as to how far one must attempt to force down a high pressure. Clinical experience seems to be the only safe guide. Curative efforts should be tried against the underlying cause rather than against the high blood-pressure itself.

### Cyclic or Recurrent Vomiting

Dr. W. M. Dabney, Baltimore: The onset is sudden, although there is frequently a history of slight indisposition for a day or two previous to the attack. The vomiting, as a rule, is the symptom of onset, while it remains the one symptom of moment throughout the attack. At the beginning of the attack the vomiting is of a forceful, projectile character. Later on, when the patient becomes weaker and more toxic, it becomes less forceful, and finally, in extreme cases, comes on with little or no muscular effort. The vomitus consists, at first, of the contents of the stomach; later of a watery mucus and finally, in some cases, of blood-tinged mucus. Examination of the stomach contents is not conclusive. Constipation is usually present, but this is not invariable, diarrhea being present in some cases. A peculiar odor to the breath is present from the beginning of the attack and in some cases, even before its onset; this is so marked as to be almost pathognomonic. The pulse, though rapid and strong at first, becomes weak and sometimes irregular as the attack progresses. The respiration is decidedly affected and in some cases its quality reminds one of the air-hunger of beginning diabetic coma. Abdominal pain is usually absent, but may be present and confuses the diagnosis.

The attack lasts from two to four days, as a rule, but may be prolonged for a week or more. The disease is primarily one of childhood; few cases occur after puberty. Heredity invariably plays an important part. The prognosis is usually good, although Comby reports ten fatal cases. The attack, if once seen, is so typical that it can rarely be mistaken. Sometimes, however, the differentiation from appendicitis is difficult. Routine treatment during the attack is unavailing. Alkalies, in large doses, have been and are still extensively used on the theory that the condition is one of acid intoxication. I have seen no good results from them during the attack, but consider them valuable in the interval. Diet in the free period is important, especially the partial elimination of starches and sugar. The condition probably belongs to the same general group as rheumatism and allied conditions. A rheumatic family history is often present, while nasopharyngitis and tonsillitis are not infrequent precursors or accompaniments. The appendix, so similar in structure to the tonsil, is frequently affected.

### The Influence of Special Forms of Diet on Certain Phases of Chronic Nephritis

Dr. C. W. McElfresh, Baltimore: Two hundred cases of chronic nephritis were studied. They were divided into four types, (1) arteriosclerosis (dropsy absent or slight), (2) associated with dropsy, (3) marked anemic symptoms, (4) marked retinal changes, concerning which the following deductions were drawn: (1) Properly selected diet is efficacious in reducing and maintaining a lower line of systolic blood-pressure, but it is to be borne in mind that a normal pressure is neither obtainable nor desirable. I believe that the normal blood-pressure is an abnormal blood-pressure in arteriosclerosis of the kidney. (2) While the value of decrease of sodium chlorid intake in many dropsical cases is beyond dispute, there are many cases not influenced by it, and in these, if the proteid be reduced and fats increased, a marked decrease in the anasarca follows. (3) In those cases in which headache, gastric symptoms and stupor are prominent features, the best results were obtained by cutting down both proteins and fats and making the diet largely carbohydrate. Uremia was always associated with a high urea content of blood, even though the urine content was low, or normal. (4) In those cases in which the eye symptoms were most prominent, the lowering of the blood-pressure by low protein diet, together with other agents, as salt rubs, massage and sweating, gave the best results. In all these cases of low protein diet the general nutrition of the body was taken care of by replacing the calorie deficit with extra amount of non-nitrogenous food.

### The Pneumococcus in Surgery

Dr. A. M. Shipley, Baltimore: For many years the pneumococcus was looked on as being of interest only to the internist, but there is scarcely any tissue in the body immune to its attack and, as a pus-producer, it ranks next to the well-known pyogenic organisms. Therefore, it frequently becomes the cause of distinctly surgical conditions. Some of the serious complications of pneumonia, such as empyema and abscess of the lung, are often due to the pneumococcus. Other conditions are thrombophlebitis, arthritis, osteomyelitis, parotitis, cholangeitis and cholecystitis, mastoiditis, puerperal sepsis, and, especially, pneumococcic peritonitis. The sources and avenues of infection still remain uncertain. The peritonitis may be a part of a general sepsis, it may be secondary to an infection elsewhere, or it may be primary. Clinically the peritonitis is often secondary to pneumonia. In these cases the weight of evidence is in favor of the blood-stream as the carrier of the infection. Pneumococcic peritonitis must not be confused with lobar pneumonia with referred abdominal pains and tenderness. The morbid anatomy of this type of peritonitis closely resembles that of the pleura under like conditions. The pus is rather characteristic. It is odorless, yellow or yellowish-green and contains flakes of fibrin. The onset is sudden, with a sensation of chilliness and, perhaps, a rigor. Diarrhea often precedes the attack and there is great pain, vomiting, prostration, leukocytosis, rapid elevation of temperature, and a rapid small pulse. Tympanites is usually not marked, the abdominal wall being rigid and scaphoid. A characteristic doughy feel has been spoken of. The progress of the disease is more rapid than that of other types of peritonitis. The prognosis is extremely grave, few patients having recovered. The treatment is that for suppurative peritonitis—nothing by mouth, rapid operation, little anesthetic, pelvic drainage and normal salt solution by the rectum.

### The Gastric Crises of Tabes

Dr. Julius Friedenwald and Dr. T. B. Leitz, Baltimore: In the usual form of gastric crises, the following characteristic symptoms are observed: Suddenly, and without warning, the condition is ushered in by a paroxysm of pain in the abdomen, lasting a variable period of time and ceasing abruptly. The digestive functions are entirely normal in the interval. The paroxysm may be accompanied by vomiting of a certain amount of mucus and food, and may continue without cause for many hours and even days. Prodromal symptoms are rarely noted. The gastric crises of locomotor ataxia are ordinarily observed in the preataxic stage of the disease and frequently lead to errors in diagnosis.

The analysis of the gastric secretion shows an increase in acidity, although results are somewhat variable. Constipation is usually present, but diarrhea may be noted. The crises appear at intervals of a few days to six months, or may increase in severity as the malady advances. Sainton and Tronc describe six varieties: the vomiting, the gastralgic, the severe, the complicated, the abnormal and the variety exhibiting an alternation of these forms in association with other symptoms. Two theories have been offered to explain the nature of the gastric crises: first, that the condition is due to some derangement of the spinal nerve system; second, that it is due to a functional disturbance of the stomach. The prognosis is grave.

The indication for treatment is to allay the severity of the crises and to prevent a return, if possible. During the attack abstinence from all food must be insisted on, although at times liquid food may be allowed. Among remedies recommended are the oxalate of cerium, the extract of cannabis indica, extract of belladonna, bromids and chloroform. Cocain, codein and morphin at times exert a favorable influence on the crises. Remedies acting directly on the stomach rarely yield results. For the relief of pain, the external application of sprays of ether, or the local application of ice are useful. Lavage of the stomach is rarely of benefit, except in patients suffering with a coincident dyspepsia. Lumbar puncture has been employed successfully. If the crises become unbearable, rhizotomy should be performed. This may require resection of the roots from the twelfth to the fifth dorsal, or even higher. The Wassermann test should always be made, not only of the blood, but also of the spinal fluid. Whenever the reaction is positive, the most active antisyphilitic treatment should be instituted.

Our observations extend over a series of forty-two cases of tabes in which gastric crises occurred. The patients were all males, whose ages ranged from 29 to 64 years. The pain was severe in eleven cases, moderate in nine and variable in seven. The gastric secretion was obtained both during the crises and in the intervals. Of the former group, from thirty-five patients the acidity was normal in six, hyperchlorhydria was present in thirteen, hypochlorhydria in ten and the acidity was variable in six. In thirty-six cases in which the secretion was obtained in the intervals between attacks, fourteen showed normal acidity, twelve hyperchlorhydria and ten hypochlorhydria.

DISCUSSION

Dr. Randolph Winslow, Baltimore: I have performed rhizotomy in one case of this type. The woman was 42 years old and was almost at the point of death. The sixth, seventh, eighth and ninth dorsal roots were resected. The gastric symptoms disappeared, but the patient died in one week.

### Arteriovenous Anastomosis in Raynaud's Disease

Dr. B. M. Bernheim, Baltimore: The first case in which we performed arteriovenous anastomosis between the femoral artery and the saphenous vein was unsuccessful, because gangrene had already begun, and the leg had to be amputated. The second case was that of a girl with beginning gangrene. The anastomosis was done in Scarpa's triangle. The pain was relieved and the circulation is apparently as good as ever. The condition later returned on the other side, which was operated on in the same way. The patient is not entirely well, but is much improved. She has lost one toe since the operation, a year and a half ago. In these cases end-to-end anastomosis does not give as good results as the lateral method. The valves in the veins do no seem to offer any obstruction to the circulation.

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## IOWA STATE MEDICAL SOCIETY

*Sixty-First Annual Session, held at Burlington, May 8-10, 1912*

The President, Dr. L. W. Littig, in the Chair

A list of the newly elected officers was published in The Journal, May 18, p. 1519. The President's Address will appear in The Journal next week.

### The Diagnosis and Treatment of Fractures

Dr. S. C. Plummer, Chicago: There is no controversy at the present time as to whether operative or non-operative treatment should be the rule of practice in the handling of fractures. Rather, each case should be considered on its individual merits. Fractures should receive more careful consideration. Non-operative measures should be exhausted before resorting to an open operation.

### Malignant Tumors of the Mesentery; With Report of a Case

Dr. Price E. Sawyer, Sioux City: In 1906 Vance reviewed the literature for five years and found twenty-eight cases of solid tumor of the mesentery. Out of twenty-seven operations there were thirteen resections of the bowel, varying in length from 1 inch in the shortest to 98 inches in the longest. Of these thirteen resections, six patients died and seven lived, making a mortality of about 46 per cent. Three of these cases were for sarcoma, all of which died. The number of males affected is eleven, ranging in age from 14 to 70 years against sixteen females, ranging in age from 8 to 60 years. The diagnosis of tumors of the mesentery is very difficult, a the subjective symptoms are in no way distinctive. Pain constipation, nausea and vomiting are usually present. Th signs that most clearly give evidence of tumors of the mesentery are their position, their mobility, and their relation t other organs. Free mobility is the most important diagnosti sign, as no other abdominal tumor will show this to such marked extent. My case was one of fibrosarcoma of th mesentery.

### Etiology and Pathology of the Chronic Arthritides

Dr. William H. Rendleman, Davenport: The specif causes of certain of the chronic arthritides have been di covered. Among these are tuberculosis, syphilis, gonorrhea and others. The chronic arthritides are local manifestations of general processes. A joint once damaged by trauma or toxemic absorption may, through the continued injury from use, be perpetuated indefinitely after the primary cause is terminated. Atrophic arthritis is essentially a proliferative process, beginning in the synovial membrane and resulting in atrophy of the bone and cartilage with ankylosis. It is probably of toxemic or infections origin. Hypertrophic arthritis is a degenerative process of old people beginning in the cartilage and resulting in marked hypertrophy of the bony ends with deformity, but seldom ankylosis. It is probably not of an infectious or toxic nature. Infectious arthritis includes that rather large group known to be caused by the presence of germs or their toxins. The chronic arthritides, including arthritis deformans, rheumatoid arthritis, etc., probably consist of a number of distinct diseases due to various causes.

### Right Rectus Incision for Appendicitis in Females

Dr. J. R. Guthrie, Dubuque: I commend the Kammerer incision. It disturbs to a minimum degree the muscular tissue of the abdominal wall; avoids injuries to important nerves and arteries; affords the operator an opportunity to investigate and to treat conservatively diseased tubes and ovaries. In 85 per cent. of the cases of appendicitis in the female, there has been coincident disease of the tubes and ovaries sufficient to demand operative treatment. In many of these cases both structures were involved. Here the Kammerer operation particularly commends itself.

DISCUSSION

Dr. D. S. Fairchild, Clinton: I have used the Kammerer incision for a number of years, and like it very much for the reason that we can explore the abdomen more thoroughly. We do not undertake to open the abdomen for appendicitis or any other trouble of that kind, unless it is for inflammatory disease of an acute character, without exploring the stomach, the gall-bladder, and, perhaps, the kidneys, and we cannot do it as well through a McBurney incision as we can through a Kammerer incision.

Dr. J. F. Percy, Galesburg: I have had no experience with the Kammerer incision where I expected to do work in the pelvis. This incision has been used in those cases in which the appendix is involved. I have passed the time when I have tried to work through a small incision. When we have a large incision we can find more things in the pelvis than we expected before the operation.

Dr. C. E. Ruth, Keokuk: While exploratory operations are necessary and always will be to some extent, there is a great tendency, I fear, with some of us to overdo the exploratory operation, and I feel that a place for the gridiron incision still exists. In the use of this incision I am enabled to get ample room for any operative work in that region. It is not sufficient, however, nor is it possible, to get sufficient room through this incision to enable one to operate on the adnexa or to explore the gall-bladder, but with the diagnosis carefully made we can almost always eliminate the necessity for a very extensive exploratory operation. I use the gridiron incision in all cases in which I have a purely appendical condition to deal with, because I have no right to use an incision that will confine my patients to bed for about twice the length of time it is necessary for recovery; it is impossible to break open a gridiron incision and the patient can leave the hospital within a week if there is no necessity for drainage.

### Hemorrhagic Diseases of the New-Born

Dr. Lawrence E. Kelly, Des Moines: The indications for treatment are hemorrhage, acute anemia, and in some cases infection. The only treatment that fulfils these indications is the transfusion or injection of human blood. Traumatic hemorrhages should be cared for along the line of general treatment for bleeding. In accidental bleeding the cord should be religated. As soon as hemorrhage of the spontaneous variety takes place, 10 c.c of blood should be withdrawn from the veins of the arm of one of the parents and injected immediately into the subcutaneous tissue of the child's back. This dose should be repeated every three or four hours until bleeding stops. If there is a reasonable suspicion that the child is syphilitic, inunctions of mercury should be given at once. In severe cases that do not respond to injections, transfusion should be attempted. If the case is in the hands of one familiar with blood-vessel surgery, an immediate transfusion is the best form of treatment, as the child is at once relieved of the anemia, and if infection is present, this also is quickly overcome by the antibodies of the transfused blood.

### Increased Diet in Typhoid

Dr. M. J. Kenefick, Algona: The advisability of the use of a more varied diet in typhoid must be decided at present on practical and not theoretic grounds, for the knowledge of metabolism in fevers is not yet sufficiently accurate for us to draw definite conclusions from experiments which, at best, can only deal with a very limited phase of the question. The fact, however, that a more liberal diet is now being employed by so many trustworthy and experienced clinicians is certainly justification for those who desire to try this method more fully.

### The Molding of Public Opinion Regarding the State Care of Epileptics

Dr. William Pfannebecker, Sigourney: The public looks to the medical profession for advice and help in matters of health and disease. We should use our efforts to nominate and elect as many physicians to the General Assembly as possible. With the profession liberally represented in the legislature we would be in much better shape to obtain the necessary health legislation, as well as the appropriations so much needed by our state board of health, and the institutions established for our afflicted ones who are public charges.

### Owen Bill

The society urged immediate and concerted action on the part of our senators and representatives in Congress in favor of the Owen bill.

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## OHIO STATE MEDICAL ASSOCIATION

*Held at Dayton, Ohio, May 7-9, 1912*

*(Continued from page 1534)*

The officers elected were named in The Journal, May 18, page 1520.

### The Early Diagnosis and Treatment of Syphilitic Diseases of the Central Nervous System

Dr. Edmund H. Baehr, Cincinnati: The value of the serologic examination of the blood-serum and the cerebrospinal fluid in diagnosis of disease of the central nervous system is established. Positive Wassermann reaction in the fluid is absolutely indicative of paresis, tabes or meningeal syphilis, and it becomes possible even to distinguish between these by a careful study of the globulin and lymphocyte content. Though tabes may exist in the absence of a positive Wassermann reaction in the cerebrospinal fluid, no case has occurred in which there was in addition no abnormality in the fluid, such as lymphocytosis or globulin excess. At least one variation is present always. A spinal fluid showing a strongly positive Wassermann and an excess of cells and globulin as well, must be considered either a syphilitic meningitis or paresis. These observations substantiate the old belief that tabes and paresis developed on syphilitic foundations.

Discrimination should be made between the types of cases selected for treatment with the strong antisyphilitic remedies. Not only the physician, but the intelligent patient also should know that the loss of coordination of movements and the loss of vision will not be restored by any agent used; that it is possible, but by no means certain, that the disease may be arrested in its development, but that a pronounced improvement may be expected of all the distressing symptoms, the pains and parasthesias, the bladder and rectal weakness, which give the sufferer more concern usually than do the failing vision and insecure gait.

DISCUSSION

Dr. W. S. Thayer, Baltimore: I would emphasize the importance of thinking of tabes in obscure abdominal paresis.

Dr. Lewis A. Levison, Toledo: It is a very wrong conclusion that with an inactive Wassermann the patient is not syphilitic. Cases of tabes, congenital syphilis and gumma have been seen in which there was no positive reaction. The positive Wassermann is always much more important than the negative and has much more significance. Where patients have been treated with salvarsan, etc., the Wassermann may become inactive for weeks or months, and again become positive. If it disappears a few days after treatment it does not mean that the patient is cured.

Dr. W. J. Stone, Toledo: Reasoning that syphilis is a degenerative disease and that it has been sufficiently treated in years gone by, it is hardly to be expected that it would be benefited by salvarsan or mercurial treatment, but the experience is that salvarsan, intravenously, is followed by marked benefit. The Noguchi test is more valuable than the Wassermann in excluding syphilis. In latent syphilis only about 50 per cent. of cases give a positive reaction to the Wassermann while the cobra venom test will give 78 per cent. positive results.

### The Municipal Control of the Milk Supply of Ohio

Dr. Charles F. Tenney, Toledo: No one has the right to use the words, "certified milk," unless the cap bearing the name has been furnished by a body of medical men usually selected from the local medical society for this purpose. This stamp means that the producer has conformed to the rules and regulations governing the production of certified milk as laid down by the American Association of Certified Milk Commissioners. The Holstein cow is the ideal furnisher of milk for infants and invalids, giving a fat percentage ranging from 3.5 to 4 per cent., which is about right for the child's intestinal tract to digest. The fat molecules are smaller and more easily broken up, and the volatile glycerids are less in amount, thus making the fat much more easily assimilated by the child's intestines. The Holstein cow is less apt to have tuberculosis and is more hardy than the Jersey, whose fat percentage is too rich for the child's digestion. In Toledo, biweekly examinations of the milk are made by a chemist, and the bacterial counts of the milk must conform to the milk commission's requirement, which is not over 10,000 per cubic centimeter, and in case of the butter fat, at least 3.5 per cent. All employees are examined by a member of the commission, and any new man hired for this work must report to a member of the commission for a physical examination before he may start work. An analysis of the water from the well is made twice during the year. In Toledo, certified milk has not only given clean milk to the bottle-fed baby and for the invalid who is largely dependent on a milk diet, but it has awakened the authorities to an increased activity by the comparisons of the certified milk count of 10,000 and the city's average milk count of 10,000,000.

### Chronic Infectious Endocarditis

Dr. Oscar Berghausen, Cincinnati: The cases under consideration are those properly belonging to those classified under the heading of malignant endocarditis, but rarely as intense in their clinical manifestations. The blood-culture usually discloses the presence of pneumococci, staphylococci, influenza bacillus or the so-called *Streptococcus mitior* or *S. viridans*. The portal of entry of the organisms thus far isolated in these cases is unknown, although the tonsil will be the organ accused by many. Pathologic changes in the form of warty excrescences on the mitral and aortic valves with accompanying changes in the heart muscle are produced, yet the clinical signs elicited on an examination of the heart may be so slight as to cause some doubt as to whether such changes have really taken place. The course is essentially a chronic one; sooner or later the cardiac changes become more evident and the patient dies as a result of cardiac failure or through the production of septic emboli in the kidney, brain, lungs or any organ. Cerebral hemorrhage was the cause of death in one of my cases. In cases with a persistently remittent type of temperature curve, with or without distinct symptoms on the part of the heart, and commonly with joint-symptoms, a blood-culture will occasionally be found positive and reveal the presence of endocarditis lenta. Such cases can properly be termed chronic septicemia or chronic septicopyemia. The patient has, to a certain degree, protected himself against the invading organisms, and the latter have probably adapted themselves to the antibodies of the heart. Although a temporary restoration of an apparently normal condition is possible, the tendency is for the bacteria sooner or later to overcome the resistance of the host. The blood-picture is a varying one, depending on the course of the disease. A secondary anemia is not uncommon, although the total number of red cells is not always diminished.

The use of autogenous vaccines has been followed by only temporary periods of improvement. The use of antistreptococcus serum likewise is not followed by improvement and may produce some harm by the sharp reactions which may follow. Salicylates are of no value. Ordinary dietary and therapeutic measures alone are indicated.

DISCUSSION

Dr. E. A. Wagner, Cincinnati: Classification of these so-called chronic rheumatic conditions is very difficult, especially on account of the varied bacterial findings. I advocate the bedside method of making cultures. The blood-cultures are frequently inactive in chronic rheumatism, unless during acute exacerbations or when the temperature is high. It would be well to follow up the cases of acute rheumatism in which the temperature is high.

Dr. Frank Winders, Columbus: I recently had a case which differed in the length of time over which it had extended, so that I was disposed to call it subacute rather than chronic endocarditis. The patient was a man, 34 years of age, an automobile dealer, taken sick last September, treated for eight weeks, then allowed to get about, and then treated for chronic malaria, pronounced so by the attending physician on account of the enlarged spleen, though he could not find the microorganism. The interesting feature was the very sudden change in the physical signs during the course of observation. Blood-cultures made showed staphylococcus, and a radiograph showed a large heart whose shape pointed to an infusion in the cardiac sac, a faint mitral systolic murmur, with low tension. The tenth day under observation, while taking a bath, he had a sudden attack of angina and there was a remarkable change in the physical condition. There was a very late diastolic murmur and typical pulse, as though he had lost a part of one of his aortic valves. Autogenous vaccines were used without result; it was thought some benefit followed the use of the stock vaccines, but the patient died and no autopsy could be obtained.

Dr. W. S. Thayer, Baltimore: These are among the most distressing cases a physician is called on to treat. Most of them are fatal. Another point is that the *Streptococcus viridans* is of extremely slow growth. The only chance for recovery lies in putting the patient in the best condition, keeping the nervous system as well as may be, and avoiding, as far as one can, the meddling of the family. This last is the most difficult part. Much care should be taken in the use of serums and the vaccines. I do not think that there is evidence that vaccination does any good, and in some cases it does harm, without doubt. Some hope may be had from an autogenous antistreptococcic serum, but care must be taken with this, because of the urticaria and other things produced which do not help the patient.

Dr. W. J. Stone, Toledo: If any benefit is to be had from vaccines the vaccine must be made properly, corresponding to the type of organism isolated from the blood, and made by experienced men.

### Alimentary Respiration; The Secretion of Carbon Dioxid by the Alimentary Mucosa and Its Relation to Eructation of Gas and the Abnormal Inflation of the Stomach and Intestine

Drs. R. T. Woodyatt and Evarts A. Graham, Chicago There seems to be a tacit agreement that gas in the stomac and the resultant belching mean one of two things: bacteria fermentation or swallowed atmospheric air. But there are reasons for believing that these two causes are not responsible for all cases of gas in the stomach, especially in cases of acute dilatation of the stomach and certain cases in which belching is associated with hyperacidity. In this connection it is entirely credible that gases might be secreted by the wall of the stomach. From our observations it would seem clear that gas can both be secreted and absorbed by the alimentary tract under physiologic conditions, and since pathologic processes, in general, may be regarded as merely disproportionate physiology, it is not unreasonable to suppose that under pathologic conditions the secretion of carbon dioxid into the stomach might become excessive. Granting this, why should not a clinical differentiation be made between distention due to this cause and that due to causes already recognized, and logical treatment prescribed for each. Finally, if gases may pass to the alimentary mucosa from the blood, should not alimentary respiration, as well as pulmonary respiration, be taken into account in the course of studies in which stress is laid on blood gas determinations, especially those touching such questions as shock?

An experimental study has been undertaken looking to the answer of these questions, and we studied particularly the condition known as acute dilatation of the stomach, the cardinal symptoms of which are rapid, even sudden enlargement of the stomach which becomes filled with fluid and gas, associated with vomiting and collapse, often ending in death. Most cases have occurred after surgical operation performed under chloroform anesthesia; some have followed anesthesia alone, while others have occurred in the course of pneumonia or other infectious diseases. Still others have followed injuries without anesthesia, and a very few have occurred suddenly in apparently well people. Interpreting the fluid contents as equivalent to edema fluid and gas, an attempt has been made to produce the picture of acute dilatation in all its essentials, in animals, by methods which might be expected to cause edema of the stomach. Procedures similar to those used by Fischer on the kidney have been used. The theory which is offered for acute dilatation of the stomach is that it is an asphyxia of the stomach with the acidity which this implies, causing an edema; that the stomach contents are a mixture of exudate and gastric juice, and that the gas comes from the stomach walls.

### DISCUSSION

Dr. C. F. Hoover, Cleveland: As these gases were taken from the stomach immediately after death, in the experiments, could not the gas found be from the blood itself, or a secretory function analogous to the change in the pulmonary system?

Dr. R. T. Woodyatt: The percentage of gas is so much higher than that of the blood (24 per cent.) that it would be like having water flow up hill.

Dr. C. F. Hoover: I saw a case in which the stomach was seen to dilate during a pelvic operation. I would ascribe this to muscular inactivity, an inhibition; it could not have been a passive distention. It is not an active distention from the accumulation of gas in the stomach, but rather an extreme relaxation of the stomach. I would be inclined to look on what has been described as an acute dilatation as an attending circumstance rather than the result.

## The Fundamental Factors in Cardiac Conditions

Dr. Paul G. Woolley, Cincinnati: To take the heart out of its vascular connection—the system to which it belongs—and treat it as an independent organ, is to take a serious liberty, and this liberty is excusable only if it is remembered always that the heart is not a separate organ but really a series of chambers that have developed by dilatation of a certain part of the vascular system. Pathologic changes in the heart are the result of processes which affect the muscles, the valves, the conduction or nervous system. Leaving out of consideration the developmental defects, the conditions of the chambers of the heart are the results of the amount of blood they must receive, this depending on the condition in the peripheral vessels and in the blood itself—caliber of the vessels, elasticity, viscosity, resistance—and on the condition of the valve-efficiency; and on the amount of blood they contain, which latter depends on the condition of the musculature. The processes known as degeneration and inflammation occur under mechanical and chemical insults, two series of processes which, while they have much in common, are primarily entirely different, and both of which are confused with atrophy. The same looseness of terms occurs as in the case of renal diseases. It is rarely, if ever, justifiable to speak of any other than an interstitial myocarditis, which may have an acute or chronic character. Other conditions, classed now with the inflammations and involving the myocardium, should be called myocardial degeneration. A heart that has suffered considerable fibrosis because of strain is often said to be the seat of a chronic interstitial myocarditis; but it is a heart of compensatory fibrosis.

Leaving aside tumors and anomalies, there are two processes that are at the base of all cardiac lesions, inflammation and degeneration, these resulting from either mechanical or chemical causes. Either alone or in combination, inflammatory and degenerative changes are able to produce certain states of the heart as a whole which are called hypertrophy, atrophy, myocarditis, valvular stenosis, valvular insufficiency, aneurysm, rupture, etc. Extrinsic factors operating through the vagus or sympathetic nerves produce physicochemical changes in the myocardium and in the muscle cells of the bundle of His which cannot be distinguished with the eye or other optical apparatus, but which lead to various clinical effects. Only the most careful analysis of symptoms will make it possible to determine the character of what is always a vicious circle in cardiac diseases, and to interrupt this circle at the proper point.

## Treatment of Hemorrhagic Conditions with Normal Human Blood Serum

Dr. Louis A. Levison, Toledo: The serum treatment has been practically specific in the hands of all who have tried it. It stops hemorrhage, thus saving life in a class of patients whose mortality under all other classes of treatment reached 90 per cent. Human serum has distinct advantages over horse or other animal serums. It never causes toxic or anaphylactic symptoms in any dosage. The use of the serum is also preferable to the whole blood, which has been advocated. The blood-serum can be obtained from any healthy individual. The blood is allowed to clot and the serum is ready for use. The average dosage is 10 c.c., repeated as often as is necessary to stop the hemorrhage. Besides its value in stopping hemorrhage, the serum is a perfect food which is invaluable to undernourished children.

(*To be continued*)

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# AMERICAN ACADEMY OF MEDICINE

## CONFERENCE ON CONSERVATION OF SCHOOL CHILDREN

*Held at Lehigh University, South Bethlehem, Pa., April 3-4, 1912*

The President, Dr. Alexander R. Craig, Chicago, in the Chair

## How Far Shall the Public School System Care for the Feeble-Minded?

Mr. Andrew W. Edson, New York City: The feeble-minded children who should be in attendance at the public schools are those who, while below par in mental acumen, are susceptible of intellectual growth. All others are institutional cases. Suitable classrooms in regular school buildings should be secured for such children. The classes should be small to permit of individual training. Specially qualified teachers should be selected. The course of study should lead to some vocation, and should include physical and manual training. The skilled teacher and the skilled physician should work side by side.

Mr. J. H. Van Sickle, Springfield, Mass.: State supervision over feeble-minded boys should begin before the development of criminal tendencies. To prevent the marriage of feeble-minded girls and shield them from temptations is an obvious duty and one which the state can perform more effectively and at less expense than the local community. For a number of years these boys and girls may be grouped in special classes and taught in public schools. In border-line cases several years may pass before it can be determined whether a child is feeble-minded or merely backward; hence the value of the special class in the public school. Except in the exceedingly small number of instances in which feeble-minded children have good homes, local communities cannot safely retain them beyond the age of adolescence. The public school can render its best service by teaching the feeble-minded such elements of simple industry as will render them most nearly self-supporting on entering the custodial home.

Dr. E. Bosworth McCready, Pittsburgh: The public school is not the proper place for the education of the feeble-minded child. Careful examination should be made of all children when first entering school. Those found to be feeble-minded should be excluded and segregated in institutions. Doubtful cases and children backward in their development should; after the correction of physical defects, faulty environment, etc., receive the necessary training in special classes and be under the observation of physicians especially trained in this sort of work.

#### DISCUSSION

Dr. William G. Schauffler, Lakewood, N. J.: While I agree as to the need of segregation of feeble-minded children, the parents have just as much right to say what shall be done with these children as has the physician or educator. The first thing to do is to find out who these children are and then do the best we can under the circumstances. The law in New Jersey requires that children three years behind the normal must be provided for in special classes not to exceed fifteen. The feeble-minded, merely backward and the physically disabled are looked after separately when found to have been more than three years in one grade.

Miss Johnson, New York: Until we can get proper institutions for these children we must do something for them in the schools. The social service side of the public school work is very valuable. Let us have paid social workers. The only way by which we can hope to place children where they belong is to get the parents' good-will. The social worker can do that when the teacher will fail.

Dr. W. G. Schauffler, Lakewood, N. J.: I feel that we might go a step further and make it compulsory to report every case of feeble-mindedness coming under observation. Legislatures should give the right to segregate these people who are the greatest social menace of the age to-day.

### Child Labor Versus the Conservation of School Children

Mr. Owen R. Lovejoy, New York: We must take a higher ground in relation to the care and training of children. We must apply the same scrutinizing attention to this human product that manufacturers and merchants are applying to specialized methods of securing business efficiency. I venture to predict that we shall recognize that the child is so truly an asset of the state that during his entire period of minority the state will claim supervision of his care, physical training and educational opportunities. The relation of parent to child will not be less than now, but more.

## TEACHING HYGIENE IN PUBLIC SCHOOLS

### What Should Be Taught?

Dr. Seneca Egbert, Philadelphia: We should first have the pupils know their bodies, and to realize that no one may reasonably hope for excellence in living if the spiritual, mental or physical personality is neglected. The development suggested involves a working knowledge of human anatomy and physiology, and the need of teachers competent to give such instruction who have a real enthusiasm for the subject. Instruction of the very young may be given by the inculcation of comparatively few and simple truths and by directing them to good examples for practice and imitation. A beginning may be made with the nature studies, leading almost unconsciously to the proper appreciation of sex hygiene. Because of the large number leaving school at 14 a course in hygiene, including as many of its subdivisions as can be comprehended, should be made a part of the schedule for the grammar school. Such a course should appeal strongly to the pupil's personal consciousness and sense of self-profit in the higher sense. For the high school I would enlarge the course until it involves an extensive scope of the general subject, and until the altruistic appreciation of it supplanted the egoistic and it was actually apprehended as being, in truth, the science of public health. A great need for the accomplishment of the work is competent teachers.

### The Teacher's Point of View

Dr. Percy Hughes, South Bethlehem: What should be taught is, in the first place, an ideal of complete living, realized as far as may be under the conditions of the schoolroom. During the first six years of school life hygiene should be taught as incidental to the art of doing and living efficiently, of obtaining those scholastic and social aims which a true school life makes prominent. In the seventh or eighth grade, at the dawn of adolescence, the rules of health, and some of the most evident data of physiology may be summarized, with special reference not so much to the child himself as to the social and civic life of the community into which he must now feel he is entering. There seems to be every reason why in the high school something of both physiology and hygiene should be taught; and doubtless the hygiene should rest more directly on physiology, but the considerations which vary in every school will determine how the instruction shall be given. To bring the whole school life to bear in the formation of hygienic habits and ideals of living requires a teacher of at least a good high-school training supplemented by a normal-school course in which much of the work has been brought directly to bear on just this purpose.

#### DISCUSSION

Mr. F. D. Raub, Allentown, Pa.: If in the schools the pupils can be imbued with the importance of maintaining a certain manner of life conducive to good health, much will be accomplished toward making the child a useful member of the community. In the primary grades some of the features introduced are care of the body, the kind of food necessary, the use of the special senses and the care of certain sense organs. In the grammar grades more of technical detail can be presented, bearing in mind always the necessity of inculcating good health habits. Instruction should be given concerning the different organs of the body, including a general knowledge of their structure and functions.

Dr. M. P. E. Groszmann, Plainfield, N. J.: This coordination of the physical care and the training in proper hygienic habits which reflect on the mental and moral attitude is of extreme importance.

Dr. Helen C. Putnam, Providence, R. I.: It does no good to talk about hygiene in educational institutions under unhygienic conditions. Our public schools and colleges, and universities to some extent, are hotbeds of tuberculosis. The tuberculosis death-rate among teachers is higher than in any other profession.

Dr. J. K. Weaver, Norristown: The lack of practical knowledge on the part of teachers is a grave fault in our teaching of hygiene in schools.

### Methods in Vogue

Mr. W. S. Steele, Harrisburg, Pa.: If we can bring boy and girls to see that physical exercise is necessary in orde to keep their arteries from hardening, that overstraining th heart is not good physical exercise, that to eat and drink to much is simply to overwork the organs of elimination an thus bring on various ills, we are not only making them mor efficient engines in the great factory of life, but we are creating an agreeable disposition and may, perhaps, prepare better field than we realize for the dropping of spiritual see

### Improvements Suggested

Mr. Louis Nusbaum, Philadelphia: The most vital fact in the teaching of hygiene is the teacher. She must, in ordinary degree, have faith and enthusiasm in her work. far as school life permits, she must be the exemplification her teaching. If we will relate our teaching to the child daily acts so that he will breathe correctly, take proper kind and amount of exercise, sleep at reasonable hours, and in a well-ventilated room; so that his body and clothing will always be clean; if we can persuade him to be temperate and modest in all things, we shall be giving a kind of training which will result, not only in personal health and happiness, but ultimately in increased health, happiness and efficiency and an improved morality of the entire community.

### How Should Hygiene Be Taught?

Dr. James S. Grim, Kutztown, Pa.: The average training-teacher in this work is ready to proceed toward better things when the medical profession and superintendents of schools create a sentiment for a different type of examiner, a man who puts health first and anatomic details second. Microscopic minutiæ as an end will part company with interest unless the teacher is not only unusually strong but a trained biologist as well. An examination on hygiene of a prospective teacher should in some way include the bodily habits of the applicant, the carriage, the vitality, the sanitary ideals actualized in practice. We have been spending too much time on the human mechanism and too little time on the child's environment. If children see how and where the house-fly breeds and what it does they will soon be interested in its extermination.

### Teaching Hygiene for Better Parenthood

Dr. Thomas D. Wood, New York: The teaching of hygiene can further no interest so important as that which relates to parenthood. For practical eugenics it is essential that the romantic, the affectional basis of marriage should be preserved, but the sentimental and emotional elements should be supported and guided by intelligent appreciation of all the factors necessary for parenthood which will protect the biologic values. This can be accomplished only by the development of controlling ideals which are supported by reason, intelligence, ethical impulse and religious motive. The most natural and logical teacher of sex and parenthood to the child is the parent. Class-room or group instruction with reference to direct human sex teaching in the public school cannot be given until: (a) enlightened public opinion recognizes sufficiently the necessity for such instruction, and exhibits confidence in the ability of the teachers to give the instruction needed; (b) teachers are intelligent, wise and tactful enough to give such instruction and guidance successfully. Comparatively few teachers to-day are capable of meeting the obligations involved in sex education. Such instruction should be given in universities, colleges, normal and private schools. The basis of successful sex teaching is companionship and confidence between the child and the parent. When class or group instruction is to be given to adolescents, it is important that the primary emphasis should be given to the presentation of facts and values, biologic, hygienic, sociologic, ethical and economic. More important than the knowledge of sex hygiene are the motives which will control thought and action.

Dr. Helen C. Putnam, Providence, R. I.: Educators are finding that well-directed correlation of human life with phenomena of growing things in school gardens and nature studies develops a wholesome mental attitude. The strategic years for making education for parenthood most effective are from 16 to 24.

### Indirect Methods of Teaching Hygiene

Dr. C. E. Ehinger, West Chester, Pa.: The fact that athletic success depends largely on physical fitness must be the keynote of hygienic teaching among young people, and this will be both the opportunity and the means by which the physical director shall meet the needs of his charges. I believe it is possible for the modern physical trainer to create a veritable atmosphere of health that will far exceed in value the results of the ordinary direct method of learning mere facts. All aids which make their appeal through avenues of recognized interest with a minimum of emphasis with the utilitarian aspects deserve to be developed. It should be understood that this does not contemplate the doing away with direct or formal method.

## Medical Education and State Boards of Registration

### COMING EXAMINATIONS

Delaware: State Society and Homeopathic Examining Boards, Dover and Wilmington, June 18-20. Secretary of Medical Council, Dr. Henry W. Briggs, Wilmington.

Illinois: State Armory, Springfield, June 13-15. Sec., Dr. James A. Egan.

Iowa: Capitol Building, Des Moines, June 13-15. Sec., Dr. Guilford H. Sumner, State House, Des Moines.

Kentucky: The Armory, Louisville, June 3-5. Sec., Dr. J. N. McCormack, Bowling Green.

Louisiana: Regular, Tulane University, New Orleans, May 30 to June 1. Sec., Dr. A. B. Brown, 108 Baronne Street.

Maryland: Regular, 1211 Cathedral Street, Baltimore, June 18. Sec., Dr. J. McP. Scott, 129 West Washington Street, Hagerstown; Homeopathic, St. Luke's Hospital, Baltimore, June 13-14. Sec., Dr. O. N. Duvall, 1326 North Mount Street, Baltimore.

Michigan: Ann Arbor, June 11-13. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

Minnesota: State University, Minneapolis, June 4. Sec., Dr. Thomas S. McDavitt, Lowry Building, St. Paul.

Missouri: Gymnasium of the St. Louis University, St. Louis, June 24-26. Sec., Dr. Frank B. Hiller, State House, Jefferson City.

New Jersey: State Capitol, Trenton, June 18. Sec., Dr. H. G. Norton.

New York: June 25-28. Chief of Examinations Division, Mr. Harlan H. Horner, Department of Education, Albany.

North Carolina: Hendersonville, June 11. Sec., Dr. Benjamin K. Hays, Oxford.

Ohio: Columbus, June 18-21. Sec., Dr. George H. Matson, State House, Columbus.

Pennsylvania: Philadelphia, Pittsburgh and Harrisburg, June 24-27. Secretary of Bureau of Medical Education and Licensure, Nathan C. Schaeffer, Harrisburg.

South Carolina: Columbia, June 11. Sec., Dr. A. Earle Boozer, 1806 Hampton Street.

Texas: Austin, June 27-29. Sec., Dr. J. D. Mitchell, Fort Worth.

Virginia: Richmond, June 18-21. Sec., Dr. R. S. Martin, Stuart.

Wisconsin: Milwaukee, May 28-30. Sec., Dr. J. M. Beffel, 3200 Clybourn Street.

Wyoming: State Capitol, Senate Room, Cheyenne, June 12-14. Sec., Dr. A. B. Tonkin, Riverton.

### Idaho April Rport

Dr. O. J. Allen, secretary of the Idaho State Board of Medical Examiners, reports the written examination held at Boise, April 2-4, 1912. The number of subjects examined in was 11; total number of questions asked, 110; percentage required to pass, 75. The total number of candidates examined was 26 of whom 15 passed and 11 failed. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| University of Colorado | (1911) | 78 |
| Northwestern Univ. Medical School | (1910) 75, 82; (1911) | 86, 85 |
| College of Physicians and Surgeons, Chicago | (1904) | 80 |
| Kansas Medical College | (1903) | 80 |
| Tulane University of Louisiana | (1895) | 78 |
| University of Michigan, Dept. of Med. and Surg. | (1910) | 84 |
| University of Minnesota, College of Med. and Surg. | (1893) | 80 |
| Barnes Medical College | (1908) | 76.7 |
| Marion Sims-Beaumont Medical College | (1902) | 75 |
| Kansas City Medical College | (1897) | 76.6 |
| University of Buffalo | (1897) | 78 |
| Ohio-Miami Medical College | (1910) | 84 |

FAILED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Gross Medical College | (1899) | 68 |
| Chicago College of Medicine and Surgery | (1908) | 70 |
| Northwestern University Medical School | (1908) | 74 |
| State University of Iowa, Coll. of Med. | (1896) 70; (1898) | 68.7 |
| University of Kansas | (1912) | 73.9 |
| St. Louis College of Physicians and Surgeons | (1903) | 60.7 |
| Barnes Medical College | (1904) | 69 |
| Columbia University, College of Phys. and Surgs. | (1908) | 73 |
| University of Oregon | (1905) | 56.6 |
| Trinity Medical College, Toronto, Ontario | (1903) | 71 |

The following questions were asked:

PATHOLOGY

1. Describe the morbid anatomy of arthritis deformans. 2. Describe varieties of bacteria. 3. Describe bacterins, serums and toxins. How are vaccines and serums prepared? 4. Describe gross and microscopic findings of lupus vulgaris. 5. Describe gross and microscopic appearance of gummata. 6. State blood-findings and describe morbid anatomy in pernicious anemia. 7. What changes take place in arteriosclerosis? 8. Define thrombosis, embolism, infarct, septicemia, pyemia, sapremia. 9. Describe gross and microscopic findings in acute yellow atrophy of the liver. 10. Describe the morbid anatomy of bronchopneumonia.

CHEMISTRY AND TOXICOLOGY

1. Give formula for: (a) mercuric chlorid; (b) mercurous chlorid; (c) cupric nitrate; (d) zinc sulphate; (e) boric acid. 2. Define and give examples of the terms: "normal salts," "acid salts" and "basic salts." Give the chemical composition of physiologic "normal salt

solution," with the approximate amounts of each ingredient. 3. Give the chemical composition (formula) and general properties of plaster-of-Paris. Explain in detail the process of setting of plaster. 4. What is the chemical formula for Labarraque's solution and on what does its disinfectant properties depend? 5. Name four normal, and give in detail tests for four abnormal, constituents of urine. 6. A. State the most common and convenient antidotes for poisoning with mineral acids. B. What course would you pursue when the poison to be antidoted is unknown? 7. Differentiate ptomains and leukomains. State symptoms and treatment for ptomain poisoning. 8. Explain in detail your method of performing an autopsy. 9. Give symptoms, treatment, lethal dose and post-mortem findings of methyl alcohol. 10. In a suspected case of arsenic poisoning, give the necessary steps required for post-mortem findings and give Marsh test for arsenic.

### PHYSIOLOGY

1. Locate and give the general features of the spinal cord. Draw a diagram of a transverse section and describe any three tracts thereof. 2. What is meant by ascending and descending degeneration? 3. Define metabolism and give examples of diseased conditions where metabolic action is either absent or perverted. 4. Locate and describe the action of the muscle-band of His. 5. Describe the tissue proper of the suprarenals, give the course and termination of their nerve-supply and state what effect their removal produces in man and lower animals. 6. From what natural source of supply does the human body derive the greater part of its energy? 7. Which nerves supply the submaxillary gland? State the effect of the stimulation of each or either of these nerves on the gland. 8. Define reflex arc and give examples of reflex action. 9. Write a paragraph on the progressive effect of starvation on lower animals and man. A. What constant physical loss precedes death? 10. What is intrapulmonary pressure, intrathoracic or negative pressure?

### DIAGNOSIS

1. Give diagnosis of Rocky Mountain "tick" fever. 2. Give differential diagnosis of chancre and chancroid. 3. How distinguish crisis from collapse in lobar pneumonia? 4. Of what import is the spleen in the diagnosis of febrile conditions? Give the topography of the spleen. 5. Describe four peculiar appearances of the tongue and give their significance in diagnosis. 6. What is the diagnostic significance of dropsy? 7. Diagnosticate acute fibrinous pericarditis. 8. Make a differential diagnosis of pleuritic and pericardial effusion. 9. Make a diagnosis of aneurysm of the descending aorta. 10. Give the differential diagnosis between cerebrospinal meningitis and typhoid.

### HYGIENE

1. Give etiologic factor, avenue of entrance, source of infection, mode of dissemination and preventive measures of the following diseases: pneumonia, diphtheria, erysipelas, small-pox, whooping-cough, rabies, scarlet fever, mumps. 2. What is the duration of life of the *Bacillus tuberculosis* in the dead body buried in the ground, kept in cold storage or pickled? A. How should such bodies be treated before burial? 3. Give, in detail, personal prophylaxis while attending a case of small-pox. 4. Which of the following diseases are due to animal parasites: glanders, influenza, yellow fever, tetanus, malignant edema, scabies, filaria, trichinalis, favus? 5. Name some of the principles to be observed in the inspection of meat for tuberculosis, when the whole carcass is condemned. 6. Has the State of Idaho any law making the testing of herds compulsory? 7. What effect has sewage on the oxygen of clean water? 8. Considering the relation of soil to disease, where would you find sterile soil? 9. Define hygiene, endemic, epidemic, parasite, animal, vegetable, hematozoon, helminthiases, piroplasmosis. 10. Describe a simple and practical method of window ventilation for schoolrooms. Make a drawing of the apparatus.

### PRACTICE OF MEDICINE

1. What is an endemic disease? 2. In what conditions does subnormal temperature occur? 3. Differentiate between cerebral vomiting and gastric vomiting. 4. Give symptoms and treatment of Rocky Mountain "tick" fever. 5. In auscultation of healthy lungs what sound is heard and what is it technically termed? 6. Describe a typical case of laryngismus stridulus and give treatment. 7. Differentiate pleurisy and pneumonia. 8. Differentiate organic and functional heart murmur. 9. Define rubeola and describe its symptoms. 10. Differentiate diphtheria from follicular tonsillitis.

### SURGERY

1. Give symptoms, diagnosis and treatment of fistulo in ano. 2. Give symptoms and differential diagnosis of tuberculous peritonitis. 3. Classify ileus and give symptoms, diagnosis and treatment of same. 4. Classify hernias. 5. Give surgical treatment of umbilical hernia. 6. Classify diverticula and give symptoms, diagnosis and treatment of Meckel's diverticulitis. 7. Give surgical treatment of hydrocele. 8. Give symptoms, diagnosis and treatment of fracture of neck of femur. 9. Give symptoms and differential diagnosis of renal tuberculosis. 10. Give symptoms, diagnosis and treatment of infection of the frontal sinus.

### OBSTETRICS

1. Name and describe briefly the female genital organs. 2. Name and describe the important sutures and fontanelles of the fetal cranium. 3. Describe the fetal circulation. 4. Describe the development of the ovum and fetus at the end of the third month. 5. State the most important signs of pregnancy up to the fourth month. 6. Describe the three stages of normal labor; give management of each. 7. When would you use the forceps? Give technic of operation. 8. What is placenta prævia? Eclampsia? Give treatment of each. 9. Define and describe graafian follicle, corpus luteum, vitelline nucleus, umbilical vesicle, liquor amnii. 10. State etiology, diagnosis and management of a breech presentation.

### GYNECOLOGY

1. Describe a case of carcinoma uteri. 2. Give the symptoms and treatment of acute pelvic peritonitis. 3. Describe the operation for ventral suspension of the uterus. 4. Give the etiology of metrorrhagia and menorrhagia. 5. Give the etiology of prolapsus uteri. 6. Describe a case of uterine fibroma. 7. Give the technic of a uterine curettage. 8. Give the symptomatology and treatment of acute urethritis. 9. Give the symptomatology and treatment of acute cystitis. 10. Give the diagnostic points of ectopic gestation.

### MATERIA MEDICA AND THERAPEUTICS

1. Give the composition, dose and pharmaceutic name of: (a) Basham's mixture; (b) Dover's powders; (c) black draught. 2. Give the chemical name for: (a) Epsom salts; (b) Rochelle salts; (c) Glauber salts; (d) sweet spirit of niter. 3. Name the alkaloid and dose derived from scoparius, Calabar bean, aconite and veratrum. 4. Explain the equivalents in the metric system of the following weights: 1, 5, 10, 15.5 gr. and 1 ounce. 5. What is meant by: (a) endermic; (b) hypodermic and epidermic administration of a remedy? 6. Mention three drugs used to accelerate the action of the heart and three drugs used to retard the action of the heart, and give dose of some official preparation of each. 7. Give the preparations of bismuth; how administered and indications for use. 8. Give the preparations and doses of mineral acids with their therapeutic effects. 9. Give dosage and indications for four remedies you use in jaundice, rheumatism and malaria. 10. State the name and dose of two drugs belonging to each of the following classes: (a) emetics; (b) diuretics; (c) diaphoretics; (d) cathartics. What is the dose of: (a) tinct. opii camph.; (b) tinct. opii deod.; (c) morphin sulphate; (d) codein phosphate?

### MATERIA MEDICA, ECLECTIC

1. Give indications and adult dosage of aconite, belladonna, digitalis, pulsatilla, phytolacca. 2. State derivation, dose and properties of iodin, bismuth, ichthyol, phosphorus, chloral hydrate. 3. What is an alkaloid? Name five; give properties and dose of each. 4. Name five cardiac stimulants; give dose of each. 5. What are the properties of chionanthus, apocynum, passiflora, lobelia, sanguinaria. 6. Name five astringents; give dose and use of each. 7. State the medicinal properties of arsenic. Name two common preparations; give dose of each. 8. State the medicinal action of hyoscyamus; give dose. 9. Apomorphin hydrochlorid. What is its principal use? Give dose. 10. What are the properties of dioscorea? Colchicum? Give dose of each.

## Minnesota April Report

Dr. Thomas S. McDavitt, secretary of the Minnesota State Board of Medical Examiners, reports the written examination held at Minneapolis, April 2-5, 1912. The number of subjects examined in was 11; total number of questions asked, 110; percentage required to pass, 75. The total number of candidates examined was 10 of whom 8 passed and 2 failed. Twenty-two candidates were licensed through reciprocity. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Rush Medical College | (1912) | 84.2, 86.2 |
| College of Physicians and Surgeons, Chicago | (1911) | 84.7 |
| Johns Hopkins University | (1910) | 88.7 |
| College of Physicians and Surgeons, Boston | (1911) | 79.1 |
| University of Minnesota, College of Med. and Surg. | (1911) | 88.1 |
| Columbia University, College of Phys. and Surgs. | (1909) | 88.8 |
| McGill University, Quebec | (1905) | 89 |

FAILED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Woman's Medical College of Pennsylvania | (1909) | 70.4 |
| Medical College of South Carolina | (1908)* | .... |

LICENSED THROUGH RECIPROCITY

| College | Year Grad. | Reciprocity with |
|---|---|---|
| Denver Homeopathic College | (1899) | Colorado |
| American Medical Missionary College | (1904) | Michigan |
| Bennett Medical College | (1906) | Illinois |
| Northwestern University Medical School, (1898) Wisconsin; (1909) North Dakota; (1910, 2) Illinois; (1911) Illinois. | | |
| College of Phys. and Surgeons, Chicago | (1908) (1909) | Illinois |
| Rush Medical College | (1911) | Illinois |
| Indiana Medical College, Coll. of Phys. and Surgs. | (1907) | Indiana |
| Keokuk Medical College, College of Physicians and Surgeons, (1900) Wisconsin; (1905) Iowa. | | |
| University of Kansas | (1906) | Nebraska |
| University of Michigan, Dept. of Med. and Surg. | (1911) | Michigan |
| Creighton Medical College | (1911) | Nebraska |
| Marquette University, Milwaukee | (1911, 4) | Wisconsin |
| Wisconsin College of Physicians and Surgeons | (1911) | Wisconsin |

* Failed to pass practical examination.

## Book Notices

The Inheritance of Acquired Characters. A Hypothesis of Heredity, Development and Assimilation. By Eugenio Rignano. Authorized English Translation by Basil C. H. Harvey, Assistant Professor of Anatomy, University of Chicago. With an Appendix on the Mnemonic Origin and Nature of the Affective or Natural Tendencies. Cloth. Price, $3 net. Pp. 413. Chicago: The Open Court Publishing Co., 1911.

In this book the author suggests a mechanism whereby the inheritance of acquired characters may be effected on the physical basis of assimilation, cell-division and the biogenetic law of recapitulation in ontogeny. In this respect he places himself in direct opposition to Weismann, who denies the possibility of the transmission of acquired characters. The author defends the Lamarckian view, to support which he brings forth the following theories of his own: 1. All the manifold physical, chemical, morphologic and physiologic variations, which can appear in the most different parts of the organism, are to be ascribed to specific alterations of a single form of energy, so that the latter appears, as it were, the common denominator for the variations that are quite unlike in nature and whose combination or separation is thus permitted as often as required. 2. The determinative influence which the germ-substance in its totality exerts on the soma cannot be limited to the first remnant of the first cleavage of the egg, but must persist throughout the whole of ontogeny up to the adult condition, so that the germinal substance never, as it were, loses touch with the soma, but rather remains in a continual state of reciprocal action and reaction with it. 3. The influence exerted by the soma in this way must be reversible, that is, the germ-substance must be influenced in such a way that it can call forth again at the proper moment, at the numberless different points of the soma of the new organism, all the same respective, special, somatic conditions by whose complex modes of being the germ-substance itself was already influenced in the present organism in so special a way. The theory as a whole is called by the author the centro-epigenetic hypothesis. He is firmly convinced that all living substance possesses the faculty of accumulating and returning the different particular specificities of generic nervous energy, which constitute the essence of all vital phenomena whatever. Thus he explains in detail the most fundamental biologic phenomena, such as histologic specialization of cells which respond always in their customary specific manner, no matter how unusual the stimulus which excites them, to the inheritance of acquired characters, from the evolution of species and the repetition of phylogeny by ontogeny, direct consequences of that inheritance, to mnemonic phenomena properly so-called.

After discussing the various theories advanced to explain heredity, which he finds extremely illogical, he goes into detail in elucidating his own views, which are very interesting. In his concluding summary he states that he was led to the theory of centro-epigenesis by a study of the fundamental law of the repetition of phylogeny by ontogeny with all its mediate and immediate results. His second hypothesis, according to which each specific nervous current deposits a very definite substance which, in its turn, is capable of provoking again the same specificity of current as that by which it was itself deposited, has enabled him with the aid of the centro-epigenetic theory to explain directly the inheritance of acquired characters. The third hypothesis, according to which vital phenomena consist essentially of an intranuclear oscillating nervous discharge—together with the second hypothesis of specific accumulators—explains to the author the fundamental property of the life-phenomenon, which consists in assimilation. These are ingenious theories worthy of study. If proved to be true, they may throw a flood of light on the transmission of disease-tendencies, the mechanism of which is still obscure. Physicians who interest themselves in the why and the wherefore of their provisionally accepted scientific dogmas will find this book replete with new ideas, as herein new vistas are opened to the medical imagination in relation to the fundamental principles of heredity.

The Criminal and the Community. By James Devon, Medical Officer of H. M. Prison at Glasgow, with an Introduction by Prof. A. F. Murison, LL.D. Cloth. Price, $1.75 net. Pp. 348. New York: John Lane Company, 1912.

During a period of sixteen years the author of this book has been in close intercourse with criminals of all classes; he thus gained a splendid insight into the criminal's make-up; similarly for many years he has taken an active interest in sociologic work. Both of these facts entitle him to a respectful hearing on the subject of the criminal in relation to society. Under the captions, "The Study of the Criminal," "Common Factors in the Causation of Crime," and the "Treatment of the Criminal," he handles his subject with intrepidity and utter disregard of old traditions. After a most scorching criticism of society, which in his opinion is responsible not only for creating the criminal, but also for preventing him from ever again becoming a useful citizen, he proposes several practical reforms. For the first offender, commonly a victim of "accidental misconduct," he proposes a system of probation, similar to the one in vogue in this country for juvenile offenders. He aims to give the individual an opportunity to reform when reformation is still possible, that is, before he has become a prison associate of the "hardened criminal." For the habitual offender who is frequently returned to prison the author favors permanent withdrawal of actual freedom, but he vigorously protests against treating him as a noxious animal; being nothing more nor less than a diseased and dangerous man, he should be treated as such. He further advocates the advisability of liberating prisoners when responsible citizens offer to become their guardians for stated periods of time. Devon is opposed to capital punishment, which he characterizes as an outstanding example of the application of the "retributory principle." In his opinion there is no real difference between the killing of an incorrigible criminal and the administration of a fatal dose of medicine to a patient suffering from incurable disease, both of which acts are contrary to every principle of humanity and ethics. Throughout the book a spirit of liberality is displayed, betokening strong sympathy for those who are "down and out," a characteristic often found in those who not only study criminal anthropology but also the environmental antecedents of criminals. That the author is thoroughly familiar with the sociologic aspect of his theme is apparent on every page. Those who have studied the natural history of crime and criminals must arrive at conclusions similar to those reached by the author of this book, namely, that the criminal represents an excrescence of a faulty social growth and that surgery is as futile in the application to the body politic as it is useless in the treatment of psychic disorders. In both sociology and medicine prevention is the remedy of the future. For the present the above-mentioned palliative measures as outlined by the author should commend themselves to society. Much good might be accomplished if every judge and legislator received a copy of this book. Physicians generally have long been sympathetic toward the views as expressed in this well-written volume, which is deserving of wide circulation.

Nephritis: An Experimental and Critical Study of Its Nature, Cause and the Principles of Its Relief. By Martin H. Fischer. The 1911 Cartwright Prize Essay of the Association of the Alumni of the College of Physicians and Surgeons, Medical Department of Columbia University, New York. First Edition. Cloth. Price, $2.50. Pp. 201. New York: John Wiley & Sons, 1912.

This is a book full of fresh, original thought. It is a special plea for the author's theory of nephritis, being an extension of his theory of edema, which has been favorably received by pathologists, though still under judgment.

The author does not consider in detail the histology of the kidneys, but rather their physiochemical structure. He believes that "all the changes that characterize nephritis are due to a common cause—the abnormal production or accumulation of acids in the cells of the kidneys" and gives the details of numerous experiments to prove this. The albumin of albuminuria, he believes, comes from the urinary membranes, not from the blood, that is, it is due to a solution of the solid colloid which makes the membranes. He shows what is the effect of acids and alkalies on solid colloids, such as fibrin and gelatin and later on the tissues.

From his experiments the author concludes that (1) an abnormal production or accumulation of acids in the kidney, or conditions predisposing thereto, exists in every case of albuminuria; and conversely that (2) whenever there is an increased production or accumulation of acids in the kidney it results in albuminuria; and (3) that if we decrease the "solubility" of various protein gels (fibrin and gelatin) in an acid medium we can decrease albuminuria.

He explains his views that all forms of nephritis are manifestations of one pathologic process. He describes fully experiments by which he has produced the histologic phenomena of nephritis in bits of normal kidney placed in weak acid solution. Under these circumstances he shows that the kidney substance swells, that it takes up water, becomes granular, dissolves in part, making the surrounding fluid albuminous and produces casts.

He does not think that hemorrhage into the kidney is due to stomata in the blood-vessels or breaks in continuity of the vessels, but to a softening of the colloid walls of capillaries and the squeezing through these softened cells of the blood-corpuscles. It seems strange that, if this is so, in the countless sections of kidneys showing hemorrhage, cells containing or partly containing corpuscles in process of passing through have not been observed often. The author's experiments on the production of all kinds of casts in pieces of normal kidney are most interesting and instructive.

The secretion of water he looks on as an active process and not due only or largely to mechanical changes in blood-pressure, etc. The secretion of so-called solids he explains in these words: "After the water is secreted I hold that all the constituents which characterize it as urine come to be added to it, in its course through the uriniferous tubules, by a process of leaching out of the dissolved substances present in the kidney-cells. But in this process of leaching out not all the constituents present in the protoplasm leave the cells in which they are originally present with the same ease. Depending on the character of the dissolved substance, and the state of the protoplasm as to lipoid content, colloidal state, and chemical composition, the water present in the uriniferous tubule may come to take up the dissolved substance to an extent which allows it ultimately to be found here in a lower concentration than in the kidney-cells, in the same concentration, or in a greater one. It is all a matter of equilibrium. The (normal) leaching out is 'selective,' or, to put it biologically, the 'secretion' of the dissolved substances is selective."

"But this leaching out of dissolved substances from the kidney is only one-half of the process of urinary secretion. The other half is the process of the absorption of dissolved substances from the blood by the kidney-cells preparatory to their secretion into the lumen of the uriniferous tubules."

The results of treatment planned to neutralize acid in the kidneys obtained by various clinicians are fully described. Considering the author's views as to the origin of nephritis, his plan of treatment is to counteract the ill effects of acids by alkalies and other salts which interfere with the action of acids, even when they do not neutralize them.

He regards sodium chlorid as harmless and even beneficial in nephritis and edema and describes experiments which lead him to these conclusions, while he barely refers to opposing views and does not describe or discuss the experiments of Marie and others, which show that nephritis can be produced by injections of sodium chlorid and that an existing nephritis can be aggravated and edema produced by them. There must be a fault in the experiments, observations or reasoning of one or the other observer on this point.

Clinicians who have applied Fischer's method of treatment have given sodium carbonate and sodium chlorid in solution by mouth, hypodermically, intravenously and by persistent drop instillation per rectum, according as in individual cases it was more or less urgent to render the system alkaline. The results are described as excellent. Alkalies and salts in nephritis do not make a new treatment, but the intravenous administration and continuous instillation is new and the results are striking.

Though the author's plea for his theory of nephritis is not convincing, it is suggestive and compels consideration and more study.

A System of Psychology. By Knight Dunlap, Associate Professor of Psychology in the Johns Hopkins University. Cloth. Price, $1.25. Pp. 368. New York: Charles Scribner's Sons, 1912.

This volume from the psychologic laboratories of the Johns Hopkins University is conspicuous in its differences from the near-new psychologies, psychotherapies, abnormal, pathologic, aberrant and bizarre contributions to the abused poetry of pseudopsychology. Its three hundred odd pages, interesting and bulging with the facts and the distinctions between a scientific nomenclature and street terminology, will give agreeable pause to purveyors of the mystic.

To him who seriously reads Dunlap's words it will be at once evident that there is no more rapid road to a knowledge of true psychology than there is to chemistry, electricity, biology, physiology or surgery. No mere jabbering of formulas or flapdoodle that can be memorized by rote between the rising gong and the after-breakfast newspaper will answer for a summary of real psychologic problems.

Dunlap minces no words in exposing the numerous and popular psychologic fallacies, generally accepted as settled facts. He launches into his subject by saying exactly what psychology is not. Then he takes a fling at the "sensationalists" and "motor" schools of psychology, and challenges Watson, Angell, Titchener, Külpe and others to "show him" that there are no such things as relations—those nine misty conceptions of Aristotle's ten categories.

One of the "ultimate principles" of Dunlap's thesis is the vigorous maintenance of the doctrine (?) that there are four elementary kinds of experience content, to wit: (1) sensations, (2) relations, (3) feelings and (4) images. We acknowledge an inability to include relations as an element of content. It would seem that the canons of Aristotle, Plato, and the others, who held, as Dunlap holds, that difference, similarity, sequence and other factors called relations are independent elements of content, are justly disputed by the "motorists," "sensationalists," and others, at least with the Scotch verdict "not proven." To us they seem to be included in imagery. Ontogenetically, they seem to be matters of recall and recognition.

It is impossible, here, to single out all of the notable contributions made to psychology in the twenty chapters of this work, but special mention must be made of the detailed and scientific discussion in the section on the character of duration, of "protensity" and "extensity" of musical sounds. This chapter may serve as a model for all instructors.

Modern psychology affirms a "soul" in spite of the denial from many commanding points of vantage. But, says Dunlap, we must bear in mind that we can know nothing about the ego and that there is nothing to be known about it. The ego, or soul, is merely a point of view, "as soon as it is described, it becomes no longer the point of view to which consciousness refers."

Of all the pleasures to be harvested from this book, none is superior to that obtained in reading the chapter on the occult. With the fictitious dignity and mock modesty of telepathy, mysticism, materializations, slate-writing, table-thumbing, clairvoyance, spiritism, psychology does not deal. With the experience of those mediums, often psychics and paranoiacs who do these stunts, psychology must deal.

A system of psychology as complete, yet as brief, as this, is indispensable for the medical man.

The Key to Sex Control, or the Cellular Determination of Sex and the Physiologic Laws Which Govern Its Control. By Percy John McElrath, M.D. Cloth. Price, $3. Pp. 232. New York: Published by the Author, 1911.

This purports to be a learned consideration of the organs of sex and the cells producing offspring with especial reference to sex determination. The author describes a part of spermatozoa which others have not seen, the "sex membrane." This, he asserts, holds the nucleus or head of the spermatozoon as if in a cup. It covers more or less of the head according as the spermatozoon is young, or of hours or days of age. When the sex-membrane covers less than one-half of the nucleus of the spermatozoon "the tail and all enter into the cytoplasm of the ovum and a male is produced." When, however, the sex membrane covers more than one-half of the nucleus of the spermatozoon it becomes detached when it passes through the cytoplasm of the ovum and only the nucleus enters the latter. Under these circumstances a female is produced. The author gives instructions as to when insemination must take place to produce male and female offspring. Every statement in this book is dogmatic. This cock-sureness may impress a non-scientific reader with confidence but it appears far from convincing to a medical man. The book contains numerous illustrations, anatomic and embryologic, and also a portrait of the author facing the title page. The book is doubtless written to sell to laymen who are interested in the problem, rather than to physicians. We cannot commend it as being of any scientific value.

# Medicolegal

## Skill Required of Physicians and Surgeons in Country and City—What Covered by the Word "Physicians"—Liability for Amputation Without Authority—Rules Concerning Damages

*(McBride vs. Huckins et al. (N. H.), 81 Atl. R. 528)*

The Supreme Court of New Hampshire holds that there was error in the trial court's ruling in this case on the skill required of physicians and surgeons which made it necessary that a verdict for the plaintiff be set aside. The trial court refused to instruct the jury: "If you find that the defendants possessed such skill and learning as is ordinarily possessed by physicians practicing in the same line in similar localities, and that in treating and diagnosing the plaintiff's case they used ordinary care in exercising such learning and skill, notwithstanding you find that the arm might have been saved, your verdict should be for the defendants." Indeed, the jury were instructed, in substance, that the defendants were bound, under their contract of employment, to possess that degree of skill in surgery in the treatment of the plaintiff's injured arm which is ordinarily possessed by those engaged in the same profession. The skill of the average physician and surgeon was made the standard or test by which the jury were to determine the material question whether the defendants had the knowledge, experience, and skill which the law requires a person to have, who represents himself to be a qualified surgeon, and assumes on request to render surgical assistance in a particular case.

The Supreme Court says that, although the word "physicians" was alone used in the requested instruction, it was evident that it was intended to include those members of the profession who practiced surgery in connection with the general treatment of diseases, and it limited the inquiry to surgeons or physicians whose practice included cases requiring surgical attention, like the plaintiff's. "Practicing in the same line in similar localities" meant, as applied to this case, the practice of surgery in country towns whose general characteristics, as to location, size, industries, and population, were substantially similar to those where the defendants assumed to practice.

The question raised was not a merely fanciful or academic one. Expert proficiency in performing difficult surgical operations is not ordinarily possessed by the country doctor, for the reason that such cases do not often occur in his practice. His opportunities for experience and observation are much more limited than those of physicians and surgeons practicing in large cities, where surgical operations are of frequent occurrence. While his professional education and knowledge of the books may be extensive, he is necessarily defective in that expert skill which is only produced by practical experience. Devoting himself to the ordinary practice of a rural community, he is necessarily deprived of that acquired skill which he would have attained, if he had practiced his profession in a large and densely populated community. The degree of skill, therefore, which he can reasonably be assumed to possess, as a general rule, must be measured and determined by a due consideration of the limited opportunities afforded in the same or similar communities, and not by the greater and dissimilar opportunities existing in larger and different communities. It would be unjust to hold him to that degree of professional ability which his environment prevents him from possessing. On the other hand, it would be equally unjust to the plaintiff in a malpractice case to permit the jury to measure the defendants' skill by the average of professional ability found to exist in other communities affording less opportunity for practice in a given medical line than the defendants' locality affords. As in the former case the standard is too high, in the latter it would be too low. In neither case would it work out substantial justice.

It might be claimed that all inequality would be avoided by adopting the rule announced by the trial court in the charge: That the defendants were bound to possess "that reasonable degree of learning, skill, and experience which is ordinarily possessed by those engaged in the same business or profession"; or that "the duty which the law imposed on them was that they did possess the learning, skill and experience of the average physician and surgeon engaged in the profession of medicine." But it is apparent that on principle this is an unsatisfactory and impracticable test. It restricts the jury to no locality in the attempt to find the average skill of the profession in surgery. It is impracticable because of the difficulty, not to say impossibility, of determining the average skill of the medical profession as a body in the treatment of a given case. In view of the facts that different schools of medicine often employ radically different methods of treating the same disease, that the practice followed in one school would often be strong evidence of negligence, if resorted to by a member of another school, and that practitioners in one locality have opportunities for experience in treating certain diseases and bodily injuries which are almost entirely wanting in other localities, the extreme difficulty of ascertaining the average skill possessed by all physicians is apparent. Such a rule is unlimited, and, because it is unlimited, it is too indiscriminate to be of any real service to the jury in ascertaining whether a defendant possesses the average skill required. The field of inquiry must be restricted. Some reasonable territorial limit must be recognized, if the law is to furnish a rule that is just to the parties and useful to the triers of the fact.

But, if the jury is instructed that the average skill and ability of surgeons in active practice in communities affording opportunities for professional observation and experience of a character similar to those afforded by the town or district where the defendant practices his profession is the standard, it is apparent that justice to both parties under their contract will be secure. The implied agreement of the surgeon is that his surgical knowledge and experience is at least equal to that of the average surgeon practicing in the same or similar localities, not to that of the average of surgeons practicing in dissimilar localities. It must be assumed that the parties had this distinction in mind; and it must also be assumed, in any reasonable construction of their contract, that they did not have in mind a general average of professional ability, in regard to which neither could have had any definite information. They did not make a contract, a material part of which neither contemplated nor understood, and which it would be impracticable for a jury to apply.

The court cannot take judicial notice of whether the average skill of the profession as a body is higher or lower than that of physicians practicing in certain localities and declare it to be one way or the other.

The argument that the word "physicians," as used in the requested instruction was too indefinite, and might include quacks, empirics, and imposters, whose evident incompetence would lower the standard sought, might have some legitimate bearing, if it were found that the jury would probably give that word such an unreasonable meaning. But the phrase "physicians practicing" in a community evidently means, in this connection, physicians whose learning, experience and practice in that community entitle them to public confidence. It does not mean all persons who assume to treat diseases or personal injuries, but only such as are ordinarily recognized as reputable physicians.

On a motion for rehearing, which is denied, the court says that the evidence tended to show that the plaintiff, having received a severe injury to his arm, requested the defendants to examine it and do what was necessary to save the arm, but not to amputate it. He was put under the influence of an anesthetic, and the defendants, on examining the wound amputated the arm. They were chargeable with the performance of a surgeon's duty when they undertook a surgeon's task. If they did not have the requisite skill for the performance of that duty, and injury resulted to the plaintiff, the question of their liability would be determined against them.

Then, if the jury found that the defendants deliberately and intentionally disregarded the unequivocal instruction of the plaintiff, while he was unconscious, it could not be doubted that they acted maliciously. Amputating the arm under such circumstances might show a wanton and contemptuous disregard and abuse of the professional confidence which the plaintiff reposed in the defendants. It would be a material circumstance characterizing their act; and, on authority and principle, it might have an important bearing on the amount of damages the plaintiff ought to receive and the defendants ought to pay.

If, in connection with, or in addition to, this element of damage, the jury believed that the defendants did not have the skill imposed on them by the law, and that they knew that they were incompetent to do what they wrongfully assumed to do—that is, to decide whether amputation was necessary, and whether they should perform the operation— it cannot be doubted that the amount of the verdict would be materially increased thereby.

### Charitable Hospital Not Liable for Negligence of Nurse as to Sponges

(*Taylor vs. Protestant Hospital Association* (*Ohio*), *96 N. E. R. 1089*)

The Supreme Court of Ohio affirms a judgment for the defendant in this suit brought to recover damages for the death of a woman patient alleged to be due to a nurse having negligently failed to keep a proper count of the sponges which had been used in an operation, by reason of which negligence one of them had been left in the body of the patient. The woman was a pay patient who was charged $10 a week for board, lodging and nursing, and it was contended that what is known as the legal doctrine of respondeat superior, the principal or master must answer for the acts of his agent or servant, applied, and should be enforced, notwithstanding the character of the corporation or the nature of its undertakings, and that, having accepted the woman as a pay patient, a contractual relation existed between the parties, which imposed obligations on the hospital association different from those to one who did not sustain such relation. But the court holds that a public charitable hospital, organized as such and open to all persons, although conducted under private management, is not liable for injuries to a patient of the hospital, resulting from the negligence of a nurse employed by it. The fact that a public charitable hospital receives pay from a patient for lodging and care does not affect its character as a "charitable institution," nor its rights or liabilities as such in relation to such a patient. This court is not disposed to lend support to the tendency in some cases to question the fundamental soundness of the doctrine of respondeat superior. Neither does it consider justified the attempted extension in this case of the rule to matters different from others, and who do not come within its reason, so as to hold a public charity involving no private profit responsible for the negligence of servants employed solely for a public use and a public benefit. Public policy should and does encourage enterprises with the aims and purposes of the defendant hospital association, and requires that they should be exempted from the operation of the rule.

### Licensing of Maternity Hospitals by Boards of Health

(*Adleman vs. Board of Health of Hartford* (*Conn.*), *81 Atl. R. 1055*)

The Supreme Court of Errors of Connecticut holds that the plaintiff was not entitled to a writ of mandamus to compel the issuance to him of a license to keep a maternity hospital, there being no allegation that he was a suitable person to be licensed, or that the board in refusing him a license did not exercise a reasonable discretion. He claimed that he was entitled to a license under section 4670 of the general statutes of Connecticut, which provides that: "No person shall keep a maternity hospital or lying-in place unless he has previously obtained a license therefor duly issued by the mayor or board of health of the city or health officer of the town wherein such maternity hospital or lying-in place is situated." His claim was that the statute gives the board of health no discretion in the matter, but that it is bound to give a license to every applicant, regardless of character or qualifications. But the court does not agree with him.

The statute in terms, the court says, imposes no duty on the board of health to license any one to conduct such a hospital or place. Any duty which is thereby imposed on the board is an implied one. Whether such a duty is implied and, if so, the nature, extent, and limitations of the duty are to be determined from the act itself, its language, and the purpose intended to be accomplished by it. The provisions of the act, subsequent to the portion above quoted, show that the purpose of the act was to regulate the business of keeping such places as are therein described. Such business, when properly conducted, is legitimate and of public benefit; but that it affords opportunity for the commission and successful concealment of crime is apparent. The act contemplates this and provides for the visitation and inspection of such places, when licensed, for the purpose of detecting the improper treatment of any child, and the discovery and removal of any article which the visiting authority thinks presents evidence of any crime having been committed therein. It is not to be presumed that the legislature, contemplating, as it evidently did, the danger and possibility of such places being used for the perpetration and concealment of crime, intended, impliedly imposing on boards of health the duty of "duly licensing" persons to carry on the business, that they shall license any and every person who shall make application for such a license. It must have been intended that the board should have some discretion in granting such license, and that the character and moral fitness of the applicant should be considered before granting a license. It is to be implied from the fact that all persons are forbidden to pursue this occupation, unless they have procured a license from the board of health, and from the other provisions of the act referred to, that it is the duty of that board to issue licenses to suitable persons to conduct the business in suitable places; that it does not lie within the absolute discretion of the board to grant or withhold a license as it shall see fit, but that it shall exercise a reasonable discretion in the performance of such duty.

### Condition of Mental System One of Opinion Only

(*Odom vs. State* (*Ala.*), *56 So. R. 913*)

The Supreme Court of Alabama says that it is true that the apparent condition of the physical system, as to health or sickness, is a matter of fact, to which a witness may testify. But the apparent condition of the mental system as to sanity or insanity is not a matter of fact merely, and involves essentially the inference and opinion of the witness. In this case the witness testified to the appearance of the defendant, saying that he was inclined to be melancholy, and seemed wild and haggard. That was as far as he could rightfully go. It may be that there is an "insane look" habitual to insane persons, the presence of which in particular cases is capable of discernment and possessed of probative value. If so, it is a matter for experts, and not for ordinary witnesses.

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# Current Medical Literature

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### Bulletin of Johns Hopkins Hospital, Baltimore

*May, XXIII, No. 255, pp. 127-158*

1 *Effect of Extensive Resections of Small Intestine. J. M. Flint, New Haven, Conn.
2 *Behavior of Blood Platelets in Toxemias and Hemorrhagic Disease; Preliminary Report. W. W. Duke, Kansas City, Mo.
3 Alveolar Tumor of Carotid Gland with Sarcomatous Transformation. P. G. Woolley and F. Fee, Cincinnati.

1. **Effect of Extensive Resections of Small Intestine.**—In all, sixteen operations on dogs are recorded by Flint, two of them on dogs from which a portion of the gut had already been removed. Of the sixteen operations on fourteen dogs, six dogs died from all causes, making a total mortality of 37 per cent. In no case, however, says Flint, could the resection of the intestine *per se* be looked on as the direct or primary cause of death, although it might naturally be considered a contributory factor in reducing the resistance by causing profound metabolic disturbances, as was evidenced by the extreme diarrhea and loss of weight. Three died from infec

tion resulting from a breaking down of the abdominal wound; one died from ileus in consequence of adhesions about the intestinal suture; one died from pneumonia, and the last from inanition, induced by metabolism experiments, after living 213 days.

Flint says that as much as 50 per cent. of the total small intestine in dogs may be removed without fatal results. The animals may gradually return to a condition of practically normal weight and metabolism when maintained on a favorable diet under good conditions. Resections of 75 per cent., and even more, of the total small intestine may be survived, but such animals are not liable to show a true recovery, i. e., a return to normal weight with the establishment of a good compensatory process. At first, the animals suffer from a severe diarrhea, ravenous thirst and appetite, and loss of weight, from which they gradually recover, until conditions may return to those of a normal animal. They remain, however, extremely sensitive to unfavorable conditions of diet and living.

Metabolic studies on such animals show that there is a marked increase in the excretion of the nitrogenous, fatty and carbohydrate elements of the food. The elimination may reach 66 per cent. of the diet content. After compensation is established, on a rich, easily assimilated diet, disgestion goes on as in a normal dog, except for an increase in the amount of intestinal putrefaction, as indicated by the amount of indican in the urine. An increase in the amount of fats in the food may lead to an increased elimination of nitrogen and fats to a point about 25 per cent. above normal. The carbohydrates, on the contrary, are absorbed to a degree considerably above normal after the compensation is established. The compensatory process consists in a hypertrophy as well as hyperplasia of the remaining portion of the small intestine. There is no regeneration of either the villi or crypts. Computation makes it probable that in favorable cases approximately the original epithelial area of the intestine is restored by the hypertrophic process.

As in animals, about 50 per cent. of the small intestine may be resected in man without much danger of serious consequences in the majority of cases. The resection of smaller amounts may, however, be followed by severe metabolic disturbances, and even inanition and death. Human cases behave in general like the animals. They show similar metabolic disturbances. In one case there was distinct evidence of a compensatory process. No regeneration or hypertrophy has ever been reported in a human case. There are over fifty-eight cases reported in the literature in which over 200 cm. of the small intestine have been resected. The mortality is 16 per cent. which is probably much lower than it should be, owing to the greater probability of successful cases finding their way into the literature. The metabolic disturbances in human cases bear no definite relationship to the amount of small intestine resected. In five resections of over 400 cm. the patients have recovered, while death from inanition has resulted from the resection of 284, 289, 300 and 350 cm., respectively. Profound digestive disturbances have resulted from the removal of 192 and 204 cm. of ileum. In human cases, factors, like difficulties in measurement, the pathologic condition, the total length of the intestine, and the resistance of the patient undoubtedly modify the result, and explain the apparent discrepancies between the amount of intestine resected and the subsequent metabolic disturbances.

The prognosis in human cases should be guarded. Apparently successful resections may, for lack of suitable compensation, uccumb ultimately to a slow process of inanition. The experiments and the series of human cases emphasize the specific unction of the three segments of the gastro-intestinal tract. Neither the stomach nor colon is able to compensate for the oss of large portions of the small intestine. Resection of the human intestine is almost never an operation of choice. The urgical rule has been, and will continue to be, a resection of the minimum amount allowed by the pathologic conditions. rom the metabolic studies, it would seem wise to give these atients a rich and easily assimilated diet, poor in fats and elatively rich in carbohydrates.

**2. Behavior of Blood Platelets.**—Variation in the platelet count in many diseases is believed by Duke to be largely the effect of toxins, some of which in small doses increase the count and in large doses decrease it. When the count descends below a level of about sixty thousand there may be an abnormal tendency to bleed. When it descends below about ten thousand, this tendency is always present, and when below one thousand, is present in its most severe form.

### Journal of South Carolina Medical Association, Seneca

*April, VIII, No. 4, pp. 93-120*

4 Medical Profession and Public Health. J. W. Jervey, Greenville.
5 Congenital Dilatation of Colon, Megacolon or Hirschsprung's Disease. C. M. Rees, Charleston.
6 Plea for More Conservative Surgery of Ovary. G. H. Bunch, Columbia.
7 Diagnosis of Typhoid. W. T. Gibson, Batesburg.

### Journal of Cutaneous Diseases, New York

*May, XXX, No. 5, pp. 235-316*

8 Xanthoma Tuberosum Multiplex. S. Pollitzer and U. J. Wile, New York.
9 Precancerous Dermatoses; Two Cases of Chronic Atypical Epithelial Proliferation. J. T. Bowen, Boston.
10 *Wassermann Reaction in Sixty-One Cases of Syphilis Treated with Salvarsan. M. F. Engman and R. Buhman, St. Louis.

**10. Syphilis Treated With Salvarsan.**—Of the sixty-one patients seen by the authors, thirty-two received salvarsan alone. Of these, nine, or 28 per cent. gave a negative Wassermann reaction; 23, or 72 per cent. gave a positive reaction. Of a group of persistent positive reactions, five had two doses and one three doses of salvarsan. Of the sixty-one patients, twenty-nine received mercury injections, following the salvarsan. Of these, fourteen, or 48 per cent. gave a negative Wassermann reaction. Of the twenty-nine, four gave a persistent, positive reaction, after two doses of salvarsan and two courses of mercury respectively. Seven of the sixty-one patients had two doses of salvarsan alone and of these, only two became negative, or 28 per cent., while five remained positive, all of which were severe infections. In the earlier syphilides salvarsan was used alone in six cases, with the result of 33 per cent. negative Wassermann reactions. In the late syphilides, salvarsan used alone, in twenty-six cases, gave 26 per cent. of negative reactions. The Junkermann method was used in forty-three cases and gave negative reactions in sixteen, or 37 per cent. The intravenous method was used in sixteen cases, with no negative reaction after a single dose. Two negative reactions were obtained after two successive doses; five remained positive after two doses and the balance received mercury.

### Wisconsin Medical Journal, Milwaukee

*April, X, No. 11, pp. 619-684*

11 *Relative Value of Diuretics. A. S. Lovenhart, Madison.
12 Human Eugenics. F. I. Drake, Madison.
13 Intraperitoneal Infections. W. E. Fairchild, Green Bay.
14 Surgical Importance of Certain Vestigial Structures, with Report of Case of Persistent Ductus Thyreoglossus. C. M. Echols, Milwaukee.
15 Gastroptosis from Radiographic Standpoint. W. F. Hilger, Milwaukee.
16 Improved Mouth-Gag for Tonsillectomy. H. B. Hitz, Milwaukee.
17 Sacro-Iliac Strain; Case Reports. E. Evans, La Crosse.

11. Abstracted in The Journal, July 22, 1911, p. 315.

### Journal of Biological Chemistry, Baltimore

*May, XI, No. 4, pp. 267-441*

18 Hydrolysis of Casein by Trypsin. E. H. Walters, Berkeley, Cal.
19 Refractive Indices of Solutions of Certain Proteins: Salmine. T. B. Robertson, Berkeley, Cal.
20 *Effect of Lecithin on Fermentation of Sugar by Bacteria. A. A. Epstein and H. Olsan, New York.
21 Balance of Acid-Forming and Base-Forming Elements in Foods; Its Relation to Ammonia Metabolism. H. C. Sherman and A. O. Gettler, New York.
22 Isolation of Oöcytase, Fertilizing and Cytolyzing Substance in Mammalian Blood-Sera. T. B. Robertson, Berkeley, Cal.
23 Combined Action of Muscle Plasma and Pancreas Extract on Some Mono- and Disaccharids. P. A. Levene and G. M. Meyer, New York.
24 Action of Tisssue Extracts Containing Nucleosidase on *A* and *B* Methylpentosides. P. A. Levene, W. A. Jacobs and F. Medigreceanu, New York.
25 Absorption of Metallic Salts by Fish in Their Natural Habitat. G. F. White and A. Thomas, Woods Hole, Mass.
26 Determination of Aluminum in Feces. C. L. A. Schmidt and D. R. Hoagland, Philadelphia.
27 Researches on Purins: 2,8-Dioxy-6,9-Dimethylprin and 2,8-Dioxy-I-Methyl-Purin. C. O. Johns, New Haven, Conn.

28 *Chemical Anaylsis of Ash of Smooth Muscle. E. B. Meigs and L. A. Ryan, Philadelphia.
29 Toxicity of Sugar Solutions on Fundulus and Apparent Antagonism Between Salts and Sugar. J. Loeb, New York.
30 Carbohydrate Esters of Higher Fatty Acids. W. R. Bloor, St. Louis.
31 *Fat Absorption. W. R. Bloor, St. Louis.
32 Echinochrome, Red Substance in Sea Urchins. J. F. McClendon.
33 Action of Various Tissues and Tissue Juices on Glucose. P. A. Levene and G. M. Meyer, New York.
34 Action of Leukocytes on Glucose. P. A. Levene and G. M. Meyer, New York.

20. **Effect of Lecithin on Fermentation.**—The authors found that the tendency of lecithin is to increase rather than to decrease fermentation.

28. **Ash of Smooth Muscle.**—According to Meigs and Ryan most of the water of the smooth muscle fibers is held by the colloids of the living tissue as organic water. Most of the potassium, phosphorus, sulphur and magnesium, which appear in the ash of smooth muscle, are present in the living tissue in a non-diffusible form.

31. **Fat Absorption.**—The results of Bloor's experiments show quite conclusively that none of the isomannid esters had passed unchanged into the chyle, although considerable quantities had been digested and absorbed. This result is in entire agreement with the findings of Frank with the ethyl esters of the fatty acids and emphasizes the probability that readily saponifiable fatty acid esters do not escape saponification under the favorable conditions in the normal intestine (excess of lipase, rapid removal of the products). Whether fatty substances of any kind may pass into the chyle unchanged remains to be proven.

### New Mexico Medical Journal, Las Cruces

*April, VIII, No. 1, pp. 215-238*

35 Catholic Doctrine on "Interruption of Pregnancy." W. R. Tipton, East Las Vegas.
36 Treatment of Pelvic Inflammation. L. G. Rice, Albuquerque.
37 Practical Points in Railway Surgery, Including First Aid Preparation for Transporting and Emergency Bags. R. J. Thompson, Tucumcari.
38 Enlarged Tonsils and Why They Should Be Removed. H. T. Bailey, Courtland, Ariz.

### Southern Medical Journal, Nashville, Tenn.

*May, V, No. 4, pp. 217-290*

39 Peritonitis. R. A. Barr, Nashville.
40 *Exploratory Laparotomy. C. W. Allen, New Orleans.
41 Ligature Material and After-Treatment of Surgical Cases. H. T. Inge, Mobile, Ala.
42 Local Anesthesia in Hernia Operations. W. T. Henderson, Mobile, Ala.
43 *Surgery in Epilepsy. W. A. Ryan, Nashville.
44 Surgical Treatment of Congenital Hypertrophic Pyloric Stenosis, with Report of Case. G. E. Gavin, Mobile, Ala.
45 *Dietetic Treatment of High Blood-Pressure. A. Eustis, New Orleans.
46 Cooperation as Factor in Prevention of Typhoid. L. L. Lumsden, Washington, D. C.
47 Control of Typhoid by Vaccination. J. J. Peterson, Mobile, Ala.
48 Glaucoma; Its More Recent Pathology and Treatment. G. C. Savage, Nashville.
49 Tonsillectomy as Performed at Charity Hospital, New Orleans. H. Dupuy, New Orleans.
50 Sympathetic Ophthalmia. U. S. Bird, Tampa, Fla.
51 Operative Treatment of Benign New Growths of Larynx. R. McKinney, Memphis, Tenn.
52 Plea for Earlier Diagnosis of Cancer of Uterus. F. W. Griffith, Asheville, N. C.

40. **Exploratory Laparotomy.**—In the case of the individual of previous good health, or possibly with earlier history of gastric ulcer, who complains of persistent or repeated abdominal disturbance not readily accounted for and when any suspicion can reasonably exist regarding a possible malignant process, Allen advises laparotomy.

43. **Surgery in Epilepsy.**—Bryan would impress on the patient and his relatives that when he has undergone an operation for epilepsy the operation is only a necessary step in a long course of supervision. It should be understood, he says, that surgery may put him in line for a cure, but that surgery alone often fails where it should not, and fails because of the too great solicitude of an anxious mother, a foolhardy persistence of the patient in forbidden paths, or the want of a distinct and intelligent guide to direct the whole after-course. This plan should be followed out just as fully in the cases that have had only a few seizures as in the older cases, and it can in most cases not be done so long as the patient returns from the operating room to his old associates and environment. No one plan for relief can be accepted as a standard. There is no question as to the chief features of the procedure in those cases which show distinct lesions on approach to the brain, namely, their removal or correction as far as possible. Bryan thinks there can be little question, too, about the correctness of the plan for excision of the brain centers of those muscles or muscle groups which habitually are affected at the beginning of the seizures, although it is not directed toward the foundation of the trouble in the sensory centers through whose perverted activity the motor manifestations are stimulated into activity.

45. **Dietetic Treatment of High Blood-Pressure.**—Eustis regards high blood-pressure as due to a toxemia and experimental results obtained by him he believes explain the good results of a low protein diet and stimulation of elimination in the treatment of this condition. In cases of high blood-pressure elimination by catharsis and copious administration of water is indicated unless the heart muscle is not functioning properly. A diet composed of substances which yield little or no tyrosin on digestion is indicated.

### Yale Medical Journal, New Haven, Conn.

*March, XCIII, No. 7, pp. 289-324*

53 Clinical Tests of Kidney Function. T. N. Hepburn, Hartford, Conn.
54 Aids to Diagnosis in Otology and Their Clinical Significance. J. F. McKernon, New York.
55 Importance of a Medical Library to Medical Profession. J. W. Farlow, Boston.

### Vermont Medical Monthly, Burlington

*April 15, XVIII, No. 4, pp. 79-104*

56 Radiculitis. A. H. Bellerose, Rutland.
57 Osteoplasty and Bone Transplantation in Pott's Disease of Spine. F. H. Albee, New York.

### Boston Medical and Surgical Journal

*May 9, CLXVI, No. 19, pp. 687-722*

58 *Outdoor Treatment of Puerperal Infection. E. B. Young and J. T. Williams, Boston.
59 Influence of Antivivisection on Character. W. W. Keen, Philadelphia.
60 *Technic of Gastro-Intestinal Therapy. M. V. Tyrode, Boston.
61 *Intensity of Acidity of Urine in Children. G. King, Fall River, Mass.
62 Respective Significance of Rest and Exercise in Treatment of Phthisis. N. B. Burns, North Reading, Mass.
63 Method of Recording Exercise Data in Sanitarium for Consumptives. C. C. MacCorison and N. B. Burns, North Reading, Mass.
64 *Value of "Russo's Typhoid Test." A. L. Grover, Iowa City, Iowa.

58. This article was abstracted in The Journal, March 30, p. 975. The sentence which read "Antistreptococcic serum and vaccines have proved of much value," should have read "Antistreptococcic serum and vaccines have *not* proved of much value."

60. **Gastro-Intestinal Therapy.**—It has been Tyrode's experience to have hardly ever seen a patient with organic or functional gastro-intestinal disturbances who has not suffered from a certain amount of nervous fatigue and irritability. Thus in the large majority of gastro-intestinal patients some drug is necessary to give nervous relaxation, and the one which Tyrode has found most valuable is potassium bromid. He uses it in doses sufficient to produce proper relaxation, and the amount varies greatly with different patients. He usually begins with about 1 gm. or 15 gr. three times daily and either increases or decreases the dose as the symptoms warrant. Always give it after meals combined with an alkali, and usually followed by a full glass of milk. Given in this way, he practically never has seen any symptoms of gastric irritation or intolerance so frequently mentioned by other authors. He obviates to a great extent the skin eruptions by having the patient consume sufficient liquids in the shape of water, either plain or Vichy. This favors the excretion through the kidneys and thus saves the skin. Morphin is used only in some very painful acute affections, as gall-stones or intestinal spasm in acute dysentery and proctitis. Tyrode uses various combinations of salts, especially of sodium chlorid, sodium bicarbonate, sodium phosphate and sodium sulphate; first to cleanse the stomach and upper intestinal tract of mucus, and, according to the concentration and time of administration, either to increase or decrease gastric and intestinal secretions;

second, to increase the peristalsis of the stomach and intestines and to aid evacuation; third, as injections to cleanse the colon and to promote healing of catarrhal processes. One of the salts of bismuth, chiefly the subnitrate and subcarbonate, is employed for astringent purposes both in the stomach and intestines, as in cases of erosions, ulcers and enterocolitis with diarrhea. To change the bacteriologic state of the gastro-intestinal tract, Tyrode relies much more on diet than on drugs; nevertheless, he occasionally uses in cases of excessive protein putrefaction such drugs as the salicylate and naphthalate of bismuth, also thymol. He practically never uses laxative pills, and the only vegetable laxative which he rarely introduces in small amounts, mixed with magnesia and bismuth or other substances, is rhubarb.

61. **Intensity of Acidity of Urine in Children.**—In King's series of fourteen cases of enuresis, all had a highly acid urine, i. e., from fourteen to thirty times as acid as the average normal for a child, and none were alkaline, none showed any evidence of malformations or local inflammatory affections, all urines were normal in all respects save for a high acidity, the specific gravity varying from 1007 to 1016 in all cases save one, where it was 1020 and 1025 on two examinations (fluids having been limited). Practically all had previously had the ordinary treatment with no definite results. All of these patients were put on potassium citrate, from 3 to 8 gr., four times a day, with definite improvement in all but one case, and this in a boy of 13 who was a masturbator and showed no improvement of either condition.

64. **Russo's Typhoid Test.**—Grover's conclusions are that although the test may be demonstrated in the urine of a large proportion of the typhoid cases, yet it may be demonstrated in such a large proportion of the urine of normal individuals that it is not a test that has any specific meaning or value as to the presence or absence of typhoid. When compared with the reliability of a blood-culture it is worthless.

### St. Paul Medical Journal, Minn.

*May, XIV, No. 5, pp. 239-286*

65 Treatment of Uterine Prolapse. W. A. Dennis, St. Paul.
66 School Health. E. A. Meyerding, St. Paul.
67 Bacillus Aerogenes Capsulatus. J. W. Little, Minneapolis.
68 Trachoma. J. H. Stewart, St. Paul.

### Annals of Surgery, Philadelphia

*May, LV, No. 5, pp. 641-783*

69 Estimation of Vital Resistance of Patient with Reference to Possibility of Recovery. J. C. Bloodgood, Baltimore.
70 *Wiring of Otherwise Inoperable Aneurysms. J. M. T. Finney, Baltimore.
71 Operation for Pott's Disease of Spine. R. A. Hibbs, New York.
72 Clinical Features and Treatment of Acute Perforating Gastric and Duodenal Ulcer. E. Eliot, New York.
73 *Intestinal Obstruction Due to Gall-Stones. F. Martin, Baltimore.
74 *New Decompression Operation. W. H. Hudson, Atlanta, Ga.
75 Tuberculous Rheumatism (Poncet). H. H. M. Lyle, New York.

70. **Wiring of Aneurysms.**—The ultimate results of this operation are necessarily somewhat disappointing when one considers the small percentage of cures. Some observers insist that no patients are permanently cured. This, however, seems to Finney too extreme a statement. A small number of Finney's patients have died as the immediate result of the operation. A larger number have died from remote results of the operation. The vast majority have been improved by it. Improvement has lasted from a few days to a term of years. A few patients, he believes, can truthfully be said to have been completely cured. In several of the cases, gelatin injections were administered in addition to the wiring, with apparently good effect. Finney emphasizes that it is of the utmost importance that these patients should be kept as nearly as possible in a state of physiologic rest for a term of months after the wiring. In this way only will the best results be secured. In three of his cases, after the complete subsidence of all symptoms referable to the aneurysm, the patients, because of this fact, and in spite of orders to the contrary, dated the return of their trouble immediately following some unusual effort.

Of Finney's twenty-three cases, so far as he knows, only two patients are still living, one after nearly three years, the other not quite a year. Both had aneurysms of the thoracic aorta. All his patients were males, mostly young men, only two being over fifty years of age. One-half of them gave a history of lues and one who denied it had a positive Wassermann reaction. Over 25 per cent. admitted using alcohol to excess. In three instances, the trouble was of traumatic origin. In one case, the recurrence dated from a fall from a height, the patient catching himself with the hand of the affected side. This case was of special interest because Finney resected the greater part of the first and second portions of the sternum and the first, second and third ribs on one side in order to expose and examine the aneurysmal sac, so close was it to the heart, before daring to insert the wire. It is an interesting fact that at first practically all of their cases were aneurysms of the abdominal aorta. In recent years, the reverse has been true and they are now almost all of the thoracic variety. The latter are more amenable to treatment by this method, owing to their greater accessibility and because a general anesthetic is not necessary. On the whole, Finney says the results of this operation, when one considers the absolutely hopeless condition of the patient under any other method of treatment, would seem to justify its employment in every case where it is not otherwise contraindicated.

73. **Intestinal Obstruction Due to Gall-Stones.**—Martin emphasizes this point, that the toxemia in these cases is the chief factor to be combated, and this can be done best by thoroughly washing out the stomach before operation, thoroughly draining the distended loop above the obstruction at the time of the operation, and giving freely and abundantly salt solution both at the time of the operation and afterward, intravenous if necessary, or intracellular in all cases, along with salt solution by rectum. He believes that if these steps are followed, more lives will be saved, even if the operation is resorted to late. Three successful cases are reported.

74. **New Decompression Operation.**—To obviate the local damage sustained by the brain in being forced out of a circumscribed opening in the skull, and to prevent a later hernia of the brain and the possible tearing asunder of the scalp wound and to allow the restoration of the calvarium should a cure be established, a new method of decompressing the brain has been carefully worked out by Hudson. In those cases of unlocalizable brain tumors in which the decompression is necessary, the area exposed is the entire posterior portion of the brain, so that the entire hemisphere may be displaced backward, thus avoiding localized damages. The lower limit of this flap is the lower limit of the cerebral hemisphere behind; its upper limit is where the skull begins to curve in a downward direction. The fissures and convolutions of the brain are not considered. If the growth has been localized in the motor region and not removed, the second flap is made over the posterior portion of the brain, thereby making two flaps. The same process is applied to the left side of the brain, the greatest care being used not to injure the cortex.

The ordinary decompression operation over the posterior region of the hemisphere is done. Hudson's usual osteoplastic flap with short central bevel is rapidly made. Two openings are made in the free border of the flap, ¾ inch apart. These openings are united by the smallest size Gigli wire saw, making a cut on a bevel. The other holes are united by Hudson's two-hand, channel-making forceps. Opposite the primary trephin openings the skull is firmly grasped with the drill guide and small ⅛-inch openings made for the silver wire sutures. The flap is now broken back by inserting elevators under its anterior and posterior borders. Silver wire of eighteen or twenty gauge is twisted carefully but quickly into the openings opposite the bone flap. These wires are left 6 or 8 inches long so as to be readily inserted into the drill holes in the bone flap. The dura is now opened, leaving a broad margin around the edge by an M- or W-shaped incision, great care being taken not to injure the cortex. The silver wires are now inserted into the drill holes in the bone flap and twisted, allowing about half an inch of slack. Each of the wires is then caught with artery forceps and twisted down until the bone flap fits snugly over the brain. The scalp is then closed carefully with interrupted fine silk sutures. The fitting back accurately of the bone flap prevents edema of the brain, and yet all the benefits of a decompression operation are secured. Should the tumor continue to grow, the bone flap is gradually lifted as the pressure straightens out the loop in the silver wire. Should pressure symptoms reappear and the bone flap not be lifting, a sharp stylet may be inserted through a cocainized point in the scalp, and the bone flap given a lift. This may be continued until all the loops in the silver sutures have been straightened out.

### Buffalo (N. Y.) Medical Journal

*May, LXVII, No. 10, pp. 539-600*

76 Retroperitoneal Tumors and Intraligamentary Pregnancy. J. M. Lee, Rochester, N. Y.
77 Dysmenorrhea. S. Y. Howell, Buffalo.
78 Cases Treated with Gonococcus Vaccine. J. G. W. Knoll, Buffalo.
79 New Departure in Medical Expert Matter. S. W. Little, Rochester, N. Y.
80 Serotherapy. W. S. Garlock, Little Falls, N. Y.
81 Law as It Relates to Physicians and Buffalo Health Department. F. E. Fronszak, Buffalo.

### Medical Record, New York

*May 4, LXXXI, No. 18, pp. 837-880*

82 Clinical Indications for Direct Transfusion of Blood with Author's Technic. A. L. Soresi, New York.
83 Treatment of Intranasal Conditions. A. E. Schmitt, New York.
84 Scientific System of Administering Ether. R. C. Coburn, New York.
85 Death from Renal Adenosarcoma. V. C. Pedersen, New York.
86 Juxta-Epiphyseal Fracture of Upper End of Humerus. F. H. Albee, New York.

*May 11, LXXXI, No. 19, pp. 881-926*

87 Some Clinical Features of Scarlatina. H. W. Berg, New York.
88 *Creosote and Calcium Medication in Respiratory Affections in Children and in Pulmonary Tuberculosis. I. Van Gieson and H. L. Lynah, New York.
89 Oxaluria Dolorosa: Contribution to Genito-Urinary Surgery. B. G. R. Williams, Paris, Ill.
90 Mortality of Indifference. C. N. Haskell, Bridgeport, Conn.
91 *Basic Cause of Flatfoot. J. R. Mitchell, Fort Worth, Tex.
92 How May We Bettetr Condition of Growing Child? E. M. Sill, New York.

88. **Creosote and Calcium Medication.**—From a review of his experimental results on guinea-pigs the senior author feels justified in considering the propriety of administering creosote in human beings not only internally but hypodermatically and intravenously as well. Hypodermatic injections were given twice a week in six cases of pulmonary tuberculosis. These patients, if only transiently, did show improvement in hacking cough, sleep and general condition. The injections were, however, painful. At the fifth or sixth injection the whole set of patients developed superficial and benign abscesses, readily healing, but terminating the treatment. These observations on the intravenous injections in man are not given with any idea of furnishing any results in the treatment of tuberculosis. These were merely trials to see if the injections could be given and tolerated. Whether, if they were given systematically and continuously in suitable cases the effect would have been beneficial, has not been determined. Under the systematic continued and persistent regime of calcium assimilation Van Gieson has seen a number of his patients improve, undergo an exudation or partial consolidation in the lung, which then resolving would appear to contribute to the walling off and closing of the lesions. Hand in hand with this course of events the sputum clears up of tubercle bacilli which finally disappear and the patients are discharged with healed pulmonary tuberculosis. In the face of this evidence, studied directly and conscientiously, he says he can no longer hesitate to believe that the great natural healing process in tuberculosis which rescues eight or nine-tenths of mankind, can be imitated and placed under human control under the guidance of a definite scientific principle.

91. **Basic Cause of Flatfoot.**—The theory is advanced by Mitchell that the basic cause of flatfoot is a slow absorption of calcium salts from the bones of the foot. Gravity directs a relatively larger amount of blood with greater force to the foot than to any other part of the body. This would subject the foot to increased absorption of salts. Further, the muscles of the legs, with intermittent activity, impel a vigorous venous current, which in turn induces an active circulation through the bones of the foot. The more active the circulation of the blood, the more active its powers of absorption. If the basic cause of flatfoot be lime absorption, then its consideration teaches that a cure in the late stage is impossible. But if flatfoot cannot be cured, Mitchell advises a simple means for its prevention. Such a method would require a diet rich in lime salts, as contained in milk, eggs, fruits and vegetables; the avoidance of decalcifying acid food, and the drinking of water known to contain the physiologic minerals.

### Archives of Ophthalmology, New Rochelle, N. Y.

*May, XLI, No. 3, pp. 209-322*

93 Case of Vessel-Formation in Vitreous. J. Dunn, Richmond, Va.
94 Skiascopic Test; New and Original Explanation. R. G. Waddy, Oxford, England.
95 Eye Syndrome of Dementia Præcox. H. H. Tyson and L. P. Clark, New York.
96 Some Ocular Manifestations of Syphilis and Parasyphilis of Nervous System. G. H. Knapp, Cincnnati.
97 Tuberculosis of Conjunctiva and Sclera Following Removal of Pigmented Papilloma of Conjunctiva. L. C. Peter, Philadelphia.
98 Ocular Muscle-Tucking or Shortening Operation. G. A. Suffa, Boston.
99 Pathology of Lens. C. Hess, Würzburg.
100 Successful Method of Corneal Transplantation. W. Löhlein, Griefswald.

### New York Medical Journal

*May 4, XCV, No. 18, pp. 913-968*

101 Orthopedic Surgeons of Latter Half of Nineteenth Century. V. P. Gibney, New York.
102 Salvarsan and Wassermann Test in Syphilis. M. L. Heidingsfeld, Cincinnati.
103 Diagnosis of Prolonged Fevers. M. Manges, New York.
104 Relation of Physician to Public. I. S. Wile, New York.
105 Treatment of Tuberculosis in New York City. N. N. Stark, New York.
106 *Deep Petrissage of Abdomen as Aid to Diagnosis of Tapeworm. R. J. Cyriax, London, England.
107 *Intestinal Obstruction, Treated with Phenolphthalein and Calomel. P. H. Markley, Camden, N. J.
108 Suggestion in Treatment of Acute Intestinal Obstruction with Impairment of Intestinal Vitality. V. Knott, Sioux City, Iowa.
109 Bacterial Therapy. W. O. Wetmore, New York.

*May 11, XCV, No. 19, pp. 969-1020*

110 Fundamentals of Freudian Psychology. W. A. White, Washington, D. C.
111 Widening the Pylorus Without Operation. M. Einhorn, New York.
112 Differential Diagnosis of Pancreatic Affections and Gall-Stones. J. F. Erdman, New York.
113 *Liability of Physicians for Accidents Occurring During Anesthesia. A. C. Vandiver, New York.
114 *Experimental Proof of Identity of Brill's Disease and Typhus Fever. J. F. Anderson and J. Goldberger, Washington, D. C.
115 Bacteria in Fresh Eggs. R. C. Rosenberger, Philadelphia.
116 Von Hansemann's Plea for Conditional Reasoning in Medicine. C. F. Bolduan, New York.
117 *Surgical Anesthesia. R. H. Ferguson, East Orange, N. J.
118 Case of Hysteria in Girl of 13 Years, Illustrating Mechanism of an Hallucination. R. Reed, Cincinnati.

106. **Diagnosis of Tapeworm.**—By deep abdominal pétrissage Cyriax means a series of circular movements executed in the direction of the large intestine with sufficient energy to cause a thorough kneading of the abdominal contents. In carrying it out, it is essential that the abdominal parietes and the fingers of the operator move as one over the underlying viscera, otherwise the process is resolved into a mere superficial effleurage, which hardly influences the viscera. It is not necessary for the pétrissage to be executed very hard in order to achieve the desired end; and unless the technic is defective, it should cause no pain. When properly performed it presumably effects the dislodging of the proglottides in two ways—by promoting peristalsis and by mechanically separating segments of the distal end of the parasite by tearing through their attachments. Of these two actions, the latter is probably by far the most important. The increased peristalsis seems to act only as an adjuvant in expelling the separated segments, and probably no intensity of it can actually dislodge the head of the worm; nor does it seem possible to reach the point of achieving this by the merely mechanical effect of the pétrissage. The latter is, therefore, only a means of diagnosis as regards tapeworm infection, and cannot replace the usual curative treatment.

107. **Intestinal Obstruction.**—A procedure which Knott has found of benefit in cases of acute intestinal obstruction, when at operation the vitality of the bowel has been found so impaired as to demand resection, is the following: A large Moynihan or Doyen forceps, with rubber-coated blades, has been applied to bowel and mesentery, well beyond the diseased area. The ends of the segment of intestine to be removed

are now occluded by any crushing forceps, at least one inch from the rubber-coated clamps. The intestine and mesentery, between the rubber-coated clamps, are now rapidly cut away, the line of incision being about half an inch from the jaws of the clamps. The cut edges of the mesentery are now quickly caught with a continuous lock stitch of catgut, and both ends of intestine drawn up and stitched into the abdominal incision, care being taken so to close the peritoneum as to permit of no leakage into the abdomen. The rubber-coated clamps are then removed. No tubes of any kind are inserted into the bowel and a large dressing is applied. The dressing must be frequently changed, depending on the amount of drainage from the gut. Should all go well, some ten days or even longer afterward, depending on circumstances, the open ends of the intestine are liberated from the wound, a lateral anastomosis is made, and the abdomen closed.

The time for making the secondary operation must be decided in each case by the surgeon himself, but as a general rule it should be done as soon as the condition of the patient will permit, particularly when the line of section has been through the small intestine. Should the small intestine have been opened high up, the patient may be fed by means of a tube introduced into the distal segment of bowel.

113. **Liability of Physicians.**—In the opinion of Vandiver, anesthesia should be administered to patients only by registered physicians, and the consent of the patient in all instances should be obtained for the administration of the anesthesia. The delegation of the function of the administration of anesthesia to trained nurses should be deprecated and discouraged. The liability of the physician if negligent is fixed and certain. The negligence of his agent, registered physician or other person, is imputable to the physician and renders him also primarily liable.

114. **Brill's Disease.**—The authors tested the susceptibility to Mexican typhus of seven rhesus monkeys that had recovered from an attack of Brill's disease, and the susceptibility to Brill's disease of ten monkeys that they had reason to believe were resistant to Mexican typhus, with the following result: Of the seven Brill's immune monkeys, in not one did typhus develop, although of nine healthy controls not one has failed to react, the reactions being well marked in seven, and abortive in two. Of the ten typhus immune animals, not one has developed Brill's disease, whereas of eight monkeys inoculated as controls, only one has failed to react. They believe that these results justify the conclusion that an attack of Brill's disease confers an immunity to subsequent infection with Mexican typhus, and, conversely, that an attack of typhus confers immunity to subsequent infection with Brill's disease. In other words, Brill's disease, so called, and typhus fever are identical.

117. **Surgical Anesthesia.**—In summing up the lessons to be learned from a study of the influence of alcohol, chloroform and ether on the power of the body to resist disease the following points are emphasized by Ferguson:

1. Do not give alcohol in the infectious diseases. It is particularly bad in pneumonia and septic conditions.
2. For surgical anesthesia administer at any one time, during the anesthesia, as little of the anesthetic as possible.
3. Never use alcohol as a stimulant during or after an anesthesia if the opsonic power of the blood is of any importance.
4. Make the anesthesia as short as possible. Begin to administer the anesthetic as late as circumstances permit and remove it just as soon as the operation will allow.
5. Use only a strictly pure ether or chloroform lest impurities in the anesthetic augment the unavoidable depression.
6. Take special precautions for asepsis and antisepsis in all operations of any length. A very slight infection, which would not manifest itself under ordinary circumstances, may develop into a serious condition after an anesthesia because of the impaired resistance.
7. Inject six ounces of olive oil high up into the rectum in all septic cases, and in all others in which the patient's power to resist infection may be called into play.
8. Remember that time is an important factor in restoring the opsonic index; therefore do not delay the administration of the oil.
9. In injecting the oil "make haste slowly." The sudden deposit of six ounces of oil may cause it to be ejected and all will have to be done over again. Give a slow, steady, continuous injection every time.
10. Use only pure, limpid olive oil. Absorption, to do the most good, must take place comparatively quickly. Therefore, take care to have at hand an olive oil free from stearins and other heavy oils, free fatty acids and other impurities.
11. If there is the slightest question whether to inject the oil or not, inject it. It can never do harm. Be on the safe side.

### Iowa Medical Journal, Des Moines

*April 15, XVIII, No. 10, pp. 457-506*

119 Economic Waste from Disability and Deaths Due to Preventable Diseases. A. E Kepford.
120 Obstruction of Common Bile Duct Due to Cancer of Ampulla. J. W. Richards, Mechanicsville.
121 Pathologic Physiology of Heart. W. L. Mendenhall, Des Moines.

### Ophthalmic Record, Chicago

*April, XXI, No. 4, pp. 171-218*

122 Convenient Attachment for De-Zeng Electric Headlight. J. R. Newcomb, Indianapolis, Ind.
123 Ophthalmologic Observation of Charles Dickens During His Visit to America. S. H. Brown, Philadelphia.

### Annals of Ophthalmology, St. Louis

*April, XXI, No. 2, pp. 209-444*

124 Organ of Melanotic Pigment in Eye of Vertebrate Embryos, and in Sarcoma of Chorioid. A. v. Szily, Freiburg.
125 New Hypophyseal Syndrome: Hypophyseal Nanism. R. Burnier, Paris.
126 Circumscribed Orbital Edema from Frontal Sinusitis. W. C. Posey, Philadelphia.
127 Shrunken Globe Enveloping Unusually Large Fragment of Steel. W. C. Posey, Philadelphia.
128 Migraine with Ring Scotoma. W. Zentmayer, Philadelphia.
129 Postmydriatic Examination. W. M. Richards, New York.

### Louisville (Ky.) Monthly Journal of Medicine and Surgery

*May, XVIII, No. 12, pp. 353-384*

130 Hypophysis Cerebri: Its Functions and Diseases, with Report of Case of Hypophyseal Tumor. J. A. Flexner, Louisville, Ky.
131 Congenital Laryngeal Stridor; Report of Case. J. M. Ray, Louisville, Ky.
132 Urgent Surgical Lesions Within Abdomen: Special Reference to Diagnosis. H. H. Grant, Louisville, Ky.

### Denver Medical Times and Utah Medical Journal

*May, XXXI, No. 11, pp. 449-496*

133 Knee-Joint Tuberculosis in Adult. L. W. Ely, Denver.
134 Prevention and Control of Tuberculosis. G. W. Holden, Denver.
135 Oral Hygiene. R. P. McGee, Denver.
136 Chiro-Practic—What Is It? J. M. Shaller, Denver.
137 Personal Effort in Preservation of Health. O. E. Coleman, Castle Dale, Utah.
138 Sterilization of Unfit. G. H. Bogart, Paris, Ill.

### Illinois Medical Journal, Springfield

*May, XXI, No. 5, pp. 537-672*

139 Alexander Hugh Ferguson, the Surgeon. A. J. Ochsner, Chicago.
140 Personal Characteristics of Dr. Alexander Hugh Ferguson. E. F. Wells, Chicago.
141 Acute Poliomyelitis: Clinical Aspects, with Special Reference to Rarer Lesions. J. H. Hess, Chicago.
142 Surgical Aspects of Poliomyelitis. D. D. Lewis, Chicago.
143 Pathology of Poliomyelitis. J. W. Jobling, Chicago.
144 Clinical Aspect and Treatment of Acute Anterior Poliomyelitis. C. M. Jacobs, Chicago.
145 Eugenics: Plea for Better Race. E. A. Foley, Jacksonville.
146 Infant-Feeding. W. D. Chapman, Silvis.
147 Russo Reaction in Typhoid. W. H. Gambill and M. C. Hawley, Watertown.
148 Local Surgical Procedures in Non-Tuberculous Joint Diseases. E. H. Ochsner, Chicago.
149 Commercial Aspect of Medical Profession. W. R. Allison, Peoria.

### West Virginia Medical Journal, Wheeling

*May, VI, No. 11, pp. 363-398*

150 Poliomyelitis. L. D. Wilson, Wheeling.
151 Meningitis: Special Reference to Diagnosis. A. O. Albin, Charles Town.
152 Importance of Early Diagnosis in Middle-Ear Disease in Children. G. A. Aschman, Wheeling.
153 Infant-Feeding. T. H. Elliott, Gauley Bridge.
154 Importance of Maintaining Normal Mouth Conditions in Children. J. C. Archer, Wheeling.
155 Strabismus in Children. J. L. Dickey, Wheelng.
156 Hernia in Children. R. J. Reed, Wheeling.

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## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### Indian Medical Gazette, Calcutta

*April, XLVII, No. 4, pp. 129-168*

1 *Estimation of Specific Gravity of Blood and Its Value in Treatment of Cholera. L. Rogers.
2 *New Method of Intraperitoneal Administration of Rogers' Hypertonic Solution in Cholera. T. H. Bishop.
3 Cholera in Campbell Hospital, 1911. L. Ganguly.
4 Treatment of Early Stages of Senile Cataract. H. Smith.
5 Black-Water Fever in Burma. L. G. Fink.
6 Case of Suppurating Ovarian Dermoid Cyst. H. C. Keates.
7 Cure of Hydrocele by Lymphangioplasty (Internal Drainage). K. K. Chatterji.
8 *Multiple Cysticercus Cellulosæ. T. V. Campbell and T. T. Thomson.
9 Treatment of Sprains, Strains and Rupture of Muscles by Strapping, Movement and Rubbing. C. P. O. Shunker.
10 Myositis Ossificans. C. A. Nanjapa.

1. **Specific Gravity of Blood.**—The specific gravity of the blood is regarded by Rogers as a guide in diagnosis and treatment of cholera.

2. **Saline Injections in Cholera.**—The same general indications noted by Rogers for the intravenous injection are accepted by Bishop for the intraperitoneal. It is noted that a blood-pressure which falls below 70 degrees continues to fall rapidly, as a rule, to between 30 and 40, so that preparations for the injection are made as soon as the blood-pressure is discovered to be below the first figure. The instrument used by Bishop for taking blood-pressure observations is Leonard Hill's new type of sphygmometer. It is portable and easily manipulated by one person. For the actual puncture of the abdominal wall he uses a trocar-cannula specially made for him. The site of the puncture, just below and a little to one side of the umbilicus (where the peritoneum is attached to the posterior surface of the anterior abdominal wall) is marked by the application of a small pure phenol swab and the tissues grasped with both hands by an assistant on the other side of the selected spot, which is, while being drawn quite taut, also brought into the middle line immediately below the umbilicus. The previously sterilized trocar-cannula is thrust boldly through and the trocar extracted. The rubber tubing leading from the reservoir is slipped on to the cannula and well over its shoulder. The hypertonic saline solution is then allowed to run in at the rate of about a pint in four or five minutes, the temperature being regulated in the same way as for the intravenous method. The amount required cannot be indicated by the improvement in the blood-pressure observable, as such improvement is not immediate, but a fair clinical indication of when to stop is when the patient experiences a desire to micturate. Micturition, though attempted, does not ensue at this point but generally coincides with the return of the blood-pressure in the radial artery some few hours later. The one apparent risk, that of injuring the intestine during the process of puncturing is, Bishop is convinced, apparent only.

8. **Multiple Cysticercus Cellulosæ.**—About six years ago the authors' patient noticed a small tumor over his left eyebrow, later another to the left side of his nose; still later on neck and all over the body. For one year before admission patient had had a cough with purulent sputum and irregular fever. On examination of his chest, they found extensive tuberculous disease of both lungs. His sputum contained numerous tubercle bacilli. His face and body presented a remarkable appearance. Numerous small subcutaneous tumors could be seen, particularly about the neck and chest, part of back, shoulders, upper and forearms, and thighs; in the pectoral muscles on both sides, the tumors were very numerous. The tumors were freely movable and felt firm and were about the size of a large grape. The patient gradually got worse and after a severe attack of diarrhea died. Numerous cysts were found subcutaneously all over the back and part of chest and abdominal wall; also over the deltoids and in upper and forearms and thighs; a few were found in the neck and face. Numerous intramuscular cysts were found in the pectoral muscles. The right lung was very adherent to the chest wall all round, the left at the apex. There was tuberculous thickening of both apices and an abscess in the right apex. No cysts were found in the lungs. On the surface of the heart two small cysts were found, one on the interventricular septum and the other on the left ventricle near the apex. In the left kidney there were three cysts, one on the convex and two others on the inner border. One cyst was found near the hylum of the spleen, no other cysts were found in the abdominal cavity. The cranial cavity was not examined. The patient had not allowed the removal of a cyst for examination, so a positive diagnosis of cysticercus cellulosæ was not made till he died. When the authors examined the contents of one of the cysts under the microscope, the head of a tapeworm with a rostellum consisting of two rows of hooklets could be seen.

### Journal of Tropical Medicine and Hygiene, London

*April 15, XV, No. 8, pp. 113-128*

11 Case of Pemphigus Contagiosus. P. H. Macdonald.
12 Sleeping Sickness in Gambia. E. Hopkinson.
13 Pigmented Macula on Tongue, Gums and Palate. R. H. Castor.

### British Medical Journal, London

*April 27, I, No. 2678, pp. 933-988*

14 *Unicellular Cancri: Parasite of Cancer. Sir H. Butlin.
15 *Mechanism and Treatment of Shock. H. T. Gray and L. Parsons.
16 *Method of Estimating Strength of a Vaccine by Standard Bacterial Emulsion. J. A. B. Hicks.
17 Case of Tuberculous Polyserositis. G. J. Conford.
18 Diagnosis and Treatment of Sciatica. W. B. Watson.
19 Traumatic Ossification of Tendon. S. F. A. Charles.
20 Case of Color Blindness. A. R. Galloway.

14. **Parasite of Cancer.**—In cases in which the cancer cells have broken bounds and are wandering or migrating, Butlin says the hope of the patient lies in these factors: (1) In the inability of the cancer cells to exist and flourish at a distance from the tumor; (2) in the possibility that the cancer cells in the individual case may be wanting in vigor; and (3) in the possibility that the resisting power of the host may be high. The first of these factors requires no treatment; the second is quite beyond medical control at present; and the third has been for some years constantly before the profession, so much so that the attempts to discover a specific against cancer have given way, in the minds of most scientific physicians and surgeons, to an attempt to discover some means of increasing the resisting power of the host. Wide and early operations, adapted to the pathology of the particular variety of malignant disease in each particular part of the body, Butlin points out, have been attended with very great success. Nor is this to be wondered at. For the tumor is the manufactory and the storehouse of cancerous cells. And even in those cases in which the cells have begun to migrate, it is most desirable to get rid of the chief source of cancer cells. The resistance of the host has a much better chance of contending successfully with scattered cells, perhaps not yet firmly established where they lie, after the removal of the tumor. In fact Butlin feels that if a "specific" against cancer were discovered it might even then be very desirable to remove the primary lesion, the tumor. Butlin warns against trusting implicitly to microscopic findings and planning operations on them. He lays down the axiom that "If an operation does not fulfil the requirements of pathology and is, nevertheless, exceedingly successful, the pathology which relates to it must be revised; either the observations are incorrect, or the deductions which are drawn from them are not justified."

15. **Mechanism and Treatment of Shock.**—Surgical shock is divided into three stages by the authors: (1) The stage of stimulation, or the pressor stage; (2) the stage of depression, or the depressor stage; (3) the stage of equilibrium, when active abnormal afferent impulses are in abeyance. It has been shown that every sensory nerve contains pressor and depressor fibers to the vasomotor center; stimulation of the pressor fibers only induces reflex vasoconstriction and cardiac acceleration, while stimulation of the depressor fibers only, induces reflex vasodilatation, and at the same time inhibits vasoconstrictor impulses. Stimulation of such a mixed sensory nerve usually induces domination of the pressor group. Domination of the depressor group only occurs (in so far as the present study is concerned) when the pressors are fatigued. Applying these principles to the results obtained by them in a hip excision, the authors conclude the following: The first stage of shock in that operation consisted in a rise of blood-pressure and an increase in the pulse-rate consequent on the domination of the pressor impulses. After about three minutes pressor fatigue commenced. Further stimulation initiated a domination of the depressor impulses, the cessation of these impulses being marked by a passive return of the blood-pressure to an intermediate level, due to the cessation of active depressor domination. Prolongation of the stimulus during the depressor stage leads to: (1) Continuous lowering of blood-pressure; this renders inadequate the blood-supply to the cardiac muscle through the coronary arteries, and this fact, combined with the lack of peripheral resistance, leads to delirium cordis; and (2) anemia and starvation of the central nervous system; if this is carried to a sufficient degree the recovery of the centers is rendered impossible.

16. **Estimating Strength of a Vaccine.**—The process used by Hicks for counting an emulsion of bacteria of unknown

strength by comparison with an emulsion of known strength, that. is, a "standard," using a differential stain (Gram's method), and a "standard" of opposite staining properties to the bacterial emulsion whose strength it is wished to estimate, is as follows: 1. Obtain a Gram-positive and Gram-negative "standard" by the diluting and plating out processes described. These "standards" keep good for at least six months in our experience. 2. Take equal parts of the emulsion of "unknown" strength and a "standard" of opposite Gram-staining properties and mix thoroughly. 3. Make a film and fix it carefully. 4. Stain by Gram's method, using a counterstain. 5. Count 200 to 300 bacteria, using a "counting square" and a one-twelfth objective and noting the Gram-negative and Gram-positive organisms in the squares counted. 6. Knowing the strength of the "standard" and the proportion of Gram-negative to Gram-positive organisms, the strength of the unknown emulsion is easily worked out by proportion.

### Lancet, London

*April 27, I, No. 4626, pp. 1109-1174*

21 Uses of Tuberculin in Pulmonary Tuberculosis. A. Latham.
22 Progressive Lenticular Degeneration: Familial Nervous Disease Associated with Cirrhosis of Liver. S. A. K. Wilson.
23 *Treatment of Opium Poisoning by Faradic Current. F. Taylor.
24 Uterine Hemorrhage: Abuse of Curet. B. Whitehouse.
25 *Treatment of Bilharziasis by Salvarsan. H. B. Day and O. Richards.
26 *Can as Good Results Be Obtained by Treatment of Pulmonary Tuberculosis in Low Lands as at High Altitudes? C. Saugman.
27 Cesarean Section for Labor Obstructed by a Suppurating Ovarian Dermoid Cyst. J. B. Hellier.

23. **Faradic Current for Opium Poisoning.**—In cases in which the coma has reached a stage threatening life Taylor thinks the faradic current should be applied persistently, in spite of the entire want of response during the first thirty or forty minutes, other than the contraction of muscles. As to the battery employed, he says there is no need for an electric current of exceptional strength. His first patient was treated by a current from a small battery of which the elements are two zinc plates less than 30 mm. square each, 35 to 40 grains of mercury sulphate, and a coil measuring 2¾ inch by 1 inch. The other patient was treated by a portable faradic battery, such as is usually employed by the general practitioner..

25. **Treatment of Bilharziasis.**—The authors conclude that salvarsan as a remedy for bilharziasis is absolutely valueless, and that it should not be used or recommended for this purpose.

26. **Altitudes and Pulmonary Tuberculosis.**—Observation has convinced Saugman that by the treatment of pulmonary tuberculosis in the lowlands it is possible to obtain results which are just as favorable as the results obtained at high altitudes.

### Australasian Medical Gazette, Sydney

*March 30, XXXI, No. 13, pp. 321-348*

28 Present Situations as Regards Infectious Protozoa. F. Tidswell.
29 Onset of Auricular Fibrillation. M. Simpson.
30 *Interesting Gynecologic Condition. S. N. Rorke.
31 Double Uterus and Double Vagina. F. S. Stuckey.

*April 6, XXXI, No. 14, pp. 349-376*

32 Cancer and Its Treatment. H. L. Maitland.
33 Salpingo-Oophorocele and Allied Conditions. J. P. Hastings.

30. **Double Vagina.**—The following case is reported by Rorke: Patient, age 19, primipara, full time labor, labor pains slight, on and off for twenty-four hours; then much stronger. On examination the os uteri appeared to be fully dilated, but further strong pains appeared to produce no progress in the advancement of the head. After waiting about half an hour, during which the pains recurred with frequency and strength, Rorke observed that both the anus and the vaginal orifice appeared not to be at all bulged by each expulsory effort, but rather retracted or pulled up, the usual eversion and D-shape of the anus being conspicuous by its absence. On further digital examination the head was felt to be past the brim of the pelvis, but was preceded by an elastic mass, which he took to be the yet unruptured "bag of waters." Rorke made an attempt to rupture with his finger nail what he took to be the unruptured "bag of waters," but without success, the structure proving too tough. After minute digital examination, he found that the resistance and obstructing mass was of the nature of a wide band or riband fixed anteroposteriorly in the vagina. He was able with no small degree of manipulation to push his forefinger round the left side of this and feel during a pain, the vertex of the head uncovered by membrane.

Subsequent pains produced no further advance of the head, but only a thinning and flattening of this anteroposterior ligament. Not knowing the extent and exact connection of this ligament, he was not prepared to sever it. Instead, after great difficulty, he applied the forceps, having first fully anesthetized the patient. This proved a rather troublesome task. He applied them to the left of the obstructing band, pushing it to the right with the unoccupied fingers of the introducing hand. This, of course, was only possible between the pains. Rorke delivered the head to the left of it. It was in position, persistent occipitoposterior. and was delivered thus.

Immediately on delivery there was a free hemorrhage and the placenta could not be expressed. On introducing his hand into the uterus Rorke still kept to the left of the band, now clearly definable. The placenta was found adherent over about 2 inches on the right wall of the uterus. This he cleared out piecemeal with his fingers, squeezing the uterus well, after delivery. Contraction was good, and ergot being given, the confinement was completed. Patient made an uninterrupted recovery. On later examination, Rorke found the obstruction to consist of a fibrous septum covered on both sides with mucous membrane. It extended vertically and mesially from close to the vaginal orifice to about a quarter-inch from the cervix. He takes it to have been a modification of a double vagina. On the closest examination no trace of a double uterus could be found, and only one cervix.

### Australian Medical Journal, Melbourne

*March 23, I, No. 36, pp. 393-404*

34 Stricture of Right Ureter Treated by Pyelo-Ureterostresis. B. Kilvington.
35 The Thymus. R. M. Downes.
36 Dystocia Due to Uterine Prolapse with Edema of Cervix. R. T. Sutherland.
37 Operative Treatment of Chronic Trachoma. J. M. Baxter.

*March 30, I, No. 37, pp. 405-416*

38 The Thymus. R. M. Downes.
39 Foreign Body Impacted in Bifurcation of Left Bronchus of a Boy (Removal). R. A. Stirling.

### Annales de Médecine et Chirurgie Infantiles, Paris

*April 15, XVI, No. 8, pp. 225-256*

40 *Fatal Generalized Vaccinia. (Cas de vaccine généralisée terminé par la mort.) L. d'Astros.
41 Fatal Duodenal Ulcer in Young Infant. (Ulcère du duodénum chez un enfant d'un mois mort par hémorragie intestinale.) Weill and Gardère.
42 *Treatment of Tuberculous Peritonitis. (Traitement moderne de la péritonite tuberculeuse.) E. Périer.

40. **Generalized Vaccinia.**—The infant was vaccinated during the first week of its life and by the end of a month it had fifty-two pustules scattered over its body but its general health was not materially impaired and there was no fever. Then several dozen more pustules appeared and the eruption assumed a hemorrhagic tendency, proving soon fatal.

42. **Treatment of Tuberculous Peritonitis.**—Périer reviews the different methods of treatment in vogue, citing the good results obtained by certain physicians with lime, a non-fluid and salt-free diet, drinking very little if at all (to combat the diarrhea), a wet compress continuously on the abdomen, covered with oil silk, and complete bed rest with the windows all open. The lime is given according to Ferrier's formula omitting the magnesia: 0.65 gm. calcium carbonate; 0.2 gm. tribasic calcium phosphate, and 0.15 gm. sodium chlorid. One such capsule to be taken three times a day after meals. This method seems most promising in the cheesy and ascites cases. Anorexia, vomiting and diarrhea are the chief indications for it, and also tuberculous lesions in the lungs, etc. Puncture is advisable if the ascites is distressing and drags along, but he advises against it in moderate cases. Laparotomy no longer has the same vogue as a few years ago; it should be reserved for the cases in which the general health is suffering severely from the long duration of the disease. Exposure of the

abdomen and later of the trunk to the direct sunlight was followed by a prompt cure in three cases reported by Chatin and Gaulier from the public hospital at Lyons. The sun baths were given for two hours morning and afternoon or for three or four hours in the morning alone, avoiding the hottest hours of the day, commencing with fifteen-minute exposures to prevent sunburn. The head is protected with a shield of black paper covered with a white cloth, the shield fastened to the back of the reclining chair.

### Archives Mensuelles d'Obstétrique et de Gynécologie, Paris

*April, XVII, No. 4, pp. 305-400*

43 *Abdominal Hysterectomy for Uterine Cancer During Pregnancy. (L'hystérectomie pour cancer de l'utérus au cours de la grossesse.) J. L. Faure.
44 *The Wassermann Reaction in Syphilitic Pregnant and Parturient Women and in Their Children. R. Daunay.
45 Lesions in the Corpus Luteum and Uncontrollable Vomiting in Pregnancy. (Corps jaune et vomissements incoercibles.) J. L. Chirié.

43. **Abdominal Hysterectomy for Cancer During Pregnancy.**—Faure insists that operative treatment should be the rule in every case of cancer in a still movable uterus, irrespective of pregnancy or other conditions. Hysterectomy is exceptionally easy with the large pregnant uterus. If the patient escapes recurrence for six months to a year, the chances are very slight that the malignant disease will return later. He presents evidence to prove that the fact of the existence of the pregnancy does not increase the liability to recurrence after radical removal of the cancer.

44. **The Wassermann Reaction in Mothers and New-Born Infants.**—Daunay has previously published his experiences with the Wassermann reaction in eighty-two pregnant women, and here reviews an additional series of 146. He gives the findings in tabular form as also in a series under salvarsan. In certain cases in which the mother had a history of syphilis but was free from all apparent manifestations of it and the Wassermann reaction was negative, and her child was also free from signs of syphilis, the child at birth gave a positive Wassermann reaction, confirming anew the absolute independence of the maternal blood and the fetal blood in regard to the specific antibodies. Mothers simply suspected of syphilis and with a negative Wassermann reaction are liable to give birth to an infant with florid syphilis.

### Bulletins de la Société de Pédiatrie, Paris

*March, XIV, No. 3, pp. 113-150*

46 Hernia of Lung from Absence of Left Sternocleidomastoid Muscle. (Hémiatrophie congénitale de la face et de la langue à gauche. Absence du muscle sterno-cleido-mastoidien et hernie cervicale du même côté.) G. Variot.
47 Infants with Abnormally Large Abdomen. (Variations, sous l'influence de la ration alimentaire, du périmètre—sus-ombilical—chez les nourrissons atteints d'ectasie abdominale.) G. Variot and Morance.
48 *Shield for Throat Examinations. (Ecran transparent fronto-facial pour l'examen de la gorge des enfants.) J. Renault.
49 Excellent Ultimate Results from Subcutaneous Tenotomy for Congenital Torticollis. A. Jalaguier and L. Lamy.
50 *Sunlight Treatment of Surgical Tuberculosis. (L'héliothérapie par la méthode de Rollier dans les tuberculoses chirurgicales.) P. F. Armand-Delille.

48. **Shield for Throat Examination.**—Renault makes the shield of mica, mounted in aluminum, and fastens it to a head-band. The mica shield is 17 by 19 cm. square and protects the physician against contagion in examining the patient's throat, while the shield can be boiled or sterilized in other ways and the soft metal can be curved to fit the face, leaving the physician's hands both free.

50. **Direct Sunlight in Therapeutics.**—Delille describes his impressions from a recent trip to Leysin where Rollier has been so successful in curing surgical tuberculosis by direct exposure to the sunlight. He trains the children gradually until they spend over six or eight hours in the sunshine, absolutely naked, the head only being protected. The location at an altitude of about 4,000 feet raises it above the mists of the valleys. Delille examined fifty patients and compared the present status with the series of photographs taken at different intervals, all confirming the rapid transformation of the general condition, the drying up and healing of fistulas in a few weeks and the healing of the tuberculous lesions with complete functional restoration and absolute restitution of the movements of the joints, even when the arthritis had long had a fistula or fungous growths. Success was obtained, Delille says, in fully 99 per cent. of the cases, the course requiring from six to twelve months or two years according to the previous condition. Rollier does not use plaster casts, and he applies extension only for coxalgia. For Pott's disease he does not use a plaster bed but exposes the back to the sunlight for several hours. Delille appeals to the authorities to organize a similar mountain station for heliotherapy in France, or at least to send to Leysin some children needing this treatment, especially those refused admittance to the seaside sanatoriums. A committee has since been organized in the Société de Pédiatrie de Paris to suggest ways and means to carry this suggestion into practice.

### Journal de Médecine de Bordeaux

*April 14, XXIV, No. 15, pp. 225-240*

51 Beverages at and Between Meals. (Boisson de repas et de hors repas.) P. Carles.
52 *Modifying Injections in Tuberculous Ostitis. (Cas d'ostéite tuberculeuse traitée par des injections modificatrices.) A. Venot.

52. **Modifying Injections in Tuberculous Ostitis.**—Venot prefers ether as the vehicle for iodoform, with care to evacuate the ether fumes at once afterward, pushing the needle to the top of the cavity where they accumulate. The ether stretches the walls of the cavity and thus smooths out folds and crevices, permitting the iodoform to reach every part of the walls of the cavity. It seems to have a direct curative action. Venot also uses frequently a 20 per cent. solution of zinc chlorid. Both this and the iodoform-ether cause more or less pain for a time, so he prefers an ethereal oil with the iodoform for children. These modifying injections, followed by immobilization of the part, are far superior, he thinks, to operative measures. The wider his experience, the less surgical his procedures. His rule is first to evacuate the pus, then make the modifying injection, and then immobilize and follow with general antituberculosis measures.

### Lyon Chirurgical, Lyons

*April, VII, No. 4, pp. 365-384*

53 Lateral Suture of Vessels. (Sutures latérales des vaisseaux.) E. Villard and E. Perrin.
54 *Fulminating Lead Poisoning from Shot. (Intoxication saturnine aigue, mortelle, consécutive à un coup de feu par arme de chasse.) J. Curtillet and P. Lombard.
55 Suppuration in Cancer of Prostate. (Nouveau cas d'abcès chaud de la prostate au cours d'un cancer de cet organe.) V. Rochet and L. Thévenot.

54. **Fatal Lead Poisoning from Bird-Shot in the Arm.**—A healthy lad of 15 received the entire charge of a shotgun lengthwise in the forearm, and the shot either had to be left or the whole arm amputated. The boy seemed to be doing well for the first twelve days except for considerable anemia; during this period the arm gradually swelled more and more. The swelling then began to subside; with this severe symptoms of lead poisoning developed, proving fatal in twenty-five days. The intoxication was so fulminating that there was no time for the line on the gums, the colic or nervous disturbances to develop. Headaches, insomnia, vertigo and anorexia were the main symptoms, accompanied by a waxy tint of the skin. Nine somewhat similar cases on record show that the prognosis depends mainly on the shape of the lead, small shot offering a greater surface than a single bullet. With a bullet, the poisoning did not manifest itself until after two and eighteen years in two cases; with bird-shot, symptoms were noticed by the third to the sixteenth week, the twelve-day interval in the case reported being the briefest on record. Anemia had been pronounced from the first, and attention is called to this as a warning signal that should have been heeded. The great swelling of the arm in this case probably hastened the dissolving of the lead in the edema fluid, and the subsidence of the edema must have washed the dissolved metal throughout the system, entailing the rapid systemic poisoning. The prognosis with a bullet or shot in the body is influenced not only by the quantity of lead in the tissues but by its surface expanse and by the conditions in regard to the vascularization of the region and the degree and extent of the local edema.

## Lyon Médical, Lyons

*April 7, XLIV, No. 14, pp. 457-816*

56 Paralysis Complicating Fracture of Humerus in Two Children. (2 cas de paralysie radiale compliquant une fracture de l'extrémité inférieure de l'humérus.) Gallois and Tartanson.
57 Remote Lymphadenitis with Appendicitis. X. Delore and J. F. Martin.

*April 14, No. 15, pp. 817-872*

58 Pneumobacillus Pneumonia. V. Cordier and A. Badolle.

## Revue de Médecine, Paris

*March, XXXII, No. 3, pp. 161-240*

59 *Diabetic Eclampsia. (Cas d'éclampsie diabétique.) A. Chauffard and H. Rendu.
60 Atypical Zona. (Les zonas atypiques. II.) J. Minet and J. Leclercq.
61 Case of Syphilitic Lung Disease Complicated with Pyopneumothorax. (Du pyopneumothorax dans la syphilis pulmonaire.) C. Roubier and H. Bonget.
62 Tuberculosis of Cardinal Richelieu. (La maladie du Cardinal de Richelieu.) H. Clen.

*April, No. 4, pp. 241-328*

63 *Meningeal Symptoms in the Tuberculous. (Les états méningés des tuberculeux.) J. Tinel and P. Gastinel.
64 Effect on Nutrition of Removal of Dog's Pancreas. (Recherches sur la dépancréatation.) H. Labbé.
65 Lactose Has No Diuretic Action Unless Liver Is Insufficient. (De la valeur réelle du lactose comme diurétique.) A. Cramer.
66 *Paramyoclonus from Mumps. (Paramyoclonus d'origine ourlienne.) M. Lafforgue.
67 *Organotherapy for Backward Children. (Arriération infantile et opothérapies endocriniennes.) R. Dupuy.

59. **Diabetic Eclampsia.**—In the case reported in a tuberculous diabetic, the brain, spinal cord, meninges and kidneys were apparently anatomically normal and there were no signs of uremia. The patient died after thirty-five eclamptic attacks in less than twenty-four hours. The eclampsia seems to have been of toxic origin, presumably an equivalent for diabetic coma.

63. **The Meninges in the Tuberculous.**—Tinel and Gastinel review the necropsy findings in a number of cases, all showing how an existing tuberculosis can affect the meninges and induce extremely variable lesions from acute inflammatory infiltration to diffuse sclerosis with fibrous nodules or cystic formations. On the other hand, the meninges may display a remarkable tolerance to the tubercle bacilli and the lesions may run an entirely latent course. In other cases the meninges may be extremely intolerant and react with intense symptoms to minimal and transient injury. Tinel and Gastinel emphasize anew in this connection the remarkable fluctuation in the tolerance of the individual. One day he seems to be extra resistant, actually vaccinated against the toxic products, and another day he seems to be hypersensitive to them. These phases may alternate and the meninges share in this variable behavior. Nothing but an actual vaccination can explain the phases of absolute latency following or alternating with periods suggesting attenuated meningitis.

66. **Paramyoclonus Following Mumps.**—Lafforgue reports a case of mumps with pronounced myoclonic symptoms the tenth day of the disease. The parotitis developed first, orchitis followed, the temperature running up still higher. As this subsided, clonic spasms developed in various groups of muscles all over the body. The clonic spasms gradually subsided until by the sixth day all had disappeared except those in the flexors of toes and fingers, but two weeks later the muscle spasms returned, nearly as severe as at first, and the knee-jerks were much exaggerated but without other appreciable nervous symptoms. The spasms gradually subsided again in a few days until little was left of them, and the patient has not been seen since. From the first onset of the infection there had been headache and occasional epistaxis. During the first few days the epigastrium had been painful and tender, suggesting possibly involvement of the pancreas.

67. **Organotherapy of Backward Children.**—Dupuy suggests utilizing our knowledge of the influence of the glands with an internal secretion to ward off impending physical and mental infantilism. The children should be given minerals as indicated by examination of the urine, and, if the blood is poor, fresh or desiccated bone marrow and iron. Inherited syphilis should be treated and adenoids removed, the diet should be extra nourishing, rich in carbohydrates and mineral salts, and the child should rest reclining for several hours a day. These preliminary measures he regards as very important as adjuvants to the organotherapy. The course of the latter lasts from six to twelve months; the first months he gives three capsules a day containing each from 0.02 to 0.03 gm. of pulverized thyroid gland, pituitary gland and adrenal. If there is extreme weakness or agitation, he adds extract of testicle and corpus luteum. In some cases he administered the extracts in glycerin by subcutaneous injection. He summarizes twenty-two cases in which this polyopotherapy, as he calls it, was applied to children from 10 to 18 years old. No ill effects were observed in any instance. The results were very encouraging, he states, the mind and body all showing benefit, the persisting sexual characteristics developing, and the entire metabolism becoming transformed.

## Presse Médicale, Paris

*April 17, XX, No. 31, pp. 309-324*

68 *Technic for and Interpretation of Findings with Endoscopy of Lower Intestine. (L'endoscopie recto-colique. Rectoscopie.—Sigmoidoscopie.) R. Bensaude.

*April 20, No. 32, pp. 325-336*

69 *Technic for Ligation of External Carotid Artery. (La ligature de l'artère carotide externe.) P. Descomps.

68. **Proctoscopy.**—Bensaude's article is accompanied by thirty illustrations and describes the technic and the interpretation of the findings with direct visual inspection of the rectum and sigmoid flexure. He gives a set of seven views taken at different depths in the normal intestine for comparison. The difficulties of differentiation are shown in a case cited in which a woman of 40 developed hemorrhagic diarrhea rebellious to the usual measures. Proctoscopy five years after the onset of the diarrhea showed the rectum nearly filled with vegetations bleeding at the slightest touch, occupying a zone about 5 cm. wide, commencing about 8 cm. from the anus. No evidences of cancer or tuberculosis were found on microscopic examination of a scrap removed, and the possibility of syphilis was then thought of for the first time. Under mercurial treatment the stools became normal and the vegetations subsided almost completely.

69. **Ligation of External Carotid Artery.**—Descomps advocates an incision parallel to but considerably more toward the front than the classic incision for ligation of the carotid, and describes the various steps of the technic with nine illustrations.

## Berliner klinische Wochenschrift

*April 15, XLIX, No. 16, pp. 725-772*

70 Rontgenoscopy of Gastro-Intestinal Tract. (Neue Beiträge zur Röntgenuntersuchung des Digestionstraktes.) G. Schwarz. (Radiologische Untersuchung des Dickdarmes.) M. Cohn.
71 *Prophylaxis of Tuberculosis. (Experimentelles und Epidemiologisches zur Lungenschwindsuchtsfrage.) P. H. Römer.
72 Bacteriologic Research on Dysentery. (Neuere bakteriologische Befunde bei Ruhrerkrankungen.) Baerthlein.
73 Biologic Action of Thorium. (Zur biologischen Wirkung des Thoriums.) J. Plesch.
74 Anaphylatoxin. E. Friedberger and A. Mareschi.
75 General Principles of Modern Treatment of Eczema. (Neuere Erfahrungen über das Ekzem und dessen Behandlung.) A. Alexander. Commenced in No. 15.
76 Bovine versus Human Tuberculosis. (Geheimrat J. Orth's Vortrag über Rinder- und Menschentuberkulose in der Gesamtsitzung der Kgl. preussischen Akademie der Wissenschaften vom 8 Februar 1912.) L. Rabinowitsch.

71. **Prophylaxis of Pulmonary Tuberculosis.**—Römer concludes from the experimental and epidemiologic data available that in the circles of the population in which tuberculosis most prevails scarcely any one reaches puberty free from infection. Both tuberculous human beings and animals are relatively immune to later infection with tubercle bacilli, so that the mortality from tuberculosis is less in the regions where the disease is most prevalent. Pulmonary phthisis is the result of massive autoreinfection of an organism intensely infected in childhood. The conclusion hence follows that if children can be protected against massive tuberculous infection, they will escape pulmonary phthisis later.

## Deutsches Archiv für klinische Medizin, Leipsic

*CVI, Nos. 1-2, pp. 1-218. Last indexed May 18, p. 1548*

77 Clinical and Pathologic-Anatomic Study of Continuous Arhythmia. H. A. Freund (Detroit).
78 Emotional Paroxysmal Tachysystole. (Psychische ausgelöste paroxysmale Kammertachysystolie.) K. Kure.

79 Hemolysis, Lipolysis and the Rôle of the Mononucleated, Non-Granulated Basophilic Cells. (Hämolyse, Lipolyse und die Rolle der einkernigen ungranulierten basophilen Zellen.) S. Bergel.
80 *Serotherapy (Serum from Convalescents) in Scarlet Fever. (Behandlung schwerer Scharlachfälle mit Rekonvalescentenserum.) E. Reiss and P. Jungmann.
81 Echinococcus Cysts in the Brain. (Mutilokulare Gehirnechinokokk.) H. Eichhorst.
82 Anemia from Hemolysis. (Ueber die hämolytische Anämie.) O. Roth.
83 Rontgenography of the Pericardium. (Das Röntgenbild des Perikards. Orthodiagraphie und Teleröntgenographie.) Römheld.
84 Abnormal Blood-Picture with Disease of Any Gland with an Internal Secretion. (Ueber das Blutbild bei Erkrankungen der Drüsen mit innerer Sekretion und seine Beziehungen zum Status thymicolymphaticus.) L. Borchardt.

80. **Serotherapy in Scarlet Fever.**—Fifteen years ago Weisbecker reported the treatment of five scarlet-fever patients with serum drawn from a convalescent, and others have published similar attempts since. The results have been conflicting, but Reiss and Jungmann here report application of the method in twelve cases and call attention to the remarkable turn for the better in ten of these patients after intravenous injection of from 40 to 100 c.c. of serum drawn from several scarlet-fever convalescents and mixed. The disease was unusually severe in each case, and the temperature and pulse dropped by nearly 3 degrees C. in from nine to fourteen hours, the drop beginning after two to four hours. The serotherapy did not seem to have the slightest action on any secondary phenomena, the lesions in the tonsils, lymph-nodes and joints continuing or developing unmodified by the serotherapy. This fact is regarded as proof of the efficiency of the serum as the fever dropped and the general condition materially improved notwithstanding the presence or progressive course of a destructive angina, for example. They now make it a rule to apply the serotherapy only in those cases in which recent scarlatinal infection is responsible for serious symptoms. The patients all began to convalesce the fourth day or fifth at latest, while in 200 other cases the fever lasted from four to fifteen days, with an average of six days. The fever terminated by crisis in only two of these 200, while this occurred in all the ten serum-treated cases. They urge others to try this method of treatment in pure, severe cases, the earlier the better, and never later than the fourth day. The serum must be from patients convalescing from scarlet fever, free from complications and otherwise healthy, at about the eighteenth to the twenty-fourth day of the disease. They prefer to centrifugate the serum from at least three convalescents and distribute it in fused ampullas containing each 50 c.c., to which 5 drops of a 5 per cent. phenol solution have been added. Each separate serum is tested beforehand by inoculation and for the Wassermann reaction.

## Deutsche medizinische Wochenschrift, Berlin

*April 18, XXXVIII, No. 16, pp. 737-784*

85 *Pathology and Treatment of Cardiac Asthma. H. Rosin.
86 Relations Between Human and Bovine Tuberculosis. (Beziehungen zwischen menschlicher und tierischer Tuberkulose.) H. Kossel.
87 Specific Antibodies in the Serum of the Tuberculous. (Die spezifische Antikörper im Blutserum Tuberkulöser.) B. Möllers.
88 *The Contagious Period of Scarlet Fever. (Zur Infektionsdauer des Scharlachs.) A. Baginsky.
89 Salvarsan in Relapsing Fever. (Anwendung des Salvarsans bei Febris recurrens.) P. P. Smirnoff.
90 Stenosis or Obliteration of Left Iliac Vein at Its Junction with the Vena Cava. (Stenose bzw. Obliteration der linken V. iliaca an der Einmündungsstelle in die Hohlvene.) M. Nagayo and O. Nakayama.
91 Suture of Anal Sphincters; Five Cases. (Ueber Sphinkternaht.) M. Eschenbach.
92 Metabolic Findings in Child with Myxedema. A. Loewy and P. Sommerfeld.
93 Jaundice with Inherited Syphilis; Four Cases. (Ueber Ikterus bei der hereditären Syphilis.) O. Rosenberg.
94 Hemorrhagic Nephritis in Infant with Inherited Syphilis. R. Hahn.
95 Salvarsan in Inherited Syphilis. E. Andronescu.
96 Roentgenotherapy of Pruritus Ani. W. Rave.

85. **Cardiac Asthma.**—Rosin discusses the causes and diagnosis and says that the prognosis at each attack is grave. Treatment must be rapid and intensive to give speedy relief, giving the preference to drugs which pass rapidly into the circulation. Consequently the heart tonics have to be given by subcutaneous, intramuscular or intravenous injection. Drugs given by the mouth not only disturb the respiration but they are defectively absorbed as conditions in the circulation during the attack are unfavorable for absorption. Even in the best case they work too late. Camphor in a 10 per cent. oil solution has maintained its usefulness and is indispensable during the attacks. He adds that as it seems to be entirely non-toxic, the injections should not be spared; they can be repeated every fifteen minutes. Caffein is also a good stimulant for the heart; judging from experiments on animals it does not, like camphor, act on the heart muscle but tones up the vessels and acts on the blood-pressure. He prefers to give it in a 2 per cent. solution to which a little phenol has been added as the solutions otherwise are apt to grow moldy and are slightly irritating, thus providing under the skin a good culture medium for germs. In long protracted attacks, three injections can be made in an hour. In very threatening attacks, some preparation of digitalis might be given by intravenous injection. Only after failure of everything else does he approve of an intragluteal injection of epinephrin. An ice-bag to the heart may regulate its contractions, or hot applications, as hot as can be borne. A favorable reflex action on the vascular apparatus may be realized by putting the hands and forearms in hot water. Mustard applications to the heart region are also useful but inhalation of sharp aromatic substances are not to be commended. He remarks that venesection is not applied as often as it deserves. The physician is often held back from using it by the fear that the venesection might be considered responsible for the unfavorable outcome in case the patient succumbs, but he declares that this consideration should not deter from venesection in cardiac asthma. Withdrawal of not less than 200 c.c. of blood often brings subjective and objective relief. One need not be afraid of often repeating the venesection with recurring attacks. The lost blood is rapidly replaced. Great relief may be obtained by having the patient sit in an upholstered easy chair with a small table in front of him on which he can rest his arms. In conclusion Rosin mentions oxygen as a possible useful adjuvant. Cardiac asthma, he reiterates, is only a symptom, and treatment of the underlying cardiovascular affection is the main thing.

88. **Duration of Contagiousness of Scarlet Fever.**—Baginsky gives a diagram illustrating forty-five cases in his experience in which children discharged from the hospital as fully cured of scarlet fever, the forty-second day, infected other members in the home to which they returned. In six cases the children gave the infection in four days to other children after their return; in some others the interval was from five to twenty-five days, but in the majority it averaged seven. Among the total forty-five there were only two children who still had otitis when discharged. He has noticed in his hospital practice that scarlet fever is liable to develop apparently spontaneously after a severe burn. This occurred in six cases. It is possible that the virus may lurk in the nasopharynx in apparently healthy children, and thus induce scarlet fever in children predisposed by a severe burn. He found streptococci in the blood in a large proportion of the scarlet-fever children. It is evident that the scarlatinal virus is the medium that prepares the soil for the streptococci, or the streptococci bring with them the actual scarlatinal virus. It is still a question how long a child with scarlet fever should be isolated. The present six weeks' rule is inadequate, he thinks. The best plan would be to have special convalescent homes for children with scarlet fever and diphtheria, where they can go on being discharged from the hospital.

## Medizinische klinik, Berlin

*April 14, VIII, No. 15, pp. 595-638*

97 *Constitutional Achylia. R. Schmidt.
98 *Operative Indications for and Experiences with Resection of Ribs in Pulmonary Tuberculosis. (Ausgedehnte Rippenresektion bei der Lungentuberkulose.) P. L. Friedrich.
99 Infant Mortality During Heated Term. (Die Sommersterblichkeit der Säuglinge.) H. Rietschel. Commenced in No. 4.
100 Etiology and Symptoms of Chorea Minor. A. Westphal.
101 Psychotherapeutic Training of Emotions. (Ueber Erziehung der Gefühle.) H. Vogt.
102 Radiotherapy of Cancer. (Umfrage über die Behandlung der bösartigen Geschwülste mit Röntgenstrahlen.) M. Levy-Dorn and others.
103 Intravenous Salvarsan in Syphilis. (Ueber intravenöse Salvarsanbehandlung.) E. E. H. Goldbach.

104 The Warming Characteristics of the Wind. (Wärmecharakter der Winde.) J. Schubert.
105 General Principles of Electric Excitation. (Die allgemeinen Gesetze der elektrischen Erregung.) H. Boruttau. Commenced in No. 13.
106 Skating Fractures. (Die Unfallkasuistik der modernen Eispaläste.) C. Zander.

97. **Constitutional Achylia.**—The motor functioning of the stomach may be normal or exaggerated but the secretory functioning is much impaired in the cases which Schmidt classes as constitutional achylia. Such patients are generally youthful, frail and with signs of neurasthenia and old glandular enlargement and other traces of old tuberculous processes. Malformations are common among them as also morbid behavior of the reflexes and a tendency to acid diarrhea. Constitutional achylia is often accompanied by extreme and fluctuating bradycardia, subnormal temperature and a sensitive vasomotor system. A frequent combination is achylia, bradycardia and tuberculin reaction. Hypotonic bradycardia in the comparatively young should suggest possible achylia; such persons often have syncope, mitral stenosis or angioneurotic edema. In a case described in detail the total achylia was accompanied by orthostatic albuminuria. Treatment should be directed to the entire digestive tract or body as a whole, rest cures, a stay in the mountains or at the seashore. The individual tolerance for various articles of diet should be carefully determined; coffee in particular may not be tolerated at all, or acid foods, fats, vegetables and flatulence-inducing starchy foods; some patients are unable to eat sweets. The patient's digestive apparatus is constitutionally weak and should be spared all possible effort. In some cases sodium bicarbonate acts better than hydrochloric acid, and antineuralgic drugs may relieve pain in the stomach region. The physician should manage the case as a general internist rather than as a stomach specialist.

98. **Extensive Resection of Ribs for Pulmonary Tuberculosis.**—Friedrich has considered this operation in forty cases and performed it thirty-one times on twenty-nine patients. In all it seemed to be the last resort after failure of other measures perseveringly applied, the prognosis growing constantly more unfavorable, and yet twenty of the patients were restored to health by the operation and have regained their earning capacity with no signs of a return of symptoms during the almost five years since. The youngest patient was 16 and he regards 40 as the limit of operability. Some had been bedridden for months with high hectic fever, night sweats and loss of weight; the outcome was more favorable the better nourished the patients, especially the muscular system. Friedrich has learned to dread a sallow complexion, a sallow flabby skin, as this generally indicates very low resisting powers, and there is usually already some tuberculous involvement of the intestines. The heart was always small and flabby, pulse rapid and the entire vascular system irritable, and yet the first few days after the operation make great demands on the heart. A preliminary course of tonics to prepare the heart is very important. The outlook is better when the other lung is sound, but old inactive processes do not contra-indicate the operation. If the amount of sputum has materially increased during the last few weeks, indicating new foci, the prognosis is less favorable. Recent dissemination through the lungs, latent intestinal tuberculosis and adhesion of the sheets of the pleura are the chief dangers. When the pleura is not movable the lung cannot expand properly on the other side, which renders the outlook much less favorable. The only patients who succumbed were those with recent metastatic lesions elsewhere. (Friedrich described his technic in THE JOURNAL, Dec. 11, 1909, page 1970.)

### Münchener medizinische Wochenschrift

*April 9, LIX, No. 15, pp. 793-848*

107 Technic for Intravenous Transfusion of Blood. (Zur Technik der arterio-venösen Bluttransfusion.) E. Payr.
108 Nerve Blocking in the Intervertebral Foramen for Anesthesia of Abdomen, Breast, Arm and Neck. (Leitungsanästhesie ans Foramen intervertebrale.) M. Kappis.
109 Behavior of Hemibilirubin in Health and with Liver Disease. (Verhalten des Hemibilirubins beim Gesunden und Leberkranken.) H. Fischer and F. Meyer-Betz.
110 Differentiation of Bacterial Toxins: the Toxin, the Endotoxin and the Anaphylatoxin. (Differenzierung bakterieller Gifte.) G. Bessau.
111 *Phenomena Suggesting Anaphylaxis After Repeated injections of Salvarsan. (Ueber anaphylaktoide Erscheinungen bei wiederholten intravenösen Salvarsaninjektionen.) G. Iwaschenzow.
112 Salvarsan in Syphilis. (Statistisches und Klinisches zur Salvarsantherapie der Syphilis.) F. Berger.
113 Collargol in Gonorrheal Rheumatism and Other Acute Sequelæ of Gonorrhea. (Klinische Beiträge zur Kollargolbehandlung des Tripperrheumatismus und anderer akuter Folgezustände des Trippers.) Gennerich.
114 Improved Technic for Graphic Registration of Heart Sounds. (Eine hochempfindliche Membran zur Herztonregistrierung.) A. Weber.
115 Pituitary Extract Not to Be Recommended as Oxytocic in the Home; Case of Tetany of the Uterus Following Its Use. (Pituitrin als Wehenmittel im Privathause nicht zu empfehlen.) Rieck.
116 Threatening Anaphylaxis After Third Injection of Antitoxin in Eleven Years. (Todesgefahr infolge von Anaphylaxie.) W. Asam.
117 *Sudden Death from Fibrillation of the Heart Ventricles. (Ueber plötzlichen Tod durch Herzkammerflimmern. Gleichzeitig ein Beitrag zur Erklärung plötzlicher Todesfälle bei Status thymicolymphaticus.) H. H. Hering. Commenced in No. 14.

111. **Phenomena Suggesting Anaphylaxis After Salvarsan.**—Iwaschenzow reports treatment of sixty-two men with salvarsan; all had some nervous disease and most had arteriosclerosis. He gave the salvarsan by intravenous injection in small doses with long intervals, and fifteen developed a condition suggesting anaphylaxis, the face becoming suddenly congested and swollen with spasmodic arrest of breathing, sensations of heat and pressure in the head, twitching and paresthesia in the extremities and great distress. The duration of the attack was from one-half to five minutes. The heart action did not seem to be affected and the attacks passed over without sequels. The dose was the third up to the seventh infusion, and never more than 0.4 gm. salvarsan; generally only half of this was infused at a time, at intervals averaging a few days to a week. He thinks that the smallness of the dose and the unusual length of the intervals were responsible for these anaphylactoid symptoms.

117. **Sudden Death from Fibrillation in the Heart.**—This communication from the university clinic at Prague in charge of Hering reviews the history of this subject and the various theories advanced to explain why animals die when fibrillation occurs in the heart. He has recently encountered a clinical case of the kind, the sudden and unexpected death occurring with constant irregular heart rhythm. The heart stopped beating before the respiration was arrested, and death occurred suddenly, all of which suggested fibrillation as the possible cause. The patient was a woman of 23, with a history of scarlet fever and acute rheumatism, and there were signs of pronounced status thymico-lymphaticus. When the fibrillation occurs in the ventricles, no blood is passed along. In a second case a woman of 40, with the same form of heart and valvular disease, died suddenly in much the same way, but with signs of peritonitis, suggesting a possible toxic paralysis of the vasomotor center. Hering urges careful examination of conditions in regard to the cessation of the heart action and persistence of respiration in all cases of sudden death, especially where fibrillation is suspected as the main factor.

### Therapie der Gegenwart, Berlin

*April, LIII, No. 4, pp. 145-192*

118 *Metastatic Abscesses in and Near the Kidney. (Ueber die metastatische Nieren- und paranephritischen Abscesse, ausgehend von Furunkeln.) W. Zinn.
119 *Clinical Importance of Conditional Reflexes in Children. (Bedingte Reflexe bei Kindern und ihre klinische Bedeutung.) E. Moro.
120 Pituitary Extract in Obstetrics. (Ueber Wehenanregung durch Hypophysenextrakt.) W. Benthin.
121 Inhalation of Saline Spray in Diseases of the Nasal Mucosa. (Behandlung der kranken Nasenschleimhaut mittels Inhalationen zerstäubter Sole.) F. Sippell.

118. **Metastatic Abscesses In and Around the Kidney Secondary to Furuncles.**—Zinn emphasizes anew that the fate of the patient very often depends on whether we have in mind the possibility of suppuration in or near the kidney after a boil. There may be a long interval before the kidney affection manifests itself. The patient then runs up a high fever with much exhaustion and possibly slight pains just below the costal arch, with an almost pathognomonic tenderness and enlargement of the kidney involved. In four cases reported, staphylococci were cultivated both from the primary boil and

the secondary renal or pararenal abscess. The fever is irregular, continuous, remittent or intermittent, sometimes interrupted by chills, with lassitude and headache; typhoid, tuberculosis, pleurisy and endocarditis are considered, while the possibility of an abscess in or near the kidney is too often forgotten. Once suggested to the mind, the local tenderness on pressure of the kidney region points to the diagnosis which is particularly important on account of the necessity for immediate surgical measures. A history of a boil or carbuncle which had healed over from one to four weeks before clears up the diagnosis. In two of the cases reported by Zinn the fever flared up during the course of a carbuncle or furuncle, with nothing in the local lesion to explain this exacerbation, and the abscess in the kidney region led to numerous complications, including thrombophlebitis; in another case there were no complications although the primary lesion was a carbuncle and the patient had myocarditis and arteriosclerosis. The prognosis is good when the abscess is evacuated early and drained. Zinn urges general practitioners to be on the lookout for such cases, as fatal complications are liable to develop if the true source of the symptoms escapes detection too long.

119. **Conditional Reflexes in Children and Their Clinical Importance.**—Moro discusses the mechanism and factors in conditional reflexes in children, such as the reflex action which is brought into play when training an infant to control the mechanism of micturition. The conditional reflexes are responsible for the tendency to frequent vomiting in neuropathic children. Certain children do not eat enough—in fact, he remarks, if we listen to the mothers and grandmothers, it seems as if very few children take enough nourishment. Especially is this the case with children who have milk forced on them as they grow out of infancy. Such children are apt to lose all appetite, the gastric secretion becomes defective as is evidenced by their repugnance to certain articles of food. If this article of food is taken into the stomach, the organ rebels and the child vomits it by a natural, unconditional reflex. But soon the mere sight of the article of food or even hearing it mentioned, brings a conditional reflex vomiting. The reflex path becomes smooth and slippery from constant travel, and all inhibiting influences die out, so that the child becomes an actual virtuoso in vomiting. Moro reports two such cases, and adds that starting for school may start the conditional reflex in these vomiting experts, their morning vomiting occurring only during the months when school is in session. Other conditional reflexes are the spasm of the lids first brought on by conjunctivitis but persisting after the eye lesion has long healed, and the convulsive cough that keeps up after a child has recovered from whooping-cough. The conditional reflexes can be utilized in therapeutics, as when prolapse of the rectum is kept under control by strips of adhesive plaster; it is soon possible to leave off one after another of the strips, the reflex action controlling the prolapse just as the full set of strips of plaster had mechanically controlled it at first. When an enema is given every time a young child is constipated, it soon becomes so used to it that defecation cannot occur without the enema and the conditional reflexes have to be called on. The child is placed on the pot at a regular morning hour and a foreign body is introduced into the anus to keep up the sensation of the syringe, first a glycerin suppository, then a simple cocoa butter suppository and gradually nothing at all, as the habit of regular defecation is built up anew. When this training is supplemented by complete abstention from milk, giving instead vegetables, fruit and coarse bread—which can easily be done with infants over 2 years old—it is possible to break up completely in the course of a few weeks the most obstinate cases of constipation in young children.

### Virchows Archiv, Berlin

*April, CCVIII, No. 1, pp. 1-160*

122 Localization of Fat in the Liver. (Zur Kenntnis der Localisation des Fettes in der Leber.) W. Fischer.
123 Gastric Secretion and Ferments in Dogs After Phosphorus Poisoning and in Experimental Anemia. (Ueber die Sekretion und die Fermente des Magens bei Hunden nach Phosphorvergiftung und bei künstlich erzeugten Anämien.) D. Minami.
124 Appendicitis. G. Bolognesi.
125 *Suicide in Soldiers. (Weiterer Beitrag zur pathologischen Anatomie der militärischen Selbstmörder.) E. Miloslavich.
126 Differential Diagnosis of Primary Endothelioma in Bone and Hypernephroma Metastasis. (Zur Differentialdiagnose von primärem Knochenendotheliom und Hypernephrommetastase, nebst Beitrag zur Histogenese der Grawitz-Tumoren.) F. Rost.
127 The Histologic and Chemical Change in the Thyroid with Exophthalmic Goiter; 230 Cases. (Die histologische und chemische Veränderung der Schilddrüse bei Morbus Basedowii und ihre Beziehung zur Funktion der Drüse.) A. Kocher.

125. **Suicide Among Young Soldiers.**—Miloslavich thinks it is more than a mere coincidence that he found signs of the lymphatic constitution in 80 per cent. of the 110 suicides whose pathologic anatomy is here tabulated. The transient mental disturbances liable to occur during or following an acute infectious disease seem more likely to affect persons of this stamp and to lead to suicide. Bartel came to the same conclusion from his study of 122 cases of suicide, published in 1909.

### Wiener klinische Wochenschrift, Vienna

*April 18, XXV, No. 16, pp. 583-614*

128 Behavior of Embryonal Cells in Serum of the Healthy and the Cancerous. IV. (Verhalten embryonalen Zellen gegenüber Serum gesunder Menschen und Karzinomkranker.) R. Kraus and K. Ishiwara.
129 Negative Experimental Tests of Infectiousness of Blood of Syphilitics. (Zur Frage der Infektiosität des Blutes Syphilitischer.) R. Frühwald.
130 Technic for Determination of Arsenic in the Urine and Milk After Salvarsan. (Arsennachweis im Harn nach der Anwendung von Salvarsan.) W. A. Merkuriew.
131 *Sponges Left by Mistake in Abdomen. (Verlorene Gazekompressen. Beitrag zur Geschichte der Fremdkörper in der Bauchhöhle.) H. Hinterstoisser.
132 Colon Cancer. (Karzinom des Kolons mit mehrmaligem Abgang hochsitzender Tumoren mit dem Stuhl.) O. Adler.

131. **Fate of Foreign Bodies in Abdomen.**—Hinterstoisser reports the ultimate outcome in two cases in which a gauze sponge was left by mistake in the abdominal cavity. One patient had been operated on for ruptured extra-uterine pregnancy and, when dismissed, a non-sensitive infiltration was palpated to the left of the uterus. Three months later a laparotomy became necessary for a large tumor which proved to be the inflammatory reaction to a gauze compress which had worked its way into the small intestine, plugging it completely while the projecting end was adherent to other loops, requiring extensive resection of the whole mass. In the second case the sponge was spontaneously expelled through the vagina in a flood of pus. He has found 121 similar cases on record; 20 per cent. of the patients died later; in seventeen cases the sponge was not discovered until necropsy; five patients died after the operation to remove the foreign body and two after its spontaneous expulsion. The length of the sojourn of the foreign body in the abdomen ranged from a few days to twelve years. In six of the total cases the sponge had made its way into the bladder; in twenty-two into the intestine; in twenty-five it was eliminated through an abscess in the abdominal wall, and in eighteen it was spontaneously voided through the rectum. In conclusion Hinterstoisser warns that operations for extra-uterine pregnancy were responsible for these mishaps in an unusually large proportion of the cases, so that special care is necessary under these conditions and to ensure that nothing is left behind. All the sponges should be taped and the supply should be ample, so that an untaped sponge need not be taken in an emergency.

### Zeitschrift für Kinderheilkunde, Berlin

*IV, No. 1, pp. 1-96. Last indexed March 16, p. 826*

133 Casein-Enriched Milk for Infants. (Verwendbarkeit caseinangereicherte Kuhmilch. Theoretische Ueberlegungen.) P. Heim and K. M. John.
134 Transient Fever in the Newly Born. (Ueber transitorisches Fieber bei Neugeborenen.) A. v. Reuss. (Fieberhafte Temperaturen bei neugeborenen Kindern in den ersten Lebenstagen.) F. Heller.
135 Digestion Lipemia. (Zur Frage der Verdauungslipämie.) P. Schulz.
136 Seroreaction in Alimentary Intoxication in Infants. (Reaktion des Blutserums bei alimentärer Seroreaktion des Säuglings.) B. Salge.
137 Involution of Adrenal Cortex. (Ueber die Involution der zentralen Rindenschicht der Nebenniere.) E. Thomas.

*No. 2, pp. 97-176*

138 Vasomotor Ataxia Following Scarlet Fever. (Funktionsstörungen des Blut- und Lymphgefässsystems der Haut als Folge des Scharlachexanthems. Beziehungen derselben zur Scharlach-Nephritis und Hautwassersucht.) O. Kirsch.

139 Metabolism with Congenital Occlusion of Bile Passages. (Verhalten des Stoffwechsels bei angeb. Verschluss der Gallenwege.) A. Niemann.
140 Iron Content of Goat's Milk. (Der Eisengehalt der Ziegenmilch.) S. McLean.
141 Hydrochloric Acid in Infant's Stomach. (Salzsäure im Säuglingsmagen.) B. Salge.

## Zeitschrift für klinische Medizin, Berlin

*LXXV, Nos. 1-2, pp. 1-186. Last indexed April 27, p. 1323*

142 Sensation of Heat by the Skin. (Beiträge zur Lehre von der Hautsensibilität. II.) A. Goldscheider.
143 Spirographic Findings in Health and Disease. (Spirographische Untersuchungen an Gesunden, Emphysematikern und Asthmatikern.) R. Staehelin and A. Schütze.
144 Action on Respiration of Light Erythem in Heart Disease. (Untersuchungen über die Wirkung des universellen Lichterythems auf die Respiration bei Herzkrankheiten.) V. Rubow and C. Sonne.
145 Instantaneous Roentgenography of the Heart. (Moment-Röntgenbilder des gesunden und kranken Herzens in verschiedenen Phasen seiner Tätigkeit.) J. v. Elischer.
146 Sarcoma of the Pericardium. F. Tobiesen.
147 Diagnostic Importance of Diastase Content in Urine and Stools. (Zur diagnostischen Bedeutung des Diastasegehaltes in Urin und Stuhl.) A. Lindemann.
148 Properties of Tuberculous Sputum. (Beitrag zu den biochemischen und chemischen Eigenschaften des tuberkulösen Sputums.) R. Eiselt.
149 Plethysmography of the Arteries. (Bedeutung und Technik der plethysmographischen Funktionsprüfung gesunder und kranker Arterien.) E. v. Romberg and O. Müller.
150 Origin and Pathology of Heart Sounds. (Klinische Beiträge zur Frage über die Entstehung der Herztöne und ihre pathologischen Verhältnisse.) C. Pezzi.
151 Changes in Blood in Pneumatic Cabinet. (Ueber Hämoglobin-Bestimmungen und die Sauerstoff-Kapazität des Blutes bei Aenderung des Atmosphärendruck im pneumatischen Kabinette.) E. Aron.
152 Jaundice and Metabolism. (Ikterus und Stoffwechsel.) G. Vannini.
153 Malignant Ulcerative Endocarditis. E. Maixner.

## Zentralblatt für Chirurgie, Leipsic

*April 13, XXXIX, No. 15, pp. 497-528*

154 Ptosis of Transverse Colon. (Senkung des Colon transversum.) F. Smoler.
155 *Ischemic Paralysis. (Ueber Lähmung nach Esmarch'scher Blutleere.) W. Kausch.

155. **Ischemic Paralysis.**—Kausch makes a constant practice of expelling the blood from the field of operation with Esmarch's elastic constrictor, and he has never had a mishap from its use except in one case in which the bandage was left on for five hours and had been drawn far too tight. This is the rock on which others make shipwreck, he says, the application of the constrictor being left frequently to an inexperienced hand, drawing it too tight or else leaving it so loose that the surgeon does not derive any advantage from it. He never uses tubing for constriction, preferring an elastic bandage from 10 to 15 cm. wide which he applies by traction on the center, not pulling on the edges. He winds the bandage from the periphery to the trunk except when there is diffuse infection, in which case he elevates the limb for ten minutes. When the latter is done he warns that the elastic bandage must be applied as rapidly as possible, the constriction acting immediately and completely on the vessels so that there is no danger of the veins being compressed before the arteries, as this would cause venous hyperemia which must be avoided. He insists that the elastic constrictor, properly applied, can be left on for hours without fear of paralysis even in syphilitics.

## Zentralblatt für Gynäkologie, Leipsic

*April 13, XXXVI, No. 15, pp. 457-488*

156 Roentgenotherapy of the Ovaries. (Untersuchungen über die Lage der Ovarien an der Lebenden mit Rücksicht auf die Röntgenbestrahlung.) O. Hoehne and G. Linzenmeier.
157 *Treatment of Stricture of the Rectum. (Zur Behandlung der Rektalstrikturen.) E. Kaufmann.
158 Fatal Rupture of Aneurysm During Labor. (Verblutung während der Geburt infolge Ruptur eines Aneurysmas der Milzarterie.) W. Wesenberg.
159 Roentgenotherapy in Gynecology. (Zur Frage der Röntgenbehandlung in der Gynäkologie.) A. Fiessler.

157. **Hemorrhage During Dilatation Treatment of Rectal Stricture.**—Kaufmann found a cystocele and rectocele on examination of a woman referred to him by an ophthalmologist as the patient's severe ocular affection was being aggravated by the necessity for great straining at stool. He did a posterior and anterior colporrhaphy but the patient did not improve afterward, and examination of the rectum later showed an almost impassible stricture. He dilated the stricture systematically with bougies from No. 9 to 20. A few drops of blood were noticed as the sitting with the No. 20 was concluded and three and a half hours later the patient had a severe hemorrhage, losing from three to four pints of blood and over. Momburg's belt constriction was applied and the hemorrhage was arrested.

## Gazzetta degli Ospedali e delle Cliniche, Milan

*April 14, XXXIII, No. 45, pp. 465-480*

160 Operative Treatment of Prolapse of the Uterus. (Nuova cura operativa del prolasso dell'utero.) G. Frattin.

*April 16, No. 46, pp. 481-488*

161 Morphin in General Anesthesia for Young Children as Applied in 300 Cases. (La morfina nella chirurgia infantile.) V. Brun.

## Policlinico, Rome

*April, XIX, Medical Section No. 4, pp. 141-188*

162 The Wassermann Reaction in Diseases Other Than Syphilis. (Contributo allo studio della Reazione di Wassermann in semeiologia clinica.) S. Rizzi.
163 Transmission of Kala-Azar by Dogs. (Sull'identita e sul modo di trasmissione delle Leishmaniosi.) C. Basile.
164 Mode of Action of Inhalation of Oxygen. (Mecanismo di azione delle inalazioni di ossigeno.) G. Marchetti and C. Capezzuoli.
165 Auscultation of Air Passages at the Mouth. (Il rantolo orale di Galvagni.) R. Fua.

## Riforma Medica, Naples

*April 13, XXVIII, No. 15, pp. 393-420*

166 Hypophysis Tumor in Insane Woman with Acromegaly. (Di un tumore ipofisario in alienata acromegalica.) A. Salerni.
167 Gas Cysts in the Intestine. (Sulla pneumatosi cistoide dell'intestino.) F. Bindi.

## Revista de Medicina y Cirugia, Havana

*April 10, XVI, No. 7, pp. 187-212*

168 *Heart Block with Epileptiform Attacks. (Caso curioso de esclerosis cardio-bulbar.) A. M. Rubalcava.

*April 25, No. 8, pp. 213-242*

169 Vaccine Therapy of Gonorrhea. (Diagnostico por culturas y bacterioterapia de las afecciones gonococcicas.) A. Recio.
170 War to Flies. (La guerra contra las moscas.) L. M. Cowley.
171 Proof that Placenta May Transmit Malaria Germ. (La placenta puede ser conductora del "hematozoon malariae.") N. Lugo-Vina.

168. **Case of Heart Block.**—The patient was a Mexican, 32 years old, and the syncopal seizures were of a pronounced epileptiform type. The pulse was only paroxysmally very slow, being nearly of a normal rate during the intervals. The ventricular systole coincided with the radial pulse. The seizures did not come on while the man reclined but he said that his head swam when he sat or stood up. Each seizure was preceded by a sensation of malaise and was followed by torpor and difficulty in speech.

## Semana Medica, Buenos Aires

*March 14, XIX, No. 11, pp. 501-552*

172 *Symmetrical Gangrene. (Etiologia y tratamiento del sindrome de Raynaud.) C. B. Udaondo.
173 Mercurial Treatment in General Paralysis. (Del tratamiento mercurial en la paralisis general progresiva.) F. F. Morixe.

*March 21, No. 12, pp. 553-604*

174 *Emotion as Factor in Disease. (Rol de la emocion en la genesis de los estados neuropaticos.) P. Janet.
175 Hygiene and Mineral Waters. (La higiene y las aguas minerales.) V. Delfino.
176 *Operative Treatment of Megacolon. (Tratamiento quirurgico del bolo fecal inaccesible por el recto.) M. Soto.

172. **Symmetrical Gangrene.**—Udaondo has used successfully high frequency currents in two cases of vasomotor local asphyxia of the hands with small patches of gangrene on one finger. In the first case, under two months of the high frequency current sittings the pains and other symptoms gradually retrogressed until all traces of Raynaud's disease in the hands had disappeared. Later the feet became affected, and no improvement was realized under repetition of the same treatment. In the other case marked improvement was realized although treatment was not begun till late and the patient failed to complete the course. Gramond reported in 1907 the successful application of the high frequency current in three cases, even what was almost actual gangrene of two fingers retrogressing. The procedure called thermopenetration has proved useful in some cases, persevering superheated air treatment in others. Sedatives should be given as sparingly as possible. Local hydro-electric baths seem to have an influence on the pains, Udaondo having had a favorable experience with this measure in two cases. In one there was

concomitant pulmonary tuberculosis and under daily fifteen to forty-five minute hydro-electric baths the vasomotor disturbances entirely subsided. The method failed completely in another case, but this patient improved remarkably under the high-frequency current. In treatment Udaondo advocates trying one measure after another until benefit is realized. If amputation becomes necessary, the limb should be sacrificed far above the lesion or the outcome will be only a temporary relief.

174. **Emotions and Nervous Disease.**—Janet discusses what is meant by emotions, the symptoms of emotional conditions, the evolution and transformation of emotions, and the psychologic problems connected therewith. He declares that every emotion is a derangement of normal conditions, and that the limits between the normal and the pathologic conditions are vaguer here than in any other field, the outcome depending on the individual powers of adaptation. On the other hand, the laws of localization render it possible for innumerable and apparently most diverse somatic morbid conditions to develop in consequence of the influence of emotional stress. This is most liable to occur when a predisposition is afforded by some slight visceral disturbance.

176. **Treatment of Megacolon.**—Soto analyzes the various methods of treatment that have been applied and the results, reporting five cases in which three of the patients were cured by operative measures. One succumbed to the effects of eventration from the postoperative vomiting (chloroform), and another to peritonitis.

### Nordisches Medizinisches Archiv, Stockholm

*XLV, Surgical Section No. 1*

177 *Varicocele and Its Operative Treatment. (Om Varicocele och dess operativa behandling.) G. Nilson.
178 *Subcutaneous Rupture of the Bladder. (Ueber Blasenruptur.) G. Naumann.

177. **Treatment of Varicocele.**—Nilson agrees with Spencer that the persistence of fetal veins is an important factor in the development of varicocele, especially as there does not seem to be any connection between the varicocele and varices elsewhere. Other factors are a general weakly constitution, an abnormally long and crooked course for the blood-vessels, straining at stool and bad conditions in regard to the circulation in the left side in general. These bad conditions may be still further aggravated by injurious influences of various kinds, especially military drill. The symptoms are aggravated by the patient's trade in some cases and resulting disturbances, especially moods of depression, must be regarded as direct symptoms. There is no evidence to date of impotence due exclusively to varicocele, and no evidence of an acute varicocele. The parts, however, become less resistant and epididymitis is frequent and peculiarly tenacious in such cases. He reviews the history of operative treatment, saying that excision of the altered vessels is the only logical and effectual measure. The blood is thus compelled to find its way through normal channels and thus relieve the testicle from the exaggerated venous pressure. The phlebectomy is done in the inguinal canal and the testicle is drawn up and held here by passing the lower stump of the vein around a 2 cm. wide strip of fibers worked loose from the aponeurosis, without disturbing their continuity. The knotted stump is held in place with two sutures and the rest of the stump beyond the ligature is cut off. The testicle is thus suspended by living tissue and the whole operation can be done under local anesthesia in fifteen minutes. The redundant scrotum soon shrinks to normal size. Nilson has applied this simple technic in sixty-one cases and the cure was complete in the forty-two reexamined after intervals of from three months to six years. Only one complained of a little pain due to an insignificant thrombosis in the part of the plexus left behind. Operative treatment is indicated by great pain, rapid aggravation of the trouble and manifest or threatening atrophy of the testicle. His cases are tabulated for comparison, and eleven pages of bibliography are appended.

178. **Rupture of the Bladder.**—Naumann remarks that the high mortality with intraperitoneal rupture of the bladder should not deter one from operating, as the patient is almost certainly doomed without; 200 fatal cases are on record. In some cases operative treatment proved successful even after an interval of four to ten days. In one of Naumann's three cases, the interval had been sixty-two hours and the young man recovered. He advocates suturing the rupture without fail unless forbidden by sepsis.

### Ugeskrift for Læger, Copenhagen

*April 4, LXXIV, No. 14, pp. 527-572*

179 *Mechanical Support for Gastroptosis. (Baeltevirkning ved Gastroptose.) A. Borgbjærg and J. F. Fischer.

*April 11, No. 15, pp. 573-602*

180 Anorexia as Monosymptomatic Hysteria in Girl of 12. (Et tilfælde af infantil Hysteri.) G. Jørgensen.
181 *Collapse Under Ethyl Chlorid. (Klorætyl ved Adenotomi.) E. Nielsen.

*April 18, No. 16, pp. 603-648*

182 Dissociated and Athetoid Motor Disturbances with Traumatic Hysteria; Three Cases. (Bevægelsesforstyrrelser ved traumatisk Hysteri.) A. Wimmer.
183 *Differential Diagnosis Between Paralytic Dementia and Cerebral Syphilis. (Bidrag til Differentialdiagnosen mellem Dementia paralytica og Lues cerebri.) A. Bisgaard.

179. **Mechanical Treatment of Gastroptosis.**—Borgbjærg and Fischer have combined the Vermehren corset with Enriquez' air pad in treatment for disturbances from atony accompanied by sagging of the stomach, and report their experiences with it in twenty cases. Inflation of the pad under the inelastic corset raised the stomach practically to normal position in most of the cases, as can be seen in the roentgenograms accompanying the article. The support from the corset always gave subjective relief in most cases, bracing the spine. The improvement in the conditions of gastric functioning after the stomach was raised in this way was soon followed by restoration of normal conditions in the stomach musculature, tending to improve and cure the gastroptosis.

181. **Collapse Under Ethyl Chlorid General Anesthesia.**—Nielsen's patient was a boy of seven and the collapse occurred during removal of adenoid vegetations, with enlarged tonsils, under general ethyl chlorid anesthesia, coming on in half a minute. There was considerable hemorrhage, but the child was revived by artificial respiration.

183. **Differential Diagnosis Between Paralytic Dementia and Cerebral Syphilis.**—Bisgaard's findings sustain the assumption that increased proportions of albumin in the cerebrospinal fluid indicate some organic lesion in the central nervous system. In case of existing paralytic dementia it is possible to precipitate out the greater part of this albumin with ammonium sulphate, while this is not possible with organic affections of the central nervous system, not even with syphilitic lesions in the brain. Only a fraction of the albumin can be precipitated with ammonium sulphate in these other conditions. He reports that this finding was constant in his tests of twenty-seven paralytics, seven patients with meningitis of various origins, five with cerebral syphilis and four with brain tumors. He applied the test in forty-seven cases in all, and describes the simple technic followed. After determining the proportion of albumin by the usual method, he mixed with another 1 or 2 c.c. of the spinal fluid equal parts of ammonium sulphate solution. In six hours the fluid above the precipitate is pipetted off and tested anew for albumin. In a typical case of paralysis the figures were respectively 4-15 before and 2-8 after the precipitation, while with tuberculous meningitis the figures were 5-42.5 and 2-37.5, and with brain tumor, 8-120 and 2-47.5. With cerebral syphilis the figures in a typical case were respectively 20-250 and 2-100, showing the large albumin content and the comparatively large proportion that escapes precipitation with this technic.

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**Correction.**—In title 145 in The Journal, May 11, page 1488, read "Three Cases of Hernia of the Bladder" (instead of "Rupture").

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## Books Received

Journal Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

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# THE PRACTITIONER, THE PROFESSION AND THE MEDICAL ORGANIZATION *

LAWRENCE W. LITTIG, A.M., M.D., M.R.C.S.
DAVENPORT, IOWA

## THE IOWA STATE MEDICAL SOCIETY

The Iowa State Medical Society has reason to congratulate itself on the spirit of good fellowship that has characterized its meetings in the past. I do not believe that there is another medical society in the United States in which the members are less influenced by selfish motives than the society to which you and I have the honor to owe allegiance. In the Iowa State Medical Society, fellow members, we do not know the meaning of the word "politics." We have no factions, no cliques, no ins, and no outs. What is best for the society is the one question ever at issue. So long as this happy state of affairs continues — and I believe that it will continue always — the Iowa State Medical Society is sure to make rapid progress in the fulfilment of its mission.

It has sometimes been said that it is difficult to secure a place on the program of the annual session. Nothing can be further from the truth. I assure you that the program committee and the various chairmen are anxiously looking for the very best men to read papers. If the best men are not secured, it is because they are not known. If any member wishes to read a paper before the society, let him on several occasions discuss the papers of others. If he do this well, he is a marked man, and from that time on it will be impossible for him to keep off the program. It is to be regretted that the scientific program cannot be published at least two months before the meeting, to give ample opportunity for every member to prepare himself thoroughly on several of the subjects that are coming up for discussion. Desirable as this should be, it is not easy to accomplish.

## THE HOUSE OF DELEGATES

To confide the business of the society to a small body of men known as the House of Delegates is a wise provision of the plan of reorganization. It is sometimes said that the society is not really a democratic body — that its affairs are managed by a relatively small number of men. There is a little truth in this statement, and it will continue to be true until county societies elect delegates that will attend the session, and that will attend all the meetings of the House of Delegates. Sometimes, at the meeting of the third morning of the session, there is a bare quorum present, and of those present many are in attendance as delegates for the first time. Naturally those that know what should be done, and how to do it, are very apt to point the way. To make the business end of this society truly democratic, to give every county a voice in the business affairs of the society, send as delegates members that will attend the meetings, that will familiarize themselves with the needs and the working methods of the society, and having found such members return them year after year. To be a delegate means work and honor. The member that considers only the honor and shuns the work will never make a good delegate.

I believe it would be a very good plan for all county societies to hold the annual meeting for the election of officers during December. The delegates selected would thus have ample opportunity to familiarize themselves with the needs of the society. The names could be sent to the secretary of the state society early enough so that a correct list of delegates can be printed in an early issue of the *Journal*. There can scarcely be any objection to this plan, and there is certainly much in its favor.

I cannot, however, refrain from making one little suggestion. I believe that the annual session of the state society should be featured in the April number of the *Journal*, and that everything pertaining to that annual session should, so far as possible, be front-page matter.

## COUNTY SOCIETIES

The county society occupies a high place in the factors that make for individual and collective progress. In fact, I firmly believe that the work of a county society is a correct index of the professional attainments of its members, and of the character of the service rendered the public. A dead county society is not fulfilling its mission. In order to improve, to keep abreast of the times, medical men must frequently meet in convention, to discuss medical topics. No statement needs less corroboration than this, so evident is its truth. These meetings reciprocally stimulate. It is so often said that physicians should join medical societies and do society work to improve the medical profession. I feel very much like saying that physicians should join societies and do society work to improve themselves. Let the motive be selfish, let it be self-improvement, because whatever improves the individual improves the entire profession, and the quality of the service rendered the public, and hence makes for the public good. I am almost ready to confess that I attend medical societies for selfish motives. I always hear something that sets me thinking, that stimulates me to better effort, that makes me try to be a better doctor. I do not attend meetings with the thought of improving the profession. I am not so conceited as to imagine that my presence is essential to the common good. To imbibe new ideas, to receive inspiration, to enjoy the fellowship of my coworkers — these are my motives.

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* President's Address at the Sixty-First Annual Session of the Iowa State Medical Society, Burlington, May 8-10, 1912.

The county society is most important because its meetings are held frequently, and because it gives practically every member an opportunity to take an active part. If the members regularly attend the meetings of the county society, read papers as often as the program committee will permit, and always prepare themselves to discuss the papers presented by others, the meetings are sure to be profitable, not only to the individual, but to the entire professional body. The program committee of the county society should always invite case-reports, carefully prepared and accompanied by a brief review of the up-to-date literature on the subject. Simply to report a case without such careful study is not very profitable either to the member making the report or to the society. The best way to stimulate interest in medical society work is to have interesting and frequent meetings. It is much easier to prepare a program a month or two months in advance, and if the subjects be announced at least one month in advance every member will have an opportunity to prepare himself to take an active part in the discussions. Every member is interested in the meeting in which he takes an active part. He feels that it was a good meeting, just as the old lady insisted that the prayer-meeting was a most excellent one, because she led in prayer. In this state there are several county societies that will serve as models, notably in Ottumwa, Fort Dodge and Lisbon. These societies arrange their meetings months in advance. A little group of men at Lisbon, Linn County, has met every two weeks for the past two years, sometimes with but three (all the doctors in the town) in attendance, sometimes with quite a number of doctors from neighboring towns. The meetings have always been interesting, and they have resulted in much benefit to those that took part. The work of the medical men of the little town of Lisbon may well serve as an example of patient, persistent and successful county society effort. A county society which meets but once or twice a year, or which mails its program one or two days before the meeting, is valueless so far as benefiting members is concerned.

The ideal method of conducting society meetings is that adopted by the Wapello County Society. In this county the program for the entire year is prepared and printed at the beginning of the year, and issued in a neat little pamphlet. I should urge every county secretary in Iowa to write Dr. J. F. Herrick, of Ottumwa (Wapello County), for pointers on county society work. There can be a very good county society wherever four or five doctors can get together once or twice a month. I am not very enthusiastic over members that simply pay their dues but never attend the meetings. I consider them dead, lying high and dry on the bank, and far from the busy stream. Their annual dues are accepted, but they do not stimulate their fellows and are not stimulated by them; they neither give nor receive; they are ciphers in the society and society work. I wish to say here that a county secretary who fails to send a written invitation to each member of the society, immediately after his election, asking when it will be convenient for that member to make his annual scientific contribution to the society, and who further fails to mail the program at least one month before the meeting, is inefficient and incompetent and ought to receive the treatment that the food-fakers planned for Dr. Wiley. The program should be mailed a few days before the meeting, but each program should, in smaller type and less conspicuous display, carry the program of the following month. It is better still to have each program announce the papers to be read the two following months. It stimulates the writer of a paper to have it known that he is under observation; it makes him feel that something is expected of him. This plan gives others ample opportunity to prepare their discussions. I again call attention to the Ottumwa (Wapello County) plan, which is best of all.

It has been said that there are too many district societies — that they detract from the county society and from the state society. I do not share this opinion. I believe that the men who attend the district societies are the most regular in attendance and the best workers in the county society, and most active in the state society. I am most firm in my conviction, however, that membership in the state society should be a necessary qualification for membership in every medical society. I do not believe in the so-called "free-lance" societies. The more good societies the better. Let a doctor get the medical society habit and he is always in attendance at his county, district, state, national and special societies; but of these the county society is most important, because it does or should meet at least once each month.

### MEDICAL DEFENSE

For some years the state medical society has defended its members when wrongfully sued for alleged malpractice, and this phase of society work has been taken up in twenty-two other states. It is often said that malpractice suits are secretly encouraged by unprincipled competitors, or by so-called experts for a fee. That this is sometimes true cannot be denied, but I fear that sometimes these suits are due to an uncompromising attitude on the part of the doctor in the presentation of his bill for services. It must not be forgotten that, no matter how just the claim for services rendered, even a successfully defended suit for malpractice is a very expensive procedure in time, money and reputation, and that its cost will more than offset the fee involved. There is no such thing as getting glory out of a suit for malpractice. The doctor, even if the case be taken from the jury, is sure to be blamed by a certain number of people in the community. It involves an unpleasant, distasteful notoriety. Good advice is, do not resort to the courts to collect a fee, if by so doing a malpractice suit may result, unless your management of the case will stand the severest criticism. Do not indirectly invite a suit for malpractice simply to vindicate your position. The medicolegal committee was called on to defend a $15,000 suit; the patient offered to pay $60 and the physician insisted on $75, and here they stuck. This suit cost the society several times the amount of the original bill, and was finally dropped, the physician collecting his fee in full. But I do not believe that he is the gainer by the transaction.

To prevent suits, whenever the case is such that the result at the best may not be satisfactory to the patient, secure early and efficient consultation. If there is a possibility, however remote, that the case may be the cause of trouble in the future, secure still more early and efficient consultation; do not wait until the patient requests you to seek additional advice; suggest consultation yourself even before beginning treatment. All fractures should be seen by a second physician — at best within call — all of them should be $x$-rayed before and after setting, and on discharge. In all fracture cases, the patient should receive specific instructions; nothing should be left to chance. If the patient be asked to report at a certain time, let the record show whether or not he did so. There must be fewer malpractice suits, or the society will have to raise its dues very materially.

The medicolegal committee has never concerned itself with the defense of any member unless said member was unjustly sued, but I think I may say that, in some instances, a little more discretion on the part of the physician, or a consultation, would have avoided the trouble entirely. Do not forget that a successfully defended suit for malpractice is expensive in time, worry and reputation. It is far better to go a long way around to avoid one.

### HOSPITALS

Hospitals are increasing in number and should be most important aids in securing the best treatment for many conditions. But too often they are but very poorly equipped for the work undertaken. Too often the visitor is shown a magnificent operating-room, while the all but mythical laboratory is located only with difficulty. *X*-ray work is poorly done, bedside notes are but poorly kept, the instruction to nurses is not systematic or serious, and the pathologist and the bacteriologist are honorary gentlemen, rarely on duty, who make occasional examinations and who, forsooth, do their work in a private office instead of in a well-equipped hospital laboratory. A well-equipped hospital laboratory is absolutely necessary; without it a hospital may be a boarding-house for the sick, but it does not make for progress. Every case entering a hospital must be most carefully studied, before and after operation, ante and post mortem. In the words of Murphy "Let the record show what was done." I consider a careful and complete record most important. This record must contain the clinical diagnosis, the operative findings, the pathologic diagnosis, and a careful bedside record. Such records kept permanently in the hospital and subject to inspection would make for better and more honest work. In many hospitals there is absolutely no systematic attempt at improvement; the hospital board is either too soundly asleep or too actively engaged in intramural hostilities to think of the scientific side of hospital work. Nothing so effectually paralyzes a hospital as a somnolent hospital board, and sleeping-sickness in a hospital board is incurable. In surgical work, too often it is cut and cover; the mistakes are not honest mistakes, such as competent painstaking men make, and which make for progress. Too often hospitals are tainted with the same spirit of commercialism that is so often seen in medical ranks. Too often they are so anxious to fill their beds that they do not inquire into the character and efficiency of the physician who would treat a patient in the house. No policy can be more short-sighted. The reputation and the success of the hospital depends on the character of the work done, and only such physicians should be permitted to work within the walls of a hospital as are able to add to the reputation and standing of the hospital. I believe that there should be a junior and a senior staff, the members of the junior staff to be under supervision until they have demonstrated their fitness to assume critical responsibility. Every legal, honest practitioner should be given the opportunity to demonstrate his ability, but if after reasonable opportunity it becomes evident that he is morally and professionally unqualified, the senior staff should have the authority to deny him further admission to the hospital. I consider this all-important. A man known to be dishonest, or of a judgment so warped that he does a gastrocolostomy as an operation of choice, or who does a hysterectomy on a young woman and proudly exhibits the "specimen," a submucus fibroid which in no manner necessitated a sacrifice of the uterus, or who commits a criminal act inside or outside of the hospital, should be forever barred. I am pleased to report that there are some hospitals in Iowa that bar men like the above. Would there were more!

The operation-room should be open to members of the staff at all times, and all operations should be bulletined. Of course, every attendant witnessing the operation of another is bound by the most rigid obligation to preserve professional secrecy, the same as if the patient were his own. In this way the limited number of operations in a small hospital could be seen by all, and the sum-total of the experience of each member of the staff would be very considerable. On the one hand, camera obscura methods should not obtain in a hospital; on the other hand, professional secrecy must remain inviolate. Interesting cases of all kinds should be studied for the benefit of both patient and staff.

I believe, further, that the day is past when medical men can be both attending physicians and attending surgeons. They should be attending physicians or attending surgeons. So long as practitioners of medicine attempt to cover the entire field, so long will work be poorly done. No man can be a physician and a surgeon.

Let us get over the idea that the surgeon has the larger brain with deeper convolutions. It is true his successes and his failures are more in evidence, but the correct management of an anemic, ill-nourished child, the correct management of a summer diarrhea, the correct management of a case of pneumonia are tasks which even the best should feel proud to have done well; and the man who manages these cases well, who by training and nature is fitted to do them well, is not fitted to do surgery; and, equally, the man who with a few movements of the knife is in the habit of accomplishing much, is not fitted for the patient, persevering work of the internist, although he must be a good diagnostician. I believe that the movement to standardize all hospitals should be encouraged by all means possible. Minnesota has taken the lead, and a nation-wide movement is being considered by the Council on Medical Education of the American Medical Association. I believe that the hospitals of Iowa will welcome this movement. A hospital is a public utility; the public is vitally interested, and has a right to know that it is well managed. All hospitals should be placed under searching and rigid state or national supervision. Standard hospitals would be available as clinical schools for the instruction of fifth-year students. What an immense impetus to better endeavor! The public would soon recognize the difference between a standard hospital and one that is not standard, patients would seek the former and avoid the latter. Let us have well-managed standardized hospitals, where team work is done, where specialists are developed, where only high-grade men are admitted, and where the incompetent and the dishonest are barred. Let hospitals become each a medical school where there are equal privileges for all honest, earnest, reasonably competent men. But, I repeat it, to work in a hospital must be considered a privilege, a badge of honor, and the unworthy should not enter. Who shall decide the question of fitness? If the work of a man will not bear the light of day, if his work is not open to inspection by his colleagues, if the record — an honest record — does not show what he has done, let him be barred.

I wish to make a plea for a trained resident pathologist, roentgenologist, and anesthetist in hospitals. It is becoming the correct thing to have the anesthetic given by trained women. Such a woman, resident in the hospital, could give anesthetics, act as pathologist, do *x*-ray work, etc. There is ample work about a hospital of very moderate size to keep such a trained woman quite busy, to the great advantage of every member of the staff. A pathologic report in every case would stimulate to better effort and make for better doctors.

### COMMERCIALISM IN MEDICINE

This word, "commercialism," has a harsh and rasping sound, but it will not down, although its discussion usually makes for progress, as the crab progresses. Books have been written on it; there have been biting magazine articles without number (notably by Arno Dosch, Ex-President Reed of the American Medical Association, both in *Pearson's*) many articles in medical journals, and numberless addresses by medical men before medical bodies. The remedy for existing conditions has been sought in publicity; dire laws to control it have been threatened, unless the medical profession eradicated the evil: "Purify yourself from within or you will be purified from without, and to your sorrow." The result has been more and more commercialism, until the public thoroughly distrusts the medical profession, a distrust on which arrogant quackery has fattened as never before. What good does it do to talk about these things? But the subject will not down, until the medical profession mends its ways, and public confidence is restored, too much has been said and written to "put on the lid" now. I shall not enumerate the various symptoms of this disease, commercialism, as manifested in the body professional. This is a commercial age, and it is little wonder that the medical profession has not escaped. In truth, to have escaped infection entirely would mean that medical men and women are made up of much sterner and purer stuff than other men and women. "Put money enough in thy purse" is the almost universal slogan.

In defense of commercialism in medicine, it has been said that medicine is a business, and business methods should prevail. A business man has something to sell, and he sells to all that he can induce to buy, his only concern being the ability of the would-be purchaser to pay, and his own profit on the transaction. It is not for him to inquire whether the would-be purchaser needs the article offered, or whether its acquisition will add to his happiness or comfort. Imagine a physician or a surgeon influenced by the same considerations, "ability to pay and the profit on the transaction." How often have you that are not tradesmen, members of this society — how often have you refused to sell your commodity in spite of the fact that the consumer had a good financial rating, and the profits of the transaction were within your grasp? How often have you refused to give unnecessary medicine? How often have you declined to do unnecessary operations? How often have you sought your reward not in "honesty is the best policy" but in the feeling that you were doing right, regardless of the most profitable policy? No, we are not tradesmen; the practice of medicine is not a business except to the charlatan and the quack. What sort of business man would unceasingly labor to destroy his market and curtail his sales, as does the physician who tries to prevent disease and the spread of infection? But I fear that there may be physicians who are tradesmen — who barter, who sell their wares to all that are willing to buy — to whom a patient is only a possible source of so much profit, as much as "the traffic will bear." I do not believe that any such are attending members of this society. The relation between physician and patient is not that of buyer and seller; it is unique, unlike that of anything else on earth. As was recently said in an address to medical men, "You are the prosecuting attorney; you are the counsel for the defense; you are the judge, you are the jury; and you are sometimes the executioner." And I shall add: "You conduct your case behind closed doors, in camera obscura, with no witness but your own sense of right and wrong." And this profession of ours is a business, subject to business methods (!) I tell you it is a vocation calling for the highest ideals and for the most unselfish standards of honesty and purity of purpose. No, we are not tradesmen, you and I. But if it be true "that those that preach the Gospel shall live by the Gospel," it must be fitting that those that practice medicine should live by their labors. Business methods in making collections do not make our profession a business; and here a business spirit, a tempered business spirit, should prevail.

### COMMERCIAL MEDICAL SCHOOLS

But the struggle for existence goes relentlessly on, and the spirit of commercialism is the result of an inexorable law. As the struggle for a livelihood becomes more intense, men are less concerned about methods, provided the desired end be obtained. No fact is better known in the business world than that competition may be so acute as to be ruinous to the competitor, and give a very inferior article to the consumer. Worse still, the material rewards may be so meager that the better class of young men will not be attracted to the profession. What can be done to remedy this evil? Before a remedy can be suggested for this condition, something must be known of its source — of the factors which brought it about, and which give it root. Back of all and responsible for all is a condition from which there is no immediate escape. There are too many medical schools — too many commercial medical schools — and consequently too many doctors, and especially too many that are graduates of commercial schools. The remedy that suggests itself, first of all, is to lessen the number of medical schools, and to eliminate all of the commercial schools. There is no other possible solution. Yellow fever was throttled by destroying the breeding-places of the mosquito by screening the rain-water, oiling the ponds, and draining the swamp-land. In like manner must the breeding-places of the incompetent doctors be sought out and made impossible. All the commercial medical schools must go; all the struggling medical schools must go; medical schools harboring commercial teachers must purge their faculties or forfeit the support of the profession. Commercial teachers in medical faculties are doing and have done more to commercialize the profession — and I use commercialize in the worst possible sense — than all other factors combined. With these men prostituting their positions for the most selfish of ends, improvement is impossible. The struggling and honest school may deserve sympathy and the *coup de grâce* should be given it as considerately as possible, but it must be *coup de grâce*. If for any reason a school does not promise the best results, it must go. Let the good and the poor schools be advertised for just what they are; let prospective students know which schools are good and which are bad. Students must learn more about work in medical colleges. They must learn that it is an easy matter to keep them busy in almost any kind of a medical school — to keep them "hustling," that they may have no time to compare notes. Naturally, the ambitious, industrious student feels that his time is profitably spent if he is busy. He is not a judge of the quality and food value of the viands set before him; he often gets very little wheat in much chaff, so that he is kept very busy getting enough protein to keep growing; his stomach is taxed to the utmost, but the food value of the repast is very low; his real advance is but a fraction of what it should be in the four or five years of his course. If the best schools be selected — and this would be done if the best schools were known to those entering — much would be done to solve the problems now confronting us. Physicians should advise young men to select only the better schools — should help them select the better schools.

### MEDICAL EXAMINING BOARDS

The state board of medical examiners, a national board, or a board for a group of states, must insist on more rigid examinations of schools and of applicants for license. It may be necessary to improve the quality of the board. In fact, I think it is most advisable to do this by asking the state medical society to suggest two or three names for each vacancy on the board, the governor to make the final selection. There should be no bar to reappointment on the board, because really good men are very few. Boards must carefully acquaint themselves with the work actually done in medical schools. Let them carefully inspect the schools, actually know whether that old worthless gynecologic clinic is still given, whether that "favorite pastime of former medical students" the omnibus, spectacular, surgical clinic, worthless except for diagnostic purposes, is still in vogue, or whether individual painstaking instruction is being given to small groups of students. Let the state board know that clinical material is ample and that selected cases may be available for demonstration when needed. When the candidate reports that he has attended five cases of confinement, let the board know whether the five cases sufficed for 100 students seated on benches, or whether each student individually attended five cases; let the board know whether one hour by the teacher means one hour for 100 students taken collectively, or whether it means one hour for a small group of five students. The board must take nothing for granted; let it actually and seriously investigate, and know that candidates have had serious, individual, not omnibus training. Two years in college as an entrance requirement may mean something or it may be a blind; the actual work in the medical course is more important than the entrance requirements.

### PRACTICAL EXAMINATIONS

Let the board give a practical as well as a theoretical examination. The present examinations are not a test. A man may answer ten questions on almost any subject, with the aid of quiz-masters or quiz-manuals, and still be utterly incompetent to practice medicine, wofully ignorant of medicine. It is a very poor school indeed that cannot prepare its graduates to pass examinations as at present conducted. It is said that years ago a certain medical school in the South, with a one-year course, had more men in the Army and Navy than any other half-dozen medical schools. The graduates were prepared to pass examinations. That school is now a four-year school, but I question whether its recent graduates are better able to answer questions than were the graduates of years ago, although they are infinitely better prepared to practice medicine — infinitely better doctors. The work of the state board will be very easy in those states which have no medical schools within their border. In such states both the theoretical and the practical examinations can be made very severe, the number of physicians gradually lessened, and the service to the public immensely benefited. Such a state should be especially fortunate; it should have the best medical service, other states bearing the heavy cost of educating its medical men. There would be no local interests to consider.

In states which have within their border weak and struggling medical schools, the profession has confronting it an unusually difficult problem, since the examinations are sure to be tempered to meet the ability of the home school. Deplorable indeed is the condition in a state in which there are many commercial schools of the lowest type and in which the state board is controlled wholly or in part by these schools. This condition seems to exist in one great commonwealth, and it is a satisfaction to know that the Iowa State Board and other state boards have established a quarantine against that state; it was time. The odor was smelling to heaven, and it will take a generation to remove the blight.

With fewer and better schools, better examinations, with at least one year of hospital training, there will be fewer and better doctors, and the medical profession will attract better men. This much attained, professional fees must be equalized. Who will maintain that the correct management of a case of pneumonia, typhoid fever, or summer complaint in a child requires less skill and thought than an ordinary laparotomy? Is the fee adequate for the services in these cases? Fees for the trying house-to-house service, be it in the country or in the city, are too low. Do you wonder that so many medical men are attracted by the larger fees of the operator? The well-trained, experienced surgeon who makes careful diagnoses, who is competent to meet emergencies, who does every operation in the best possible manner, who is conscientious and God-fearing, who declines to do unnecessary operations, who does enough but not too much — that man earns his fee whatever it may be. We are attracted by the things that seem easy; we neglect the things really difficult, as the correct diagnosis, and the correct management of daily internal cases. And why? It is the fee that is attractive. With fewer and better doctors, with fees proportional to the skill and the judgment and the responsibility involved, conditions will be immensely improved.

Can anything else be done to improve conditions? That question has been answered many times — by Ex-President Reed of the American Medical Association, by Ex-President Lord of the Western Surgical Association, by President Murphy of the American Medical Association, and by many others; the remedy is included in the single word "publicity." Let the people know that at least 25 per cent. of the men practicing medicine are graduates of commercial schools, and entirely incompetent to assume responsibility of any kind, be it teething baby or a case of roundworms. There are men who are equally incompetent, although graduates of schools considered good at the time of their graduation. I refer to the men who have not visited medical centers during the past ten or fifteen years, who do not read journals, and whose diagnoses and operations beggar description.

The "amateur surgeon" has been flayed without mercy, and he deserves all he is getting, but he is not so much to blame as the school which failed to impress him with the sacredness of his obligations, and the state examining board that gave him his diploma and his license to assume every responsibility. The word "amateur" does not consider the age of the surgeon, or the years of his practice. The man who does not often feel that his knowledge of surgery is very incomplete and who does not persistently seek the truth, the man who does not make every effort to reach a reasonably correct diagnosis in every case is an amateur, and should be so heralded to the public. The man who attempts the management of a difficult surgical case — and all laparotomies are difficult — without a reasonable experience as assistant, is dangerous, and should be so heralded to the public. The specialist who does not have a sufficiently broad knowledge of medicine to estimate symptoms with a fair degree of correctness, and who uses a microscope of a power so high that he sees only a very limited field, is an amateur, and should be so heralded to the public. The man who does not use his microscope to make or confirm diagnoses whenever possible is an amateur and will always remain an amateur surgeon. I have several young friends who do not subscribe for The Journal of the American Medical Association, and I am afraid they will always remain amateurs. The man who does not often think that his work is far from perfect, who is not a severe critic of himself and his methods, and who considers himself as good as the best — is an amateur. I believe that the really competent and able man sometimes, often, experiences the feeling ascribed by Osler to the mystic in his "Alabama Student." "They see the travail of their souls and are not satisfied, and in the bitterness of the thought that they are not better than their fathers are ready with Elijah to lie down and die." Not a comforting sentiment, but it comes with force to the men that are striving for better things: the amateur never has this feeling. Good internists are as scarce as good surgeons; they should command just as good fees, and internal cases are often more difficult; although a fatality does not rest as heavily on the shoulders of the internist, yet the responsibility is the same. The man of any age who loses a pneumonia or typhoid patient without consultation is just as reprehensible as the man who loses a patient in what should have been a simple and safe surgical operation.

The demand for better service is just as urgent in medicine as in surgery. I believe that the honest, conscientious, painstaking doctor will soon come into his own, be he internist or surgeon.

The remedy for commercialism is fewer and better medical schools, with the immediate and complete elimination of commercial teachers from all schools, a fifth hospital year, fewer and better doctors, less drugging and more teaching, equalization of fees, and publicity. Let Arno Dosch, Lord, Murphy, Reed and others continue their agitation until the public is taught to "stop, look, and listen." If the medical profession will not purify itself from within, let it be purified from without.

### THE PUBLIC AND THE PHYSICIAN

I have said that the public pretty thoroughly distrusts the physician and not without reason. The loud and continuous hammering the profession is receiving because of its commercial tendencies and because of the large percentage of entirely incompetent men within its ranks in a measure explains this distrust. Only a few days ago one of the foremost scientists in the country said to me, "What benefit can come from a consultation? Doctors always support each other; the patient is no wiser. Consultations are merely a matter of form." This statement was made by an educated observing man. Does it indicate that he has a great confidence in the integrity of the profession? Is there any basis for his suspicions?

I often think that the number of quacks in a community is a measure of the manner in which the profession has met its obligations. I recently asked a well-known practitioner whether he gave his patients sensible advice, whether he instructed them in medical matters. "Sensible advice — instruction — no. They want treatment, and I treat them." This sentiment put into practice is sure to work to the advantage of quacks and quackery. An intelligent community, intelligent in medical matters, is not a good field for quacks. Every physician should become the teacher of his patients. The public must be educated, and doctors must be the teachers, at the bedside, in the consulting-room, always telling the truth about medical matters. If every doctor would do something in this line, if only a little, the sum-total would be a stunning blow for dishonest and illegal practitioners.

Says Benjamin Moore, in "The Dawn of the Health Age" along these lines, "The medical profession sadly requires to have some dignity put back into it, by being made a truly teaching profession. Medicine must be given sometimes, but at the same time if doctors could see their way to give one-tenth the present amount of drugging and ten times the present amount of teaching, it would be better for both the world at large and the self-respect of the medical profession." Less drugging and more teaching is a slogan by which to win.

### THE STATE EXAMINATIONS

The medical profession has no quarrel with any real or so-called school of medicine; it favors and recognizes no special school but welcomes to its ranks every educated physician, and wishes a full measure of success to every man that practices the healing art. But the medical profession and this society stand for equal tests for all in the basic principles of medicine. No treatment according to any school is possible unless a diagnosis be made, without which the grossest and even criminal errors are unavoidable. On this point there can be no question. Hence the state examination must include all the subjects usually taught in a medical school, except therapeutics and materia medica, which may well be left to the schools. There should be no examination in "practice" but a searching examination in "internal and nervous diseases." The examination must include the causes, the pathology, and the symptoms of all internal diseases, and all the so-called fundamental branches, all of them, that a diagnosis may be possible. It is no concern of the state board of medical examiners whether an applicant be a so-called regular, homeopath, eclectic, or what not, so long as he is well trained in pathology, pathogenesis, etc. Clean, competent, honest stimulating competition is welcomed. Let us hope that the time is not far distant when a national board of examiners will take charge of all examination, and issue all licenses to practice medicine. Perhaps a board representing a group of states would be more practical, as suggested by Mr. Hallett of the Royal College of Surgeons, at the recent conference in Chicago.

### DR. WILEY AND THE OWEN BILL

You all remember the unworthy effort to force this faithful public servant from his important position. Feeling that by so doing I should reflect the sentiment of this society, I sent a message to President Taft that the 2,000 members of the Iowa State Medical Society endorse and believe in Dr. Wiley because of the great work he has done and is doing. A very courteous reply came from the White House, but of course under the signature of the President's secretary. But Dr. Wiley has resigned. I have so much confidence in his judgment that I feel that he is working for better things, that he sees better and bigger things in the not far distant future, a national Bureau of Health. About this just a word. I need not dwell on the urgent need for such a bureau, or on the work done by the League for Medical Freedom to prevent its organization; but "who," says Earl Mayo, " are the chief opponents of the establishment of a national Bureau of Health and who oppose all supervision in health and medical matters, state or national?" "What other interest," says Mayo, in referring to the patent medicine interest, "has the ability, even if it had the disposition, to raise hundreds of thousands of dollars for a continuous campaign against the proposed national Bureau of Health, all in the guise of medical freedom?" "Freedom," says Mayo, "to poison, to debauch and to slay, and such opposition should bring to Senator Owen the support of every decent citizen." Much has already been done to voice the sentiment of the profession and of the people on these matters, but much remains to be done. A direct and forceful appeal must be made to the broad-minded men that represent the state of Iowa at Washington. I should suggest not only that the House of Delegates send a suitable message to Senators Owen, Cummins and Kenyon, but also that every member of this society communicate with his respective representatives in Washington, asking for early and favorable action on the Owen bill, known as Calendar Bill 561. These letters must be written at once. In addition, every member should induce as many influential citizens as possible to write similar letters. The Owen bill would become a law very soon if the members of the medical profession were half as busy as the National League for Medical Freedom. We must not be caught napping; we are responsible for the attitude of Iowa in this matter and now is the time for action.

The Owen bill has recently been reported favorably by the Senate Committee; this is reason not only for encouragement, but also for additional effort. Everybody must get busy and boost. Write letters to the Iowa senators and representatives — many letters, and at once.

### A CRYING NEED AND AN OPPORTUNITY

We owe much to Rochester and much to the leading surgeons of Chicago and other great cities. They have thought of us, and prepared for us an annual congress of surgeons, and other like entertainment. We can go to a large city at any time and see noted men at surgical work — always technic, until we forget everything else. What we need most of all and what we want is not operations, not technic, but pathology and diagnoses, medicine and medical clinics. We need and we want careful clinical methods, we want diagnostic methods, we want to refresh and rejuvenate ourselves by again seeing and hearing Pepper, Charcot, Nothnagle, Gerhard, Bramwell, Gowers, Krafft-Ebing and Dejerine. We must be brought to a higher estimation of things medical. We want to get acquainted with the internists and neurologists, with Billings, Sippy and Dock; with Patrick, Church and Hecht. We want to see these giants in action, we want to observe and study their methods. These are the men that can stand on the bridge, that have it in their power to stay the surgical onslaught, and to entice younger men and older men, too, back into medicine. Let Chicago arrange a medical clinic for senior students and doctors, three or four hours each week-day; let the time and the place be widely heralded in different hospitals, on different days; let the keynote be diagnosis and clinical methods. These clinics would soon be as well known as are the surgical clinics, and they would soon become veritable medical meccas. A surgical congress makes for more surgeons, and I hope that it makes for better surgeons, that it stimulates serious study of surgical problems, and that it makes for better diagnosticians and better surgical pathologists. But it is an omnibus, spectacular, opera-glass affair. I sometimes fear that it fosters the idea that surgery is easy and profitable.

In addition to the daily clinics already mentioned, a medical congress conducted much as the surgical congress is conducted would stimulate the often waning spirits of the internists, and every general practitioner is an internist. Such a congress would divide honors with the surgical congress, or perhaps rank higher as a factor making for progress, and do more good. I would not have this an idle appeal; many, many times have I longed for medical clinics. There are more than enough internists in Chicago and other large cities to accomplish wonders in this direction without undue hardship to anyone.

The surgeons are doing all the shouting, while the internists bewail the lack of appreciation for their work. The remedy is easy. We need diagnostic methods; we must improve ourselves; we must again be taught how to examine patients, how to read and estimate correctly. These must be clinics that set men thinking — that inspire correct methods; the benefits will be immense. Will our appeal be heard by the men that have it in their power to teach us better methods and higher ideals? I hope so. We appeal to the metropolitan internists to inaugurate a series of medical clinics and a medical congress. They will be successful. Many of you know how attractive the clinics of Nothnagel, Charcot, Mendel, Krafft-Ebing, and the others mentioned were to medical men. Chicago and St. Louis can duplicate these clinics. Will they heed the call?

### THE MEN OF THE HOUR

In closing, I should say that the need and the hope of the profession is young men, earnest, well-trained young men, men of high ideals, but in this work of ours there is but one test for age. The man who reads, who studies, who does not let a day pass without an effort to make himself a better doctor, who attends his county and state societies, who frequently visits medical centers, who prepares papers for his county and other societies — that man is a young man, and in him lies the hope of the profession. The man who isolates himself from his coworkers, who works alone, who feels that attendance at medical meetings is time wasted, and that nothing is to be learned at medical centers — he is an old man regardless of the date of his birth. The man that is ready to write a paper when invited to do so is a young man. Recently I spent a day with one of the leading surgeons of our sister state to the eastward. Casually, he said that he had in mind twelve subjects on which he wished to read papers. His papers are much sought and always good. That man will never grow old. What an example he should be to some of our old men that graduated during the first ten years of the present century, who are too busy to prepare papers, or who do not regard an invitation to read a paper as a precious compliment, calling for their best effort! I know a large number of men who began to age the day they graduated, who have grown older and older ever since, and who are now bent and decrepit in medicine, although they have not yet reached the age of 40. I know men of 65 or 70 years who are active workers, with most receptive minds, and these men are still young, and we love them for their youth. The need of the hour is men who love medicine for its own sake, who are enthusiastic, tireless students, clean men, honest men, men that are brave enough to say "I do not understand your case," men who strive to make a diagnosis rather than blindly prescribe, men who are painstaking, progressive, receptive, sympathetic, big-hearted, warm-blooded men; God-fearing men, men who never forget that all their training, all their effort has for its object only the best interests of the patient to which every other consideration is secondary. These are the young men so sorely needed; they will never grow old; and "men" all through this paper includes men and women. The grandest young man in Iowa to-day — we all love him — is Edward Hornibrook, of Cherokee.

I wish to say that I believe that there are hundreds and hundreds of men practicing in Iowa, the larger percentage of them country doctors, who in a progressive spirit and in devotion to duty excel their city confrères. There are in Iowa to-day hundreds and hundreds of country doctors who are fully competent and who merit the sympathy and warm affection so freely given to that "good old country doctor."

My faith in the future of the profession is unbounded: the future is bright with promise. We shall weather all our storms; commercialism will disappear; the public will be more intelligent and responsive; hospitals will bar their doors to the unworthy; the commercial schools will be throttled; and the material rewards will be sufficient to attract the very best men. The profession will continue worthy of its great inheritance, of the inheritance left it by Lister, McDowell, Laennec, Jenner, Hunter, Harvey, Koch, Pasteur and Ross, a few of the immortals that grace our guild. It will be a better and a purer profession, a fit profession for your son and for mine.

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**Serotherapy in Itching Skin Diseases.**—Linser does not attempt to explain its mechanism, but he states that there can be no doubt of its efficiency. He injects 10 or 20 c.c. of serum from a healthy person and has found it effectual in arresting the tendency to general pruritus in the elderly, also in impetigo, urticaria and allied dermatoses in children and in eczema. In the latter affection it is supplemented by the usual measures, but in the pruritus of the elderly nothing else is needed in some cases, the pruritus ceasing entirely after a few injections of the serum. He usually makes three or five injections on successive days and then waits to observe the effect. Some patients had up to sixty injections on consecutive days with no by-effects. It is indispensable, he has found, to have the serum from a person of the same sex and the same condition as to presence or absence of pregnancy. There can be no question of anaphylaxis, as the serum is not from an alien source, and he urges a trial of the measure in all rebellious cases. Linser is professor of internal medicine at the University of Tübingen, and his article on the subject is published in the *Dermatologische Wochenschrift*, March 30, 1912.

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# CONTRIBUTION TO THE SURGERY OF BONES, JOINTS AND TENDONS

JOHN B. MURPHY, A.M., M.D., LL.D.
President of the American Medical Association
CHICAGO

*(Concluded from page 1431)*

## EXTRA-ARTICULAR LESIONS PRODUCING DEFORMITIES OF JOINTS

The extra-articular lesions which are operative in producing deformities of joints are (a) shortening of tendons through contraction of muscles; (b) paralysis of counteracting groups of muscles; (c) cicatricial fixation or shortening of the capsule, and (d) cicatricial contraction of the skin and fascia. These are caused (1) through burns, sloughs, trauma, and so forth, and (2) by periarticular abscesses, such as a psoas abscess in the hip, popliteal abscess, and so forth.

Muscular contraction from trauma is most commonly the sequence of too tight bandaging. This is particularly noticeable in the lesion described in the literature as Volkmann's contracture, Volkmann's paralysis, ischemic paralysis and ischemic muscular atrophy with paralysis. I shall not go into the literature of this subject now, as that would require too much space, but it will be considered fully in a monograph to be published later. None of these names, however, expresses the real pathologic condition, which is a traumatic myositis, the result of pressure produced by a circular bandage or splint applied too firmly against the muscles of the arm or forearm. Following such pressure there is an immediate myositis with absorption and subsequent contraction. All of the damage is done practically inside of the first seventy-two hours. The contraction shows itself in from four to six weeks, and assumes a fixed condition within ten to twelve weeks. It then remains stationary except for the additional deformity which is produced by the growth of bone without a growth of muscle. This makes it appear as though the muscles were continuing to contract, which is not my view of the case.

There is no paralysis of the motor nerves from the ischemia, except when a splint presses against a nerve, the median, axillary or ulnar. If one examines these patients carefully at the end of six or eight weeks, one finds that all of the muscles respond to voluntary impulses; that the motion in them is limited by the fact that a greater or lesser portion of the belly of the muscle has been destroyed by the myositis and is now a firm cicatricial mass, often readily recognizable by a depression in the forearm or over the biceps or triceps.

When a bandage is applied too tightly around the knee, the external popliteal nerve is readily compressed as it passes over the outer surface of the fibula just below the head. This results not in a contraction, as it does everywhere else in the body, but in a paralysis and elongation of the muscle which in the lower extremity is recognized as a drop-foot. It is a common sequence of a prolonged Buck's extension or a plaster cast applied firmly around the knee, or of compression in splints. It results in a paralysis of all the extensor group of muscles on the anterior surface of the leg, and later a contraction of the calf muscles follows, giving the patient a talipes equinus. The drop-foot so commonly present after fractures of the leg and thigh is a dressing sequence and not an injury sequence.

Occasionally in traumas to the arm, forearm, thigh and leg, the muscle bellies are cut through to the bone and extensive hemorrhage into them takes place, and the muscles become adherent or united to the periosteum, which fixes and immobilizes the muscle so that voluntary contraction or extension cannot be produced below the point of muscular fixation. Absorption of the adipose tissue may follow this contraction and the skin is frequently attached directly to the aponeurosis or belly of the muscle. A myositis ossificans, when it extends into the muscle for a considerable distance, not infrequently produces a contraction and a limitation of motion. Inter- and intramuscular angiomata, the result of trauma or infection, may cause a phlebitis, which in turn causes a deposit throughout the muscle or muscle group of an extremity, resulting in contraction and fixation, with permanent deformity.

I shall not consider here the spastic contractions from central nerve lesions nor the hypercontraction due to paralyses of opposing muscle groups. I shall, however, consider the congenital contractures and deformities of muscle origin.

### TENDON SUBSTITUTIONS, ELONGATIONS AND TRANSPLANTATIONS

It can be seen from the above classification that all of these propositions must be met by a type of treatment adapted to the etiologic factors and the physical conditions in a particular case. A bandage that has been so tightly applied following an injury as to cause a rapid edema of the extremity below the point of injury or to cause sufficient pain to require an anodyne should be removed at once. At once means *immediately*, not in a few hours or in a few days. One must bear in mind that the pressure can destroy the muscle, as demonstrated experimentally, as early as three hours following the application of the bandage, and twenty-four to forty-eight hours is ample time in which to disable a member permanently.

Bandages and splints should never be applied for the purpose of reducing a fracture, and rarely ever for the maintenance of position by force after reduction. They are simply immobilizers or means for limiting voluntary or mechanical disturbance of the bones after reduction is effected. I have had under my care in the last three years sixteen cases of this type, involving the upper extremity, which shows how common the lesion is. In not one of these was there a paralysis of sensation or motion, showing that the nerves were properly function-ting. The limitation of motion was due to the contraction of the muscle following the pressure myositis.

The principles of treatment consist (a) in the correction of the deformity; (b) in balancing the muscle groups so that subsequent contraction and deformity do not occur; (c) in the division of such portion of the joint-capsule as is necessary to permit of a full latitude of motion in the joint.

The first is accomplished by the elongation of the flexor tendons by means of a double L incision and division, as shown in Figure 126. The tendon should be elongated so as to leave a slack at the time of primary correction. If possible, parallel tendons should not be divided on the same line. Each tendon should have its sutures inserted at the time of division, but not tied. In the profundus-sublimis-pollicis group at the wrist the degree of elongation can be estimated by straightening the fingers and extending the wrist to the fullest extent after division and before approximation.

The flexor carpi radialis and ulnaris do not need to be elongated more than ½ to ¾ of an inch in any of the cases, while the index- and middle-fingers may need an elongation of 2½ to 3 inches. When the tendons have all been elongated and sutured, if the hand still does not remain in position, the capsule of the joint should be divided all along the anterior surface of the joint and the line of division covered by a flap of tissue taken from the side of the wrist. When this cannot be accomplished, the point of union or approximation should be surrounded by egg membrane to prevent tendon agglutination. When the sutures are tied and the tendons replaced, a portion of the tendon sheaths or the fascia and fat from the inner or outer side of the arm should be swung in between the tendon groups and sutured, otherwise the tendons become fixed to each other transversely and the muscles move as a group in place of individually. The effect of this plan is beautifully illustrated in Case 33.

CASE 33.—*Patient.*—R. K., type distributor, aged 19, suffered from contraction of flexor tendons of forearm and of biceps, and of fascia in upper arm and elbow. Personal and family histories were negative.

*Present Trouble.*—In September, 1899, the patient was thrown from an unmanageable horse, sustaining a fracture of the left arm near the elbow. The arm was placed in a plaster mold for six weeks, with the forearm fixed at a right angle. During this time he had great pain in the forearm, with enormous swelling of the hand and fingers. When the mold was finally removed, the elbow was flexed with only 1 inch of flexion and extension at the lower end of the radius. The wrist was flexed and contracted on the forearm, and the fingers contracted on the palm. Sensation over the hand was gone. The patient says that the elbow was operated on in January, 1900, and a small piece of bone removed. The arm was then completely and forcibly flexed and placed in a mold. When this mold was removed he could extend the arm a little more than to a right angle, and flex it to the shoulder; some power in the fingers was regained; sensation over the whole length of the arm and hand returned.

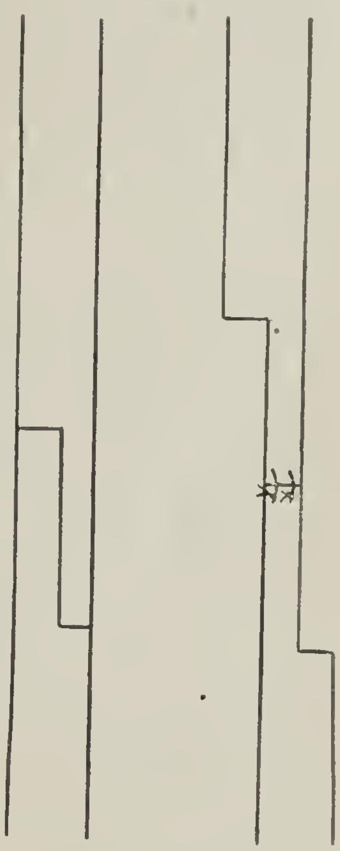

Fig. 126.—Method of tendon elongation. Double "L" incision and approximation by suture of long ends of two "Ls."

*Examination.*—There was great atrophy of the muscles of the forearm and lower third of the arm. All the flexor tendons responded to voluntary contraction impulses, showing that the nerves had not been destroyed, and that it was a tendon, muscle and capsular fixation, and not a loss of neuron transmission. The degree of motion diminished until the patient had just sufficient motion to determine that it was not a bony ankylosis.

*Treatment.*—In June, 1909, the biceps tendon was exposed and elongated for an inch and a half. It was then found that the arm could be extended only half an inch more than it could before and that the obstruction to elongation was not the biceps tendon, but the capsule. An incision was then made over the internal condyle for a distance of 2 inches, extending upward on the supracondyloid ridge. A similar incision was made over the external condyle. All of the tissues, except the capsule of the joint, were elevated with a periosteotome, but the periosteum itself was not disturbed. One could then look across the forearm, from one condyle to the other, and survey the entire capsule of the joint. This capsule was divided with a tenotome, the edge directed toward the joint. After its complete section the forearm dropped down and was then easily extended to the full anatomic range. Primary healing followed and within two weeks he was able to make flexion and extension of his forearm without any evidence of previous conditions. Four weeks following this all of the flexor tendons of the forearm were elongated, according to the usual double L elongation plan, and with lateral approximation stitches union was secured. The degree of elongation varied from 1½ to 2¾ inches, so as to allow of complete hyperextension of the hand and fingers. The anterior capsule of the wrist-joint was then divided transversely, so that the carpal bones could be extended to their full degree. Fatty tissue flaps were interposed between the points of suture and egg membrane was used to wrap a few of the tendons.

*Results.*—Healing occurred per primam, with complete restoration of flexion and extension of all of the fingers individually. The young man has developed into a very good amateur pianist, which speaks for the result obtained in this case. The function of his arm and hand is not impaired and the strength of his arm in contraction has been restored wonderfully, to a greater degree than one would expect considering the degree of atrophy of the muscle bellies.

The division of the joint-capsule, associated with elongation of the tendons, does not receive sufficient attention in the literature on the subject. It is necessary to secure a permanent and a good result. After prolonged contractions in the neighborhood of the elbow, when the biceps tendon has been elongated, the forearm will not come down unless the anterior capsule of the joint is divided. Then it can be forced down gently, stretching the fibers of the brachialis anticus and the nerves, arteries and veins in the trochlear space. Occasionally this stretching of the musculospiral and median nerves in front and the ulnar nerve behind produces a complete paralysis of the muscles of the forearm. This is due to the suspension of transmission of nerve impulses in the axons by what I believe to be an edema following stretching. It disappears in from two weeks to four months. In every case under my observation the function of the muscles was completely recovered.

The following case illustrates the elongation of tendons by plasty when they have been destroyed, and the preparation of the forearm or wrist for tendon elongation, that is, where a flap must be transplanted from the abdomen or thigh to the forearm, in order to give sufficient tissue through which to transmit the tendons.

Case 34.—*Patient.*—M. H., brakeman. Family and personal history not pertinent to present condition.

*Present Trouble.*—October, 1904, while coupling cars, his left hand was caught between the draw-bars of two cars. He was removed to a hospital, where the hand was properly cleansed and dressed, under anesthesia. The lower end of the radius and tissues of the hand were crushed and lacerated; some pieces of bone were removed. He remained in the hospital a month, part of the skin and tissues involved in the injury having sloughed. About Nov. 1, 1904, the thumb of this hand became gangrenous, because of ischemia due to the defective circulation through the injured wrist, which was almost amputated.

*Treatment.*—A large flap was freed from the abdominal wall and sutured on to the wrist to fill in the gap. This restored the circulation to such a degree that only a small portion of the thenar eminence necrotized. Two months later a portion of the original graft was swung around to fill in the gap between the ulna and radius. All of his flexor tendons had been divided by the injury. He had a puffy, distended wrist from the large quantity of fatty tissue present in the transplanted skin flap. Immediately after entering the hospital the gangrenous tissue of the thumb was removed and the tendons in this area were cut off and left loose. Two months later these loose tendons were caught up and sutured to the fat and fascia of the palm of the hand. One and a half years later a second operation was performed. Part of the ulna was removed to permit of flexion of the wrist and at the same time an elongation and reattachment of all of the flexor tendons was made. These tendons were carried forward through the adipose tissue of the graft. This operation was performed by my associate, Dr. J. M. Neff.

*Results.*—The patient has had a fairly good use of the hand since the last operation. The thumb can be adducted slightly; little finger can be flexed; other fingers can be flexed together, but not separately. In November, 1908, he had good muscular contraction, with extension of the fingers, but limitation of motion in the wrist. He returned to his occupation as a brakeman.

If the anterior or posterior group of tendons are contracted and fixed to the bone to such a degree that plasty cannot be performed, then an excision of the bone should be made, the forearm or arm shortened, and the muscles and tendons placed under favorable conditions for mobility, with muscular contraction and relaxation. Fat and fascia should be interposed between the tendons and the bone. If this cannot be obtained from the neighborhood of the injury, it may be obtained from the fascia lata of the thigh. It is essential that the periosteum and the skin should not become attached to the line of the new union of muscles or tendons, as these fixations are a great impairment to motion by subsequent muscular contractions and relaxation.

### CONGENITAL CONTRACTIONS

In congenital contraction or deformities of joints not due to paralysis of opposing groups of muscles (Case 35), three elements must be taken into consideration in order to obtain good results: 1. The elongation of the contracted tendons. 2. The division of the capsule of the joint at the site of the contraction, so as to permit the limb to be restored to its normal position and to pass through its anatomic range of motion without tension on the capsule. Capsulotomy is preferable to laceration of the capsule by force. 3. In addition, there should be the shortening of the opposing muscle tendons, as when the Achilles tendon is shortened in talipes equinus.

Case 35.—*Patient.*—C. O., aged 8 years, has never been able to use his right hand because of an upper motor neuron lesion of congenital origin.

*Examination.*—This shows a drop-wrist. He can use all of the shoulder muscles and biceps, triceps, coracobrachialis and brachialis anticus. There is loss of function in the short flexors and extensors; also in the long flexors and extensors except the long extensors of the little, middle and ring fingers; absence of pronation and supination.

*Treatment.*—The patient was operated on Nov. 9, 1909. The lesion was an upper motor neuron lesion because all the nerves and muscles responded to faradic electricity. The flexor carpi-ulnaris, which was active, was united to the flexor sublimis and profundus digitorum of the ring, middle and little fingers; also all of these tendons were elongated and reunited. The flexor carpi radialis was united to the flexor longus pollicis and flexor indicis. The flexor profundus digitorum of index and little fingers was also united to flexor carpi radialis, each of these having their tendons elongated 1½ inches. The palmaris longus which was alive, was attached to the flexor indicis. The radial, median and ulnar nerves were intact; all responded to the faradic current as well as all the muscles in the forearm. November 16 there was complete primary union. Stitches removed. The mold was left on six weeks, then motion and massage of fingers and wrist was started. Finger-motion was started in the third week with the mold on.

*Result.*—The wrist could be held straight out and motion was slowly returning to the fingers at the time the child left the hospital. The hand was on a palmar splint.

The elongation of the tendon, the division of the posterior capsule of the tibio-astragaloid articulation and the shortening of the extensor tendons of the foot, par ticularly the tibialis anticus, should be effected. When there is a tendency to equinovarus or valgus, the tibialis anticus should be shortened without division. When there is a tendency to equinovalgus, the tendon of the tibialis anticus should be split and half of it detached, passed subcutaneously across the ankle and attached to the external surface of the cuboid bone, imbedding it in the periosteum and fibrous capsule. The external half of the tendon ought to come on tension before the internal half, so that with every contraction of the tibialis anticus the first tendency of the foot will be to move upward, as toward eversion, and, finally, as the two forks of the tendon come on tension there is straight extension.

The significance of this implantation of the tendon is very great and contributes materially to the result. When there is a pes cavus present at the same time, there should be, before the tendons are transplanted, a division of the calcaneus attachment of the deep plantar fascia, so as to permit the fascia to extend freely in the direction of the toes. This is done with a tenotome. In addition to that, there should be a division of the long and short plantar ligaments and of the scaphocuneiform and scaphocuboid ligaments. It is rarely necessary to divide the tarsometatarsal ligaments. This can be done with a long tenotome. The instrument is passed beneath all of the flexor tendons of the toes and foot and often beneath the tendon of the peroneus longus. With gentle pressure, then, the lower articular margins of the tarsal bones can be separated and the foot elongated, so as to hypercorrect the pes cavus and make it a pes planus. The muscle tendons in these cases do not need to be divided after the plan of Phelps; neither will the arteries or nerves need to be destroyed, if a little care is exercised and proper anatomic bearings noted.

CASE 36.—*Patient.*—R. G., aged 15, was admitted Feb. 2, 1912. The family and personal histories were negative. The patient has never had any injury, rickets or bone disease; nothing that would have any relation to the present trouble; no chills, fever or history of infection.

*Present Trouble.*—When 7 years old his mother noticed that he wore his left shoe sole through more quickly on the outer side near the front of the foot, but could not see any deformity of the foot. He played like other children. Not until three ears later (five years ago) was a deformity of the foot oticeable. Since that time the deformity has been increasing in degree. There is no pain except a dull ache after tanding on the foot for some time.

*Examination.*—There is no tendency of the foot to turn ither in or out. The Achilles tendon was strongly retracted ut the heel touched the floor under great strain when the atient stood erect, but when in a comfortable position he ad a superlative equinus with the articular end of the tibia esting on the posterior surface of the astragalus. Equinus as present, also a tendency to eversion of the ankle. Ever-ion and abduction were less than inversion and adduction. here was greater contraction in the plantar fascia which was ery short and formed an extremely high arch; no paralysis in uscles of the anterior tibial, peroneal flexor or extensor roups; no evidence of rickets or any bone disease. Heart nd lungs were normal. The urine was negative.

*Treatment.*—The Achilles tendon was lengthened. The nner half of the attachment of the astragalus was taken off ith its periosteum. The Achilles tendon was then split pward a distance of 2½ inches and its outer half divided at hat point. This permitted of extension of the foot to the ull degree. After rupturing the posterior annular ligament ith repeated extension efforts, so that the foot could readily put in and easily held at an acute angle to the tibia, the nds of the divided Achilles tendon were reattached, making n elongation of about 3 inches. The future contraction of e Achilles tendon would all come on the outer half of the tubercle of the os calcis, and there would be no contracting force on the inner half. The plantar fascia was then divided subcutaneously just anterior to its attachment to the tubercle of the os calcis, and the plantar, tarsal and metatarsal ligaments were divided clear across the arch. This permitted of a fair reduction of the pes cavus. The tendon of the tibialis anticus was split from its attachment to the internal cuneiform bone upward, until it reached to the annular ligament. The periosteum and ligaments were then exposed at the cubometatarsal articulation. A hemostat was passed beneath the tissues to the opening at the end of the ligament and half of the tendon of the tibialis anticus was grasped and drawn out and sutured to the periosteum of the cuboid bone at its outer and anterior portion. Sufficient tension was put on this to produce pronounced relaxation of the internal half of the tendon of the tibialis anticus, which was left attached to the cuneiform bone. The purpose of this reattachment was to convert the tibialis anticus from an internal rotator of the foot to an external rotator, and to balance the contractors of the foot so that the astragalus would be held plumb beneath the articular surface of the tibia. All of the flexor tendons of the toes were divided without suture over the middle of the first phalangeal bones. By the transposition of the attachments of the Achilles tendon to the outer side of the tuberosity of the os calcis, and of the tibialis anticus to the cuboid, the foot was drawn outward at every contraction, either in extension or flexion. This was beautifully illustrated when the boy was examined four weeks after operation. With every effort to extend or flex the foot it was abducted instead of adducted, and he walked plumb on his astragalus.

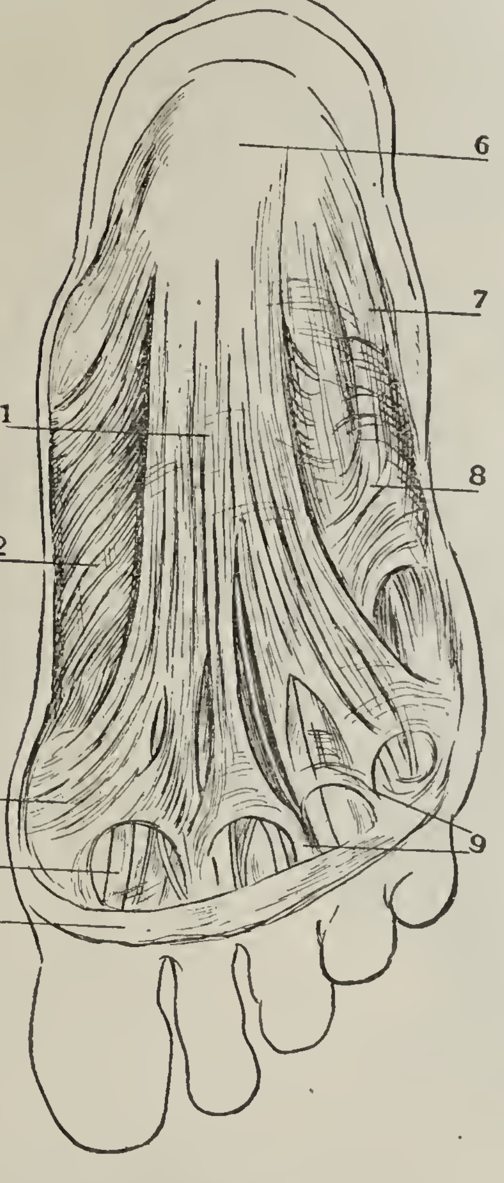

Fig. 127.—Superficial dissection of sole of right foot (subject lying on belly), showing plantar fascia. 1. Plantar fascia, central portion. 2. Plantar fascia, inner lateral portion. 3. Plantar fascia, slip for great toe. 4. Flexor longus hallucis tendon. 5. Superficial transverse metatarsal ligament. 6. Os calcis, inner tubercle. 7. Calcaneometatarsal ligament. 8. Plantar fascia, outer lateral portion. 9. Plantar fascia, digital slips.

I feel that this correction should never be performed by the heavy crushing instruments in use by orthopedists up to this time. They are unsurgical as well as unnecessary. The same method of elongation in congenital deformities of the upper extremity should be carried out and the same principles applied. It is unnecessary to detail them in citing cases, because I mentioned the particular technic for the individual situation. When the tibialis anticus is out of commission, the extensor longus hallucis or extensor communis digitorum or even the peroneus brevis may be effectively used to take the function of the tibialis anticus (Figs 127 and 128).

Paralysis of counteracting groups may be due to (a) anterior poliomyelitis; (b) meningitis, cerebral or spinal or both; (c) paralysis from divisions and disease of the nerve-trunks.

In the treatment of all of these conditions a careful analysis of the muscles retaining their contractility must be weighed before one decides on the transplantation of the tendon attachments to be made. When this is clearly outlined, one must take into consideration the desirability and advisability of producing an arthrodesis in one or more of the joints in the impaired extremity. Arthrodesis with transplantation of muscle attachments often produces a very effective restoration of function of the limb and renders a limb that is comparatively useless of very material service. Both of these are secondary to the consideration of the possibility of transplantation of the axon so as to restore muscular contractility in the already paralyzed muscles.

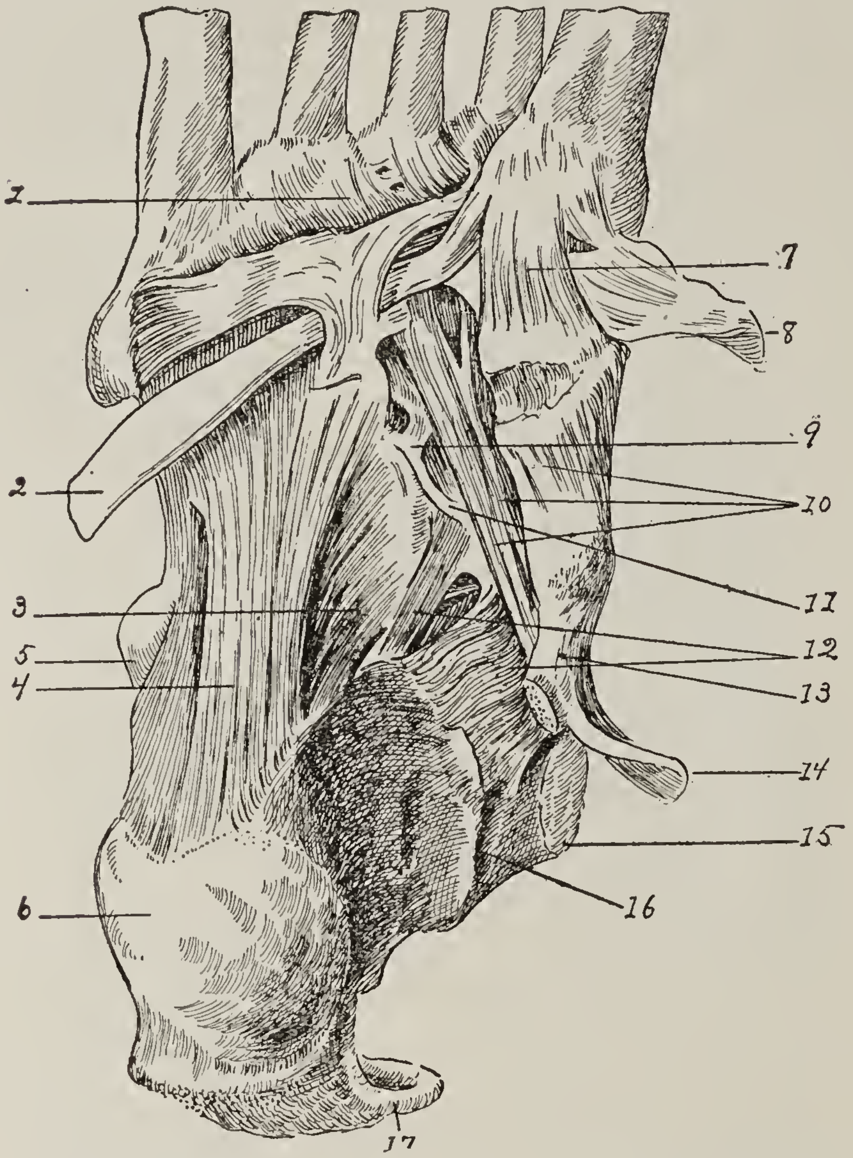

Fig. 128.—Right tarsus, inferior aspect. 1. Intermetatarsal ligament. 2. Tendon of peroneus longus. 3. Short plantar ligament. 4. Long plantar ligament. 5. Peroneal spine. 6. Calcaneum. 7. Tarsometatarsal ligament. 8. Tendon of tibialis anticus. 9. Cubocuneiform ligament. 10. Scaphocuneiform ligament. 11. Scaphocuboid ligament. 12. Inferior calcaneoscaphoid ligament. 13. Scaphoid. 14. Tendon of tibialis posticus. 15. Internal malleolus. 16. Sustentaculum tali. 17. Tendo Achillis.

In the paralysis following anterior poliomyelitis, which is the most common lesion causing circumscribed muscle paralysis, the neurons are often so badly damaged that short-circuiting of motor impulses cannot be effected.

The fields in which this is most valuable is in paralysis of the external popliteal without paralysis of the internal popliteal, where the axons of the external popliteal can be inserted into the axons of the internal popliteal with great advantage to the patient.

The next are the muscle groups of the arm, the ulnar and median. When one or the other of these groups is impaired the nerve transplantation may be effectually made so as to restore function, paralysis of the median nerve being the all-important one. The nerve transplantation should be made months before the tendon transplantation is attempted, so that, if possible, there may be nerve restoration and muscle contraction in effect at the time the tendon transplantation is carried out.

Case 37.—*Patient.*—R. B., aged 24. The family and personal histories were negative.

*Present Trouble.*—At the age of 8 years the patient fell from a porch, breaking the left radius at the junction of the lower and middle thirds. Anterior and posterior splints were applied at once and were not removed for five or six weeks, at which time union was perfect. Functional ability was impaired but use of the hand returned rapidly. During the next few months the patient noted a gradually increasing inability to extend the middle, ring and little fingers on the left hand, seriously interfering with the function of the joints of the hands and fingers. In December, 1896, a physician made an incision following the course of the ulnar nerve from elbow to wrist and stated that he freed the ulnar nerve from many adhesions. This operation was non-productive of results. In May, 1898, a physician advised forcible extension of the fingers and retention by a mold. This was attempted but the procedure was extremely painful and seriously interfered with the blood-supply in the fingers, necessitating its abandonment. The doctor then advised tenoplasty in the hand, which was done in the same month, the tendon to the little finger alone being operated on. No result.

*Examination.*—In the fall of 1902 there were the following findings: Left hand and forearm were smaller than right. Flexion of wrist was normal; extension diminished; flexion of fingers normal. With wrist extended, middle, ring and little fingers were well into palm. With wrist and hand midway between flexion and extension, i. e., straight with line of forearm, middle, ring and little fingers were three quarters flexed. Fingers could be extended only when wrist was in position of supreme flexion and hand was well adducted. Fluroscopic Examination: Radius, ulna and metacarpals normal.

*Treatment.*—All of the muscles reacted to voluntary impulses and responded positively to the faradic current, showing that there was no motor neuron lesion, and that operations on the nerves could not and should not be considered. All of the flexor tendons were lengthened for 1¼ or 2¾ inches, including the palmaris and both the flexor carpi. The flexor tendons were lengthened. Immediate primary union and marked improvement resulted. With the wrist extended middle, ring and little fingers were far from being pulled into the palm of the hand. In December, 1903, a second operation was done to rectify the condition still further. There was still additional lengthening of the tendons and immediate primary union. With the wrist extended there was no flexing of the fingers. Movements of the hand and fingers are practically normal. There is inability to flex the distal phalanges fully; this is slight and is not noticeable in the daily use of the fingers. The hand and fingers are strong.

*Result.*—In July, 1911, the patient had perfect flexion and extension of all the fingers and thumb and wrist. His hand is perfectly useful in all of his surgical work.

Unfortunately, too many of the cases of paralysis following anterior poliomyelitis are discarded or overlooked as surgical possibilities, and braces and other substitutes for tendon transplantation are adopted. There is a splendid field for the application of these principles in this class of cases, a fact of which the general practitioner should be made aware.

The cicatricial contraction of skin, fascia, muscles, etc., is a very complex proposition as applied to joint-deformities. Burns of the third degree in the popliteal space, in the groin, in the trochlear area, and in the axillary and neck zone produce the most distressing typ of scar fixation of a joint. Less frequently burns on the anterior surface of the forearm and wrist, on the anterior surface of the ankle or in the zone of the heel cause incapacitating deformities.

One cannot think of this subject in a serious way without mentioning the prophylactic management of these cases. In the whole range of surgery there is probably no class of cases that is so badly managed from the final outcome standpoint as burns of the extremities, and no class of cases that offers such a great reward for a little attention and a little minor surgery as the treatment of burns in the early stage. The contraction following burns is due practically to the formation of connective tissue in great masses and the granulation tissue which forms during the process of repair. There should be a well-defined and definite time for action in he treatment of burns, namely, as soon as the slough has disappeared; that is the time for skin-grafting, before a irm connective tissue mass has formed beneath the granulation tissue. Practically all burns should be grafted within two to six weeks from the time they are ustained. The nearer to two weeks, the greater will be he percentage of grafts which can be made to live and he more nearly normal will be the restoration of funcion after this procedure.

CASE 38.—*Patient.*—J. R., aged 20 years.

*Present Trouble.*—Seven months ago, Feb. 11, 1904, he was orking inside a boiler when a valve broke letting in steam hich scalded him. He was able to stick his head out of a ole in the iron and this was the only part of his body not urned. Scar tissue has formed on neck, hands, lower extremties, abdomen and few spots on chest; one area on right orearm not healed. He has contracture of scar tissue of alm of hand and forearm, so that fingers are stiff with limited otion and held in flexion. Extension of right wrist greatly mited, also slightly so in left wrist.

*Examination.*—There is cicatricial contraction of skin on almar surface of fingers of left hand flexing all fingers cutely; same on wrist. This skin and tissue greatly thickned; tendons on right hand not affected.

*Treatment.*—Operation: Sept. 14, 1904. Cicatricial skin and ssue on anterior surfaces of four left fingers dissected away own to fat covering tendons; skin on tips of fingers left. ikewise dissection made on inner side of left thumb down tendons and from palm and anterior surface of left wrist. endons of left hand were not cut as fingers could then be ell extended after exsection of adherent tendon sheaths. A rge flap of skin about the size of the left palm with half inch of adipose tissue was dissected off the upper and ntral part of chest leaving base of flap below. Five other cisions were made to the outer side of this flap on the est and four strips of skin were dissected up toward the se, each flap corresponding in size to the palmar surface each finger. The hand was then turned over on the chest d the chest flap sutured to the outer side of the left hand, edge of dissection on hand, while the four flaps of skin re alternately sutured to the palmar surfaces of the fingers th fine silkworm gut. The hand was dressed and strips adhesive plaster placed over left forearm and hand and ought to chest. Plaster of Paris was applied over the forem and hand.

*Results.*—The extreme tips of two of the finger flaps became erotic. The large palmar and dorsal surfaces of the flaps hered and became firmly attached. Twelve days later half the flaps were detached and two days after that the entire p was detached from the chest. No necrosis of flap followg detachment. The fulness in the fingers resembled that a stuffed glove. There was full extension and flexion of fingers, which has remained permanent. The adipose ue in the flap rapidly absorbed as the result of the pressure ted on it by the use of the hand, and gave a cushion t was elastic and free from contractile tendency.

The Thiersch graft is the ideal one as a primary treatnt. Why should a burn be permitted to go six months l ten months or years and be followed by extensive scar formation and contraction leading to deformity? What is the explanation or rationale of such a treatment? Absolutely none, except that of incompetency on the part of the surgeon in charge.

After the contraction has taken place the case presents itself to the surgeon as a deformed joint or limb, the result of cicatricial contraction, either of the skin alone or including the deeper structures and even the capsule of the joint. If it involves the skin alone, a large transplant from the neighboring tissue to the full depth of the skin and including a considerable quantity of adipose tissue gives the best result. The skin can then expand with the contraction of the scar tissue that may form above and below the place of insertion of the transplant.

Pedicle transplantation gives the best result at this stage of the disease. When the upper extremity is involved, the flap may be taken from the chest or abdomen. When the lower extremity is involved, the flap should be taken either from the same or from the opposite leg. I have had cases illustrating both types of conditions, and these will be cited in the monograph.

The reason the scars in the axilla and popliteal space cause so much trouble is that the attempt at motion in the joint always causes a hyperplasia of the connective tissue of the scar, or a tendency to keloid formation. This is also noticeable in the scars of the neck. Whereever there is excessive motion in scar tissue, the tendency is always to hypertrophy of that tissue.

It is interesting to note the rapid absorption of the upper and lower portions of scar tissue that are permitted to remain after the insertion of an elastic skinflap in the center of a firm cicatricial keloid mass, showing that the relief of tension at once favors the absorption of the scar tissue. This is true in burns of the hand, face, neck and so forth. One can see that the skinflap with $\frac{1}{8}$ or $^{1}/_{16}$ of an inch of fatty tissue beneath it will expand to twice its original size in a few months if it is surrounded by scar tissue or subjected to repeated or continued traction and still retain all of its pliability and softness. These transplanted flaps are often hypersensitive to a very annoying degree through the regeneration of the peripheral nerves of sensation.

Annular scars are dangerous to the circulation of the extremity and occasionally cause gangrene. We all recall annular scars produced by the typical Schede operation on the leg for varicose veins. I remember seeing at one time in the County Hospital two cases of gangrene of the foot some months after the Schede operation, owing to the contraction of the annular scar just below the knee.

The compression from annular scars is very easily remedied by dividing the scar throughout its entire width, at right angles to the circumference, and inserting in the line of division, after freeing the normal tissue, a pedicled flap from above or below. By doing this in one or two places in the circle the cicatricial tissue is rapidly absorbed, compression from the scar ceases, and the circulation is restored at the same time that the scar tissue is elongated and the implantation made.

It is frequently necessary, where a firm contraction has been permitted to go on for years and the leg has become deformed, for instance, to make a division and elongation of the two hamstring tendons and possibly make a division of the posterior capsule of the knee. If the contraction has existed only for a comparatively short time, capsulotomy is unnecessary, although tenotomy and tenoplasty may be demanded. In all of this class of work the capsule and the tendons and the remaining tissues should be so fully elongated under anesthesia that the limb rests in a perfectly straight position and can be put through its full normal range of motion without great force or tension; otherwise, when the patient comes out of the anesthetic, motion will be limited and deformity will be persistent.

It is remarkable what extremes of contraction may take place with complete division of the bellies of large muscles. If the gap is too great or the muscle-ends become fixed to the periosteum, full restoration of function cannot take place. Even when there is a great depression in the belly of the muscle following suture, or in subcutaneous union without suture, the full strength of the muscle is often restored. The upper or lower fragment of the muscle following a compression myositis, as described above, greatly hypertrophies and renders wonderful service, considering that only a small percentage of the muscle cells is retained.

I had a patient, an athlete, who made his living by athletics and who had a traumatic division of his right biceps. It was one of the largest biceps I ever saw. It was a railroad accident, and he agreed that if his muscle power was restored to its full lifting capacity, he would expect no damages from the railroad company. Eight months after the accident, when he produced a contraction of his biceps, my fist could be inserted into the gap between the two ends of the muscle; still he could lift with that biceps a greater number of pounds than he was able to lift before the accident. It had not been united by suture. It was a subcutaneous division and a subcutaneous automatic reunion.

### HETEROLOGOUS TRANSPLANTATION OF LIGAMENTS

Wherever the tendons have been destroyed and there is not sufficient tendon material left for elongation, homologous transplantation should be made. Portions of tendons can be taken from any of the other tendons in the patient's body, the Achilles tendon being an excellent source. The long flexor tendons in the forearm can have some of their substance removed and still not have their function impaired in any way. These same tendons may be used as substitutes for ligaments in flail joints or joints with excessive motion, particularly in the knee, where substitutes for the external lateral ligaments may be necessary following arthroplasty.

Silk may be used as a ligament producer or stimulator. It can be inserted so as to induce development around it of a mass of connective tissue which will give mechanical support or, if used as a tendon, will favor the generation of a sufficient quantity of connective tissue fibers to carry on the function of the tendon. After the silk has ceased to give the least support, it is no longer of use.

The after-treatment consists, first, in waiting until the wound has healed entirely and, second, in gradually instituting passive and active motion. In tendon elongation active motion should be resorted to at first, as the patient forms the best estimate as to the sensation of pain or discomfort, and the contraction which the impaired tendon will tolerate. At the end of four and a half to six weeks, when an organic union of the tendon has taken place, passive motion may be induced to a great degree, and must be encouraged. During the process of repair of the tendons the limb should be fixed with a plaster mold or other mechanical support in an overcorrected position, so that any fixation of the tendons that may occur in a transverse direction will be a fixation with the tendons amply elongated. Where muscles have been contracted and atrophied for a number of years, the restoration of voluntary contractile power takes months.

# A CASE OF MYOCLONIA OCCURRING ONLY AFTER REST OR SLEEP *

L. PIERCE CLARK, M.D.
NEW YORK

The essential myoclonias have had a more than usually difficult pathway to their full recognition as morbid states since the first description of paramyoclonus multiplex by Friedrichs in 1881. There are those who still claim that myoclonias have not passed beyond symptom complexes, parts of the hysterias, or the epilepsies, and as an accompaniment of those more frankly established organic diseases of paralytic encephalopathies, hemiplegias, and the residual irritative scleroses and softenings of the latter group. To prove that the myoclonias are but syndromes, their occurrence even in organic spinal affections such as myelitis and poliomyelitis is cited. However this may be for types of pseudomyoclonia, the pathogenesis of essential myoclonus is now known, in the majority of cases, to develop on a basis of neuropathy from which many other types of the spasmophilia may coincidentally also take their origin, either in the myoclonic's own family or in collateral branches of the same family stock. No really new conception of the nature and pathology of the affection has been brought forward in the past decade. Writers and observers on the subject in about equal proportions assign its pathology respectively to the terminal neuromuscular apparatus, lesions of the cortex, or lesions of the spinal cord. Its symptomatology and the surmise as to its etiopathology as a disease entity may be found in most recent text-books on neurology. Many variations of the disease have been subject of report in modern literature. Thus the association disease of myoclonus-epilepsy, which was first established as a clinical entity in this country under this name and which was further elaborated on in the extensive case reports of Lundborg, is but one of the variant manifestations of the pure disorder as laid down in Friedrich's classic description of paramyoclonus multiplex mentioned at the outset of this paper.

This strange convulsive disorder of myoclonia appears in most cases at rather definite intervals of hours, days or weeks. The subjects suffering from the uncomplicated or essential disease show no disturbance or loss of consciousness during the attacks, and are rather keen and alert in analyzing their own disease. Thus the disorder is an ideal one in which to study many of the conscious but uncontrolled manifestations of clonic spasm.

During the past few months a very interesting case of the classic type as regards symptoms has been under my close observation and study in a young man of 24, in whom the contractions are made to occur in an almost experimental manner by the simple expedient of requiring the patient to take a more or less prolonged rest attended or not by sleep. In brief the case history is as follows:

*Patient.*—J. S., a bright, alert, unmarried man, aged 24, a college student, reported to me as suffering from uncontrolled cramps in his legs after resting. There is no distinc nervous disorder in the family history of either parent, bu my patient is the eldest of a family of three children, o whom the second is an epileptic under my care, and th third, a girl, is of a "highly nervous temperament."

*History.*—My myoclonic patient was born at full term, bu after a face presentation. There was some asphyxia at birt about one-half minute being consumed in the resuscitatio

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* Read before the Section of Neurology and Psychiatry, Ne York Academy of Medicine, March 12, 1912.

The head was elongated and otherwise misshapen. He weighed 9¾ pounds at birth. These not especially pathologic incidents of birth, however, resulted in no special abnormal infantile life. The child was breast-fed for two or three months and after that period he was gradually weaned to artificial feeding. There was no constipation. Teething began normally and without special difficulty at 4 months. As soon as the child began to stand and walk, at 18 months, the mother noticed he frequently "made queer movements in his legs," stumbled and often fell. Some neurotic features in development were also noted about this time. For two years the little patient was an incorrigible thumb-sucker and often delighted himself for hours in pulling his own hair and banging his head on the floor. These habits were, however, outgrown or controlled entirely at 6 or 7 years of age. At night he was always "restless in sleep" but slept quietly an hour and a half during each day. Nocturnal enuresis occurred in early childhood and has persisted more or less as an ineradicable habit even to the present day.

On medical observation at 4 years of age it was found that when he attempted to walk, after a prolonged rest, either with or without sleeping, all the voluntary muscles of the trunk and extremities underwent arhythmic and asymmetrical contractions which the little patient was entirely unable to control; the violence of the muscular contractions frequently threw him to the ground. The attacks, for they were considered as a phase of jacksonian epilepsy, a form of *petit mal moteur*, lasted for a few seconds only; were most intense at the beginning, and the muscle contractions gradually ceased as the patient seemed to exert his will in their control. All the muscles of the body, even those of the face, are said o have been involved at this early age. The proximal muscles of the thighs and arms were most engaged in the clonic pasm, and those of the extensor group were most strongly nvolved. The little patient was always conscious, never bit is tongue or passed urine in an attack. Inasmuch as there vas no epileptic cry in any of these attacks, no immobility f pupil during the muscle contractions, nor vasomotor changes s seen in classic epilepsy, and, in the continued absence of he mental stigma of epilepsy, the diagnosis of epilepsy was eriously questioned. Several years passed in study and ineffective treatment, and as no general plan of treatment was ound of lasting benefit, the parents finally decided to allow he patient to go without any treatment and let him "gradully outgrow the affection." He was then 13 or 14 years of ge. It had been observed, however, that on leading a hygienic nd regular life the patient did gradually improve. In time, y a clever trick of stepping about briskly on attempting to and or walk, the patient was able to disguise in part the anifestations of the convulsive disorder, especially to those her than the family. Then, too, in time he seemed to gradlly gain more control of the large muscular contractions. e never had an attack in deep and quiet sleep, although hen he turned over in bed or greatly shifted the position his body the contractions were sure to occur with great olence. The major attacks always occurred in the early orning hours. The left side seemed to be most involved. he patient says that he now occasionally feels as though the uscles of his face move in the great attacks; a close observer, wever, sees no grimaces or alteration in facial expression the attack.

The usual modifying influences of heat, cold, emotional ocks, etc., have no effect on the myoclonic contractions in e patient. It should be added, however, that during an tack of scarlet fever, at 7 years of age, the myoclonic conactions were very severe and exhaustive. A sort of status yoclonus obtained for nearly the whole of three days during e height of the fever. For several days after this period was practically free from violent contractions even during after-rest periods, a fever replacement not uncommon in history of this myoclonic individual. The myoclonus does t seem to have seriously altered the normal physical and ntal development. A series of more or less classic attacks myoclonic contractions were personally witnessed by me l the following notes were made at the time:

The patient went to sleep at 11 p. m. in a strange bed, in somewhat noisy surroundings. The night was very warm but he fell asleep quickly and slept soundly and quietly until 2:15 a. m., at which time, in turning from the left side on which he had been quietly sleeping, the muscle movements began with quick clonic contractions, arhythmic and asynergic, in all the proximal muscles of the neck, trunk and extremities. At times there was but slight fibrillary tremor in the larger muscles (the deltoid and gluteal in particular), and at other times the mass movements of muscle play were sufficient to twist and hurl the body about as though the patient were wrestling with an unseen adversary. The contractions were as sudden and quick as those seen in ordinary classic myoclonia. The patient was fully conscious throughout and seemed rather amused than otherwise at the phenomenon. The full excursions of the different movements were greatly curtailed by the voluntary effort of the patient, who with great quickness foiled the full excursions of the larger contractions. The more intensive movements in the larger muscles ceased in about one minute, but some fibrillary twitchings in the muscles of the forearm and leg continued for one minute longer.

On the whole, it may be stated briefly that in this attack and in several others witnessed within the next few hours, the attacks were sudden and violent in onset and ended by a gradual subsidence of range and frequency of clonic spasms. The severest attack of the single night series, however, occurred on rising for the day at 7:30 a. m. I made quite sure that the partial waking, as in the turning movements, induced the contractions, and not the reverse. The patient exercises control over the contractions by tensing the opposing muscles to those engaged in spasm.

It has been found that prolonged rest or exercise alters little the severity and frequency of the attacks. Of late years it has been noted that marked indulgence in coffee and alcohol react very unfavorably on the condition, especially noted in increased contractions for days after such indiscretions.

In brief, then, it may be said we have here a case of classic myoclonic contractions of unknown origin, aside from possible obscure hereditary causes and slight injury at birth, which afflicts the patient largely if not solely after rest and only during that physiologic period in which normal tension of muscles is brought about, as in walking or standing.

The case is, however, not quite so unique as one might at first suppose. A review of the literature of our subject shows that in a patient of Lundborg's who had nocturnal myoclonus with epilepsy, the mild attacks of myoclonus did not rouse the patient from sleep, but strong ones did. It is not stated in the author's text whether the partial waking of the patient inaugurated the contractions, as in my case, or the reverse. In this case of Lundborg's, the nocturnal attacks gradually grew worse while the diurnal movements were relatively quiet after bad nights. The epilepsy, which remained entirely distinct from the myoclonia in its clinical occurrence and manifestations, preceded the appearance of myoclonus for two or three years. Another case, which was reported by Unverricht and which was described in that author's first family group of myoclonus, also showed that the patient had nocturnal epilepsy before he developed myoclonus; the epileptic attacks occurred nightly but no definite mention of the relation of the myoclonia to sleep was recorded. But in a case reported by Bührer in which nocturnal epilepsy occurred before the development of myoclonus, the latter was almost continuous during the greater part of the daytime. The myoclonic contractions quickly and completely subsided on going to sleep, but mere turning over in bed while asleep or waking at night caused it to reappear, so that some nights were very bad. Another case, still more analogous to mine here recorded, was one of Lundborg's in which the epilepsy began the association disease (myoclonus-epilepsy) and was matutinal for some time before myoclonus developed in the case. The myoclonic contractions were relatively quiet when the patient was asleep but she was forced to sleep sitting in order to gain greatest freedom from both her epilepsy and myoclonus. It is recorded that when this patient awakened or was awakened by some one suddenly, she became very myoclonic and when she awoke at 4 or 5 o'clock a. m. the myoclonus was at its worst. In still another case of Unverricht it was recorded that the patient was not free of myoclonus during sleep. And in still another case, by the same author, it was stated that there was usually no myoclonus at night, but on some nights violent contractions occurred so severely that the limbs had to be held. No mention was made of the patient's condition in partial sleep or on fully waking.

In a case of Krewer's the myoclonus was *almost* absent during sleep. In another case of Lugaro's the myoclonus ceased on going to sleep, as has been usually noted in this association disorder, but the myoclonic contractions were resumed during the act of waking, so that the patient was often fully aroused by them. In Rabot's case the myoclonus was especially marked on waking, as was Garner and Santoise's case which was also much more active in the latter half of the night—which is an exact counterpart of my own case.

Thus it will be seen that out of a total of twenty-six cases of myoclonus carefully analyzed in literature, sixteen had positive data regarding the myoclonus during sleep, and of this number seven are recorded as showing a cessation of myoclonus in sleep, while nine cases showed some mention of myoclonus continuing during sleep, or reappearing on or during waking. These citations from literature are made for two reasons, first to show that, contrary to the usual conception, myoclonic contractions may, and indeed often do, occur during sleep or part waking, and also to show that the condition, together with many of its allied states of the spasmophilic group such as tics and habit spasms, are intimately dependent on physiologic alterations of muscle-tone which in the last analysis is intimately bound up with an integral part of the function of the cerebral cortex and is one more link in the proof of the cortical origin of the disease.

There is a marked diminution of the muscle-tonus during rest or sleep. When myoclonic patients are aroused from deep sleep this wave or nerve-impulse flows into the terminal muscle apparatus, which in turn responds in an irritable manner to the abnormal or excess impulse, and clonic spasm occurs. The perturbing spasm is continued until the reciprocating cortical centers and the muscles controlled by them are equilibrated or balanced; then and then only does rest or proper control of the normal waking tension of the neuromuscular system take place. I am aware that this explanation is but a crude clinical hypothesis and has many physiologic defects, but I submit it as the most obvious explanation in our present conception of muscle-tonus.

The essential defect in the cortical control over muscle-tone and the undue responsiveness of the muscles to abnormal nerve-impulses is probably bound up in some metabolic defect, which is probably more often congenital than acquired, and is essentially a physiopathologic defect. The ductless glands and their influence on vascular, muscle and nerve-tissue tonus are being energetically inquired into by a host of workers in the spasmophilic group. The exact application of these intricate studies on spasmophilic phenomena as here considered are of the utmost importance, as the understanding and more exact application of modern chemotherapy rests on them. We cannot make great advance in the nature, pathology and treatment of the convulsive disorders until we do know the proportional importance which the several causes play. To this end remarks on this atypical case of myoclonia are made and placed on record for further analysis and study.

84 East Fifty-Sixth Street.

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# THE SURGICAL IMPORTANCE OF THE PARATHYROID GLANDS AND CLOSELY ALLIED LYMPH-NODES *

NATHANIEL GINSBURG, M.D.
Associate in Surgery in the Philadelphia Polyclinic Hospital; Assistant Demonstrator of Anatomy in the University of Pennsylvania
PHILADELPHIA

The surgical importance of the parathyroid glands, independent of the development of tumors of these little bodies, is their possible extirpation during excision of one or both lobes of the thyroid gland.

The anatomic relations of the parathyroid glands is definitely established, and their numerical constancy is subject to slight variation, as proved by careful searches by me for these little bodies during the past six years in the Anatomical Laboratory of the University of Pennsylvania.

Since most observers who have recorded their findings dealing with the gross anatomy of these bodies are in accord as to location, number and source of blood-supply, a review of the literature on this subject is unnecessary.

Continued experience in looking for the parathyroid glands, however, has emphasized the fact that their easy identification is not always a simple matter. So uncertain is this identification in many instances, that I am forced to the belief that at times their differentiation from closely allied lymph-nodes is impossible save by histologic examination.

Lymph-nodes in the region of the thyroid gland are numerous, and, at times (not infrequent), their size and relation is unmistakable from the parathyroid glands. The positive recognition of a parathyroid gland by its separate arterial twig no longer holds true, since numerous lymph-nodes have been observed to possess separate vessels, likewise springing from the inferior thyroid artery. This latter observation is especially true in the case of the group of small pretracheal lymph-nodes which lie just below the lower poles of the lobes of the thyroid gland. This is a constant anatomic relation and is well shown by the accompanying illustrations. Since identification in the laboratory is attended with so much difficulty and a considerable expenditure of time, it appears obviously impossible to isolate routinely at operation, either the glandule itself or its nutrient vessel. The employment of colored injection fluids to distend the smaller blood-vessels in the body is the best means of studying their course and distribution. The injection is usually accomplished under considerable pressure, and suffices to fill the minute arteries in the peripheral parts of the subject. Even under these conditions the parathyroid arteries are difficult to isolate and it is often necessary to facilitate their recognition by the use of a magnifying glass. From a practical point of view, how

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* From the Anatomical Laboratory of the Medical School of the University of Pennsylvania.

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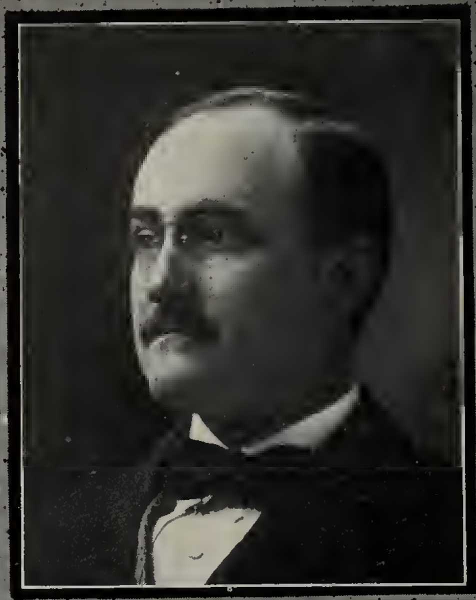

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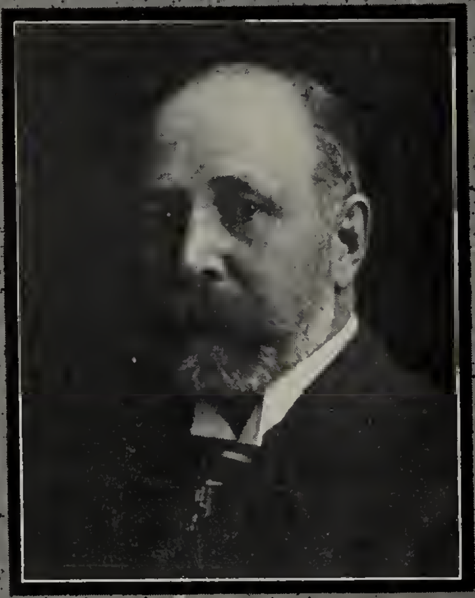

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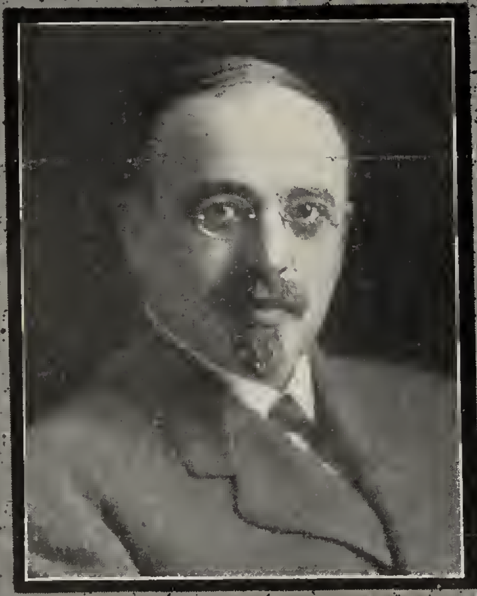

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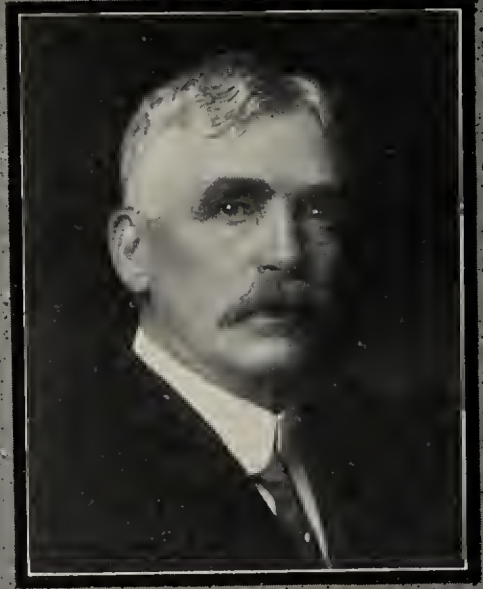

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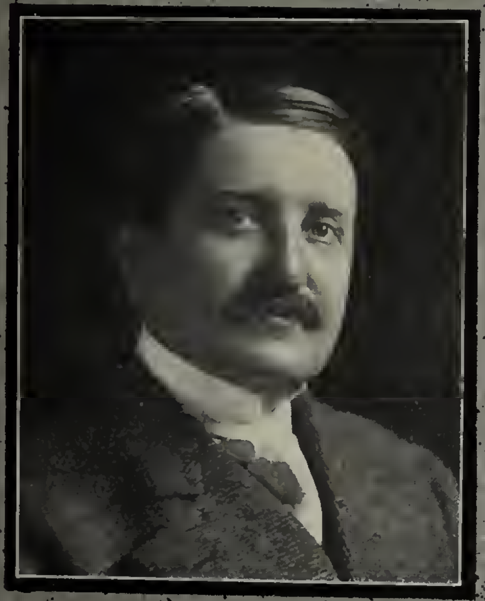

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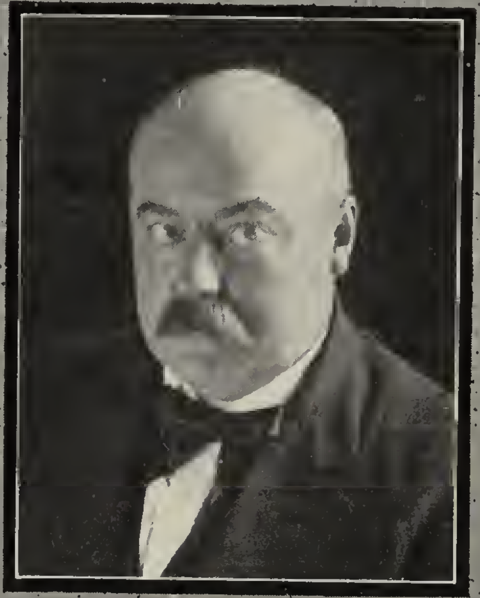

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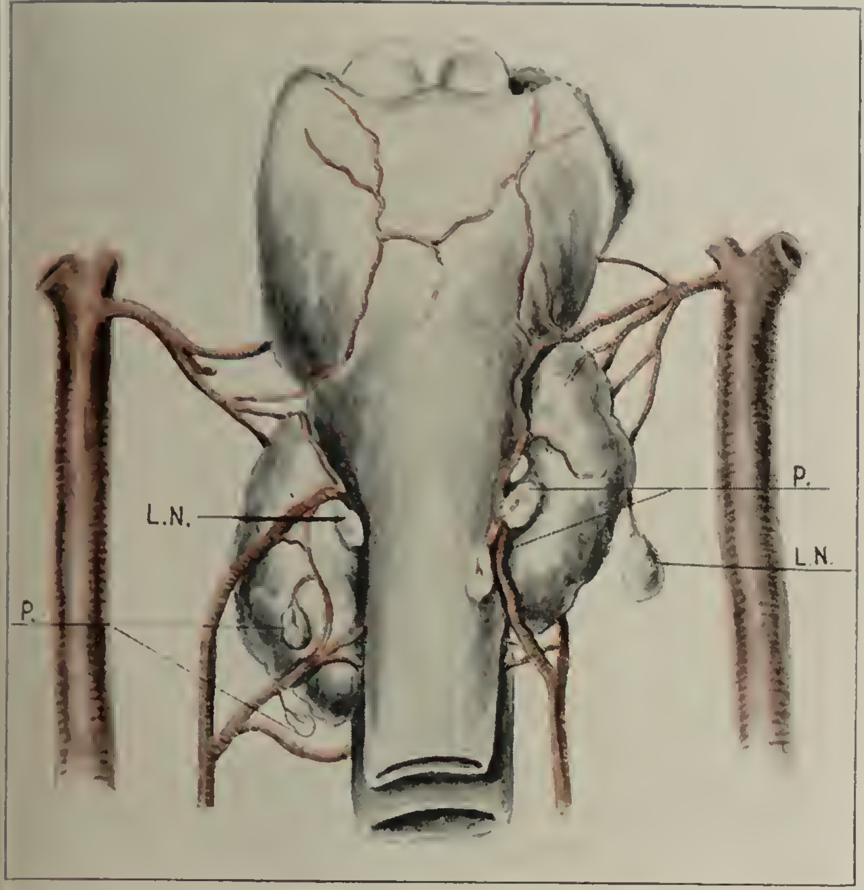

Fig. 1.—Thyroid gland seen from behind. Note the close association of the parathyroid glands and the closely allied lymph-nodes. P, parathyroid glands; LN, lymph-nodes.

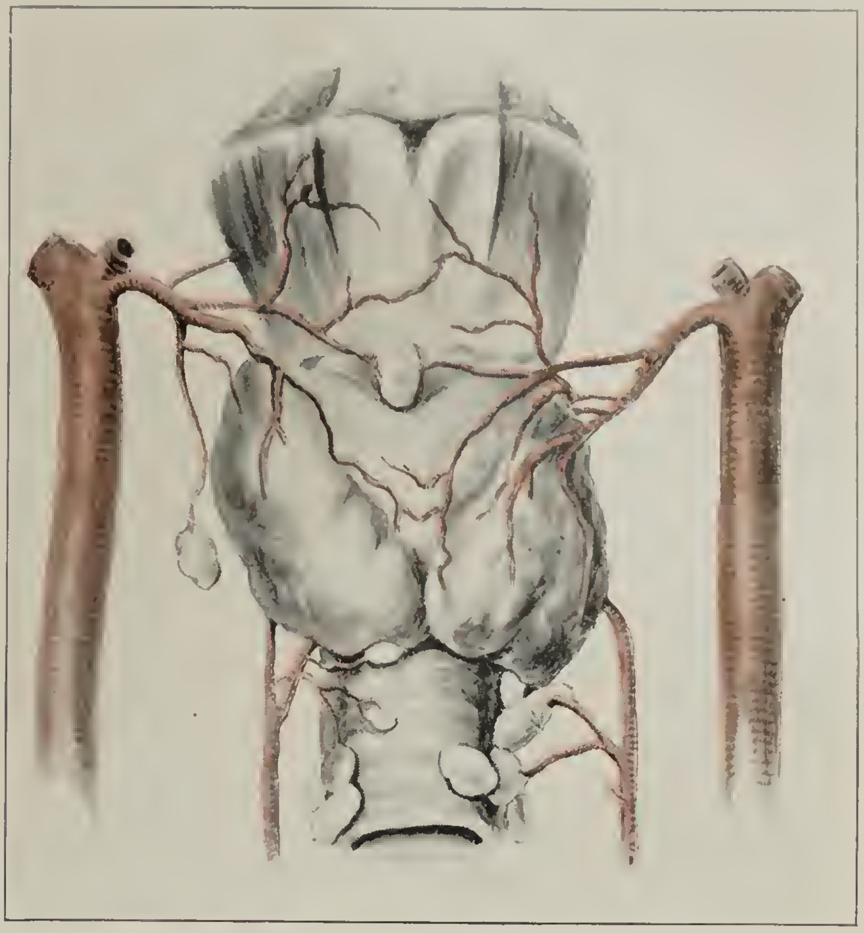

Fig. 2.—Ventral aspect of the thyroid gland. Note the large number of lymph-nodes, some having a separate arterial twig. There are no parathyroids in this drawing.

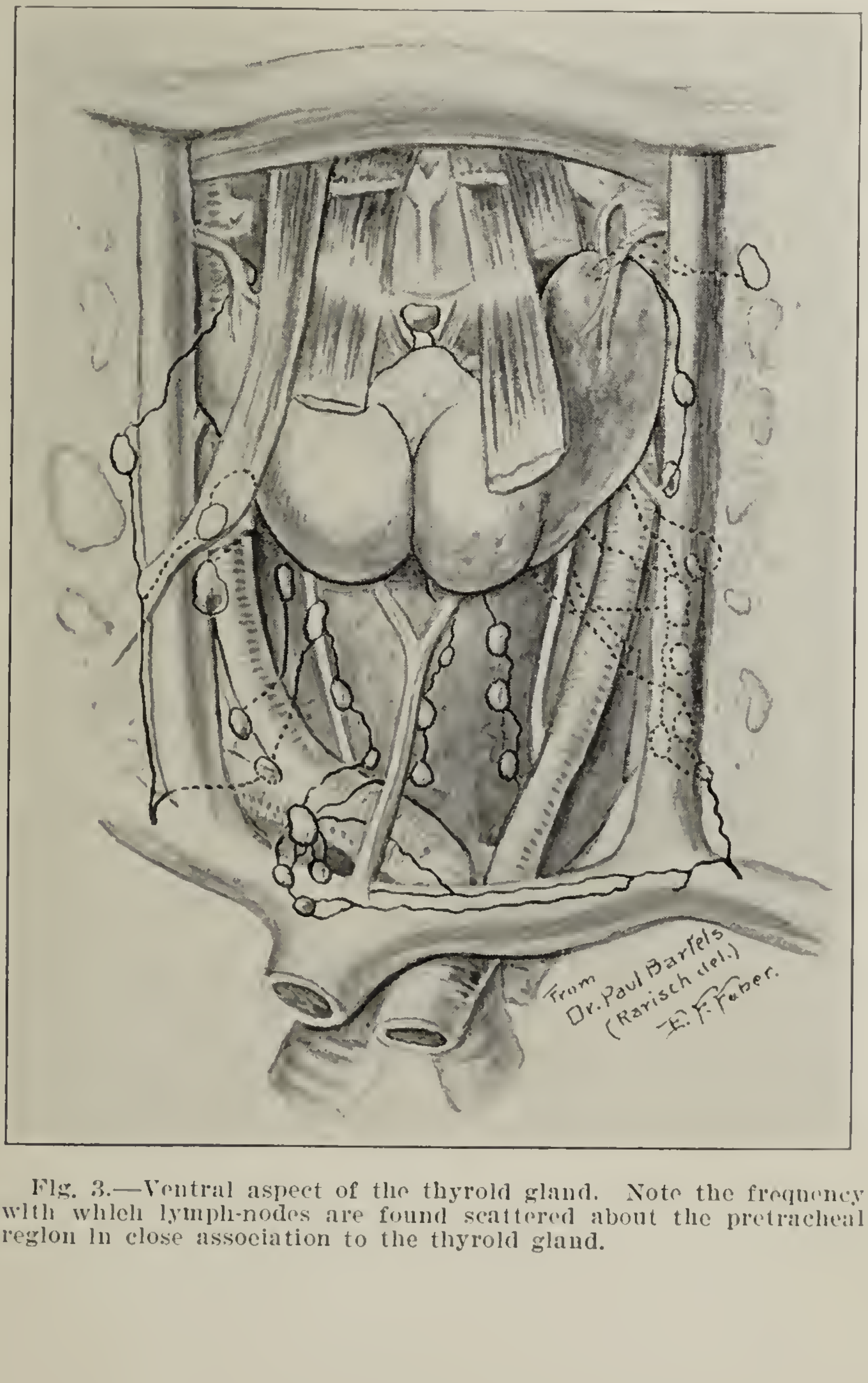

Fig. 3.—Ventral aspect of the thyroid gland. Note the frequency with which lymph-nodes are found scattered about the pretracheal region in close association to the thyroid gland.

ever, it is really unimportant that they should be recognized and isolated during surgical operations on the thyroid gland, because a knowledge of their usual position obviates the danger of their removal or exposure to traumatism. Clinical proof of this fact is the rare occurrence of postoperative tetany in the hands of those surgeons who have recorded a large number of goiter operations.[1]

Since postoperative tetany is so rare, owing to the establishment of a surgical technic which practically ensures the integrity of the parathyroids, the necessity for immediate auto- or heterotransplantation of parathyroid glands is somewhat remote. The impossibility of recognizing an excised parathyroid at operation, its identification being certain only after careful histologic examination, emphasizes the futility of attempting to reimplant the glandule.

The failure of tetany to develop in those cases in which total thyroidectomy had been performed with ligation of both thyroid arteries, was explained in an earlier communication on the basis that existence of an anterior and posterior pharyngeal arterial anastomosis sufficed to insure the vitality of the parathyroids.

Examination of some of the lymph-nodes found in the immediate vicinity of the thyroid gland has revealed unmistakable evidence of tuberculous involvement. Since identification is not always certain, it is not unlikely that tuberculosis of these lymphoid structures may have been confused with a similar pathologic state reported as occurring in the parathyroid glands.

1704 Pine Street.

## A DEVICE FOR MOVING PATIENTS

F. F. SIMPSON, M.D.

PITTSBURGH

For a number of months I have been using, with complete satisfaction, a simple device for transferring unconscious patients, very heavy patients, very ill patients and patients with drainage, from the operating-table to their beds, and from one room to another in the hospital.

Because I would be loath to return to former methods and because it might be of interest to others, I venture to present illustrations and a brief description, fully realizing that such a method may have been thought of and even used by others, though I have no knowledge of its previous existence.

It consists of a leaf of sheet iron, as long as the stretcher, and 9 or 10 inches wide, which is attached to the side of the stretcher by strong hinges much after the fashion of the hind gate of a wagon. When the free margin is raised and securely placed on the table, it bridges the intervening space and gives a continuous surface for sliding the patient from the table to the stretcher.

Before the patient is put on the operating-table, two sheets, folded lengthwise, are placed across the table and on top of its covering. The ends of these sheets are folded in accordion pleats and tucked (on either side) under the edge of the pad which covers the table. One of these sheets extends from the head to the hips. The other is so folded that it extends from the hips to the knees. This permits pulling the patient down to the lithotomy position without the sheets being soiled during vaginal work. Before the patient is to be taken from the table she is again placed in a horizontal position and the lower sheet is unfolded, so that it extends from the hips to the ankles.

At the time the transfer is to be made, the stretcher, having a leaf, is put by the side of the operating-table.

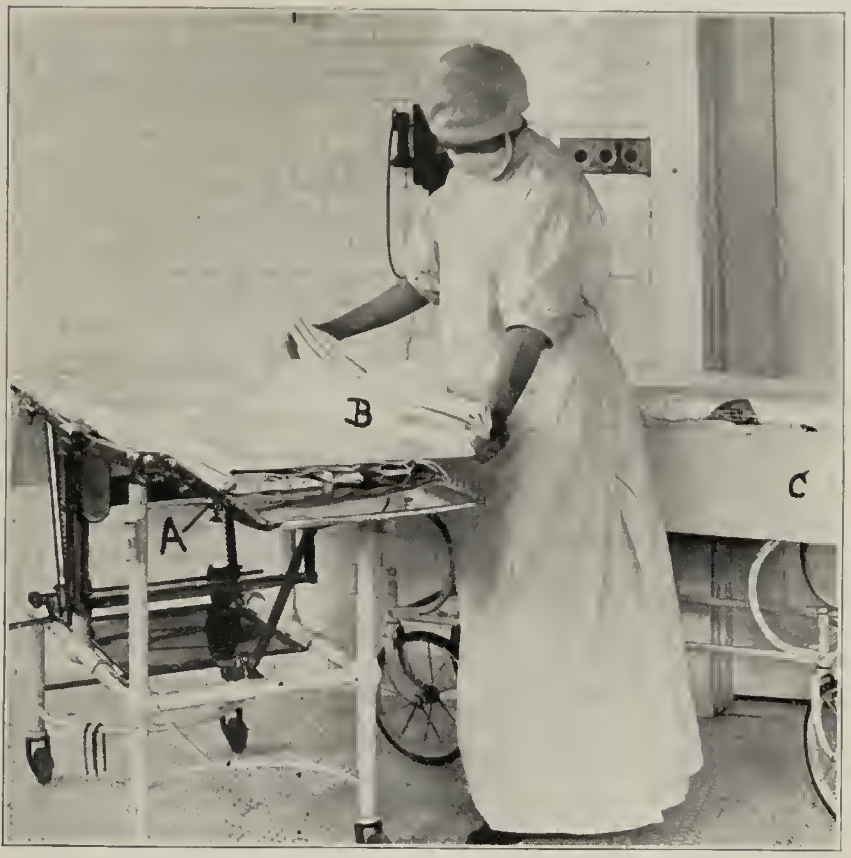

Fig. 1.—*A*, folded draw-sheet tucked under pad on operating-table; *B*, end of draw-sheet being folded in accordion pleats; *C*, sheet-iron leaf attached by strong hinges to side of stretcher.

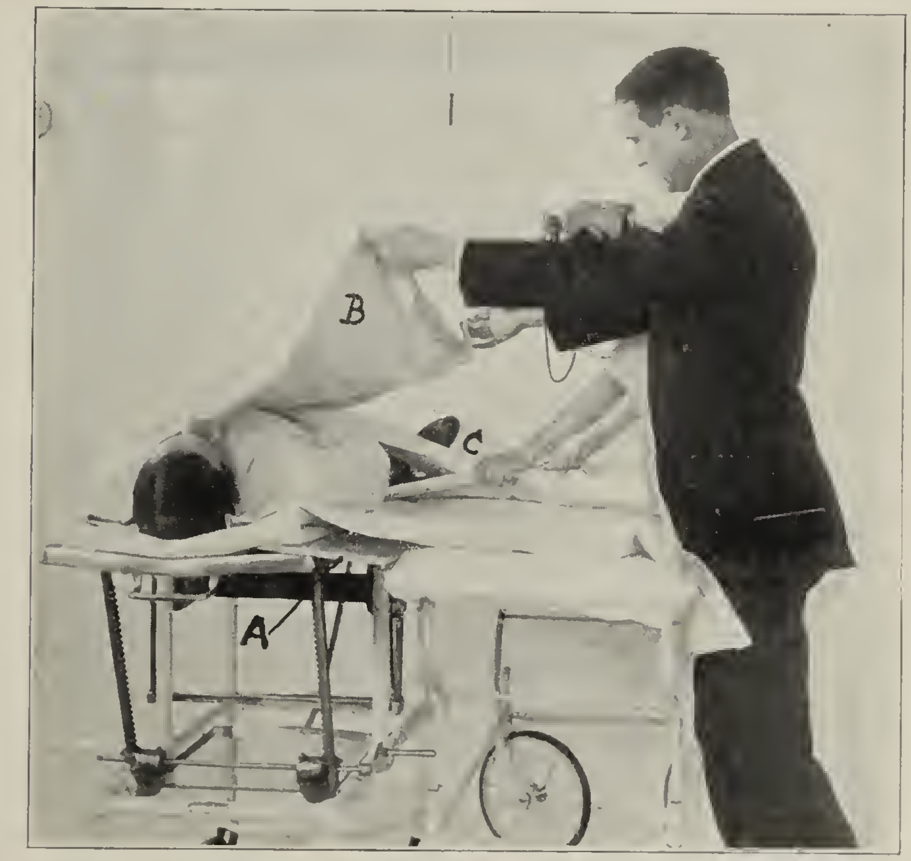

Fig. 2.—*A*, metal leaf of stretcher pushed under side of patient and resting securely on the operating-table; *B*, upper draw-sheet (that is from head to hips) being adjusted; *C*, lower draw-sheet (that is from hips to feet) ready for pulling patient from table to stretcher.

The leaf is raised and pushed under the side of the patient, so that 6 or 8 inches of the full length of the leaf rest on the table. The ends of the folded sheets nearest the stretcher are straightened out and rest on the stretcher. The opposite ends of the sheets are drawn over the patient, so that the patient is ensheathed by the two sheets, the ends of which lie on the stretcher. Two persons standing at the opposite side of the stretcher from the operating-table catch the ends of these sheets and by comparatively little effort draw the patient quickly, gently and safely on the stretcher. When the bed is reached, the leaf of the stretcher is placed on the bed and the patient drawn carefully and easily from the stretcher to the bed.

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[1] Dr. Charles H. Mayo stated at the meeting of the Clinical Congress of North American Surgeons, held in Philadelphia in November, 1911, that in a series of over 3,000 operations on the thyroid gland he had encountered postoperative tetany but once. The patient presented only mild symptoms of the disease.

By this method there is no lifting and no danger of dropping the patient between table and stretcher, provided the leaf is pushed far enough over on the table. It seems less crude than the methods in common use.

Jenkins Arcade Building.

# TYPHOID VACCINATION AND THE WIDAL REACTION

## WITH REPORT OF A CASE WHICH FAILED TO SHOW A POSITIVE WIDAL AFTER THREE SUCCESSIVE VACCINATIONS

AUGUSTUS MAVERICK, M.D.
SAN ANTONIO, TEX.

In vaccinating against small-pox the important question which arises is: "Did the vaccination take?" Now that typhoid vaccination is becoming more and more popular in civil life it is just as important for the physician to know whether his subjects really become immune to typhoid or not, for if his vaccine has been kept on the druggist's shelf for a couple of years or a faulty thermostat in the manufacturer's laboratory has caused it to be overheated, he may vaccinate with it by the bucketful without results. The individual may be happy who thinks he is protected from typhoid, but is not, and who drinks his polluted water without a tremor, but his position is not one to be envied.

In vaccinating a large body of people, as a whole army, where the vaccine has already proved good and the conditions always remain the same, it would be troublesome and useless to determine whether each member showed a positive result, but in ordinary practice at the present time where so many outside factors may influence the value of the vaccine, the physician is not deserving of his patient's confidence who does not make a point of determining the results in each case. In this country the vaccine prepared by the Army Medical School is taken as the standard, since it has been so thoroughly tried, but the vaccines now sold by the leading manufacturing houses are in no way inferior. The physician who obtains his vaccine fresh, direct from one of these houses, is safe, but if he depends on what his druggist supplies him he might be disappointed. Typhoid vaccine, as prepared at present with heat to kill the bacilli, keeps very poorly; it should never be used a year after its preparation and by preference not after three months. The best vaccines sold now have the date after which they should not be used stamped on the package, but under the very unfavorable conditions often found in the general drug market even this date may sometimes prove too long.

Small-pox or cow-pox being an exanthematous disease, the success of a vaccination is readily determined by inspection of the skin lesion, but typhoid being mainly a bacteriemia, the results of the vaccination are to be expected chiefly in the blood. The local and general symptoms experienced by the subject after inoculation with typhoid vaccine cannot be used as an index. The majority suffer practically no general reaction and the local skin area need show but little disturbance. Vincent,[1] of the school of military hygiene at Val-de-Grâce, France, prepared a vaccine without the use of heat by autolysis of living typhoid bacilli in physiologic salt solution, the injection of which produced very energetic bactericidal properties of the blood and only a little or no local and no general discomfort. An increase in the bactericidal elements of the blood-serum following vaccination against typhoid was pointed out by Pfeifer and Kolle, in 1896, and since then by numerous other observers, this increase being more marked and constant than that conferred by an attack of typhoid. Bacteriolysis is well marked, although the bacteriolytic tests are too unsatisfactory for general use. The serum has also been demonstrated to contain an antibody which gives the usual complement fixation test seen in typhoid itself. Determination of the opsonic index after vaccination shows a decided increase in the opsonins. Major Russell[2] prefers as more satisfactory Neufelt's method of estimating the power of phagocytosis and found an increase in the phagocytic titer to be well marked and constant, reaching its height at the end of three or four weeks, when it was one to six thousand times as high as that of normal blood. Recently Albert and Mendenhall[3] have demonstrated an increase in the number of leukocytes immediately following inoculation of the vaccine, there being a polymorphonuclear neutrophil and large mononuclear leukocytosis, the increase in the large mononuclears being characteristic of typhoid. Typhoid precipitins are also found unusually abundant after vaccination.[4]

The blood test by which the practicing physician is to decide whether his vaccine gave good results or not is the Widal reaction, the power of the serum to agglutinate the bacillus of Eberth. Pfeifer and Kolle, Chantemesse,[5] Castellini,[6] Trigalia and Mozznoli,[7] Spooner,[8] Russell,[2] Sappington,[9] and other writers have called attention to the presence of the Widal reaction after inoculation of typhoid vaccine. Semple[10] has shown that the agglutinins are equally abundant whether the vaccine has been given subcutaneously or intramuscularly. Courmont and Rochaix[11] have succeeded in obtaining a positive Widal following the administration of the vaccine by high intestinal injections, although the reaction was never well marked. They also succeeded in obtaining a positive Widal following ingestion of the vaccine, but the results varied a great deal and were by no means satisfactory. The Widal reaction ordinarily becomes positive in five to ten days after the first dose of vaccine and grows stronger with the second and third doses; it reaches its height in ten to thirty days following the last inoculation, when, according to Major Russell,[2] it "is often present in dilutions of 1 to 5,000 and occasionally the serum develops a titer of 1 to 10,000 o even 1 to 20,000; only rarely does it fail to exceed 1 in 500 or 600." The reaction gradually weakens, bu has been reported as persistent at the end of one and two years.

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[1] Bull. de l'Acad. de Méd., June 21, 1910.

[2] Boston Med. and Surg. Jour., Jan. 5, 1911.

[3] Am. Jour. Med. Sc., February, 1912.

[4] Ricketts and Dick: Infection, Immunity and Serum Therapy Ed. 2, 1911.

[5] Bull. de l'Acad. de Méd., Dec. 7, 1909.

[6] Centralbl. f. Bakteriol., Oct. 18, 1909.

[7] Riv. Crit. di Clin. Med., 1909, No. 40 (quoted in Mulford Bulletin).

[8] Boston Med. and Surg. Jour., 1910, clxxii, 37.

[9] Jour. Med. Research, June, 1910.

[10] Lancet, June 25, 1910.

[11] Presse méd., June 3, 1911.

This, as we know, is a much more powerful action of the blood antagonistic to the typhoid bacillus than we would expect following an attack of typhoid. According to Austin and Frothingham,[12] "the agglutinating power of the serum in typhoid usually reaches its height in about the third or fourth week, when a positive reaction may be obtained in as high a dilution of serum as 1 to 800, but as a rule not over 250." Van der Velde[4] is said to have reported a typhoid serum which was agglutinating in a dilution of 1 to 1,000,000, but such instances must be extremely rare. In typhoid we seldom meet a positive Widal during the first week; at the end of the second week, 70 to 80 per cent. of the cases show this reaction. In a few well-marked cases of typhoid the Widal fails to appear. In such instances it may be only temporarily absent, for it varies from day to day in strength; "it may be thirty times as strong one day as the next and may even disappear entirely for a day or two." In other cases the failure to obtain a satisfactory reaction is explained by the bacilli used in the test belonging to a different strain from that causing the disease. Some cases of typhoid are caused by a strain of bacilli which are agglutinated with difficulty and these are found to leave the blood-serum of the victim very poor in agglutinins. Sometimes the blood of a typhoid patient fails to show a positive Widal in the ordinary strengths, but gives a positive reaction when well diluted. This paradox is explained by the presence of agglutinoids, here called proagglutinoids, which have a stronger affinity for agglutinogen (the bacterial element of agglutination) than has the agglutinin (the blood element); when the serum is diluted the concentration of the proagglutinoids becomes less and at a time when they are so dilute that they have no influence on the reaction the agglutinins are still present in such quantity that agglutination is brought about. Agglutinins do not kill the bacilli but merely clump them together, so that they may be more readily taken up by the phagocytes.[4] A serum may be bactericidal, though not agglutinating, but in typhoid the presence of agglutinins is such a characteristic feature that if they remain absent we would ordinarily hardly expect to find other antibacterial elements. If the above causes are eliminated, as far as possible, there still remain three or four cases out of every hundred which, for no apparent reason at all, fail to give a satisfactory Widal (agglutination in dilutions of serum under 1 to 40 or 50 can hardly be called satisfactory).

The presence of so many more antibodies in the blood of those vaccinated against typhoid than among those made immune by an attack of the disease would indicate a greater rarity in the absence of the Widal reaction after vaccination. To date authorities have been unanimous in finding a positive Widal after typhoid vaccination and the reliability of the test for this purpose has become fixed. In Circular 4 from the office of the surgeon-general the statement is made that "the Widal reaction is always positive after typhoid prophylaxis; it appears in about ten days after the first dose and remains positive for six months to a year." The large number of serums examined to date (1912), in the Army Medical School from vaccinated individuals have invariably shown a positive Widal.[13] Since, however, the factors which give rise to agglutinins in artificial immunization are the same as in natural immunization it would be plausible to believe that a negative Widal might occur after typhoid vaccination, no matter how very rare this might be. That this is actually possible is shown by the following case:

G. H., male, white, aged 16, was inoculated on May 25, 1911, with 500 million typhoid bacilli, the vaccine being obtained from a local druggist. The injection was made subcutaneously near the angle of the left scapula. On June 6 a second dose of one billion bacilli was administered, and on June 19 a third dose of one billion. No general symptoms followed the inoculations and the site of injection showed very moderate soreness and little redness and swelling. Five days following the last dose a Widal was made and proved negative. Dilution 1 to 50 showed lessened motion of the bacilli and no clumping; dilution 1 to 100, slightly lessened motion and no clumping. The vaccine used was manufactured by the H. K. Mulford Co. and it was thought that possibly its age was responsible for the negative results obtained (Mulford at that time did not date their vaccines as they now do). This was also the opinion of Dr. A. Parker Hitchens, director of the Mulford Biological Laboratories, who was kind enough to communicate with me on the subject. He suggested repeating the vaccination with a vaccine known to be fresh.

On September 22 the patient was submitted to another series of inoculations, the material being supplied by Dr. Hitchens himself. On that date, the patient received 500 million typhoid bacilli; on October 2 and 12, one billion each. General symptoms were absent; the local reaction was moderate, although after the first dose the subject complained of "soreness of the whole arm and shoulder" throughout the next day. The week following the last dose a Widal test was made and again proved negative. Dilution 1 to 50 showed lessened motion of the bacilli and no clumping except a slight tendency for a few groups of three or four bacilli to agglutinate around the edges of the hang-drop; dilution 1 to 100 showed lessened motion and no clumping. The lessened motion was a little more marked than after the first vaccination and the faint tendency to agglutination was absent altogether the first time. At the request of Dr. Hitchens, samples of blood collected in glass capsules, on November 1, were sent to him. His examination, which was most thorough, may be quoted in full.

"Dilution of serum made in test-tubes, normal saline solution being used as diluent.

"Following are the dilutions of the serum: 1 : 10, 1 : 20, 1 : 40, 1 : 80, 1 : 160, 1 : 320, 1 : 640.

"Serum obtained from immunized horse was used for positive control in dilutions made in same manner. Following are the dilutions of positive control serum: 1 to 200, 1 to 400, 1 to 800, 1 to 1600, 1 to 3200, 1 to 6400.

"Equal amounts of typhoid bacteria suspension (strain-Dorset) added to the dilutions. One test-tube containing suspension alone used as negative control.

"All test-tubes incubated at 37 C. for two hours. At the end of which time the tubes were taken out of the incubator and hanging-drop slides prepared and examined. Three microscopes were used simultaneously, one for the positive test showing undoubted agglutination, one for the negative test and one for the test with the serum under question. Motility and clumping were looked for in all three preparations.

"Immobilization and clumping were noticed in the positive serum in all the dilutions and in the serum under examination in dilution of 1 to 40; next dilution 1 to 80 being free from clumps and bacilli motile.

"Test kept in dark at room temperature over night and results read macroscopically next morning. Complete agglutination found at that time all through the dilutions of positive serum, no agglutination in the negative control.

"Serum under question showed sediment up to dilution 1 to 40, supernatant fluid being cloudy."

In summing up his results Dr. Hitchens wrote:

> We can only confirm your own findings—we got a fairly unsatisfactory agglutination at 1 to 40 but not above this

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[12] Arch. Int. Med., December, 1910, p. 717.

[13] Means, A. W. W.: Vaccination Against Typhoid in the United States Army, Am. Jour. Med. Sc., March, 1912.

point. We gave one tube of the blood to one of our friends in another laboratory and the report is the same.

Dr. Hitchens expressed himself unwilling to say whether the patient was immune to typhoid or not, saying:

> We know there are persons who do not react to other substances, and we know that the same is true of the lower animals. We frequently have horses that refuse to show the presence of even a few units of antitoxin, even after weeks of severe treatment with toxin. I do not know that it has ever occurred to anybody to attempt to infect these animals to determine whether or not they are immune.

The same preparation of vaccine as used on the patient for his second series of inoculations was at the same time given to four of his brothers. Each one of the four showed a very strong Widal. This proved to my satisfaction that the vaccine used was not at fault. It also went to show that whatever the peculiarity might be in this individual's serum it was apparently not a family peculiarity. All possible causes of a negative Widal in typhoid were considered. The effect of dilution (up to 1 : 640) was to make the test further from positive and this fact eliminated the possibility of proagglutinoids. That a difference in strains between the bacilli used in making the Widal and those used in the preparation of the vaccine could be responsible for the negative results was also out of the question since the Widal was made by Dr. Hitchens with the same growth of bacilli as used to prepare the vaccine, and in addition my own growth of bacilli were agglutinated by the blood of the patient's brothers who received the same vaccine. The patient's blood was examined at seven different intervals while he was under observation and this should be enough to exclude the idea that a temporary absence of agglutinins (as may occur in typhoid fever) was responsible for the negative results.

Since the patient was perfectly willing, it was next decided to try one more vaccination with vaccine from another source. Through the courtesy of Dr. Hitchens a typhoid vaccine was obtained from a most reliable source (which I am not at liberty to name). Only two inoculations were given, each of one billion bacilli, on January 10 and 23 respectively. Neither caused any general symptoms, the first produced quite a little local discomfort, the second very little. A Widal test was made before the first dose was given and differed in no way from those preceding. Another Widal was made the week following the last dose, in dilution 1 to 50, and showed lessened motion (somewhat more pronounced than before) and no agglutination except a slight tendency (more than before) in certain parts of the field. With motion of bacilli noticeably lessened and a slight tendency to agglutination, the Widal might be called suspicious but not fairly positive.

The effect of each vaccination on the blood of this person was evidently to produce very moderate increase in agglutinins and it is plausible to believe that continued inoculations in time would have produced a good Widal reaction. The question which most concerned the patient in this case, and the most important question after all, is, have the vaccinations made him immune to typhoid? The scarcity of agglutinins is strongly against an acquired immunity. No examinations were made for other antibacterial elements in the blood; of all such products in serum immune to typhoid infection the presence of agglutinins would certainly be expected first. A Widal which is persistently, not temporarily, absent or weak in typhoid has long been recognized as a bad prognostic sign, and as most commonly seen in fatal cases. This would lead one to believe that an absent or weak Widal after typhoid vaccination is suggestive of little resistance to typhoid infection and an unusually severe attack if infection should occur. On the other hand, if an individual is vaccinated against small-pox and the vaccination is not successful we say that he is already immune (provided, of course, that we are sure of our technic and vaccine). The fundamental principles in typhoid and small-pox vaccination are, of course, different. But it would seem that a person very susceptible to typhoid would show well-marked toxic symptoms following absorption of the vaccine, as has been pointed out by Sir W. B. Leishman. Therefore, if this patient has such a susceptibility, why were no toxic symptoms produced? A case illustrating a hypersensitiveness to typhoid infection is recorded by Captain Williams,[13] as follows:

> A man who had typhoid in 1899 was inoculated [with typhoid vaccine] in June, 1909, receiving two doses, the first of these produced a moderate reaction, while an exceptionally severe one followed the second. In March, 1910, he had a mild attack of typhoid. The conclusion seems warranted that in this case we have an instance of individual hypersensitiveness to typhoid infection.

It is the common experience of all who have had much to do with vaccination against typhoid that persons who have had an attack of typhoid fever usually show marked symptoms after vaccination. This certainly seems rather peculiar when we realize that those who have once had typhoid very rarely suffer a second attack and are ordinarily protected for life against reinfection. All these facts only add to the difficulty in answering the question: Is this patient immune or hypersensitive to typhoid infection?

NOTES ON OTHER CASES

Typhoid vaccination in general practice differs in many respects from similar vaccination in the army, where conditions remain more uniform. During the past year I have performed seventeen vaccinations against typhoid; in all but one instance examination o the blood was made following the last inoculation an of these all showed a positive Widal reaction except th case recorded. Care was taken to obtain the vaccin fresh as needed, direct from the manufacturers (Mulford). No bad effects were produced in any case. Ther was nearly always a well-marked local reaction—redness swelling, tenseness and itching of the skin—of shor duration. General symptoms were practically absent i all cases except two. The patients were two young married women. One suffered after each inoculation fro malaise, headache, dizziness, nausea and feverishness o moderate severity. The other had similar symptom after the first dose and ten days later refused anothe inoculation. A Widal at this time was made and prove decidedly negative and the patient finally consented t take the other two doses by the mouth. No sympton of any kind resulted from this method of administratio but following the last dose a positive Widal was foun in dilution 1 to 50, although not well marked in 1 100. The first patient was nursing a 9-months-old bal at the time and remarked that the child became "pa and fretful" the day after each of the last two inoc lations. It was thought that possibly the child mig have obtained enough agglutinins through the mothe milk to appear in the blood-serum or have absorb enough toxins to produce agglutinins of her own, b although the mother showed a strong Widal, the child's blood was absolutely negative.

Four of my patients were under 13 years of age and my limited experience agrees with that in general, which states that children are apt to show less disturbance from typhoid vaccine than are adults. My youngest patient was a girl of 7 who experienced practically no subjective symptoms at all, local or general, after each inoculation (full dose), and whose blood showed a strong Widal ten days after the last dose.

Experience has taught that ten days is the most suitable interval to observe between inoculations. One or two days more or less, however, can make no difference, but a longer interval is to be preferred to a shorter one. When pressed for time it is well to know that an interval of only a few days may be used, although not as satisfactory. One of my patients who was leaving the city on short notice received his inoculations at five-day intervals and his blood developed a good reaction.

It makes little difference what part of the body surface is used for inoculation provided absorption at that point is good. The arm, back, buttock, thigh, abdomen or chest may all be used, but the operator usually comes back to the left arm at the insertion of the deltoid as the handiest place of all. Persons vaccinated in the arm complain of being bumped against in a crowd; others vaccinated about the body cannot wear their clothes with ease; those inoculated in the back say they cannot lean back in a chair, and those vaccinated in the buttock fuss about not being able to sit down — if the leg is chosen they are still able to "kick."

507 Bedell Building.

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# A METHOD OF OUTLINING THE THYROID GLAND

MALCOLM S. WOODBURY, M.D.
Resident Physician, Clifton Springs Sanitarium
CLIFTON SPRINGS, N. Y.

The large number of clear-cut cases of thyroid disease, together with the very common instances of neurotic states, and of circulatory derangements (especially those of so-called "nervous heart") very evidently dependent on faulty thyroid activity, force one to the opinion that dysthyroidism is of very frequent occurrence.

This being the case, any diagnostic method which will be of aid in thyroid examination is of some importance.

I have examined many cases in which I thought the thyroid to be normal in size and after examination have questioned myself as to whether I had actually succeeded in my examination or whether I was simply satisfied with finding no obvious enlargement, without really accurately outlining the gland. I venture to say that this has been, at times, the experience of every man who makes the thyroid region, as every conscientious examiner must, an important field in every routine physical examination.

The accurate manual examination of the normal thyroid is not easy and in many cases is impossible by the methods usually employed. Having seen and felt moderate thyroid enlargements brought into much greater prominence by strong extension of the neck, a support being placed under the neck (that is, by the usual position employed in partial thyroidectomy) I became convinced that in all examinations of the thyroid this position should be assumed, but being firmly persuaded of the great importance of proper thyroid examination I decided to work out the problem on the cadaver, to make my previous conviction as near a certainty as possible. These investigations, coupled with many subsequent examinations of patients, have radically changed my preconceived view of the matter.

The principal structures which interfere with manual examination of the thyroid are the sternomastoid muscles; and of very much less importance the sternothyroid and sternohyoid muscles.

The examiner, on grasping his patient's throat in the usual manner and instructing him to swallow, is not infrequently confused in his findings as the sternomastoid border slips under his fingers. It is rather surprising to one who forms his idea of thyroid anatomy largely by the appearance seen during the operation for goiter, to find how almost completely the normal thyroid is hidden beneath the belly of the sternomastoids. In the specimen studied by me, from the body of a medium-sized, thin but fairly muscular man, the head being in erect position, the entire lower pole of the thyroid and the upper pole except a very narrow margin (less than 0.5 cm. at its widest point) were covered by the sternomastoid. The gland in this specimen would be considered normal in size, the longest dimensions of the lobe being 5 cm. by 2 cm. by 1 cm. The gland was practically symmetrical and a discussion of one lobe will serve for both. With head erect it was found that the lower pole was only 2 cm. above the head of the clavicle and was completely covered by the sternomastoid. On flexion of the neck, the tip of the lower pole descended to a point 0.5 cm. behind the head of the clavicle, and incidentally, behind the attachment of the sternomastoid to the clavicle. It also descended at least 0.5 cm. away from the surface and on inserting the finger under the sternomastoid I found that the lobe could very easily be pressed backward another 0.5 cm. before it rested firmly on its bed.

With the neck in extension the tip of the lower pole occupied a position 2.5 cm. above (cephalad to) the head of the clavicle, and on pressure with the finger, was 1 to 1.5 cm. nearer the surface than when similar pressure was made, the neck being flexed. The anatomic reason for this change of position of the lobe seems to be, in part, the fact that it occupies a position over the fifth, sixth and seventh cervical vertebræ, that is, over the "down-hill" portion of the cervical vertebral convexity; having no bony attachments it descends with the larynx and trachea (with which it is in contact and to which it is attached by fibrous trabeculæ) when the neck is flexed, and ascends when the neck is extended, the distance of the lower pole from the surface varying as it is pushed farther down the "vertebral hill" in flexion of the neck, or is drawn up on to the top of the "vertebral hill" in extension.

With the neck flexed I was unable to outline the lower pole through the sternomastoid and obviously so near the point of its attachment the muscle could not be retracted to advantage. On the other hand, in firm extension of the neck the lower pole could be outlined through the sternomastoid, though not with entire satisfaction, as the sternomastoid was on the stretch and could not be easily retracted, and being tense, it was not entirely easy to feel through it; though firm, deep pressure gave fairly satisfactory results. Endeavoring to improve on this position for examination of the lower pole I continued the strong extension of the neck and rotated the chin until it was nearly over the opposite shoulder. This so rotated the larynx and trachea on their long axes that the lower pole of the thyroid lobe lay almost above (cephalad to) the suprasternal notch (a region incidentally, which in thyroid surgery I have sometimes called the anatomic soap-box, as it very conveniently lends itself to this use in the scrub-up). In this position the inner border of the lower pole which was hidden ¾ cm. under the sternomastoid with the neck in extension, and 1.5 cm. with the neck in flexion, came out from under the sternomastoid and lay 0.5 cm. internal to it and almost directly above the suprasternal notch, the tip of the lower pole being 3 cm. above the head of the clavicle. The whole lower pole could be outlined with the head in this position, but the border of the sternomastoid still caused some confusion. I then found that, with the head in the above-described position, if the side of the head were slightly flexed on the chest so that the sternomastoid attachments were made to approach each other somewhat, that the muscle was released from tension and the finger could very easily be inserted under its border and could readily outline the entire lower pole.

In this position the upper pole could also be fairly well outlined, its inner border being 0.25 to 0.5 cm. internal to the inner border of the sternomastoid. I found, however, that the most satisfactory position for examination of the upper pole was moderate flexion of the neck without rotation. Simple extension in outlining the upper pole is of practically no value as the upper pole is already at the "top of the vertebral hill" and extension (which is of so great aid in the exposure of goiter in the operative field) in the normal neck, does not carry the belly of the sternomastoid backward far enough to make more than 0.25 cm. difference in the exposure of the upper pole and renders the muscles too tense to be readily retracted or felt through. Flexion, on the other hand, relaxes the sternomastoid muscles which are then so easily retracted with the finger that the entire pole can be easily outlined. So that by combining the maneuvers described, the entire lobe can be outlined with entire satisfaction. Examination of the thyroid isthmus requires no special position.

These procedures have been tried on many patients and I believe that the thyroid gland can be measured with a fair degree of accuracy in the great majority, if not in all cases. I am at present in the habit of measuring the lobes at the time of each complete physical examination. In many instances, for the complete outlining and measuring of either lobe, the maneuver described for the examination of the lower pole will serve perfectly.

It is needless to say that the "firm but delicate" touch is essential. The gland, however, has a feel which distinguishes it from the other structures and very fortunately the anatomy of the sternothyroid and sternohyoid muscles is such that they cause very little confusion in palpating the gland. As in the usual method of examination of the thyroid, the movements of the gland on swallowing are an aid. It is important that the patient's head should be held by the examiner or his assistant, not by the patient's own effort, as this involves unnecessary muscle tension. Many patients, on being told to relax the sternomastoid, after the head has been brought into the proper position, are able to do so very satisfactorily.

One other point, which I cannot conclude without emphasizing, is this: Every physical examination should include careful auscultation over the four thyroid arteries just as surely as it should include auscultation of the heart and lungs. I see, every year, several patients who do not show much thyroid enlargement, but who do show symptoms very suggestive of hyperthyroidism and in whom conclusive evidence is found in the distinct bruit heard over one or more of the thyroid arteries. The location of the bruit is, of course, over the region of the superior and inferior poles of the lobes of the gland.

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# TOXEMIA AND ECLAMPSIA IN THE NEW-BORN BABE

EFFA V. DAVIS, M.D.
CHICAGO

Why pregnant women are at times attacked with eclampsia with fatal results in a large percentage of cases is still an unsolved problem. It is believed that something goes wrong with the chemistry of the blood in such patients — that a toxic material is elaborated which finally produces signs and symptoms that point toward, if they do not terminate in, active convulsions.

Such women, whether they have active eclampsia or not, bear children more or less affected by their mothers' morbid condition. We find on studying these toxic or eclamptic women that their children show varying degrees of affliction, some dying *in utero* with a resulting abortion or early still-birth, while others go to term and are born in an enfeebled or asphyxiated condition, which results in still-births at term or death shortly after birth from apparent inanition. Still others, whose mothers have gone on to convulsions, partake of the same serious degree of the disease and are attacked with convulsions also. Such infants usually succumb early or within a few hours after birth.

There are other instances in which the mother has been known to be toxic, but has escaped a climax of eclampsia, but the child after birth has continued toxic and finally developed convulsions and died. The seizures come on suddenly and nearly always result fatally.

A certain number of infants born of toxic mothers, however, recover completely, and no marked disturbance are noticed. These babies no doubt inherit strong resisting power from the paternal side and resist the diseas more vigorously than others. Infants often do wel though born of women who have a few hours late themselves died of eclampsia.

Rarely, if ever, do these infants fail to show som signs of their mothers' affection, however. Most of ther show a marked icterus, a slight rise of temperatu during the first few days after birth, dull, sleepy c feeble behavior when placed at the breast and a relativel large initial loss of weight. Frequently they are fretfu colicky babies, with poor digestive power; they gai slowly on their mothers' milk and easily become ma asmic on artificial feeding.

If they survive the care of the obstetrician, they go make up the vast number of weaklings that the pedi trician is called on to treat later. During the obstet cian's service they contribute a moderately large class sudden and unaccountable deaths in the new-born a not a few of the otherwise unaccountable still-birt They, I believe, account for the class of babies that suf with icterus neonatorum and unaccountable sudden hi temperatures not due to infections of the digestive tra by careless handling, and to the class of infants th develop convulsions and suddenly die in the first t weeks of life.

I believe that in almost every instance such a toxen in the mother extends to her child and may be the cau of its death even two or three weeks, if not longer, af birth. It is proper to use the term "toxemia of pregnancy in the mother" as a cause of death in the infant in these cases instead of leaning on the common, overworked excuse of "gastro-enteritis" as the only possible cause of death in an infant dying of convulsions shortly after birth with its head uninjured by instrumental delivery or prolonged, difficult labor.

I feel that it is worth while to call attention to these cases because I believe that a certain few can be relieved and that their lives even may be saved by an early recognition of the possibility of the condition and by measures taken promptly after birth to secure elimination through the bowels and kidneys.

I have some faith in the use of small divided doses of calomel and bicarbonate of soda, with an initial dose of castor oil, and plenty of sterile water to flush out the kidneys. I believe that it is a mistake to put the child early to the mother's breast in these cases. I favor weak infusions of fennel or chamomile with a little sugar for a few days; and if the temperature rises I give a little sweet spirits of niter, 2 or 3 drops, for a dose or two till the excretion of urine is established. I advise the employment of a healthy wet-nurse, when possible, with colostrum still present in her milk, rather than its own mother's breast. Small doses of calomel seem to do the most for these infants, but it must be given with care and overdosing avoided, as hemorrhages from the bowels and stomach are not uncommon. Warm baths and care in keeping the child's body warm are of the utmost importance, as in adults suffering from the same trouble.

Whether the milk of the toxic mother contains detrimental elements is still a question, but from clinical observation, I am of the opinion that it does, as the infants so often show indigestion and colic after the flow of breast-milk is established. Possibly the condition described as the "three months' colic" of young nursing infants may be due to the presence in the mother's milk of some toxic ingredient, which the already somewhat toxic babe cannot throw off, producing colicky indigestion, or the sudden and fatal convulsion that may come on directly after nursing, as has happened in my experience.

As a key to the possible type of infant to be looked for from these toxic women we can divide the mothers into two classes.

First and most unpromising are the women who show on physical examination a poor physique and who have a bad family history, often revealing intemperance, goiter, asthma, tuberculosis or a line of short-lived ancestors dying of heart or kidney lesions—in short, a degenerate type, and what the life-insurance companies would term a "poor risk." The progeny of such mothers is most susceptible to toxemias of pregnancy though the child may survive if the mother does not go as far as an eclamptic attack before its birth, and the case does not result in an abortion before the child is viable.

The second class is much more promising, and is composed of mothers who primarily possess a good physique, present a good family history and would be counted good life risks, but who have acquired luxurious habits and have embarrassed their elimination by idleness, overeating and lack of fresh air.

Women of these two types are more apt to be afflicted with a toxemia that may prove dangerous to themselves than the woman who has a damaged kidney from some other cause, or, in other words, a true nephritis. Such a woman is more liable to abort early and remain free from eclampsia, never carrying a child to term.

The following are, briefly, the histories of twelve cases taken from my hospital records and case books to illustrate the points I have tried to make. They do not represent all the cases I have noticed, especially among the milder types. I regret that my notes on all my cases have not been accurate enough to enable me to give the percentage of frequency of occurrence in the regular routine of my work.

Other authors have reported instances of eclampsia in babes born of eclamptic mothers, but the literature does not contain much on the effects of the milder toxemia of the mother on her infant. I hope that this recitation of cases will stimulate observation along that line. Being convinced of the harm done to the unborn, physicians will more frequently recognize such mild toxic cases and treat them properly.

The first five cases in the series are infants whose mothers suffered with toxemia of pregnancy to the degree of having eclampsia. In the two cases in which eclampsia occurred after delivery the infants survived, while in the three mothers who had convulsions before or just at the time of delivery the three infants all died.

The next two patients (Cases 6 and 7) are children of mothers who were markedly toxic but escaped eclampsia; the infants, however, both developed convulsions and died on the third and fourth days.

The last five cases are of milder types of toxemia in which neither mothers nor babes suffered eclampsia, but both alike showed illness due to the toxic state of the mothers.

Case 1.—An old primipara, aged 38, with poor physique, suffered from extreme condition of toxemia, headaches, nausea, vomiting and edema of limbs, face and finally entire body. She was delivered prematurely of twin girls of 3½ and 5 pounds each. She had an eclamptic seizure eight hours after delivery, being very profoundly affected with six convulsions. The condition yielded to treatment and the mother recovered. The infants were not nursed by her and were feeble and icteric, the smaller dying at four months of what seemed to be a toxic condition following the ingestion of some certified milk which made ill all the babies in the nursery where it was used. The larger twin lived to be adopted but developed a glaucoma, which was pronounced congenital by Dr. Francis, and was afflicted with malnutrition and subject to convulsions many times during its first and second years, when it passed from observation.

Case 2.—A multipara, aged 35, was seen for the first time in convulsions. The child, which weighed 6 pounds, was delivered after seven seizures, the woman being in a delirious and semi-unconscious state. The infant showed signs of profound toxemia, being almost at once seized with feeble convulsions, and died in five hours. The mother recovered.

Case 3.—A primipara, aged 25, was under observation about three weeks. She showed mild toxic signs; no albumin in urine. The first stage of labor was prolonged and painful, lasting twenty-four hours. There was a sudden attack of eclampsia in the second stage. Easy forceps extraction of child was performed, with short and but partial anesthesia of mother, who had but one convulsion but remained unconscious for several hours. The infant began to show convulsive seizures directly it was born and lived but twenty-four hours. The mother recovered promptly.

Case 4.—An infant girl, weight 3 pounds, was admitted to nursery on third day of life after being delivered by cesarean section from mother who died the following day in a near-by hospital in convulsions with history of toxemia. The infant was given little but sweetened water for the first five days and later did well on cow's milk. The only sign of toxic trouble was in the profound icterus which came on shortly after birth and did not clear up for three or four weeks.

Case 5.—A primipara, aged 17, whose family history showed intemperance and goiter, was permitted to drink beer during pregnancy. There was a history of an attack of measles in early pregnancy. The patient had a well-developed goiter; showed some edema of limbs, with slight amount of albumin in the urine. She was seized with severe convulsions in second stage of labor, head on perineum after short easy first stage. The infant was extracted by forceps almost instantly. It was not asphyxiated, crying promptly but feebly. It weighed 7½ pounds. The respiration was feeble and heart rapid. No convulsions were noticed but the child's condition became weaker and weaker till death occurred at the end of three hours. The mother was profoundly affected but made good progress after the first twenty-four hours, albumin disappearing from urine within three weeks.

Case 6.—A Polish multipara with contracted pelvis, seen for the first time in labor, was delivered under chloroform anesthesia by cesarean section in Rock Island Hospital. Signs of toxemia were present; edema of limbs, albumin in urine. The child was born asphyxiated, respiration being established with difficulty. It weighed about 9 pounds. On the third day it was seized with a convulsion and died. The mother's recovery was uneventful.

Case 7.—A young primipara of the obese type, with a chronic gonorrhea, had a well-marked toxemia, headaches, nausea, vomiting and edema of lower limbs. No albumin was noticed. Treatment was given for four weeks preceding delivery. Labor was short and easy. The infant, which weighed over 7 pounds, seemed normal and was put to the mother's breasts regularly. It did not receive much milk until the third and fourth days, when it obtained a good supply. On the evening of the fourth day it went into a severe convulsion and died about one hour after nursing.

Case 8.—A primipara, aged 28, with poor physique, entered hospital in labor at eighth month; she had had no previous care. She showed edema of face and lower limbs, urine contained abundance of albumin. Normal easy delivery of an eight-months baby girl, weight 4 pounds. The infant was feeble and sluggish; it was very difficult to teach it to nurse. It was given breast-milk from a normal wet-nurse, the first week, and was later nursed by mother. It grew into a delicate child with frequent fits of illness.

Case 9.—A woman, aged 25, in her first pregnancy showed mild toxemia. The infant, born at term, showed inability to thrive on mother's milk; the stools were green and curdy, and an extreme colicky state occurred after each nursing. All trouble ceased after the child was put on artificial food. The second pregnancy occurred four years later accompanied by extreme toxemia. There was no albumin, but pernicious vomiting to a degree that threatened the safety of both mother and child. With vigorous treatment the case went to term. The infant began to show the same disturbance when nursed as her sister had done. An exchange of babies was made by employing a healthy wet-nurse with an older baby. Both babies did well under this treatment and the toxic mother was given her own child to nurse after a period of two weeks with good results. She nursed the child successfully for about six months, when supplemental feeding was required. In about three years a third pregnancy resulted in such profound pernicious vomiting that gestation was interrupted in the fourth month to save the life of the mother.

Case 10.—A primipara, aged 35 years, whose family history was poor, showed mild toxic signs during the last two months of pregnancy. She had chronic gonorrhea. The infant, weighing over 8 pounds, was born after short easy labor. It developed hemorrhages from the bowels on three occasions in first week of life and showed marked icterus and great loss in weight. It was taken from the mother's breasts at the end of two weeks after severe attacks of colic and loss in weight. The child made poor progress on artificial feeding and showed signs of marasmus at 4 months.

Case 11.—A primipara, aged 17, whose family history was poor, manifested toxemia by edema, loss of appetite, headaches, etc. There was no albumin. The child was born after short easy labor at term; it weighed 6 pounds. It was asphyxiated and revived with difficulty. Old clots showed that partial separation of the placenta had been present for several days. The infant was profoundly jaundiced after a few days and was generally feeble and delicate. Its condition improved promptly after being taken from the breast and carefully fed on cow's milk.

Case 12.—A multipara, aged 33, was seen for the first time in labor. There was a history of kidney trouble. She showed great edema of limbs. There was sluggish uterine contraction. The forceps was applied for inertia after fourteen hours of feeble effort on the mother's part. The infant weighed 10 pounds. There was no asphyxiation. Old clots expelled with the placenta showed early partial separation. The infant developed jaundice early and temperature rose to 102.5 on the fifth day. It was taken off its mother's milk, given mild doses of calomel and soda and the milk of a healthy wet-nurse for a short time. The mother was treated with calomel and salines for some time and later sent home nursing her baby after its condition showed improvement.

2314 North Clark Street.

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# RECENT ADVANCES IN THE TREATMENT OF PULMONARY TUBERCULOSIS BY AIR, FOOD AND REST *

LAWRASON BROWN, M.D.
TRUDEAU, N. Y.

The last half of the nineteenth century saw the institution of the fresh-air treatment of pulmonary tuberculosis, which in the first decade of this century has been extended to the treatment of many other diseases, including nervous and mental disorders, pneumonia and certain digestive disturbances. We know that fresh air is of great benefit in pulmonary tuberculosis, but even yet some of us have not fully realized that fresh air benefits patients with other forms of tuberculosis as much as it does those with the respiratory type. It is, then, safe to say that fresh air exerts no more influence on the lungs than on the rest of the body. A further fact bearing on this point is the unpleasant symptoms that many persons experience when confined in a close or stuffy atmosphere and forced to breathe "ruminated" air. It is almost needless to enumerate these symptoms —at first headache, drowsiness, lassitude, malaise, nausea, faintness, vertigo; later digestive and nervous disturbances, followed by malnutrition, secondary anemia and lessened resistance to infectious diseases. It is of considerable interest to recall the symptoms of mountain sickness experienced in very high altitudes (15,000 feet): headache, intense drowsiness, lassitude, nausea or even vomiting, fainting, vertigo and further palpitation of the heart, throbbing of the arteries and shortness of breath.

It would seem very reasonable, therefore, to infer that lack of oxygen in the latter case was the cause of the disturbance, and arguing by analogy it would appear most probable that lack of oxygen was the disturbing factor in the former. Such certainly was long a curren belief. The increased percentage of the $CO_2$ has been held by some to be the chief cause, while others have believed that "crowd-poison" was the essential factor The existence of "crowd-poison" has been questioned but Rosenau and Amoss have proved beyond doubt, b the anaphylactic reaction, the presence of protein bodie in the exhaled air.

Are these, then, the deleterious substances that weake resistance to and lessen chances of recovery from pu monary tuberculosis when the patient fails to get fres air? Ingenious experiments have been devised to hel

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* Read at the Annual Meeting of the New York Medical Societ April 17, 1912.

answer this question. Several healthy men have been confined in small cabinets and made to rebreathe a small amount of air. The percentage of oxygen quickly fell and that of carbon dioxid rose greatly. The organic matter, which apparently bears some relation to the percentage of carbon dioxid, must also have risen. The individuals all became very uncomfortable and finally ceased to talk. An electric fan inside the cabinet was then set in motion and great relief was experienced, even though the composition of the air remained unaltered. In another experiment, the individual within the cabinet was allowed to breathe fresh air without, however, experiencing any relief. Still again, a person outside the cabinet was permitted to breathe only the air within the cabinet and suffered no ill effects. These and other careful observations have led to the conclusions that coolness, dryness and active motion of the air are factors to be sought after and further, as James puts it, that "many atmospheres are good enough to be breathed which are not good enough to be lived in."

The temperature of the air plays an important rôle in health and disease. Recent inquiries concerning certain mill operatives in Connecticut have shown that men working on piece work accomplished more when there was a marked change in the atmospheric temperature, even from cooler to warmer conditions. As a rule the more vigorous races live in climates where the cold, though pronounced, is not severe enough to limit the production of good crops. The custom of sending young and vigorous patients to climates with equable temperature has long since been abandoned. An average diurnal variation of at least 20° F. is one requisite of a good health resort for tuberculous patients. Sudden changes for vigorous patients act like a tonic and are to be desired when intelligently met. This is a feature of the winter climate in Arizona where a marked change occurs each night at sunset. The weight curve of healthy and tuberculous individuals bears this out. In 1,200 patients at the Adirondack Cottage Sanitarium I found that the weight began to increase in August and continued to do so until Christmas. It then remained stationary or decreased slightly to Easter, after which it fell steadily to August. A marked change of temperature is usually noticed in the Adirondacks in August and early September and the diurnal variations are great. I might add that this is probably the normal weight curve. Nearly every tuberculous patient has a more or less deranged nervous system. Like cold tubs in typhoid, cold air in pulmonary tuberculosis is a great nervous sedative, for it abstracts heat, especially when in motion. Too intense or too prolonged cold, however, overstimulates some. It has long been a current belief in Saranac Lake that one hour of driving is worth two of sitting on the porch. Who can say that, beside the psychic influence, the rapid change of air about the body may not be greatly beneficial? Unquestionably the exhilaration of coasting and of automobiling may in part at least be explained in this way. In any case, to active motion of the air with the attendant evaporation of moisture from the surfaces of the body is to be ascribed much of the sensation of well-being experienced with good ventilation. It requires only slight movement of the air to increase markedly the loss of heat from the body. In cold climates this must be met by heat-production, by muscular contractions, which, when the patient is at rest, are involuntary, but greatly raise the muscular tone.

The dryness of the atmosphere, that is, the degree of humidity relative and absolute, plays an important part, but can be largely offset by motion of the atmosphere. Mere dryness is of little avail, for nearly every home in America, especially in winter, has an atmosphere containing far too little moisture — in fact, far less than is to be found in the deserts of Egypt or Arizona. The really important point is the amount of moisture that can be absorbed by the atmosphere from the surface of our bodies, and this depends on the humidity of the air, its temperature and most of all on its movement.

This brings us to the consideration of a few practical points in the fresh-air treatment of pulmonary tuberculosis. It might seem wholly insufficient, from what I have said, for a patient to be in bed with his head out of a window. In reality it is not so, but, in my opinion, it is far less effective than the full air bath. Spraying the upper part of the trunk with cold water in typhoid fever is certainly not so efficient as a complete sponge, but does some good. So with the window tent. It must not be lost sight of, however, that the room in which the body remains needs very careful ventilation.

A question that must be decided frequently is whether the roof or the back yard is the best place in which to take the fresh-air treatment. I do not hesitate to say that the roof should be used in every instance, where possible, for several important reasons. The number of bacteria, the quantity of dust and the temperature of the air decrease directly with the elevation above the street, while the movement of the air increases. This leads to fewer secondary infections and to less irritation of the respiratory tract, and subjects the body to a far better hygienic environment. In summer, however, the roof may be too warm.

These newer ideas about fresh air throw grave doubts on the efficacy of "air carriers" and emphasize the necessity of life in the open, "living" air. My experience, after observing patients for ten years, does not lead me to believe that sleeping out of doors materially hastens recovery, provided eight to ten hours a day are spent in the open air and the night passed in a well-ventilated room. When, on the other hand, the patient returns to his indoor work, then sleeping out is very necessary. Ozone is said never to occur in rooms, however well ventilated, but it is of no value to man except as an indicator of the purity of atmosphere.

A man out of doors is said to be exposed to 100 times more fresh air than he could get in the best-ventilated room in any given period of time. In any room bacteria are partially protected, while in the open they quickly die.

### GOOD FOOD

"Eat once for yourself, once to gain weight and once for the germs," is another way of stating that suralimentation is of importance in the treatment of tuberculosis. But just how important is suralimentation? What are we striving for? We saw that life in a poorly ventilated atmosphere had a deleterious effect on the digestion and ultimately reduced the resistance to infectious diseases. The environment in which patients with pulmonary tuberculosis were treated twenty-five years ago made it almost impossible for them to escape the effects of an ill-ventilated atmosphere. Their appetites suffered and they could not eat. It was but natural, then, that along with fresh air, food, good in quality and great in quantity, should also be insisted on. That day, however, has now passed and any layman that does not know that fresh air and good food constitute the best treatment for pulmonary tuberculosis is indeed unobservant or crassly ignorant. What, indeed, are the purposes of this good food? Is it enough to keep the patient in nitrogen equilibrium or does he require more, and, if so, how much more? Of what should his diet, roughly speaking, consist? These and many other problems have received much attention during the past decade and it is of great interest and value to round up our new knowledge on these points. Given a patient without fever and without (serious) complications, the scales are the best criterion of the diet.

I know of no better simile than the gasoline engine. The efficiency of the engine is the work it can accomplish on the road. Give it too much gasoline and the combustion is incomplete, the spark-plugs become dirty, the cylinders coated with carbon and the efficiency is greatly reduced. In other words, the engine does far better work when supplied with only enough gasoline to produce the best result.

So, too, with the tuberculous patient. Give him what he can use, but reduce his diet to the lowest point at which he will gain the required amount of weight. The tuberculous patient with an early lesion is often about ten to fifteen pounds below what he should weigh for his height and age. We should, I believe, aim to bring this patient up to and slightly beyond this weight, which is often ten pounds above what he has usually weighed. We should not try to do this, however, by too rapid gains, too forced feeding, which but too often defeats its very purpose. We should be satisfied with a gain of a pound a week and a digestive system in fine order. Now when the required weight is attained let the diet be reduced to the lowest point which will give satisfaction at the table and sustain the weight. This reduces to a minimum the quantity of waste which the excretory organs must take care of, makes out of many patients very different individuals and reduces greatly gastro-intestinal disturbances.

You may ask me for details as how best to accomplish this. Here arises the question of individuality which is really of the greatest importance. My first advice to such a patient is gradually to quit taking milk and to eat only three meals a day. These meals should gradually be made to approximate what he must eat in the future. Fats are more easily taken in sufficient quantities than proteins or carbohydrates, but popular knowledge so emphasizes the importance of proteins that it is more necessary to push the carbohydrates.

In the majority of patients beginning treatment for the first time, such directions smooth the course of recovery from the disease. In some, however, the digestive functions have never been very active and these patients must be coaxed and wheedled into eating an amount sufficient for their needs. Here we must have frequent days of rest, when the diet is somewhat reduced. The greatest objection to sanatorium treatment is the difficulty experienced in individualizing the diet. I cannot to-day, however, go into details of how to treat digestive disorders. In closing this section of my paper, I might add that my advice to patients is as follows: "Eat as little as you can in order to gain, but you must gain this number of pounds. When you reach that weight, eat less still and just enough to maintain your weight, avoiding milk. You will have little upsets, little flare-ups of the disease, during which you will lose weight. Then the milk, which you have cut out of your dietary when you have gained enough, should be replaced and will enable you to regain quickly the pounds you have lost. It is not the amount you eat but what you assimilate that is important."

### REST AND EXERCISE

Too much body fat is no aid in combating an infectious disease and when the weight reaches the mark set, then another problem enters, which I shall now discuss. I refer to exercise. By inference one will conclude that up to this time the patient has been at rest. Generally speaking, the weight, temperature and pulse should be normal before any exercise is permitted. Recently two schools have sprung into prominence. one advocating absolute rest, the other maintaining that the only way to lose the cough and expectoration is by carefully regulated exercise which produces efficient auto-inoculation, a sine qua non of recovery. One advises that the patient's trousers be hid, for then one knows where the patient is; the other says that the muscles must be hardened from the first in order to achieve results. If we weigh these opinions we see that while danger lurks in the first, grave risk is associated with the second. While rest may be employed in any home, the system of auto-inoculation can be efficiently and safely carried on only in an institution where the physician in charge is well and believes thoroughly in the system. Many have attempted it and some have come to grief. My advice is to beware of auto-inoculation unless one stands ready to do nothing but work alongside one's patients. This is obviously impossible for most of us.

In any case, rest is imperative for many patients for some time; and those who advocate auto-inoculation through strenuous exercise believe firmly also in rest. In fact, some believe in rest so absolute that the patient with fever is not allowed to stir from his bed — he can neither read nor go to the toilet. He is fed, bathed and treated as a patient ill with typhoid fever would be. This absolute rest is prescribed to prevent auto-inoculation and when it can be carried out intelligently and faithfully may reduce a temperature that has long resisted all other treatment.

But let us say the temperature has reached normal what should be the next step? It is here that the tw camps are divided, for one would, as I say, hide th trousers, the other assist the patient to don them.

In regard to auto-inoculation, I confess it is a grea temptation to all sanatorium authorities to push it The big, husky fellows, the robust, buxom lassies, tha sit about on porches or stroll around taking their exercise. possess much potential energy that it is a great pit to lose. This alone is a strong argument in its favo but, to make it a success, there are certain requirement that are difficult to obtain. As I have said, I believ that to achieve the best success, the physician must b well and strong and willing to work with the patient if necessary. In an institution it is very difficult t carry on other forms of treatment, but this can be ove come. Excessive auto-inoculation must be met by absolute rest, and few institutions have a nursing staff larg enough to give the patients proper treatment. A certai number of patients fail to improve under this line treatment and some feel that they have been injure This, however, can be disregarded when due care h been exercised. Another unfortunate thing is the fa that even in the Adirondacks it is often too hot in th middle of the day for patients to work in the garden fields. Crops mature and need to be reaped. Th patients for one reason or another may not, witho serious injury to their chances for recovery, be able garner them. Shall the crops be lost or the patien injured? Such a problem is not infrequent. While may not be perfectly fair to compare the results obtained in a sanatorium in England with those obtained in one in America, the comparison affords some interest. The results of such a comparison between the figures published by Paterson at Frimley, the birthplace of auto-inoculation, and those at the Adirondack Cottage Sanitarium, where a certain number received tuberculin treatment, seem to indicate that the permanent results may be better among the patients discharged from the latter institution. In any case, I believe that the treatment by auto-inoculation in pulmonary tuberculosi[illegible] fraught with grave peril and I confess that I hesitate to use it.

How to be happy in bed is a problem difficult of solution for many men, and to attempt to keep a patient in bed who is fuming and chafing under the restraint when his temperature is normal and he feels well is, I think, useless. I do believe we have overlooked the value of rest of the lungs in pulmonary tuberculosis — rest which, I might add, can be obtained with any degree of success only when the patient is in bed. We know that a tuberculous spine needs fixation, that a tuberculous hip needs absolute rest, that a tuberculous knee or wrist used ever so little fails to improve. What aim has the treatment of pulmonary tuberculosis by induced pneumothorax other than limiting the function of the lung and putting it as nearly at rest as possible? I believe that the day is coming when by this means and by other operative interference we shall prolong the life and usefulness of many patients who to-day have but a few months of dreary, useless and hopeless existence ahead of them. I have known two patients, one with a broken leg, the other with a tuberculous ankle, make pulmonary recoveries only when absolute rest in bed had become necessary on account of the complication. For these reasons I have come to believe that a patient with an early lesion and any elevation of temperature should remain in bed for some time. Nor do I always limit it to patients who have a rise of temperature, for rest in bed will help the cough and expectoration more in many cases than any form of treatment. Digestive disturbances are often more readily combated when to the treatment is added rest in bed. One must of course use discretion, for not all patients can be so treated. When by rest in bed the temperature has fallen to normal and the question of getting up arises, I often inform the patient that the period of most rapid gain is from the time his temperature becomes normal to the time he begins to get up and to use his energy otherwise than for combating the disease. This, for many, makes the bed a little softer resting-place. When such a patient is doing well, I frequently allow him to go for drives or boat rides, or even, when this is begun gradually, to exercise by walking. On his return he goes at once to bed on a porch where he lives and takes all his meals except in cold weather. At first, these liberties should be permitted only on every other day, and the following day should be spent in bed. It is surprising what patients can accomplish who devote their whole time to resting and working.

When the patient knows that at a certain date he must return to work, if I consider such a step at all possible, I endeavor to fit him for his future work. At the Adirondack Cottage Sanitarium we have found our workshop of the greatest help in training the patients' muscles for their future activities. We teach them that unless they can do more work, take more exercise than is required by their future occupation and withal stand it well, it is folly to think of returning to work. For clerks, bookkeepers, mechanics, physicians, nurses and many others, we find suitable, useful forms of exercise which we prescribe, not with the idea of auto-inoculation, but with the idea of producing tolerance to the amount of exercise necessary to their various callings. The patients enter into it heartily and I believe for us, at least, the results are far more satisfactory than what we could obtain by auto-inoculation.

Rest in bed is essential in all early cases for some time as well as for any patient who is not doing well. Rest harms few patients even when carried on longer than necessary. Exercise is often fraught with danger and must be prescribed as carefully as arsenic or strychnin, for an overdose is not less deadly.

Had I to begin treatment to-day for tuberculosis, knowing what I do, however little it may be, I would go to bed and remain there for two months, whether symptoms were present or absent. Such, I feel, is the importance of rest at the beginning of treatment.

# THE OCCURRENCE OF A POSITIVE WASSERMANN REACTION IN CASES OF LEAD-POISONING *

CYRUS W. FIELD, M.D.
NEW YORK

During the past year the routine Wassermann examinations in Bellevue Hospital have shown a number of cases of lead-poisoning giving a positive reaction; and for this reason we desire to call attention to the fact, though its occurrence has been noted incidentally before.

We have had twelve cases of lead-poisoning in which the blood had been sent into the laboratory for a Wassermann test,[1] and of these twelve, eight were positive and four negative. Of these eight positive cases, only one gave a history of ever having contracted syphilis and in that case it was thirty years previously and the patient claimed never to have had any secondaries or tertiary lesions. His wife had had one miscarriage. Another of the eight patients had a very suggestive specific history. A woman, aged 46, a domestic, gave a history of having had one child and at least five miscarriages, but denied all venereal history. She was evidently very susceptible to lead-poisoning, for she had an attack five years previously (after painting some furniture, according to her own statement), suffering at that time from marked wrist-drop. No recent history of exposure to lead could be made out, but she presented at this time a slight double wrist-drop, abdominal pain, lead line on the lower gums and her blood showed marked granular basophilia of the erythrocytes.

In one other case no history could be obtained, as the patient entered the hospital in a semi-comatose condition and died shortly after. He was a solder-caster by trade and died of cerebral hemorrhage. His red cells showed marked granular basophilia and the anatomic diagnosis at autopsy was as follows: cerebral hemorrhage, right lenticular artery, with rupture into lateral ventricles;

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* From the Pathological Laboratory Bellevue Hospital, New York City.

[1] The technic of the Wassermann reaction used in this series is as follows: A 5 per cent. solution of sheep red cells and amboceptor obtained from rabbits and as antigen, the acetone-insoluble fraction of lipoids obtained by extracting syphilitic fetal livers with alcohol, taking up in ether and then precipitating with the acetone. This is redissolved again in ether and reprecipitated. The precipitate is then dissolved in Merck's methyl alcohol. The amount of this used is 0.01 c.c. The patient's serum is tested to see whether it contains any natural amboceptor for sheep-cells and this is taken into consideration when the hemolysin is added. It is needless to say that all tests are controlled. The quantities are one-half those used in the original Wassermann technic.

lobular pneumonia (right and left); serofibrinous pleuritis; healed apical tuberculosis; hypertrophy left ventricle; chronic valvulitis, aortic and mitral; chronic aortitis; chronic interstitial nephritis; chronic interstitial splenitis; nutmeg liver; otitis media, right, purulent.

In the other five cases there are no signs or symptoms in any way referable to a specific lesion, all being typical cases of lead-poisoning. All the patients denied any venereal disease, but all five showed a positive Wassermann reaction. None of these came to autopsy, all having been discharged from the hospital improved after treatment with potassium iodid, strychnin and catharsis.

The four negative cases were all cases of chronic lead-poisoning occurring in painters. Syphilitic infection was admitted by one of these with secondary manifestations forty years ago, but he had since had no symptoms referable to syphilis. None of them could be called alcoholic in any way. One of these patients died and came to autopsy, the anatomic diagnosis being: lobular pneumonia, right upper lobe; tuberculous pleuritis, left; chronic pulmonary tuberculosis, left upper; chronic interstitial nephritis; fatty and cirrhotic liver; chronic interstitial pancreatitis; interstitial thyroiditis; chronic aortitis; chronic gastritis; chronic pharyngitis and laryngitis with acute edema; calculi of seminal vesicles; pial edema.

In the literature there are a few cases of lead-poisoning which have been reported with positive Wassermanns, but we cannot find that the condition has been considered as a possible source of error in interpreting the Wassermann reaction. Of course, it would be impossible to say, from the few cases here reported, that the positive reaction was brought about by the lead-poisoning, for it may be that cases of lead-poisoning are more apt to give a positive Wassermann with an old syphilitic lesion than are others; and owing to the fact that not all the cases of lead-poisoning that entered the hospital were examined for the Wassermann reaction, it would be improper to consider our series as showing the correct proportion of cases of lead-poisoning giving positive Wassermanns. It will probably be found to be lower when more cases are examined.

Another point which would be well worth observing, but which we have been unable to do in any of our cases so far, is to see what effect an injection of salvarsan or mercury, or both combined, might have on the Wassermann reaction.

In conclusion, we cannot at the present time accept a positive Wassermann reaction in a case of lead-poisoning as proving a specific infection, and, on the other hand, we cannot ignore its presence. Until many more observations are made and much experimental work has been done, it will be best to simply keep this fact in mind in interpreting positive reactions in persons exposed to lead.

# A SIMPLE STAIN FOR THE SPIROCHÆTA PALLIDA *

RUTH TUNNICLIFF, M.D.
CHICAGO

In studying cultures of *Spirochæta pallida*, for which I am indebted to Dr. H. Noguchi, I have found that the organism stains readily, usually in two or three seconds, with a 10 per cent. mixture of a saturated alcoholic gentian-violet solution in 5 per cent. phenol. The smears may be fixed in the flame, although no fixation is really necessary. The stain is also useful for staining fresh material and for phagocytic experiments. A very thin smear is essential for obtaining a satisfactory stain of fresh material. For phagocytic experiments, the stain is left on about three minutes; the smear should not be fixed by heat; after washing and drying, the leukocytes are stained with Leishman's or some other suitable stain. According to Koessler,[1] the stain is satisfactory for staining *Spirochæta pallida* in experiments with spermatozoa as carriers of infectious agents. After I had found that this was a useful stain for the spirochete, I discovered that it had been used previously for staining the spirochetes by Oppenheimer and Sachs,[2] and by Ploeger,[3] but on account of the simplicity of the method and because it is little known, it was thought advisable to publish this note.

# TRANSPLANTABLE TUMORS OF THE FOWL: A NEGLECTED MATERIAL FOR CANCER RESEARCH *

PEYTON ROUS, M.D., JAMES B. MURPHY, M.D., AND W. H. TYTLER, M.D.
NEW YORK

The recognition that neoplasms exist in many species of animals throughout the vertebrate world has given to the tumor problem a broader biologic significance. And at first glance it appears strange that so few animal forms have been utilized for experimental cancer research. Attention has centered on the new growths of the rat and mouse, on a peculiar round-celled tumor of the dog, transmissible by coitus, a dubious tumor of wild hares, endemic in certain portions of Germany, and on a thyroid growth of fishes, the exact nature of which is still under dispute. There exist good reasons for this limitation. The animal employed for tumor work must be available in quantity and capable of thriving under laboratory conditions; and its "spontaneous" growths must be transplantable. True tumors are rare in cats, rabbits and guinea-pigs, and, while more frequent in dogs, are difficult to study because of the number of individuals which must be employed and the frequent necessity that all shall be of one age and breed.

Some two years ago one of us transplanted a spindle-celled sarcoma of the fowl, a very typical neoplasm metastasizing by means of its cells, and in other way regulated by their peculiarities. The growth has sinc been observed in twenty-seven series of fowls. Recentl it has been successfully transmitted by the Berkefel filtrate of an extract of the fresh tissue in Ringer' solution[1] and by the dried or glycerinized tumor-tissue These results have led us to a study of other chicken tumors. Work with them has not yet advanced to test for an extraneous causative agent; but it has disclose the presence in chickens of an abundant material wel adapted for cancer research. From a single firm sellin live poultry in New York we have acquired during th past seven months twenty-seven chicken-tumors, a nu ber greater than this institute was able to obtain mouse-tumors from all sources in the course of thr years.[2] Furthermore, the avian growths were encountered in a relatively unfavorable stock, young for the most part and supposedly healthy.

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* From the Memorial Institute for Infectious Diseases.

1. Tr. Chicago Path. Soc., 1912, viii, 280.
2. Deutsch. med. Wchnschr., 1905, xxxi, 1156.
3. München. med. Wchnschr., 1905, lii, 1381.

* From the Laboratories of the Rockefeller Institute for Medic Research.

1. Rous, Peyton: Jour. Exper. Med., 1910, xii, 696; 1911, xi 397; The Journal A. M. A., 1910, lv, 1805; 1911, lvi, 198. Ro P., and Murphy, James B.: Jour. Exper. Med., 1912, xv, 119, 270

The existence of tumors of the fowl has been demonstrated by the work of several investigators.[3] The variety of growths is much greater than among rats and mice. We have been especially struck with the frequency of benign tumors. Among 353 primary neoplasms of the mouse, Haaland[4] found but three which may be termed benign — a melanoma, a mixed tumor and a fibromyoma uteri. There were 344 carcinomas and six sarcomas.[5] But among our first twenty chicken-tumors were a large, characteristic lipoma, a pure myxoma and several stationary growths, made up of blood, or lymph-sinuses and lymphoid tissue, which are perhaps best looked on as nevi. Of malignant tumors there were an osteosarcoma with large blood-sinuses, from one of which the fowl bled to death at operation, numerous round-celled tumors, a connective-tissue growth producing cartilage and bone, three spindle-celled sarcomas, a fibrosarcoma and an epithelioma. Previous observers have noted sarcomata and carcinomata in about equal proportions. But they have dealt in large part with autopsy material and with growths primary in the viscera; whereas our records have to do with tumors superficially situated, and for this reason come to hand during the life of the host.

Small bits of each spontaneous growth were removed at operation and transplanted by means of a trochar. The selection of a vascular site for the grafts has much importance. Usually they were placed deep in the pectoral muscle. The normal fowls taken as hosts were young, and of the same variety as the chicken with the spontaneous growth. The general failure to transplant avian growths is certainly attributable, in part, to lack of observance of such points.[6]

Many attempts were made to transplant the first tumors obtained, quite irrespective of the indications afforded by their histologic appearance. More recently, taught by negative results, we have resorted to preliminary autotransplantations, and have tried to propagate further only such growths as proved autotransplantable, or were found micoscopically to be malignant.

On much of the work it is too early to report. But thus far two new tumors have been successfully transferred to other hosts. One of these, a connective-tissue growth forming cartilage and bone, is noteworthy, because in the original host it appeared to arise as a symmetrical developmental anomaly connected with the sternum. It is now in its fifth "tumor-generation." The other growth is a spindle-celled sarcoma which had its primary seat amid the muscles of the upper leg, but metastasized to the neck and gizzard. It is now growing rapidly in a large proportion of the fowls constituting the second "tumor-generation" (second consecutive series inoculated).

Of special interest is the question as to whether our spindle-celled sarcoma with a filterable cause would be found to be epidemic among chickens. But it has not even been encountered. True, several spindle-celled sarcomas have been observed, including one that is transplantable. But each has its distinguishing histologic features. There remains the possibility, nevertheless, that these various growths may have a common cause, a point which we hope to investigate in the near future.

Sixty-Sixth Street and Avenue A.

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[2] Jobling, J. W.: Monographs of the Rockefeller Institute for Medical Research, 1910, No. 1, p. 81.

[3] Ehrenreich and Michaelis, Tyzzer, Wernicke.

[4] Haaland, M.: Fourth Scientific Report of the Imperial Cancer Research Fund, 1911, p. 1.

[5] Haaland excluded from these figures thirty of the lung-adenomas peculiar to mice and twenty-one lymphomas because of uncertainty as to their significance.

[6] Rous: Note 1. From a recent publication (Verhandl. d. Japan. Patholog. Gesellsch., 1911, p. 114) it appears that A. Fujinami and K. Inamoto reported in Osaka, in 1910, their success in transplanting a myxoma of the fowl. They make no mention of the influence of variety of the host on the success of transplantation.

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## ANOTHER TONSIL-FORCEPS; ONE OF THE OPERATIVE DIFFICULTIES REMOVED

George Paull Marquis, A.M., M.D., Chicago

It is with some hesitation that I present anything on the very voluminous subject of the tonsil, but after several years of effort I think I have worked out an instrument which will simplify the operation for those who use the snare for the final removal of the tonsil.

Many forceps models have been devised for seizing the tonsil and holding it firmly while it is being dissected from its bed, but in nearly all the objection has been that, after the dissection has been made, the forceps must be removed and passed through the snare loop and the tonsil again grasped. In this procedure it is very rare that the gland can be seized in exactly the same position so that when one is prepared to close the snare over it, it does not come out from its fossa free from the surrounding structures as it did when the dissection was apparently completed, and one is again obliged to resume the dissection before tightening the snare.

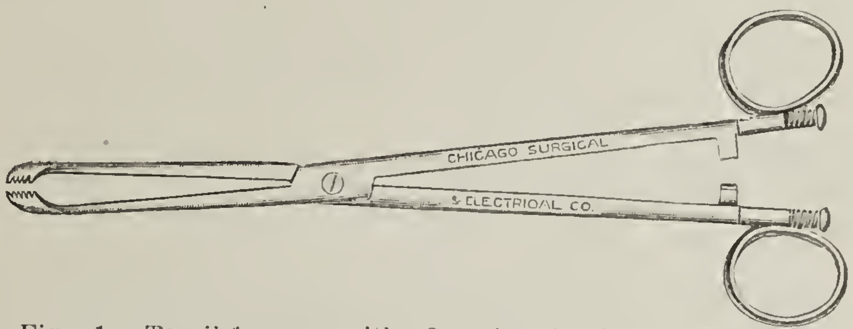

Fig. 1.—Tonsil-forceps with fine interlocking saw-teeth and movable handles.

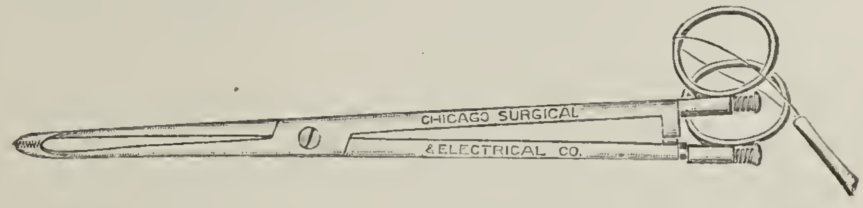

Fig. 2.—Snare wire being passed over the handles of the forceps after one ring has been bent on the other.

Then too the oftener one grasps a tonsil in the forceps and lets go, the more apt the forceps is to pull out and greatly increase the difficulty of a clean enucleation. The forceps which I wish to show possesses two distinct advantages.

1. It seizes and holds the tonsil securely and will not pull out.

2. It will allow the snare loop to be passed over the handles.

The grasping surface is composed of very fine saw-teeth which interlock. These teeth meet with a curve toward the forceps and away from the tonsil, so that traction on the forceps serves to make it seize the tonsil more firmly, instead of tending to pull out as in most forceps. The grasping surface is set on the forceps at an angle of about 15 or 20 degrees so that when the tonsil is seized the forceps can be held at the opposite corner of the mouth and still the entire surface of the forceps will be permitted to come into contact with the tonsil, and thus to obtain a firm hold on the gland instead of a partial one with only the corner of the forceps.

The greatest advantage, however, is in the movable handles. Each ring fits over a tooth-joint and is held in place by a spring, which is retained by a small screw nut. Being on a thread, this nut can be removed at any time should it be necessary to insert a new spring.

Figure 2 shows the snare wire being passed over the handles after one ring has been bent on the other. I find it much easier to bend the lower ring upward and then pass the snare from above downward.

Both rings are movable, allowing the forceps to be used on either tonsil.

I have used the forceps in a large number of cases and am convinced of its value for these reasons:

1. It allows a firm hold of the tonsil.
2. It grasps with its entire surface instead of a corner and is less liable to pull out.
3. A good hold of the tonsil, having once been obtained, can be maintained until the gland is removed.
4. It is not necessary to dispense with the finger rings and this allows a firmer hold on the forceps.

31 North State Street.

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# HEMATURIA FROM TUBERCULOSIS OF A PATENT URACHUS. OPERATION FOLLOWED BY SEPTIC RASH. RECOVERY*

Herman E. Pearse, M.D., and Edwin Lee Miller, A.B., M.D.,
Kansas City, Mo.

The following case is reported because of its rarity, and the evidence it affords of one more cause of hematuria, and one more rare tumor of the abdominal wall to be reckoned with.

*Patient.*—A country woman, aged 26, unmarried, with no unusual history, had had measles, mumps and chicken-pox without sequelæ. One aunt had died of tuberculosis. Four years before the examination she had a discharging sinus one-half inch below the umbilicus which had closed. Four weeks before the examination a small, red, tender, inflammatory tumor was noticed at the inner margin of the umbilicus. In two or three days the tumor, by this time about 3 inches long and 2 inches wide, ruptured and a mucopurulent discharge escaped. The tumor lay in the median line and did not seem to be very tender; at least, not so sore as before the rupture. For three days the patient had had a severe coryza with a severe cough. Prior to the coryza, her relatives stated that she had had a hacking cough for several years. The abdominal tumor was refractory to ordinary measures and she was brought to us by her physician, Dr. Taylor of St. Clair County, Mo.

*Examination.*—The patient was a well-nourished, well-developed woman, weighing about 130 pounds. Temperature 101.2, pulse 110, respirations 26, and blood-pressure 120. The mucous membranes were somewhat pale; the hemoglobin was 75 per cent. White cells were 5,000. Urine negative. The lung findings were normal except for marked dulness at the right apex on percussion with increased tactile and vocal fremitus and innumerable fine, moist râles, accentuated after voluntary coughing. During the patient's entire stay at the hospital these lung signs never changed, though the coryza had cleared before she left. The sputum was examined five times for tubercle bacilli with negative results. The remainder of the general physical examination was negative.

The abdominal wall presented a diamond-shaped, indurated tumor reaching 2½ inches below the umbilicus in the mid-line. Its breadth at its widest part was about 2 inches. Pressure over the central portion of the tumor expressed a mucopurulent discharge from a sinus near the center of the umbilicus. The edge of the sinus was red and raised, and the skin covering was excoriated within a radius of ½ inch. A probe directed downward met no resistance until beyond the central portion of the tumor. The patient, under observation for eighteen hours, ran a temperature of 101 to 102; pulse 74 to 104; respiration 24 to 30.

With such a history, such lung findings and a tumor in the abdominal wall, a diagnosis of infected tuberculous cyst of the abdominal wall—probably of the urachus—was made and immediate excision was advised.

*First Operation.*—On October 12, after alcohol-iodin preparation of the skin, the patient was anesthetized and a 5-inch incision beginning to the left of the umbilical sinus was made in the median line past the lower border of the mass. While excising the mass, we opened a cyst cavity. A small amount of the purulent fluid escaped and a hard, foreign body was disclosed. In endeavoring to pass wide of this infected mass and cyst cavity and contents, the abdomen was opened and the intestines immediately guarded by long gauze compresses. The obliterated hypogastric arteries were not observed at this time. The mass was excised and the hard foreign body proved to be a sebaceous accumulation the size of a hen's egg. The pads were removed, the peritoneum closed and the abdominal wall sutured. Drainage was maintained at the upper angle near the umbilicus by a wisp of iodoform gauze.

The patient was taken back to bed in good condition and made a good recovery from the light anesthetic. Twenty-four hours after the operation, the patient complained of a severe pruritus, which became almost unbearable. Her face, neck and chest and the palmar surface of her forearms presented a scarlatiniform erythematous efflorescence. She did not have the red throat, strawberry tongue or characteristic prodromal vomiting of scarlet fever. Nothing we could do relieved the itching. In four days the rash subsided and the affected areas exfoliated. The patient maintained a pyrexia during the four days of the erythema from 100 F. to 104.8 F. and even after desquamation had taken place still showed a temperature of 100.5 F. for three days.

The gauze drain was removed twenty-eight hours after operation. From the drainage opening a serous discharge persisted and required change of dressings two or three times in twenty-four hours. Her urine was measured and recorded and watched for signs of acute nephritis following scarlet fever, but they did not appear. No blood was noticed, microscopically or in gross specimen.

Six days after operation the patient passed markedly bloody urine. Three hours before she had voided normal urine. As she had begun her regular menses, it was suggested that possibly the hematuria was due to menstrual contamination. To eliminate this possible error, Dr. Miller catheterized the patient and found the source of the blood to be the bladder. A later cystoscopic examination by Dr. McCallum showed normal urine from the right and left ureteral orifices and a bloody discharge coming through an opening in the bladder fundus. The margin of the aperture in the fundus was markedly indurated and excoriated. There were several points suggestive of tuberculosis in the bladder mucosa.

A microscopic examination of the urinary sediment showed mainly erythrocytes and a few round cells with quite a few polymorphonuclear cells. No casts were found.

*Second Operation.*—On the eighth day following first operation, we again opened the abdomen through a mid-incision reaching from the umbilicus to the pubis, opening up the old cavity and extending into the space of Retzius. The wall of the incised cavity was dark and appeared infected. Th open end of the patent urachus was found and that orga was excised taking a portion of the mural peritoneum wit it down to the fundus of the bladder where the heavy cord like tubular structure widened and fused into the fundus o the bladder. We were able to express a bloody urine from th distal end of this tube, incised 4 inches above the bladder. W removed the cord and the bladder fundus for an inch on al sides of the opening. The bladder wall was infolded an closed by three layers of catgut sutures. The obliterated hypo gastric arteries were now found, then dissected from thei peritoneal bed and excised. The peritoneum was closed wit chronic gut. A gauze drain was placed down to the bladde fundus and the wound was closed by catgut uniting the laye of fascia. Stay sutures were left to be tied when the drai was removed. Metallic skin clips united the skin. The opera tion took thirty-five minutes.

*Postoperative History.*—The patient went back to bed i good condition. The pyrexia still existed. Next day a Wid test was made and found to be negative. She had the sa scarlatiniform efflorescence after the second operation as aft the first, with a degree increase in her temperature; the sa unbearable pruritus again appeared. One day later the dra was removed and stay sutures tied; four days later the ra again desquamated and the itching ceased. Five days lat the temperature fell to normal. The skin clips were remov on the fifth day following second operation, with the sk wound healed. Thirteen days from the second operation, s was well enough to sit up. The sinus at the umbilicus healed the hematuria never reappeared; the pyrexia subsided. The patient returned home well.

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* Read before Jackson County (Mo.) Medical Society, April 23, 1912

The sinus was recurrent tuberculous as proved by the microscopic sections. The cheesy mass was sebaceous matter often seen in tumors of the urachus. The lung condition we regarded as tuberculous because from the beginning until the patient left the hospital the physical signs never changed over the right apex.

The hematuria was caused by blood oozing through the patent urachus from tuberculous excoriation in that organ. The bladder showed signs of tuberculous infection (Dr. McCallum).

The rash was a septic rash as shown by its duration. It is needless to express the anxiety this rash caused when this patient was an inmate of a surgical hospital ward. It has this peculiarity of sudden onset after each operation. Ether rashes are more evanescent, of shorter duration, usually a few minutes; and rarely have the same distribution. Scarlet fever is not prone to such recurrences.

We believe the condition due to breaking up of the walls of an infected tumor, with a subsequent acute infection. The rapid healing and satisfactory union following the second operation does not satisfactorily support this view point. In summary, this patient showed:

1. Tuberculous infection of a urachus with discharging sinus at umbilicus.
2. Hematuria, patent urachus.
3. Septic rash.
4. Unexplained pyrexia; not typhoid, therefore, either tubercular or septic.
5. All clinical signs of tuberculosis in lung and bladder yet we were never able to substantiate the clinical findings by bacteriologic examination of the discharges from these organs, even though the microscopic sections showed the tumor manifestly tuberculous.

1201 Rialto Building.

## A CASE OF GUNSHOT WOUND OF THE PREGNANT UTERUS

A. W. Tucker, M.D., Shanghai, China

*History.*—The patient, a Chinese woman, aged 26, applied for treatment at St. Luke's Hospital at about 7 a. m., Feb. 4, 1912, complaining of pain in the abdomen and back. February 3 at about 10:30 p. m., while attempting to stop a robber, she had been shot in the abdomen. Her previous history was good; she had two children, both living. The patient was nine months pregnant.

*Examination.*—The wound of entrance was about 3 inches above and to the left of the umbilicus, through the left rectus, was about ¾ of an inch in length and somewhat ragged in outline. About 3 inches of omentum were protruding from the wound. No wound of exit was found. There was no external bleeding. The skin wound was situated at about the top of the fundus uteri. Abdomen was tender, pulse 126 and rather weak, respiration 28, heart and lungs good.

*Operation.*—The abdomen was opened through the wound and the omental tag tied and removed. A large amount of blood and clots was found in the abdomen. No wound was found in the intestines. A wound of about an inch in length was found in the anterior part of the fundus of the uterus, a little to the left of the midline. Fresh blood was coming out from the wound in the uterus, but not very rapidly. A cesarean section was decided on. The uterus was opened high, the incision extending from the wound downward. The hemorrhage seemed to be from the placenta, which was situated anteriorly and through which the bullet had passed. The child was delivered and the uterus sewed up; the uterus contracted well. A good deal of clotted blood was found in the pelvis. The abdominal wound was closed with two cigarette drains. The patient became pretty weak during the operation and was given 20 ounces of saline solution intravenously. Pulse at the end of the operation was 140

*Postoperative Course.*—The patient did well until midday, when she had somewhat of a collapse, from which she rallied with stimulation. She was given ergot and strychnin hypodermatically and saline by rectum. At 8 a. m. the pulse was 132, temperature 99.4, and her condition was good.

February 5, 8 a. m., pulse was 124, temperature 99.2, and condition good. Lochia was established but scanty. I then remembered that I had forgotten to dilate the cervix, so did so without anesthesia. The lochia then became about normal in amount with some clots. The outer dressing was changed. At 8 p. m. her condition was still good, pulse 130, temperature 99.9. Her condition remained good until 7:30 a. m., February 6, when she suddenly collapsed and died at 9 a. m. I was not able to get a post-mortem. Neither dressing showed a hemorrhage, but I am inclined to think that it was the cause of death.

The child, a girl, started breathing with a little inducement. The bullet, which was of soft lead about ½ inch in diameter and weighted 7 drams, was found to have entered its back over the left scapula and had lodged under the skin near the spine. It was extracted and the wound dressed. The child was doing well on the fourth day, when the family took her home.

# *New and Nonofficial Remedies*

The following additional articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association. Their acceptance has been based largely on evidence supplied by the manufacturer or his agent and in part on investigation made by or under the direction of the Council. Criticisms and corrections are asked for to aid in the revision of the matter before publication in the book "New and Nonofficial Remedies."

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that, so far as known, it complies with the rules adopted by the Council.

W. A. Puckner, Secretary.

**CHOLERA VACCINE.**—Cholera vaccine consisting of attenuated living vibrios of different virulence has been used with considerable success in India by Haffkine. The living vibrios have been replaced by Kolle by emulsions of killed bacteria and statistics appear to show that this form of vaccine is efficient in the prevention of cholera.

H. K. Mulford Co., Philadelphia.

*Cholera Bacterin.*—(Cholera vaccine). This bacterin is designed for the purpose of immunizing against cholera.

Cholera-bacterin is marketed in packages of three syringes; syringe 1 is said to contain 500 million killed cholera vibrios, while syringes 2 and 3 each contain 1,000 million killed vibrios.

**TYPHOID VACCINE.**—

H. K. Mulford Co., Philadelphia.

*Typho-Bacterin Mixed.*—It is marketed in packages of three syringes; syringe 1 is said to contain 500 million killed *Bacillus typhosus* and 250 million each of *Bacillus paratyphosus* A and B, while syringes 2 and 3 each contain twice the number of killed bacilli contained in syringe 1.

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**The Duty of Medical Association.**—When a young man enters the medical profession he receives as a heritage certain rights, privileges and immunities, which place him at once under obligations to his profession. When he unites with a medical society, he aids in medical organization, he becomes more broad-minded and liberal; it enables him to see his own shortcomings, and also the ability of others. Such association will stimulate him to study and investigate, and he will help to unite, strengthen and elevate his profession. But when a physician selfishly isolates himself from his brother physicians he fails to discharge his obligation to his profession and is bound to get into ruts and become unfitted for the highest discharge of his duties.—J. M. Dampeer, M.D., *Mississippi Med. Monthly*

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[*For other information see second page following reading matter*]

SATURDAY, JUNE 1, 1912

## EXPERIMENTAL HYPERTHYROIDISM

The pathologic condition variously designated as Graves' disease, Basedow's disease, or exophthalmic goiter is characterized by certain familiar symptoms which are readily recognized in man. Most conspicuous among these are tachycardia, disturbances of the nervous system characterized by hyperexcitability and exophthalmos, disturbances of the digestive tract accompanied by diarrhea and occasional hemorrhage, and, finally, perversions of nutrition manifested in rapid emaciation, sometimes attended with febrile changes, glycosuria and comparable phenomena. For some time these symptom-complexes in man have been ascribed to a condition of hyperthyroidism; and the overfunctioning of the thyroid has been made responsible for the appearance of the manifestations described.

When the evidence for the validity of the hypersecretion hypothesis is critically examined, the current explanation of the etiology of this disease is far from convincing. Professor Carlson has lately summarized the basis for the prevalent view as follows: (1) structural changes in the thyroids, (2) the effects of partial extirpation of the gland, (3) the aggravation of the symptoms by thyroid administration, and (4) the alleged production of some or all of the symptoms in healthy individuals and experimental animals by thyroid administration.[1] He has pointed out that much of the evidence is as yet a matter of inference rather than of direct demonstration. It is quite plausible that some of these phenomena may be results of altered thyroid behavior rather than an excessive secretion. Furthermore it is by no means clear that some of the cardinal symptoms of exophthalmic goiter are not in reality the secondary effects of a metabolic disturbance rather than the immediate cause of the diseased condition.

Obviously the best proof of the thyroid hypersecretion hypothesis would consist in the possibility of producing the typical manifestations experimentally by administration of thyroid products. This has been attempted by numerous investigators in recent years with most contradictory or inconstant results.[2] Professor Carlson and his Chicago co-workers have again taken up the problems of experimental hyperthyroidism in the hope of contributing some more definite answer to the question of etiology of so-called exophthalmic goiter in man. Heretofore the most constant symptom reported after the long-continued experimental exhibition of thyroid preparations has been tachycardia. An interesting case of apparent production of this disease by hyperthyroidism involves a man who, without the advice of a physician, had consumed about 1,000 thyroid tablets within a few weeks in order to overcome his obesity.[3] He developed the typical picture of the Graves syndrome, with exophthalmos, tachycardia, nervous hyperexcitability, emaciation and glycosuria. The symptoms disappeared again after ten months.

In common with earlier investigators, Carlson reports that toxic symptoms can in all probability be produced in all animals by thyroid feeding. According to him the most constant results in the animal experiments are loss of body weight, gastro-enteritis and diarrhea. In thyroid feeding trials on himself, Carlson noted dizziness, weakness, tachycardia and loss of weight. "In the groups in which the pulse could be recorded with accuracy," Carlson adds, "thyroid feeding in distinctly toxic quantities does not produce tachycardia. Neither does the feeding result in nervousness or exophthalmos in any of the groups. The animals usually retain their appetite and will feed until the gastro-enteritis is extreme or the animal is moribund. In view of our results in so many animal groups it would seem that the records of exophthalmos obtained by previous observers by thyroid feeding are based on errors of judgment, and that the nervousness and tachycardia similarly described are due to some other factors than the thyroid feeding. This is clearly the case in some instances, from the accounts of the experiments given by the authors themselves; for example, in Cunningham's experiments on monkeys. It would require considerable imagination or an undue influence of one's wish or one's judgment to identify the symptom-complex of excessive thyroid feeding in experimental animals with the exophthalmic goiter syndrome in man. The symptoms in experimental animals may o may not be an expression of hyperthyroidism. Othe lines of investigation must determine that point. Th symptoms are not those of exophthalmic goiter. I would seem that man is very much more susceptible t thyroid feeding than any other species so far subjecte to the experiment. Because of this fact and in view o the higher or more delicately balanced nervous organiza tion in man, the expression of hyperthyroidism in ma may differ from that in the lower animals. It is ther fore clear that the present study contributes nothing the settlement of the question of etiology of exop thalmic goiter in man, except in so far as it rende untenable the argument from 'experimental hyperth roidism.' "

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[1] Carlson, A. J., Rook, J. R., and McKie, J. F.: Experimental Hyperthyroidism in Mammals and Birds, Am. Jour. Physiol., 1912, xxx, 129.

[2] Von Fürth, O.: Ergebnisse d. Physiol., 1909, viii, 535.

[3] von Notthaft: Ein Fall von artificiellen akutem thyreogen Morbus Basedow, Centralbl. f. inn. Med., 1898, p. 353.

We are far from understanding the interrelationships which unquestionably exist between some of the so-called ductless glands. In this connection, however, it should be recalled that such associations between the thyroid and thymus[4] may be of import in hyperthyroidism in which a hyperplasia of the thymus has been reported to occur. Indeed, the degree of the latter has been directly related to the severity of the Graves manifestations.[5] Such statements are, of course, too fragmentary to serve as a basis for theory-building; but they stimulate to further research.

## FEDERAL CONTROL OF VACCINES AND SERUMS

This country is being flooded — and it is the same abroad, but to a less extent—with preparations belonging to the general class of "vaccines, viruses, antitoxins," etc. As many of these bear the label "Licensed by the Treasury Department" or "U. S. Government License No. —" and, for the most part, "Guaranteed under the Food and Drugs Act" in addition, it may be well to remind our readers of the exact meaning of these phrases. The guaranty under the Food and Drugs Act has no meaning at all for the consumer; it simply means that in case of legal difficulty the retail dealer may shift the responsibility to the manufacturer. The most brazen humbugs are "guaranteed" in this way; this phrase has led to much misunderstanding and has undoubtedly greatly increased the confidence, even of intelligent persons, in nostrums.

The "License of the Treasury Department" has a different significance, although it too, is capable of abuse and is being abused. Perhaps the situation will be more intelligible if we review briefly what the license means and what it does not mean.

Several years ago Congress passed a law to regulate the interstate traffic in viruses, serums, etc., the enforcement of which was placed in the hands of the Public Health and Marine-Hospital Service. Under the terms of this act and the regulations for its enforcement all manufacturers, both here and abroad, who desire to manufacture such products for interstate traffic are required to procure a license from the Treasury Department. This license is granted only on the recommendation of the Surgeon-General of the Public Health Service for a period of one year, and only after a thorough inspection of the establishment and examinations of the products themselves. No license can be granted to an establishment which does not have sanitary stables, a properly equipped laboratory and a competent personnel; the establishments are subject to inspection at any time and are required by law to be inspected at least once a year. The license may be revoked on evidence that the establishment is not being properly conducted; as a matter of fact, the licenses of some of the best-known establishments both here and abroad have been revoked or suspended pending improvements.

The examinations in the Hygienic Laboratory of the Public Health Service of products found on the market as well as those obtained directly from the firms are directed to detecting the presence of living organisms, especially of pathogenic organisms, the presence of tetanus toxin, the control of the strength of the preparations, so far as this is possible, the absence of adulterations, etc. An illustration of the working of the law is the statement from the last annual report of the Public Health Service that, owing to the difficulty of exercising a satisfactory control over foreign establishments manufacturing vaccine virus, the importation of the latter into the United States is now prohibited. This report also cites the fact that experts from the Hygienic Laboratory investigated certain cases of tetanus alleged to have resulted from the use of vaccine virus; the allegations were found to be baseless.

The Hygienic Laboratory, after prolonged investigations, has established official American standards for diphtheria and tetanus antitoxins; all such preparations sold in the United States are required to conform to these standards. Before the establishment of these standards the antitoxins on the American market were extremely variable; in many cases they were worthless. The control of vaccine virus is similarly efficient; before the passage of the law much of the vaccine virus on the market contained large numbers of living bacteria and "sore arms" were common. As the result of this work the United States probably leads the world in the quality of diphtheria and tetanus antitoxins and vaccine virus.

We now come to the dark side of the picture. There are a large number of products of this class the value of which has not been definitely established; there are others of value for which no satisfactory standards are available. To the latter class belong, for example, antimeningococcus serum and tuberculin. The control of the Public Health Service over such products is at present largely limited to an inspection of the factories and an examination of the products to determine their freedom from dangerous contaminations; it is not supposed to go into the theories back of the production of the products or into their clinical value; it can simply require that these products be made in a sanitary manner and that they be free from dangerous impurities.

As a consequence of these limitations there are being extensively advertised a number of products which, in the opinion of many, have little or no therapeutic value; these, however, bear the government license, and physicians employing them should bear in mind exactly what this means. Unfortunately the number of these questionable products seems to be increasing. The difficulty in dealing with them is also increasing, for a number of physicians holding positions in medical colleges, laboratories or sanatoriums are engaging in their manufacture; this is especially the case abroad, but it is becoming the case here also. The fact that the men are associated with institutions of standing inspires more confidence in the products than would be the case if the latter were made by firms avowedly in business for making money.

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[4] Hoskins, R. G.: Am. Jour. Med. Sc., March, 1911.
[5] Gebele: Beitr. z. klin. Chir., 1910, lxx, 20.

What remedies can be suggested for this state of affairs? In the first place physicians should bear in mind that the guaranty under the Food and Drugs Act means absolutely nothing so far as the consumer or user is concerned and that the Treasury Department license may mean almost nothing as to therapeutic value. It is obviously desirable that the Hygienic Laboratory should extend its investigations and prepare standards for other products to which all firms can be held. This is simply a question of an enlarged laboratory and more money. Meanwhile the profession has a right to expect of the Council on Pharmacy and Chemistry, its accredited agency for determining the value of proprietary remedies, the same watchfulness and care as to serums and vaccines as it has exercised with reference to the products of synthetic chemistry. This attention the subject has been already receiving to some extent, but there are indications that the Council will need to go more deeply into the matter in the future. In view of the large number of new vaccines being put before the profession with more or less plausible claims, there is need of painstaking investigation not only as to the products themselves, but also as to their therapeutic value.

## LOOKING TWENTY CENTURIES BACKWARD

John R. Early, a discharged federal soldier, went, in August, 1908, from North Carolina to Washington, D. C., to attend to a pension claim on account of malaria contracted in the service. While there he called on a physician for a diagnosis of a skin lesion which was pronounced to be leprosy. Every one knows how Early has since been treated by the American people, his fellow-citizens — quite like any pariah. It was recently reported that "John Early, supposed leper, has been driven out for the last time; and Tacoma, in Washington State, has done the driving out." At first it was intended to fence Early within his acre of land outside Tacoma, thus shutting him from contact with any other person. There were sympathizers with him who petitioned against the idea of that fence. But on the putting in evidence of some passages of Scripture a judge of the superior court refused to issue a restraining order against the erection of the barrier. The national authorities then found a permanent refuge for Early at the Port Townsend quarantine station; and, it is said, "satisfied that he could do no better, he has left the world, and has gone to attend an undoubted leper in that station. His wife and three children will live as near to him as possible," and he will be able to aid them from the small nurse's salary of $65 that a magnanimous government will pay him, $30 pension being added on account, not of leprosy, but of the malaria contracted in the Spanish War.

Now, without entering into the controversy of experts on the subject, for the purposes of argument, let leprosy be presumed in Early. Leprosy is a slowly developing, slightly infectious disease, comparable in many respects to lupus or tuberculosis of the skin. If from the beginning Early's infection had been pronounced a form of tuberculosis, who would have paid the slightest attention to it? Yet the opportunities for the ordinary tuberculous patient to communicate his disease are many times greater than the opportunities for the leper to infect with leprosy, which is communicable only with difficulty.

Possibly leprosy was dangerously infectious in the scriptural days from which the traditional horror surrounding it is largely derived. If so, this characteristic has certainly become greatly modified during the twenty intervening centuries. Moreover, the Biblical leprosy was a congeries of several diseases—leprosy, tuberculosis, scrofula, erythema, eczema, cancer and what not else—all of which passed for leprosy, but which science has since differentiated. How illogical it is, then, to base our twentieth century attitude toward leprosy on its ancient or its medieval status! Leprosy to-day, taken as a whole, is scarcely more terrible in its effects on the individual patient than is syphilis; it is not so swift in its action; it is certainly far less readily communicated, and, therefore, infinitely less dangerous to the community. Our London correspondent says:[1] "There are probably always twenty to thirty cases of leprosy in London." The patients "live at home and move about unrestricted. . . . There appears to be no danger whatever of contagion, for no cases of transmission have come to light." If the enlightened American people must suffer from an epidemic pathophobia, let it be a wholesome and prophylaxis-inducing fear of something really worth dreading—of venereal diseases, for example —infections infinitely more ghastly and harmful to th race than leprosy.

## COMPLEXION AND HEALTH IN THE TROPICS

The occupation of regions, like the Philippines Porto Rico and the Isthmian Canal Zone, where trop ical conditions prevail, has brought new problems i relation to the influence of climate on health. Th needs which these changes in the new territoria interests of the United States have brought with them the necessity of introducing troops, workmen and of cials into countries where the tropical climate is qui unlike that to which they have been accustomed f generations, raise many questions of serious concern f the welfare of the nation as well as of the individua involved. The difficulties attending the colonization the tropics by the white race are familiar facts of h tory; so that the serious-minded statesman may w pause to consider the prospects of success which c new ventures involve and to inquire whether t obstacles hitherto encountered are insurmountable for white men.

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[1] The Journal A. M. A., March 16, 1912, p. 794.

Many of our readers will recall the direful effects of the tropical climate, especially as it manifests itself in the Philippines, which were depicted by Major Woodruff in his widely read book.[1] The theory advocated is that certain deleterious features noted in the tropics are due to the chemical rays of the sunlight; and it was maintained that the pigmented integument of the black races especially protects them from the harmful actinic waves.

The use of all sorts of protective clothing is recommended, a red, orange-red, or black layer being especially suggested. Even tinfoil lining is advocated for the headgear. In addition to ordinary sunburn effects a high incidence of affections of the nervous system, including insanity, is asserted by Woodruff to be particularly likely to occur in the tropics as the result of excessive light stimulation. He also maintains that the blonds suffer more severely than do the brunettes from the deleterious influence of tropical residence, the ill effects of which are mainly due to the large proportion of chemical or ultraviolet rays contained in the tropical sunlight.

Any careful reader of Woodruff's book must have observed the lack of critique which characterized many of his pronouncements. Some of the debatable features of his evidence are presented in a form so convincing and a style so entertaining that the lack of poise in places is readily overlooked. The underlying problem is one of some practical importance in the selection of recruits and governmental employees for our distant possessions.

Major Chamberlain, the president of the U. S. Army Board for the Study of Tropical Diseases as They Exist in the Philippine Islands, has remarked: "The question as to whether transplanted fair-skinned races gradually change after many generations from a lighter to a darker average type, as a result of the survival of those best fitted to endure a high degree of sunlight, is purely speculative and of theoretical interest only. Whether men of dark complexion living ten, twenty, or thirty years in the tropics can withstand the climatic influences more successfully than those having fair skin, light hair and blue eyes is of much practical importance, but is extremely difficult to determine because of the almost insurmountable obstacles which stand in the way of making observations over such a period of time on any considerable group of men. When it comes to the relative resistance of the blonds and the brunettes during the comparatively short tour of duty (two years) which American soldiers commonly serve in the Philippines, the task is beset with fewer difficulties."

Some of the debated problems have already received a satisfactory solution. Phalen's extensive practical experiments for the Army Board[2] failed to show any benefit resulting from the use of orange-red hat linings and underwear. This is, after all, what might be expected. If tanning is due to actinic rays, it is only reasonable to assume that since the ordinary clothing is able to protect the skin from their effects, the same clothing will protect the body as a whole—in other words, that ordinary clothing gives sufficient protection. Indeed, there is as yet no adequate proof that pigmentation *per se* is beneficial in the tropics; and Aron's studies seem to indicate that heat rays rather than the ultraviolet waves are the disturbing elements in tropical sunlight.[3] It is well known that heat and humidity, in the absence of light, can produce symptoms similar to those occurring in milder degree among residents of the tropics.

The Army Board maintains that it is doubtful if the actinic component of the sunlight is a factor in tropical morbidity and deterioration. The elements of possible import in this are manifold. Heat, humidity, sunlight, lack of exercise, disturbed sleep, improper food, bad water, alcoholic and venereal excesses, and above all the characteristic infections of the tropics have been brought forward as alleged causes of the deleterious effect of residence in the tropics. Major Chamberlain of the Army Board has made an extensive investigation of one factor, namely the complexion type.[4] Account was taken of the amount of sickness among the blonds and brunettes in the soldier and constabulary groups, of symptoms referable to climate, of soldiers invalided home, of the military conduct of the two groups, of the comparative incidence of nervous disease in the Army in the Philippines and the United States, and of numerous other statistical relations. A clear summary of the whole matter may be well expressed in Dr. Chamberlain's own words: "In our investigation of blonds and brunettes the evidence was conflicting, some facts being in favor of the fair and others in favor of the dark-complexioned men. This is what would be expected if there were actually no differences between the two types as regards their resistance to tropical influences. From a consideration of all the data it appears that blonds are quite as well able as brunettes to withstand the influences of the Philippine climate for a period of two years and probably for a period of five and one-half years. In case of residence beyond the latter period we are not in a position to express an opinion based on any extensive personal observations." The prospects in the domain of tropical hygiene are far from unfavorable, in Major Chamberlain's judgment.

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[1] Woodruff, C. E.: Effect of Tropical Sunlight on White Men, New York, 1905.

[2] Phalen, J. M.: An Experiment with Orange-Red Underwear, Philippine Jour. Sc., Sec. B, 1910, v, 525.

[3] Aron, H.: Investigation on the Action of the Tropical Sun on Men and Animals, Philippine Jour. Sc., Sec. B, 1911, vi, 101.

[4] Chamberlain, W. P.: Observations on the Influence of the Philippine Climate on White Men of the Blond and of the Brunette Type, Philippine Jour. Sc., Sec. B, 1911, vi, 427.

## LOCAL QUESTIONS AND NATIONAL PROBLEMS

At its recent meeting the House of Delegates of the Iowa State Medical Association adopted a resolution recommending the publication in THE JOURNAL of the presidential address delivered before that society. This recommendation we gladly accepted,[1] not only because the Iowa association suggested it, but also because we regard the address as a model.

Dr. Littig discussed local conditions without anticipating a national audience; but practically all local questions, such as those he discusses, have a national bearing, and all national questions certainly have a local bearing. What is needed to-day is more discussion in state associations of such national questions as affect the individual states. The key-note of this address is furnished by the able discussion of organization, county societies, medical defense, hospitals, commercialism in medicine and in medical schools, medical examining boards and the relation of the physician to the public. Each of these questions is of national as well as of local importance. Dr. Littig's assertion that the county society is an index of the professional attainments of its members and of the character of the services rendered to the public will apply in every state; and his appeal to the profession to take more active interest in the county society is appropriate in every commonwealth.

Dr. Littig criticizes the somnolence of hospital managers; he urges better hospital equipment, the employment of trained laboratory assistants and anesthetists, and the keeping of more complete records of cases. He commends the movement to standardize hospitals, under consideration by the Council on Medical Education; he decries commercialism in medicine, which creates distrust on the part of the public toward the profession. A physician, he says, is not a tradesman; medical practice is a vocation, calling for the highest ideals and for the most unselfish standard of honesty and purity of purpose. Dr. Littig believes that there are too many commercial medical schools; that commercial teachers in medical faculties are doing more to commercialize the profession than all other factors combined; that these schools should be weeded out; and that prospective medical students should be informed how to select the best schools in which to make their preparation. He urges that medical examining boards should be reorganized with only the best men; that they should be informed with regard to the work actually done in medical schools; and that examinations should be such as to be practical tests of the preparation of the student for practice. He believes that the number of quacks in a community is a measure of the manner in which the profession has met its obligation — that a community intelligent in medical matters is not a good field for quacks. And he might have added that in many instances the medical men and not the laymen of the community are responsible for the conditions, and that too often a splendid outline of work, such as he has presented, ends with nothing, because the suggestions are not taken up by alert committees and pushed to results.

All these questions are discussed as they relate to Iowa, but they are broad questions and just as vital in every state. In fact, no state or community to-day is so isolated or so peculiar that its fundamental problems are not essentially those of other states and communities. Thorough mastery of the conditions and problems of one's own locality will furnish the key to the conditions and problems of the nation. The great need in the profession to-day is for men of high ideals and far-sighted, statesmanlike grasp of medical conditions. Such men are schooled and developed in the local organization, as the Hancocks, the Adamses and the Warrens of the American Revolution were schooled and developed in the New England town meeting. The profession needs executive officers and heads of committees who have large administrative ability and grasp of detail. Such executive officers and administrative heads are to be sought for among the members who take enthusiastic, active interest in their local organizations. These points are well exemplified in Dr. Littig's paper. If every state could have such an address annually, a decided impetus would be given for better things in our organization.

## THE SELECT COMMITTEE ON PATENT MEDICINES

For years, those interested in the public health of Great Britain have demanded that an official investigation be made of the "patent medicine" evil. These demands have finally borne fruit and a body known as the Select Committee on Patent Medicines has been appointed by the British government to inquire into th question of the sale of patent and proprietary medicine and of other medical preparations and appliances as wel as of the advertisements relating thereto. The committe is to report whether it considers necessary or desirabl any amendments of the law now governing the sale o these preparations. As might be expected, the "paten medicine" and proprietary forces are up in arms and ar enlisting the help of all those who derive financial benefi from the exploitation of nostrums, "ethical" and otherwise. The proprietary article section of the Londo Chamber of Commerce has issued a pamphlet in which declares that the agitation against "patent medicines has been fomented by the medical profession for reaso purely selfish. It scouts the idea that medical men a protesting against this vicious traffic because of t menace it is to the public health.

By far the strongest and least easily answered arg ment brought forward in the pamphlet is the undeniab fact that proprietary remedies are largely used by me cal men. As THE JOURNAL prophesied,[1] this point w bound to be raised as soon as the "patent medicin fakers found their business threatened. The medical profession of Great Britain, though it has done splendid work in exposing the fraud and viciousness of the "patent medicine" business, has taken no pains to see that its own skirts are clear. American and European frauds of the "ethical proprietary" type are still largely used by the English physician as is evidenced from the fact that high-class British medical journals carry the advertisements of such humbugs. With the official organ of the British Medical Association—the *British Medical Journal*—carrying advertisements of such nostrums as Bromidia, Angier's Emulsion, Listerine, etc.—with the *Lancet* lending its pages to the exploitation of such humbugs as Antikamnia, Papine and Kutnow's Powder, and with other English medical journals deriving a revenue from similar and other proprietary nostrums, the British profession will find difficulty in answering this question, which is bound to be put: Wherein is it worse for the public to buy medicinal preparations about which it knows nothing than it is for the medical men to prescribe preparations of whose composition they are and must be ignorant?

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[1] Littig, L. W.: The Practitioner, the Profession and the Medical Organization, this issue, p. 1653.

[1] The Proposed Royal Commission on Quackery—a Proph editorial in THE JOURNAL A. M. A., Feb. 3, 1912, p. 349.

Of course the newspapers are coming valiantly to the rescue of the "patent medicine" manufacturers. A well-known journal published in the interest of the British newspapers has stated the case of its clientele with brutal frankness. In an article dealing with the appointment of the select committee and published under the subtitle "A Huge Revenue Threatened," it asks in behalf of the newspapers:

> "Which shall we support, the people who have advertised, are advertising, and will keep on doing so, or the people who don't advertise, and don't believe in it, and who, if they did, haven't the money to spend on it?"

Here, apparently, is the British newspapers' view of the question. The fact that the "patent medicine" evil is one which attacks the public in its most vulnerable point — its health — is apparently of no moment and deserves no consideration when balanced against the fact that it is the source of a gigantic revenue for the newspapers themselves.

In view of the fact that the British public has not been sufficiently enlightened on the "patent medicine" evil to take a very active interest in the question before the select committee, and knowing the enormous vested interests that are threatened, we venture to prophesy that no marked restrictions will be put on the "patent medicine" business as a result of the committee's investigations.

But one thing we may hope for: that the British medical profession may have brought home to it the uncomfortable fact that for the continued exploitation of nostrums, it must accept some responsibility. If the investigations of the select committee bring forth no more tangible results than that of calling a halt on the prescribing of proprietary nostrums by British physicians, it will have accomplished a wonderful amount of good.

# *Current Comment*

## REPORTING VENEREAL DISEASES

Following the recommendation of its advisory board, composed of a number of prominent physicians of the city, the New York City Board of Health has adopted resolutions providing for the reporting of venereal diseases. Officers in charge of public institutions, including those supported in full or in part by voluntary contributions, are required to report promptly to the department of health patients suffering from venereal diseases. The resolutions, after reciting that venereal diseases are infections, communicable and preventable and constitute a menace to public health, require the officers to report promptly the name, sex, age, nationality, marital state and address of patients under observation suffering from any venereal disease, together with the stage and duration of the disease, and the date of infection, if obtainable. Physicians are also requested to report private patients under their care except as to the name and address. The necessary tests and bacteriologic examinations for diagnosis are made by the board of health, and curative serums will be distributed in cases in which the data required for registration are furnished by the physician. As a means of effectively carrying out the objects for which this regulation was provided, the board has asked the board of estimate and apportionment of the city to provide funds for the erection and maintenance of a special hospital for the care of venereal diseases. No such facilities are now available in New York and much of the salutary effect of this important measure would be lost by reason of this lack. The reporting of venereal diseases is an important step in public sanitation, and if universally adopted and thoroughly carried out would go a long way in the control of this prolific source of human morbidity and disease.

## SUMMER HEAT AND ADULT MORBIDITY

In Europe during the summer of 1911 the excessive heat was observed by De Fleury[1] to have had a pronounced effect in producing dysenteriform enteritis, appendicitis and paratyphoid with enlargement of the liver in adults. Not only was there increase in such affections during the hot period, but after its subsidence many persons developed gastro-intestinal disturbances, congestion of the liver or some cutaneous affection of digestive origin. In attempting to account for the effects of the hot weather De Fleury says that the abuse of cooling drinks with food, the tendency of foods to spoil and the increasing virulence of pathogenic germs were important factors, but he believes that the most important factor was the diversion of the water in the organism from the kidneys to the skin, with increased excretion of water, with lowering of blood-pressure, but with decreased elimination of toxins. The sweat-excreting apparatus of the skin is equal to only about a fourth of the filtering apparatus of the kidneys and during the hot weather fluids are excreted by the skin almost entirely. It was De Fleury's observation that persons who lived on a fruit and vegetable diet, to the exclusion of meat and eggs, escaped gastro-intestinal disturbances. Hot drinks also acted in a prophylactic way, as did the employment of the lactic ferments. Drugs which increase the blood-pressure and stimulate the kidney function also had beneficial effects. The observations of De Fleury would seem to confirm the dictum that in hot weather it is desirable to decrease the amount of protein food intake, to limit the diet more closely to fruits and vegetables and to ingest plenty of plain water or other bland drinks while the stomach is empty in order, if possible, to increase elimination by the kidneys. The frequency of congestion of the liver would seem also to support the theory of a deficient elimination of toxins as an important cause of the morbidity due to the heat.

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[1] Bull. de l'Acad. de méd., Paris, Nov. 7, 1911, No. 36; abstr. in THE JOURNAL A. M. A., Dec. 23, 1911, p. 2110.

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## PORTRAITS OF THE PRESIDENT AND OF THE SECTION OFFICERS

We present to our readers this week portraits of the President-Elect and of a number of section officers whose portraits have not previously been given in The Journal. The likeness of President-Elect Abraham Jacobi is inserted as a frontispiece. It is a picture with character and many who receive it will be glad to detach it and have it framed. The pictures of the section officers are also arranged with a view to the possibility of framing. Pictures such as these appear in The Journal each year, in the issue just before the annual session. These leaders in their especial branches represent exceptionally well every section of the United States. It will be noted that the young men of the profession are largely in evidence. Other official honors have come to most or all of them. Blue has been distinguished recently by being made Surgeon-General of the Public Health and Marine-Hospital Service. But it is safe to say that the honor of an official position in the great representative organization of the profession is as satisfactory to him and to the others as any distinction which they have heretofore achieved. Russ and Hornsby represent the new Section on Hospitals. All these men well deserve the honor which has come to them.

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## HEALTH IN THE CANAL ZONE

The remarkable record of the Sanitary Department of the Isthmian Canal Commission has been commented on so frequently that a report showing a degree of healthfulness in this formerly pest-ridden country, better than that reached by our best-governed American cities, no longer awakens surprise. Simply as a matter of record, however, it is interesting to note that the report of the Department of Sanitation for March, 1912, just issued, shows that out of 13,108 white employees of the Canal Commission and the Panama Railroad, only three died during March from disease and two from violence, a death-rate from disease of 2.75 per thousand per year, and a total death-rate, including accidents, of 4.58. Even including the 37,987 colored employees, of whom twenty-five died of disease and six from violence, there was a total of only thirty-six deaths from disease and violence out of 51,095 employees, all engaged in the most arduous and dangerous work in a tropical region, noted ever since its discovery by white men as a hot-bed of disease. The total death-rate for all employees for the month of March was only 8.45 per thousand per year. The death-rate for the entire Canal Zone with its 159,514 inhabitants was only 14.67 per thousand per year, a death-rate to which any American city would point with pride. When one turns to the list of white men, women and children from the United States, however, the true significance of the work of the Sanitary Department appears. There were on the Canal Zone in March, 1912, 6,113 white employees from the United States, 4.447 white women and children from the United States and a total of 11,923 white Americans. Yet among this body of nearly 12,000 people there were only four deaths from disease, two of which were deaths of infants less than fifteen days old, the two remaining deaths being one from appendicitis in a man of forty-five and one of organic disease of the heart in a man of forty-two. Typhoid, diphtheria, malaria, measles, whooping-cough, tuberculosis, small-pox and other contagious diseases which cost the United States 600,000 lives annually, are practically abolished in the Canal Zone. And the same results could be secured in every city and village in this country if our present knowledge of disease were applied as intelligently here as it is in the Canal Zone.

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## "PRINCE" GUELPH AND AMRITAM

We have recently been honored — more or less — by a visit from no less a personage than "Prince" John Edward R. Guelph of London, New York, Los Angeles, India and Hasbrouck Heights, N. J. The "prince," in a modified cockney accent, made known his errand, which was to bring before the American Medical Association "the only known beverage that will avert premature old age and senile decay." The name of this newest of "soft drinks" is Amritam, which we are assured is an "oriental nectar" manufactured by the Amritam Company of Los Angeles. Amritam, according to the prospectus, has been analyzed by "a prominent London chemist," Granville H. Sharpe. Mr. Sharpe, who wears a long string of letters after his name, is thus described in *Truth's* "Cautionary List":

> Sharpe, Granville, H., F.C.S., 11 and 12, Great Tower street, London E. C.—A so-called "analyst" who makes a business of supplying tradesmen with certificates of the purity and genuineness of the goods they manufacture for use a trade advertisements.

Evidently Mr. Sharpe's testimony is to be accepte *cum grano salis.* By turning to The Journal files, w find that in 1908, "Prince" Guelph was, according to th Hasbrouck Heights (N. J.) *News-Letter,* establishin the "King Edward Sanatoria of America" for the cu of cancer and tuberculosis. Correspondence with th authorities across the water failed to show that eith "Prince" Guelph or "Doctor" Guelph — he went und both titles—or his "sanatoria" were known in Englan The New York papers for March 28, 1909, containe humorous accounts of the ejection of "Prince" de Guel from the Hotel St. Regis for failure to pay his hot bill. The "prince" at that time had been attempting launch the "Ermine Social Bureau," the alleged obje of which was the presentation of its subscribers to the court of St. James — subscription price $100. For the "prince"—if he is reported correctly—claims to be no less a personage than a son of the late King Edward of England! Even as long ago as 1909, it seems that "prince" was attempting to float the Amritam company, but presumably New York does not offer so verdant a field for that particular type of promoting as do Los Angeles and Chicago. The New York *World* in giving a very full account of the "prince's" unpleasant experience with the plebeian hotel keeper, refers to the fact that in 1899 the gentleman was arrested when he was going under the name of Dr. John de Guelph Norman. In commenting on the "prince's" claim to subsequent kingship, the *World* said:

> "If the 'prince' does not succeed to the throne of England he may have better success in proving title to the kingship of patent medicine men and advertisers."

We do not think that a better summary of the present status of "Prince" John Edward R. Guelph, president of the Amritam Company of Los Angeles, can be given than that just quoted from the *World*.

### RECOGNITION WITHDRAWN FROM SEVERAL MEDICAL SCHOOLS

State licensing boards are apparently becoming more active in their inspection of and in their refusal to recognize inferior medical schools. Reports have been received that in Illinois the State Board of Health has recently withdrawn recognition from the Hering Medical College of Chicago and also from two Missouri medical schools located in Kansas City, the Eclectic Medical University and the Kansas City Hahnemann Medical College. The former of these schools, we understand, is not in good standing with the Missouri State Board of Health. Also a report from Georgia states that the Georgia State Board of Medical Examiners has refused to examine the graduates of the Southern College of Medicine and Surgery of Atlanta. We are informed that in New York the registration of the Eclectic Medical College of the City of New York and the New York Medical College and Hospital for Women has been rescinded by the Board of Regents—this being equivalent to the withdrawal of recognition—the action to take effect July 1, 1912. As shown by the statistics of state board examinations published in The Journal last week, it is noticeable that states harboring low-grade colleges are themselves the recipients of the large majority of the graduates of those institutions. The licensing boards of some of these states are apparently beginning to realize this fact.

### "PROFESSOR" SAMUELS

Readers of The Journal have heard[1] of "Professor" Samuels, the quack who has made millions by selling a weak watery solution of sugar and salt at $5 an ounce. Until recently, Samuels made his headquarters at Wichita, Kan. The Journal exposed[2] his nefarious trade and asked editorially, "What's the Matter with Kansas?" that it should tolerate a fraud like Samuels. Kansas answered the question by making the state too hot for the quack. As a result, Samuels advertised that he was going to move to Detroit, Mich., so as to be located "nearer the center of the United States," thus indicating that he believed the public's ignorance of geography to be equal to its gullibility. He had barely got settled in his Detroit offices when The Journal called attention to the fact[3] and asked "What's the Matter with Michigan?" An answer was again forthcoming in no uncertain tones, when the public prosecutor raided Samuels' offices a week ago, arrested the "professor," seized his card-index of victims and carried off a barrel of sugar and a bin of salt. When arrested, the faker declared that he left Kansas because the climate of that state did not agree with his wife's health. It would probably be nearer the truth to say that he left Kansas for his own health. Every man who has the interest of the public at heart will congratulate the Detroit authorities if they succeed in making that city as unhealthful a place for Samuels to live in as Wichita had been made.

## Medical News

### ARIZONA

**New Officers.**—South Side Medical Society of Tempe and Mesa: president, Dr. B. B. Moeur, Tempe; secretary-treasurer, Dr. R. F. Palmer, Mesa.

**Personal.**—Dr. R. F. Palmer, founder and manager of the South Side Hospital, Mesa, has leased the institution to Mrs. M. E. Smith.——Dr. George D. Troutman, Tucson, has been appointed health superintendent of Pima County, vice Dr. W. V. Whitmore, resigned.——Dr. R. N. Looney, Prescott, has been appointed superintendent of public health, vice Dr. E. S. Godfrey.——Dr. F. E. Shine, Bisbee, retired president of the Arizona Medical Association, has been appointed a member of the State Board of Medical Examiners.

### ARKANSAS

**Hospital Notes.**—The City Hospital of Fayetteville, erected at a cost of nearly fifty thousand dollars and with accommodations for thirty patients, was dedicated recently.——St. Luke's Hospital, Little Rock, erected by Dr. J. P. Runyon, was recently opened. It has accommodation for fifteen patients and is equipped with all modern conveniences.

**Personal.**—Dr. H. O. Walker has been elected president of the Newport Board of Health.——Dr. R. L. Maxwell has succeeded the late Dr. D. B. Neal as physician to the Ada Thompson Memorial Home, Little Rock.——Dr. Henry Dickson has been chosen chairman of the Paragould Sanitorium.——Drs. James A. Foltz, St. Cloud Cooper, W. R. Brooksher, H. Moulton, J. G. Elberle, J. D. Southard, J. C. Amis and George F. Hynes have been elected directors of the Sparks Memorial Hospital, Fort Smith.——Dr. S. P. McConnell, assistant superintendent of the Arkansas Tuberculosis Sanitorium, Booneville, has resigned and will resume general practice. On the date of his departure Dr. McConnell was presented with a handsome watch charm by the patients.

**State Society Meeting.**—The thirty-sixth annual meeting of the Arkansas Medical Society was held in Hot Springs, May 13-16, under the presidency of Dr. Morgan Smith, Little Rock, the society being guests of the Hot Springs-Garland County Medical Society. The following officers were elected: president, Dr. Edward R. Dibrell, Little Rock; vice-presidents, Drs. G. A. Hebert, Hot Springs; St. Cloud Smith, Fort Smith, and R. Q. Patterson, Augusta; secretary, Dr. C. P. Merriwether, (reelected); editor of the state journal, Dr. William R. Bathurst, Little Rock; delegates to American Medical Association, Drs. Morgan Smith, Little Rock, and G. A. Warren, Black Rock; alternates, Drs. A. U. Williams, Hot Springs, and W. N. Yates, Fayetteville; councilors, first district, Dr. M. C. Hughey, Rector; second district, Dr. L. E. Willis, Newport; third district, Dr. T. B. Bradford, Cotton Plant; fourth district, Dr. E. E. Barlow, Dermott; fifth district, Dr. R. A. Hilton, Eldorado; sixth district, Dr. C. A. Archer, Ashdown; seventh district, Dr. R. Y. Phillips, Malvern; eighth district, Dr. W. A. Snodgrass, Little Rock; ninth district, Dr. F. B. Kirby, Harrison, and tenth district, Dr. J. T. Clegg, Siloam Springs. Little Rock was selected for the place of next meeting, May, 1913. At the Thursday session a reward of $500 was offered for the arrest of the person who during the closing days of the last session of the General Assembly, "took, stole or misplaced" Senate Bill 451, creating a state health commission.

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[1] The Journal A. M. A., Dec. 24, 1910, p. 2248.

[2] The Journal A. M. A., Oct. 21, 1911, p. 1372.

[3] The Journal A. M. A., March 23, 1912, p. 863.

## CALIFORNIA

**New Officers.**—Orange Medical Association, at Anaheim, May 7: president, Dr. Ida B. Parker, Orange; secretary, Dr. John Wehrly, Santa Ana.

**Doctors' Building for San Francisco.**—The construction of a store and office building at Eighteenth and Castro Streets, San Francisco, has been commenced. With the exception of the first floor, the entire building will be used as offices for physicians and dentists.

**Authorizes Hospital Directors to Build.**—Mrs. Whitelaw Reid is said to have authorized the directors of the Red Cross Hospital, San Mateo, to proceed with the construction of a new building, to cost $100,000. Mrs. Reid is building this hospital in memory of her mother, the late Mrs. Darius Ogden Mills.

**Personal.**—Dr. Starr K. Church, Madera, is ill with typhoid in Johns Hopkins Hospital, Baltimore.——Dr. Frank J. Bailey has been appointed health officer of Red Bluff.——Dr. William Friedberger, Stockton, health officer of San Joaquin County, has been appointed superintendent of the county hospital, vice Dr. J. D. Dameron, resigned, and Dr. R. B. Knight has been appointed health officer.

## IDAHO

**New Officers.**—Pocatello Medical Society: president, Dr. Casper W. Pond; secretary-treasurer, Dr. E. N. Roberts, both of Pocatello.

**Endorse Inspection Bill.**—The teachers of Ada County, at their meeting in Boise, April 20, endorsed the proposed medical inspection bill for the schools of Idaho.

**Personal.**—Dr. W. A. Wright, division surgeon for the Oregon Short Line at Pocatello, and acting surgeon-general of the state, has resigned and moved to Salt Lake City, Utah, and has been succeeded by Dr. E. N. Roberts.——Dr. Leo F. Castle, Pocatello, has been appointed house surgeon at Holy Cross Hospital, Salt Lake City, Utah.

## ILLINOIS

**Declared Not in Good Standing.**—The Hering Medical College of Chicago was declared not in good standing by the Illinois State Board of Health at its meeting, April 16. The college had been conditioned by the board for two years past and as it still failed to comply with the requirements, recognition was withdrawn.——Advices from the office of the State Board of Health state that after inspections recently made of the Eclectic Medical University of Kansas City, Mo., and the Kansas City Hahnemann Medical College, the board has declined to accord recognition to either institution.

**New Officers.**—Macoupin County Medical Society, at Virden: president, Dr. T. W. Morgan, Virden; secretary-treasurer, Dr. T. D. Doan, Scottville.——Henry County Medical Society, at Kewanee, May 2: president, Dr. W. W. Adams, Atkinson; secretary-treasurer, Dr. G. H. Hoffman, Kewanee.——DeKalb County Medical Association, at DeKalb, May 8: president, Dr. Anderson, DeKalb; secretary, Dr. Harry Wright, Hinckley.——Woodford County Medical Society, at Eureka, May 7: president, Dr. C. V. Higby, Eureka; secretary-treasurer, Dr. Millard, Minonk.——McHenry County Medical Society, at Woodstock, May 17: president, Dr. James I. Wernham, Marengo; secretary-treasurer, Dr. A. B. Smith, Woodstock.——Mercer County Medical Society, at Aledo, May 7: president, Dr. H. T. Walker; secretary-treasurer, Dr. A. N. Mackey, both of Aledo.

### Chicago

**Money Raised for Hospital.**—At the annual luncheon of the Mothers' Aid Society of the Chicago Lying-In Hospital, May 16, Mrs. Kellogg Fairbank stated that a hospital fund of $72,000 has been raised and that work would begin in June on the building which is to be erected on Fiftieth Street and Vincennes Avenue.

**Memorial to Dr. Brower.**—A large mosaic picture back of the altar was unveiled last Sunday at the Church of the Epiphany, Ashland Boulevard and Adams Street, as a memorial to Dr. D. R. Brower, dean of the neurologists of Chicago, who died in 1909. The "Resurrection" is the subject of the unusually beautiful altar piece; the stones used were imported from Venice. The address at the ceremony was a notable tribute to the many-sided life work of Dr. Brower, and to the high ideals of the medical profession in general.

## INDIANA

**Personal.**—Dr. James H. Ford has been elected president of the Indiana Board of Health.——Dr. John Kyle, Indianapolis, is taking an extensive trip on the Pacific Coast.——Dr. C. B. Gutelius, Indianapolis, who gave up his practice on account of ill health a year ago, has recovered and resumed practice.——Dr. William Clevenger, Indianapolis, sailed for Europe, May 15.——Dr. D. W. Fosler has been appointed superintendent of the Indiana Dispensary, vice Dr. J. V. Reed, resigned.——Dr. A. P. Buchman, Fort Wayne, has retired from practice and moved to Des Moines, Iowa.——Dr. and Mrs. T. W. Moorhead, Terre Haute, sailed for Europe, May 18.——A drink-crazed man shot three times with a revolver at Dr. Hamilton P. Franks, Muncey, May 8, but fortunately without effect.——Dr. B. F. Whitmer, Goshen, was knocked down by a runaway horse, May 11, and sustained painful injuries.——Dr. W. H. Coleman, Evansville, is convalescent after operation for appendicitis performed at Deaconess Hospital, May 6.

## KENTUCKY

**College Will Suspend.**—Following the withdrawal of recognition by the Kentucky State Board of Health, the Louisville National Medical College has notified the board of its suspension of operation following its commencement May 23.

**Personal.**—Dr. W. E. Render, second assistant physician at the Hopkinsville State Hospital, has been temporarily transferred as first assistant physician to the Lexington State Hospital.——Dr. W. E. Allen, Chestnut Grove, narrowly escaped drowning in a flooded creek, which he attempted to ford, April 29.——Dr. Ap Morgan Vance, Louisville, has returned from the south and resumed his professional work.——Dr. John M. Wells, Carlisle, has resigned as health officer of Nicholas County.

**Reciprocity Established with Oklahoma.**—A letter from Dr A. T. McCormack, assistant secretary of the Kentucky Stat Board of Health, states that reciprocal relations have bee established between Kentucky and Oklahoma, either on th basis of a written examination or on a diploma from reputable medical college without examination, if the diplom and the license were granted prior to September 1, 1907. Th applicant must have been a resident of the state from whic he applies for at least a year, and during that time he mus have been a member of the local state and national medica societies of the school with which he is affiliated.

**Decision on Killing of Animals.**—The attorney-general ha rendered an opinion that the State Board of Health has right to order the killing of animals afflicted with disease that are communicable to human beings, while the Stat Livestock Sanitary Board has the right to kill stock whic has diseases communicable to other animals, but not t human beings. The significance of this decision is that cow which react to tuberculin are slaughtered under order of th State Board of Health without compensation to their owner while animals killed by order of the State Livestock Sanitar Board may be paid for by the fiscal court of the county i which the animals are destroyed. Representatives of th State Board of Health, dairymen and the State Livesto Sanitary Board held a conference with the governor a discussed the entire question of the tuberculin testing la In order to test the power of the fiscal court of a county pay the owner of a cow condemned as having tuberculos and killed by the order of the State Livestock Sanitary Boar a suit will be filed in Lexington and the Court of Appea will be asked to construe the law.

## MARYLAND

**In Commemoration of Early Physician.**—Easton held ex cises May 4, a commemorative of Dr. John Coats, first gra master and founder of the Grand Lodge of Masons of Ma land in 1787. Dr. Coats, a Philadelphian of good educati espoused the cause of the colonies in 1775 and was severely wounded in the storming of Quebec, and later commanded a company in the Eleventh Pennsylvania Regiment. At the close of the war he settled at Easton where he became impoverished and died, being buried at his own request, in the potter's field. The remains were later removed to Spring Hill Cemetery, Easton, where a monument was erected. Eulogies were pronounced at the grave of Dr. Coats, which was decorated with flowers.

**Bills Passed by the Recent Legislature.**—The following bills were passed by the recent legislature and received the governor's signature:

Increasing appropriation to State Board of Health and making it possible for the board to establish a bureau of sanitary engineering.

For improved registration of vital statistics.

Increasing the appropriation for tuberculosis work.

Reenacting midwifery laws and making them operative through the State Board of Health.

Abolishing the common drinking-cup.

Providing for report to State Board of Health of occupational diseases.

Providing for examination of dogs' heads for the diagnosis of rabies by the State Board of Health and for treatment of indigent patients exposed to the infection of hydrophobia.

Providing for the regulation of sale and distribution of tuberculin and other biologic products used in the diagnosis or prevention of disease in animals.

Providing for an appropriation to be expended by the organization committee of the Fifteenth International Congress on Hygiene and Demography.

The optometry bill and the antivaccination bill for Dorchester County were not reported from the hygiene committee.

#### Baltimore

**Johns Hopkins Commencement.**—At the annual commencement of Johns Hopkins University, June 11, Dr. William Crawford Gorgas, M. C., U. S. Army, will be the orator and will speak on his duties in the Canal Zone. President Remsen will make his last appearance as presiding officer of the exercises. The name of the medical department hereafter will be "The Graduate School of Medicine."

**Hospital School Opened.**—The children's Hospital School, the building for which was given by Mrs. William Painter as a memorial to her husband, was formally dedicated, May 11. Dr. William S. Thayer presided. Dr. Edward O. Janney, in behalf of Mrs. Painter, made the presentation speech. Dr. William H. Welch responded for the school, and the ceremonies concluded with the presentation of the keys by Mr. Arthur G. Brown to Dr. William S. Baer.

**Personal.**—Drs. W. E. Magruder, Sydney R. Miller and Flora Pollack have been elected trustees of the Prisoners' Aid Society of Maryland.——Dr. Caldwell Woodruff, assistant resident surgeon at Mercy Hospital, has resigned and will practice in Roanoke, Va.——Dr. William Breathwaite, recently appointed to the staff of the Isthmian Canal Commission Hospital, Cristobal, sailed for Panama, May 23.——Dr. Roland B. Whitridge has returned from abroad.——Dr. D. W. Cathell has been elected president, Dr. Robert S. Kirk, superintendent, and Dr. John Roth, assistant superintendent of the Eastern Dispensary.——Dr. George B. Reynolds, while making a professional call, was sandbagged and robbed of a gold watch and $100.——Dr. William A. Knell has been appointed health warden for the twentieth ward, vice Dr. H. J. Hahn, resigned.

### MASSACHUSETTS

**New Medical Examiners.**—Dr. Daniel P. O'Brien, New Bedford, has been appointed associate medical examiner by the fourth Bristol district; Dr. John J. McNamara, Brockton, for the first Plymouth district; Dr. Frank A. Woods, Holyoke, for Hampden County; Dr. George F. Curley, Milford, for Worcester County, and Dr. T. Morton Gallagher, Newton, for Middlesex County.

**Personal.**—Dr. Lewis M. Palmer, South Framingham, has been appointed a trustee of the Massachusetts Training Schools.——Dr. Willis E. Clark has been appointed resident surgeon at the Malden Hospital, vice Dr. C. F. K. Bean.——Dr. George C. Osgood, Boston, has been promoted to Major, Medical Corps, M. V. M., and assigned to the command of Field Hospital No. 1.

**State Medical Society.**—The one hundred and thirty-first anniversary meeting of the Massachusetts Medical Society will be held June 11 and 12, in John Ware Hall, Boston Medical Library, under the presidency of Dr. George B. Shattuck, Boston. The Shattuck lecture is to be delivered by Dr. David L. Edsall, formerly of St. Louis, but recently appointed a member of the faculty of Harvard Medical School, whose subject will be "The Clinical Study of Respiration."

### MICHIGAN

**New Officers.**—Detroit Oto-Laryngological Society: president, Dr. P. J. Livingston; secretary, Dr. Emil Amberg (reelected).

**Owen Bill Endorsed.**—The Flint Board of Commerce, May 14, and the Genesee County Medical Society, May 8, passed resolutions endorsing the Owen bill.

**New Sanatorium.**—Dr. A. B. Allen is making plans for the construction of a sanatorium in Mount Clemens to have accommodation for forty-five patients and to cost about $35,000.

**Search for Lepers.**—Dr. R. L. Dixon, secretary of the State Board of Health, Lansing, has gone to Gaylord to endeavor to intercept Samuel Izen, an alleged leper, who is reported to have broken quarantine. The state officers are now searching for a third leper suspect who is said to be in the junk business in Bay City.

**Personal.**—Dr. W. F. Martin, Battle Creek, is under treatment in Johns Hopkins Hospital, Baltimore.——Dr. H. E. Locher has been elected president of the Grand Rapids Board of Health.——Dr. Karl B. Rucker has been appointed chief physician of the State Reformatory, Ionia, vice Dr. Roy O. Knapp, resigned to accept the position of assistant medical superintendent at the State Hospital.——Dr. J. F. Denslow, recently appointed, has resigned as city physician of Muskegon.——Dr. John W. Bosman has been elected president of the Board of Health of Kalamazoo and Dr. W. E. Collins has been reappointed city physician.——Dr. A. Coulahan, De Witt, who has been ill in a Lansing hospital, is reported to be improving.——Dr. Albert I. Lawbaugh, Calumet, dean of the medical profession of the copper country, was the guest of honor at a testimonial banquet at the Miscowaubik Club, Calumet, April 24. Dr. W. H. Dodge, mayor of Hancock, was toastmaster, and addresses laudatory of Dr. Lawbaugh and his influence on medicine and surgery in Houghton County were made by various members of the profession.——Drs. H. E. Randall, M. S. Knapp and T. S. Conover, have been appointed members of the advisory medical board of Hurley Hospital, Flint.——Dr. B. E. Biggs, formerly superintendent of the Ionia City Hospital, has been appointed assistant superintendent at the State Hospital, Flint.

### MISSISSIPPI

**College Permanently Closed.**—Word is received that at the commencement exercises of the Mississippi Medical College, Meridian, May 11, it was announced that the college would not be reopened on account of adverse legislation passed by the last legislature.

**Personal.**—Dr. George Leavell, Oxford, is under appointment to go to China as a medical missionary.——Dr. W. B. Thomason, Jackson, has been appointed associate medical examiner for the Alabama Life Insurance Company, with headquarters at Birmingham.——Major Charles Le Baron, Gulfport, medical corps, N. G. Miss., has been appointed chief surgeon.——Dr. Robert W. Rowland, Jr., Jackson, has been placed in charge of the refugee camp at Vicksburg.

### MISSOURI

#### St. Louis

**Medical Library Club Election.**—At the annual meeting of the St. Louis Medical Library Association, May 15, the following officers were elected: president, Dr. N. B. Carson; vice-president, Dr. J. H. Duncan; secretary, Dr. N. Allison; treasurer, Dr. R. M. Funkhouser; librarian, Dr. F. J. Lutz, and trustees, Drs. F. A. Glasgow and Philip Hoffmann.

**Personal.**—Dr. George Dock has resigned as dean of Washington Medical School in order to devote more time to his duties as professor of medicine in the institution.——Dr. A. C. Kimball has been appointed a major in the medical corps, N. G. Mo., to date from Feb. 15.——The appointment of Dr. Wheeler Bond as a member of the City Hospital Board has been confirmed.——A memoir of the late Dr. Augustus C. Bernays, noted surgeon of St. Louis, written by his sister, Miss Thekla Bernays, has just been printed and is being distributed among the friends and admirers of Dr. Bernays.

**Hospital Notes.**—The managers of the Mayfield Memorial Hospital announced that they are ready to proceed with the new building, to be erected at a cost of about $200,000, on a site of five acres. Other buildings are to be added from time to time as required and the entire project will represent an investment of about one million dollars. It is to be under the control of the Baptist Churches of America.——The Central Jewish Council has intervened to prevent the erection of a hospital by the orthodox Jewish community, on the grounds that it may injure the present Jewish Hospital. The complaint of the orthodox Jews is that the present Jewish Hospital is not adhering strictly to the Jewish dietary laws. At a meeting held May 8, it was decided to build an addition to the hospital, to cost $75,000, this addition to contain a "kosher" kitchen.

## NEW JERSEY

**Personal.**—Colonel Henry Allers, Harrison, has been appointed chief surgeon of the Medical Corps, N. J., vice Dr. John D. McGill, Jersey City, resigned.——Dr. Lewis R. Souder, Atlantic City, is convalescent after an illness of nearly a year.——Dr. John B. Cassady, Burlington, is reported to be seriously ill.

**Mosquito Commission Named.**—The following men have been appointed as a commission toward the extermination of mosquitoes: Drs. H. H. Davis, of Camden; J. K. Bennett, of Gloucester City; W. A. Westcott, of Berlin, and Edward S. Sheldon, of Collingswood; and Messrs. Henry D. Moore, of Haddonfield and Andrew H. Moses of Merchantville.

**Amendments to Medical Practice Act.**—Dr. H. G. Norton, Trenton, secretary of the State Board of Medical Examiners, writes that the legislature amended the medical practice act so that hereafter an education equivalent to a standard four-year high school course must be completed before the student begins the study of medicine. Another amendment secured gives the board power to prosecute quacks and frauds. Dr. Norton also states that reciprocal relations have been established between New Jersey and Pennsylvania.

## NEW YORK

**New Board Appointments.**—State Board of Regents announced, on May 4, the following appointments as members of the State Board of Examiners: Drs. Arthur W. Booth, Elmira; William H. Park, New York City, and Aaron B. Miller, Syracuse.

**Registration Rescinded.**—Information recently received states that the Board of Regents, at a meeting held recently, rescinded the registration of the Eclectic Medical College of the City of New York and of the New York Medical College and Hospital for Women, and that the action will become operative July 1. This is equivalent to withdrawal of recognition from the institutions named.

**Women Elect Officers.**—The Women's Medical Society of New York State held its sixth annual meeting in Buffalo, May 10, and elected the following officers: honorary president, Dr. Grace Peckham Murray, New York City; president, Dr. Helene J. C. Kuhlman, Buffalo; vice-presidents, Drs. Angenette Parry, Josephine Walter, New York City, and Edith W. Stewart, Hume; secretary, Dr. Marion Craig Potter, Rochester; treasurer, Dr. Edith R. Hatch, Buffalo; and councilors, first district, Dr. S. Josephine Baker, New York City; second district, Dr. Anna Craig, Kings Park; third district, Dr. Julia G. McNutt, Albany; fourth district, Dr. Julia Kimball Qua, Amsterdam; fifth district, Dr. E. Elizabeth McKnight, Oswego; sixth district, Dr. Sara E. Green, Elmira; seventh district, Dr. Evaline P. Ballintine, Rochester, and eighth district, Dr. Jane Wall Carroll, Buffalo. The next meeting will be held in Rochester.

**Vital Statistics for March.**—The death rate for the month of March in this state was 16.3, which is about that of the average for the month of March for the past twenty years. The number of deaths, however, was almost 1,000 below the mortality of the last two years. One-third of the deaths occurred at an age past sixty. In the summer hardly more than one-fifth of the deaths are of old people. The decade below sixty was likewise increased. Pneumonia caused 1,200 deaths and other respiratory diseases as many more, so that taken together this group of diseases exceeded all others. During March there was a decrease in pneumonia as compared with January and February, while other acute diseases of the lungs have increased. A large factor in the high mortality of March was diseases of the circulatory system, in the last three months 16.7 per cent. of the deaths being from this class of diseases. The nervous system furnished the next largest number of deaths, about one-half as many as from circulatory diseases. Measles and scarlet fever had their customary spring increase.

**Personal.**—Dr. Joseph Roby has succeeded E. M. Moore, resigned, as chief of staff of the Infants' Hospital, Rochester. Dr. Moore has been appointed honorary chief of staff and Drs. E. W. Mulligan, Ralph R. Fitch, D. F. MacDonell, E. W. Ruggles, E. L. Hanes, A. C. Snell and B. A. Richards have been appointed members of the consulting staff.——Dr. Gard W. Foster, Auburn, has returned from abroad.——Dr. R. M. Pearce, professor of research medicine in the University of Pennsylvania, delivered the annual Alpha Omega Alpha address of the Gamma of New York Chapter at the Syracuse Medical School, May 21, on "Medical Education."——At the meeting of the board of managers of the State Institute for the Feeble-Minded, Syracuse, resolutions were adopted praising the personality and the work of Dr. James C. Carson, who recently resigned after twenty-seven years of service at the head of the institution.——Dr. LeRoy W. King, Lowville, was operated on for appendicitis in the Watertown City Hospital, May 10, and is reported to be doing well.——Dr. A. Walker, Macedon, fractured his right arm while cranking his automobile, May 10.——Dr. L. A. Frazier, Amsterdam, who is about to retire from the active practice of medicine and move to Mechanicsville, is to be given a farewell dinner by the Amsterdam City Medical Society.——Dr. Walter T. Diver, Troy, has returned from abroad.——Dr. A. F. Miller, Batavia, was seriously injured in an automobile accident, May 3, and was taken to a hospital in Buffalo.——Dr. F. W. Sears, Syracuse, who has been seriously ill with influenza in Baltimore, has returned home convalescent.

### New York City

**New Officers.**—Flatbush Medical Society, May 10: president, Dr. William S. Applegate, Brooklyn; secretary, Dr. William H. Bayles.

**Personal.**—Dr. John M. Hall, Quarantine, N. Y., has been appointed second deputy health officer, vice Dr. E. S. Rimer, Rosebank, resigned.

**Raising Funds for Summer Campaign.**—The Diet Kitchen Association has begun a campaign to raise $50,000 for the maintenance of milk stations in the congested districts of the city. The association keeps nine stations open throughout the year.

**Obstetrical Society Elects Officers.**—At the meeting of the New York Obstetrical Society on May 14 the following officers were elected for the ensuing year: president, Dr. George Gray Ward, Jr.; vice-president, Dr. Samuel M. Brickner; secretary, Dr. Howard Canning Taylor; treasurer, Dr. Hermann Grad.

**Poliklinik Dinner.**—The staff of the German Poliklinik celebrated the twenty-ninth aniversary of the institution, May 17. Dr. Ludwig Weiss presided as toastmaster, and narrated the history of the institution from small beginnings until it now treats 75,000 patients annually and has developed great financial power. Dr. H. J. Boldt spoke of the advancement o the institution in the way of erecting a hospital, and othe members of the board of trustees testified as to the growth and value of the institution.

### Buffalo

**Harrington Lectures.**—The Harrington lectures arranged b the medical faculty of the University of Buffalo will be delivered in Alumni Hall by Dr. Ludvig Hektoen, Chicago, May 2 to 31, on "Immunity."

**Examination for Hospital Superintendent.**—A competitiv civil service examination is announced for the position of medical superintendent for the J. N. Adam Memorial Hospital fo Incipient Tuberculosis at Perrysburg. The position offers salary of $2,000 a year.

**New Hospital.**—Bids are being secured on the plans an specifications of the new hospital for the care of malignan diseases which has taken over the Gratwick Cancer Laborator and will continue its work. The building first to be constructed will cost $65,000 and will accommodate twenty-fiv patients.

**Personal.**—Dr. Herbert U. Williams, professor of patholog in the University of Buffalo, has been made acting dean, vic Dr. M. D. Mann, resigned.——Dr. Roswell Park has bee selected as chairman of the citizens' committee to arrange f the International Congress of School Hygiene to be held i Buffalo next year.

**Municipal Hospital to Be Built.**—Initial steps have bee taken for the erection of the Municipal General Hospital. site of 82 acres has been acquired at a cost of $20,000, noti of intention for an appropriation of $600,000 has been passe The first group of buildings will be wards for advanced cases tuberculosis, and this department will be named after Dr. Jo H. Pryor in recognition of his services in this special field.

## OHIO

**New Officers.**—Union County Medical Society, at Richwood, May 3: president, Dr. A. B. Swisher; secretary-treasurer, Dr. Angus MacIver, both of Marysville.

**Physicians' Office Buildings Popular in Columbus.**—Dr. Frank Winder has repurchased the Barnhill property, Columbus, and will remodel it, making five apartments for physicians.——A twenty-six room building, at Grant and State Streets, is being built for Dr. C. T. Okey; a like building on State Street for Dr. Earl Gilliam. Dr. S. Leach has just completed a stucco building for similar purposes on North High Street, and Drs. W. D. Inglis and Swope have remodeled a building for physicians' offices. On Goodale Street, Dr. J. A. Riebel has made excavations for a three-story building, to be used for physicians' offices.

## OREGON

**Personal.**—Dr. Calvin S. White, Portland, secretary of the State Board of Health, fell recently, fracturing the left ulna and dislocating the left elbow.——Dr. R. D. Byrd has resigned his position as physician to the state penitentiary, Salem.

**Doctors' Building Planned.**—The Morrison Trust Company has contracted to erect a building at Seventh and Morrison Streets, ten stories in height. All but the lower two stories of this building are to be arranged for physicians' offices and the structure is to be named "The Doctors' Building."

**Rush Graduates Organize.**—The Oregon Rush Alumni Association was organized in Portland, May 16, with an initial membership of twenty-eight. The following officers were elected: president, Dr. L. W. Hyde; vice-president, Dr. Charles B. Frisbie, and secretary-treasurer, Dr. C. J. McCusker, all of Portland.

**College Changes.**—At the twenty-fifth annual meeting of the faculty of the Medical Department of the University of Oregon, Portland, May 9, Dr. Simeon E. Josephi, dean of the faculty since the organization of the institution, resigned and Dr. Kenneth A. J. Mackenzie was chosen his successor. As a mark of esteem and respect the retiring dean was honored by his colleagues with a banquet at which he was presented with a silver pitcher and tray, the presentation speech being made by Dr. George B. Story.

## PENNSYLVANIA

**New Officers.**—Medical Club of Harrisburg: president, Dr. Samuel Z. Shope; and secretary, J. Harvey Miller.

**Hospital News.**—A charter has been granted the Nesbitt East Side Hospital about to be erected on Wyoming Avenue, Dorranceton, Wilkes-Barre.——A private hospital is to be located in the residence of Mrs. Alexander U. Logan, Parnassus, by four ladies who have had long experience in hospital work.

**Antituberculosis Fight.**—A charter for the Erie Antituberculosis Society was granted April 29. Application for this charter was made by Drs. George B. Kalb, J. W. Wright and others interested in the establishment of a local sanitarium for tuberculosis. Mr. George D. Shelden has given as a site a twelve-acre farm near the city, said to be worth about $10,000.

**State Vaccination Commission to Meet in Atlantic City.**—The Pennsylvania State Vaccination Commission, appointed by the governor to make inquiries into the subjects of vaccination and small-pox, will probably hold its session at Atlantic City during the meeting of the American Medical Association. Physicians who have had large experience with vaccination or small-pox and who are in position to give what would constitute valuable testimony before the association, are requested to communicate with Dr. Jay Schamberg, 1922 Spruce Street, Philadelphia.

**Personal.**—Dr. Z. C. Myers, New York, who recently was operated on in the University of Maryland Hospital, Baltimore, is reported to be convalescing.——Dr. P. A. Noll, Dallastown, who fractured his patella in a fall last week, has not yet recovered the full use of his leg.——Drs. George B. Kalb, J. W. Wright and Frank P. McCarthy have been elected directors of the antituberculosis society of Erie.——Dr. S. N. Traver Harrisburg, Steelton, has returned from Erie and will locate in Harrisburg.——Dr. James W. Walker was shot and painfully wounded at his home in Melrose Park, May 15, by a man who is said to have been intoxicated at the time.——Dr. James W. Geist, Wilkes-Barre, Pa., has been appointed Captain Medical Corps, N. G. Pa., and assigned to the Ninth Infantry.

### Philadelphia

**Hospital Officers Reelected.**—Contributors to the Pennsylvania Hospital held their one-hundred sixty-first annual meeting and luncheon May 6, and reelected the board of managers.

**Club to Entertain Presidents.**—The medical club of Philadelphia will hold a reception at the Bellevue-Stratford, June 7, in honor of the president, president-elect and secretary of the American Medical Association and the president of the Medical Society of the State of Pennsylvania.

**Personal.**—Dr. Mason McCollin was recently injured about the head and body in a runaway accident, May 3, and was removed to the Medico-Chirurgical Hospital.——Dr. William M. Welch was given a dinner at the Hotel Majestic by the Northern Medical Association, May 30, in celebration of his completion of one-half a century of practice.

**Entertainment Committee for Foreign Visitors.**—At a preliminary meeting of the citizens' committee on plans for the entertainment of the German Physicians' Vacation Study Society, numbering about 200, who visit the United States in September, Dr. James M. Anders was elected president, and Dr. Albert Bernheim, secretary of the committee.

**Better Water Supply for West Philadelphia.**—The chief of the Bureau of Water announced on May 13 that plans are being prepared for the improvement of the West Philadelphia water supply, the work to be done with $300,000 to be appropriated from the new loan. Changes will be made in the Belmont filters, which increase the filtration capacity from 40,000,000 gallons a day to 60,000,000 gallons. This will necessitate a larger pipe line to carry the water from Belmont to the Georges Hill reservoir, and will enable the bureau to keep the water in that reservoir at a higher level and thus increase the pressure in West Philadelphia.

## TENNESSEE

**Alumni Meeting.**—The second annual banquet of the Alumni Association of the Medical Department of Lincoln Memorial University, Knoxville, and the old East Tennessee Medical College was held in Knoxville, May 9, and Dr. Charles F. Davis, Knoxville, was elected president. Dr. G. H. Henderson presided as toastmaster and addresses were made by Rev. Frederick N. Avery, Cleveland, Ohio, who recounted the history of the university, and Dr. J. Q. A. West gave reminiscences of olden days at the institution.

**New Officers.**—Middle Tennessee Medical Association, thirty-sixth semiannual session at Pulaski, May 16-17: president, Dr. C. L. Goodrich, Fayetteville; secretary-treasurer, Dr. R. W. Billington, Nashville.——West Tennessee Medical and Surgical Association, twenty-first annual session at Memphis, May 16-17: president, Dr. J. T. Herron, Jackson; secretary-treasurer, Dr. I. A. McSwain, Paris, (reelected). The association adopted a resolution favoring the passage of the Owen bill.——Morgan County Medical Society, reorganized at Oakdale, May 13: president, Dr. John W. L. Cooper; secretary-treasurer, Dr. W. E. Gallion, both of Oakdale.

## TEXAS

**County Secretaries Meet.**—The annual meeting of the State Association of the County Secretaries of the State Medical Association of Texas was held, May 8, in Waco, and the following officers were elected: president, Dr. Thomas Dorbandt, San Antonio; vice-presidents, Drs. J. S. Calhoun, Henrietta, and R. H. Cockran, Coleman, and Secretary-treasurer, Dr. J. E. Robinson, Brownwood.

**Personal.**—Dr. Joseph H. Reuss, Cuero, has been appointed chief surgeon of the San Antonio and Aransas Pass Railroad, vice Dr. Amos Graves, San Antonio, deceased. The headquarters of the hospital department are to be removed to Yoakum.——Dr. C. T. Moffitt, Beeville, is reported to be seriously ill with cerebrospinal meningitis.——Dr. Henry Hartman, Temple, has been appointed state bacteriologist, vice Dr. Samuel N. Key, Austin, resigned.——Dr. E. Toomim has been appointed health officer, Waco, and Dr. H. E. Hoke, state chemist and food inspector.

**Meeting of State Association.**—The forty-second annual meeting of the State Medical Association of Texas was held in Waco, May 7-9, under the presidency of Dr. J. H. McCracken, Mineral Wells. San Antonio was selected as the next place of meeting and the following officers were elected: president, Dr. J. S. Turner, Dallas; vice-presidents, Drs. J. B. McKnight, Brady; O. L. Norsworthy, Houston, and J. W. Overton, Sweetwater; councilors, fourth district, Dr. S. C. Parsons, San Angelo, reelected; eleventh district, Dr. Albert Woldert Tyler; thirteenth district, Dr. H. Ball, Crystal Falls (reelected); fourteenth district, Dr. F. D. Boyd, Fort Worth (reelected); delegates to the American Medical Association, Drs. W. B. Russ, San Antonia reelected, and J. H. McCracken, Mineral Wells. The report of the committee on public policies and legislation urged the members to induce every senator and representative in congress to support the Owen bill. Objections were urged to the amendment of the medical practice act, and recommendations were made that a state insanity commission and a system of detention hospitals for the insane be established.

## VIRGINIA

**New Officers.**—Northern Neck Medical Association, at Reedville, May 4: president, Dr. I. E. Cockrell, Reedville; secretary-treasurer, Dr. R. O. Lyell, Warsaw.

**Tuberculosis Hospital Planned.**—Preliminary plans adopted for a new reception hospital for the Catawba Sanatorium, to be built near Salem, provide for an institution of forty beds. A central administration building is to be constructed and the patients will be located in wings on either side.

**Personal.**—Dr. F. M. Hodges, Richmond, sailed for Europe, May 8.——Major S. R. Sayers, Wytheville, has been appointed chief surgeon of the Second Brigade, Virginia Division, United Confederate Veterans.——Dr. G. B. Lawson, Roanoke, has been appointed a member of the State Board of Medical Examiners, vice Dr. Rawley W. Martin, Lynchburg, deceased.——Dr. Joseph C. Dunford, Portsmouth, was painfully injured in an automobile accident, April 23.

## GENERAL

**Balneologists Organize.**—The American Association for Hygiene and Public Baths was organized in New York City May 15. Dr. Simon Baruch was elected president and Dr. Joseph E. Gichner, Baltimore, a director. It was decided to hold the next meeting of the association May 30, 1913.

**Frisco Surgeons Hold Meeting.**—At the eleventh annual meeting of the Frisco System Medical Association held in Springfield, Mo., May 13 and 14, the following officers were elected: president, Dr. W. S. McDonald, Fort Scott, Kan.; vice-presidents, Drs. J. R. Dawson, Birmingham, Ala., and B. C. Schwab, Sapulpa, Okla.; secretary, Dr. H. N. Chapman, St. Louis; treasurer, Dr. W. A. Camp, Springfield.

**Advertisements for Medical Positions.**—The power of advertising is being recognized by those in charge of hospitals and other health enterprises. Boston is advertising for a health commissioner to fill the position to be vacated by the retirement in near future of Dr. Samuel H. Durgin, and Montreal General Hospital is seeking an experienced physician for general superintendent.

**Approaching Pan-American Medical Congress.**—The Sixth Pan-American Medical Congress will convene at Lima, Peru, the first week in August, 1913, in connection with the Latin American Medical Congress and the Congress of Hygiene. The international executive committee includes two members from each of the various countries of North and South America, except that the United States has four members in the committee. Round-trip excursions are being planned from New York and New Orleans by way of Mexico to Panama and down the coast to Peru, returning by the new Trans-Andes railroad through the tunnel to Buenos Aires or otherwise as desired. It is expected that the Panama canal will be ready for the steamer carrying the delegates from the United States. Among the attractions offered in Peru are trips to the ruins of the Incas, etc. The congress is to be divided into eight sections on the usual subjects.

**Bequests and Donations.**—The following bequests and donations have been announced:

Johns Hopkins Hospital, Gynecologic Department, Baltimore, $5,000; Harper Hospital, Detroit, $30,000, by the late Miss Octavia W. Bates.

Mount Sinai Hospital, New York, $10,000, by the late Jacob W. Mack.

Rockford (Ill.) Hospital, $15,000, by the late Mrs. A. Emmagene Paul, Chicago.

Paterson (N. J.) General Hospital, $2,000, receipts of the recent charity ball.

Harvard Medical School, Boston, $10,000, from Mrs. William H. Underhill for a fund, the income of which is to be used for original investigation into the diseases and disturbances of the nervous system.

Worcester (Mass.) Memorial Hospital, $10,000, by the will of Milton G. Higgins, for a nurses' home.

Children's Hospital, Philadelphia, $5,000; Pennsylvania Hospital, Philadelphia, over $5,000, by the late Thomas W. Haldron.

Germantown Hospital, Philadelphia, a contingent bequest of $100,000, by the late Frank J. Firth.

Philadelphia Hospital for Women, $5,000; Seaside Hospital for Invalid Women, Atlantic City, N. J., $1,000; Kensington Hospital for Women, $1,000, and the residue of the estate to the Women's Hospital, Philadelphia, by the late Delphine T. Hopper.

St. Joseph's Hospital, Syracuse, $25,500; Women's and Children's Hospital, Syracuse, $19,000, and the Homeopathic Hospital, Syracuse, $5,500, the proceeds of the general hospital fund recently solicited.

The will of Augustus W. Openhym leaves $275,000 in trust which on the death of his wife will be divided in three portions: one to Mount Sinai Hospital, New York City, for the maintenance of a free ward; one to the German Hospital to provide rooms at lower than the regular rates for worthy patients, and the third to Columbia University to establish the Openhym fund for research work into the cause, prevention and cure of cancer, with the provision that if this work became unnecessary the fund shall be used for research in other diseases.

St. Vincent's Hospital, New York City, $10,000; Hospital for Ruptured and Crippled Children, New York City, $5,000, by the will of Katherine L. D. Harnett.

Mount Sinai Hospital and Montefiore Home for Chronic Invalids, New York City, $2,000 each; General Memorial Hospital for the Treatment of Cancer and Allied Diseases, $1,500, by the will of Lewis S. Wolff.

Mount Sinai Hospital, Beth Israel Hospital, German Hospital Dispensary, Montefiore Home for Chronic Invalids, Presbyterian Hospital and St. Vincent's Hospital, New York City, each $5,000, by the late Moses Weinmann.

## FOREIGN

**Death of Pribram.**—Hofrat Prof. Alfred Pribram of the German university at Prague died suddenly last month, aged 71. He has been professor of medical pathology since 1873 and has long been director of the first medical clinic. Among his numerous works, his "Grundzüge der Therapie" passed through a second edition in 1907.

**Honors for Roux of Lausanne.**—The local medical society at Lausanne, Switzerland, celebrated recently with much ceremony the twenty-fifth anniversary of the connection of Prof. C. Roux with the Lausanne public hospital. A check for over $10,000 (51,914 francs), to which 1,180 donors had subscribed, was presented to him and turned over at once by him to the special endowment of the local surgical clinic. Roux' contributions to surgery are well known, especially his technic for gastro-enterostomy, and he was long on the editorial staff of the *Revue Médicale de la Suisse Romande.*

**Honors for von Jaksch.**—The completion by Rudolf von Jaksch of twenty-five years as professor of internal medicine in the university at Prague was celebrated recently by his friends and pupils. The *Prager med. Wochenschrift* issued a special number in his honor and a *Festschrift* was presented to him. His contributions to scientific literature number 209 to date. Among the most noteworthy is his work on diagnosis, which was epoch-making in its day and even now ranks as one of the most widely accepted authorities in this field. It has been translated into six languages. His work on splenic anemia is sufficiently recent to be recalled by every one. His father was an eminent internist and professor at Prague before him.

## LONDON LETTER

*(From Our Regular Correspondent)*

London, May 18, 1912.

### The Select Committee on Nostrums

The Select Committee appointed by the House of Commons to inquire into the law and advertisement of "patent medicines" (nostrums) has met for the first time to hear evidence. The first witness examined was Sir Nathaniel Highmore, Solicitor to the Customs and Excise, who gave evidence as to the law regulating the sale of nostrums and the revenue from this source. Duties on nostrums were first imposed in 1783. They took the form of a double duty which is still maintained. Each vender must annually take out a license for which the charge is 5 shillings ($1.25). On each article sold a duty is levied according to its price. On an article sold for a shilling (24 cents), the duty is 1½ pence (3 cents); exceeding a shilling and not exceeding 2½ shillings, 3 pence (6 cents); exceeding 2½ and not exceeding 4 shillings, 6 pence (12 cents), and so on up to articles exceeding in value 50 shillings ($10), on which the duty is 20 shillings ($4). The enormous sale of nostrums may be judged from the following figures of revenue derived from them, bearing in mind that most of the articles bear the lowest duty (3 cents). For the year ending last March the number of licenses issued (i. e., of persons vending nostrums) was 43,117, and the duties on nostrums, apart from licenses, was $1,600,000. As the legislation on nostrums is over a century old there are some difficulties in its administration and in defining what constitutes a nostrum. The practice is to be guided by the fact that an article is recommended as a remedy for disease or not. Thus a soap recommended as a hair wash is not liable to duty, but if recommended for the prevention or cure of any disease of the scalp it is. In the same way proprietary articles advertised in the medical press to be used for dispensing are not liable to duty. Sir Nathaniel Highmore answered in the negative the important question whether there is anything in law to prevent any person from making a mixture containing any substance, except obvious poisons, advertising it as a cure for disease and selling it broadcast on the payment of stamp duty. It is this fact which actuates those who have demanded this inquiry and it is only from legislation on this point that any good can be hoped for.

The consternation produced by this inquiry among nostrum-mongers and others interested in the trade is shown by an article entitled "A Huge Revenue Threatened," which has appeared in the *Newspaper Owner*, a journal published in the interest of newspaper proprietors. It states that the capital expended by the owners of proprietary articles during the last hundred years is "in the region of one hundred million" ($500,000,000). A large part of this enormous sum has gone into the pockets of newspaper owners, who have published not only mendacious advertisements, but puffs disguised as editorials. The present advertising expenditure is estimated at $10,000,000 per annum. Morning papers are said to derive at least a third of their revenue from advertisement of nostrums and evening and weekly papers as much as half or even three-quarters. Each newspaper is invited to ask itself the question, "Am I to risk losing my share of two million (pounds) per annum?" The article has at any rate the merit of frankness. It appeals only to the mercenary motives of those interested without any of the hypocrisy, so usual in politics, when private interests pretend to exist for the public good.

### The National Health Week

The remarkable success of the "National Health Week," which is one of the results of a movement started only a year ago by a small philanthropic society of engineers, has been described in my previous letter. Some further particulars can now be given. Public attention in various parts of the country has been focused on the question of the national health. The coordination of a large number of voluntary isolated services, official, religious, philanthropic and scholastic, has been achieved. Health officers have been particularly pleased with the amount of amateur interest which has been focused on health problems. It has been shown that the amateur, if willing to be directed, can prove a valuable force. A vast amount of help has been received both before and during the week from municipal authorities; from voluntary health societies, by lending kinematograph films and providing lectures; from the clergy by sermons; from physicians by lectures and demonstrations; from schoolmasters, teachers and class leaders by instruction of their flocks; from merchants by the loan of advertising space; from artists, journalists and business advisers along the lines of their specific work. About 100 towns throughout the country were approached mainly through individuals, with the suggestion that they should form committees for carrying out a Health Week to begin on April 28. Such committees were formed in about forty towns, either with or without municipal sanction. In addition, in about 200 towns individuals endeavored to promote some sort of health celebration. The Health Week Committee laid down a suggestion program in vague terms, feeling that the only chance of success was to leave to local initiative the proper course to take under the circumstances. The chief feature in the program was the town's meeting with the mayor in the chair and the health officer as one of the speakers. The municipality thus took the people into its confidence, the health officer describing what had been done, what is being done, and what it is hoped to do in promoting the public health. In other places parts of the program were sermons, lectures and demonstrations of cookery, nursing, physical drill, morris dancing, etc. The most elaborate program was undertaken at Halifax, the central feature being a town meeting of 3,000 people. Sermons were preached in forty places of worship and instruction given in a large number of Sunday and adult schools. In all the day schools the first lesson each morning during the week was devoted to some health subject. On May day twenty-five schools were thrown open for exhibition of physical exercises, morris dancing and organized games. In another town, Warrington, some of the factories ceased work for half an hour while lectures were given by the health officer or his assistants.

## PARIS LETTER

(*From Our Regular Correspondent*)

Paris, May 10, 1912.

### Municipal Elections and Public Hygiene

During the recent municipal campaigns throughout France the Association ouvrière pour l'hygiène et la sécurité des travailleurs has prepared a list of demands regarding public health. The Association urged the necessity of convincing future municipal counselors that the first duty of municipality is to protect public health. It recommended voting only for candidates who promise to administer a program of hygienic reform, directing the struggle chiefly against infant mortality; in addition, drawing up each quarter a detailed report of the hygienic work of the municipal council and, on each occasion, in all public assemblies, to interpellate candidates and to require of them some account in this respect.

### French Medical Journalism Judged by an Italian

Dr. Marco Luzzatto, of Padua, recently published in the *Revista veneta di scienze mediche*, a study of medical journalism in different countries. He finds that French medical literature differs from the German especially in the predominance of clinical medicine, properly so called, over scientific and laboratory medicine. This is due chiefly to the temperament, rather synthetic than analytic, of the race, to the example and influence of great clinicans, such as Laënnec, Trousseau and Charcot, and, finally, to the abundance of hospital material. While, indeed, until a few years ago, German scientific work came almost entirely from the universities, on the other hand, since the beginning of the nineteenth century, the hospitals of Paris have become centers of clinical study. According to Dr. Luzzatto, no one is more capable than the French of recognizing the characteristics of a new morbid syndrome or its varieties, no one can present these facts in a more expressive manner, a little schematic, possibly, but perfectly clear and intelligible. He cites the numerous clinical syndromes described in so masterly a fashion by Charcot and, more recently, by Pierre Marie. In the course of the last twenty years, however, French medical journalism has lost a little of this distinctively clinical character, and laboratory researches have been given their legitimate place. The *Journal de physiologie et de pathologie générale* and the *Archives de médecine expérimentale* express the tendency toward a rigorously modern and scientific production. Physiologic and pathologic chemistry alone is still very far from the broad and powerful development it has already attained in Germany. On the other hand, France excels in the domains of neurology and of technical journalism. The *Revue neurologique* can compete with the best German *Centralblätter*, if indeed it is not superior to them. In no other literature does Luzzatto find anything equal to the *Iconographie de la Salpêtrière*, which, in combining the charm of the artist with the seriousness of the scientist, shows the spirit of Charcot.

### The Physiognomy of Murderers

Drs. A. Marie and L. Mac-Auliffe have reported, in one of the recent meetings of the Académie des Sciences, the results of their study of the physiognomy of murderers, based on metrical photographs (face and profile) of 250 condemned murderers of whom thirty-five are women. Of this number, asymmetries have been found in the following proportion: predominance to right, seventy-three; predominance to left, forty-eight. Large jaws, broad and high, have been observed in seventy cases.

From their researches Marie and Mac-Auliffe conclude that murderers are recruited chiefly from the muscular type (rectangular face, presenting equal proportions from the line of hair growth to the root of the nose, from the root of the nose to its base, from the base of the nose to the point of the chin). The massive development during growth, observed in many murderers, is not peculiar to them, but is also found among respectable people; this development explains the frequency of the broad measurement of the extended arms described by the school of Lombroso. A rather large number of murderers have a combination of the muscular and digestive types (pyramidal face, with broad jaws, flat nose, low and narrow forehead). It is quite natural, as has been said, that "gross appetite served by great muscles" might induce a murderous act. This curious combination explains the frequency among murderers of large jaws, described many times by anthropologists and wrongly attributed to the existence of a theoretic crude type, more or less closely related to the anthropoid apes.

## BERLIN LETTER

(*From Our Regular Correspondent*)

Berlin, May 3, 1912.

### The Duel Compulsory Among Army Medical Officers

As is well known the idea is still widely prevalent in Germany that a personal insult can be wiped out only by the shedding of blood, and in the army it is such a powerful tradition that every one who does not act according to it, that is, who refuses a challenge to a duel in case of a serious insult, is compelled to resign. Notwithstanding the fact that protests have been made for a long time and especially against compulsory duelling, in assemblies, in the press and in parliament, this evil custom has not been abandoned. Some years ago an imperial edict declared that the duel should be reserved for extreme cases, and that the honorary councils (Ehrenräte) should hinder as far as possible all duels for personal quarrels. Notwithstanding this, every year several affairs have occurred, in which usually one of the contestants loses his life. For this reason an affair of the kind which occurred two years ago but which has only of late become known, is again attracting very great attention and has led to a lively debate in the press and in the Reichstag. This case is of special interest to physicians because it concerned two of our colleagues. In a small city in Würtemberg one physician was insulted by another, a staff surgeon in the reserve. The occasion was a quarrel in reference to the Krankenkassen. The local military court of honor decided that he must challenge his opponent to a duel. The physician, however, refused to obey this order because considerations of religious duty, of human law, of logic and of his family forbade him to challenge the other to a duel. After this statement, the court of honor decided that in consequence of this breach of professional ethics, he was guilty of an injury to the honor of the profession and proposed that he should be dismissed from the reserve medical corps. The decision was laid before the emperor, as the commander in chief of the army. The emperor decided, however, that a refusal on religious grounds to fight a duel should not be made the occasion of a judgment by the court of honor, but that a member of the military medical corps who had acted in this respect so contrary to the fundamental views of his professional colleagues could not remain any longer in his service. In view of the fact that the physician in question had given no occasion for the insult offered him and was innocent, the emperor would permit him to resign voluntarily and not be expelled from the army against his will and as a punishment. The imperial decree which, inasmuch as the physician in question belongs to the radical party, has just been published in a radical party journal was subjected to severe criticism in the liberal and radical press (*Zentrumspresse*). In response to an interpellation in the Reichstag, the minister of war tried in a somewhat awkward way to defend the emperor's decree, but aroused vigorous opposition on the part of a majority of the house (naturally with the exception of the conservative parties in which the representatives of the nobility and the great land-holders form the majority). Naturally this case gives occasion for combating the duel in the army with increased vigor and the socialist party has therefore already made a motion in the Reichstag that every one who makes or accepts a challenge to a duel shall be dismissed from the army. In view of the conception of honor and the defense of honor prevailing among the majority of army officers, both of the line and medical corps, it is not to be expected that the emperor will accept such a measure, and so everything soon will be just as it was before.

### Relations of Roentgenologists to Other Physicians and Their Patients

The annual meeting of the German Roentgen Society, held in the middle of April in Berlin, adopted the following resolutions bearing on the questions involved in the title: 1. Roentgenology is a fully justified medical specialty, like laryngology, ophthalmology, etc. 2. The roentgenologist is a specialist, and as such is to be consulted by the physician or patient with reference to making or confirming a diagnosis, in conformity with the generally recognized customs for consultations. 3. The roentgenologist makes use of the Roentgen methods in addition to general clinical methods. He is to decide what method shall be applied (that is, the exposures, roentgenoscopy, transillumination, orthodiagraphy, teleroentgenography, etc.). 4. The plates prepared for the purpose of making the diagnosis, the negatives, screens, etc., are the property of the roentgenologist, in the same way, *e. g.*, as histologic preparations belong to the consulting pathologist. But it is self-evident that for reasons of professional comity the roentgenologist shall at any time voluntarily place a proof of the plates, a negative or other articles of the sort at the disposal of the consulting physician. 5. The delivery of plates, proofs, etc., to the Krankenkassen, insurance societies, etc., is to be on the basis of special arrangements. It is also customary for the roentgenologist to permit the use of his material in case of necessity. 6. The roentgenologist may voluntarily without charge or for pay furnish the patient a proof or finished print, but it is advisable that this should be done only in cases in which no damage or disquieting of the patient is likely to result from the practice.

## VIENNA LETTER

(*From Our Regular Correspondent*)

Vienna, May 10, 1912.

### Renewal of French Prize for Austrian Physicians

Two French physicians, Drs. Moussand and Rivier, of Paris, have instituted a prize of 1,000 francs ($200) to be called Prix Pierlot, which will be granted under the following conditions: Physicians of Austrian birth and nationality only may apply for the prize who gained their diploma of M.D. not longer than four years ago. They must produce at least one scientific paper, and they must spend the money during a stay in Paris, where they have to work in the hospitals and engage there in scientific work. The prize will be granted by the medical faculty of Vienna, to which the applications must be addressed. The successful applicant must, after his return from Paris, report to the faculty his work and his observations. The object of the prize offered is the establishment of the closer relations between the Austrian and French medical faculties which existed several years ago, when Austrian and French physicians used to exchange their experiences on diseases of the nerves and on experimental pathology. This prize was offered in 1911, and this year is repeated.

### Jubilee of the Vienna Poliklinik

A few days ago, the Poliklinik in Vienna celebrated its fortieth anniversary. This institution is in fact now an appendage of the General Hospital, and it is well known to all American physicians studying in this city as the place where excellent instruction in all branches of our art may be had. Originally it was a small out-patient dispensary and, although it gathered at the outset the very best of medical instructors and the best-known specialists, it was then eighteen years before it could move into its own premises next to the old General Hospital. While in the first year of its existence a little less than 12,000 patients entered through its gate, in 1911 more than 87,000 new patients were seen in the various departments of the Poliklinik. Gradually the number of beds was increased, so that at present the hospital attached to the Poliklinik numbers 150 beds, thirty-two of which are for children.

There are all branches of medicine taken care of, and among the staff of the hospital were and are men whose names as specialists have great and far-reaching reputation. Thus for instance, the laryngologic department was once under Schnitzler, Chiari (now Koschler), the otologic under Urbantschitsch (now Alexander), the pediatric under Monti (now Hamburger), the urologic under von Frisch and the other departments under men of similar reputation. A large number of classes is controlled by the American Medical Association of Vienna, and the courses are equivalent to those given in the general hospital of the university. The importance of the professorships of the Poliklinik may be esteemed best by the fact that very often the regular professors of the university are chosen from among the men of the Poliklinik. Last year the Poliklinik was assured of the possession of an acre for enlarging the existing hospital and coming into the vicinity of the new general hospital, the pride of the Vienna medical profession.

A fact worth mentioning is the number of major operations (1,200), performed in the Poliklinik hospital last year; while altogether 2,720 in-patients were dealt with, and the number of new patients seen since 1872 is 1,880,135. A festival celebration took place recently in commemoration of the fortieth birthday and hopes were expressed that the fiftieth anniversary of the day would prove as successful as all others.

### Railway Cars for Sick Passengers

The state railway of Austria has just brought on its lines a new type of cars for patients requiring transportation over long distances. The first-class car has a compartment for the patient, into which the ill persons can be wheeled without any discomfort, sitting or in a recumbent position. This "ward" is completely up to date hygienically. A cooling apparatus for the hot season is provided. Of course, there is ample room fo physicians and nurses, and special water closets. For the transport of a larger number of patients, special hospital car have been adopted, which will accommodate from four to eigh persons each. All the patients can be wheeled into the car from the side, and here too a complete modern hygienic equipment has been provided. The idea is to enable patients goin from home to a hospital, or to one of the health resorts, to us the railway. In cases of accidents on the railroad, the car will also be very convenient.

## Association News

### CLINICS AT ATLANTIC CITY

The Committee on Clinic Days calls attention to the program announced in The Journal, May 4, 1912, p. 1375. The clinics to be given are designed to be an epitome of medical progress during the last year, and are to be amply illustrated by lantern-slides.

In addition the committee has arranged for a set of clinics at Philadelphia for Monday, June 3, and Friday and Saturday, June 6 and 7, under the general control of Dr. John B. Deaver, Chairman of the Philadelphia Clinics. Other clinics will be given in Baltimore under the general charge of Dr. Thomas S. Cullen on the same days. Members in attendance at Atlantic City are urged to attend these clinics on their way home after the session of the Association.

Charles Louis Mix, Chicago.
Chairman of Committee on Clinic Days.

For the benefit of any interested in Atlantic City, especially any who may yet decide to attend the annual session, attention is here called to the full announcement, in the May 4 issue, concerning the city and its attractions, the entertainments, the railroad and hotel rates, the programs of each section, etc. Supplemental information has been given in this department since May 4 also. On registering at Atlantic City, one will receive full program, invitations, tickets, etc.

## Marriages

John Monahan, M.D., Fort Springs, Pa., to Miss Florence McGinty, of Tamaqua, Pa., at Philadelphia, May 14.

Jonas Edwin S. Minner, M.D., Egypt, Pa., to Miss Carrie Rodgers, of Allentown, Pa., in Reading, May 16.

J. A. McNiven, M.D., to Mrs. Louise Savigny, both of Aberdeen, Wash., at Portland, Ore., May 11.

Kenneth Bulkley, M.D., New York City, to Miss Gladys Clark Rogers, of Toronto, Ont., May 11.

Davis Nathan, M.D., Norristown, Pa., to Miss Pearl Holben, of Schnecksville, Pa., recently.

Charles Wesley Hutchison, M.D., to Miss Bernice Cook, both of Coalinga, Cal., May 12.

Clarence L. Poley, M.D., to Miss Stella A. Bayne, both of Los Angeles, Cal., May 14.

Lucien C. Davis, M.D., to Miss Margaret Cattau, both of Shawano, Wis., May 10.

Claud Julian Allen, M.D., to Miss Fay Jopling, both of Rich Hill, Mo., May 7.

Edward L. Reinecke, M.D., to Miss Dollie Baynes, both of Dubuque, Ia., May 15.

Mina Logue Fuller, M.D., Adrian, Mich., and Mr. Peterson, of Chicago, recently.

Van Dyck McKelvey, M.D., Denver, to Miss Clara Frank, at Omaha, May 8.

## Deaths

**William Joseph Asdale, M.D.** Rush Medical College, 1866; a member of the Medical Society of the State of Pennsylvania, and the American Association of Obstetricians and Gynecologists; one of the founders of the West Penn Medical College, Pittsburgh; secretary of that institution until its consolidation with the Western University of Pittsburgh, and emeritus professor of diseases of women; for fifteen years a member of the medical staff of the West Penn Hospital, and a member of the consulting staff of the Passavant Hospital; for twelve years a member of the select council of Beaver Falls, and once its president; died at his home in Patterson Heights, Pittsburgh, May 19, from nephritis, aged 69.

**Minor Franklin Clarke, M.D.** Medical College of Virginia, Richmond, 1909; a member of the Medical Society of Virginia; died at his home in Clover, May 19, it is said from the effects of an overdose of bromidia, aged 30.

**Daniel Jackson, M.D.** Kentucky School of Medicine, Louisville, 1865; a Confederate veteran and medical cadet during the Civil War; a member of the Iowa State Medical Society and a member of its board of councilors; for many years a practitioner of Audubon; consulting physician to the Council Bluffs General Hospital; died in his home at Council Bluffs, May 13, 1912, from asthma, aged 65.

**Elmer Ellsworth Briggs, M.D.** New York Homeopathic College and Hospital, New York City, 1883; a member of the American Medical Association; formerly a practitioner of Pittsburgh and Watsonville, Cal., and assistant secretary of the board of health of the latter place; died suddenly in the Santa Rosa Hospital, May 15, 1912, while performing a surgical operation, aged 50.

**Ferdinand C. Herff, M.D.** University of Giessen, Germany, 1842; St. Louis College of Physicians and Surgeons, 1882; a member of the American Medical Association, formerly president of the West Texas Medical Society and an honorary member of the St. Louis Medical Society; a pioneer practitioner of Southwest Texas; died at his home in San Antonio, May 18, aged 91.

**Charles William Dahlenburg, M.D.** Miami Medical College, Cincinnati, 1906; a member of the Ohio State Medical Association; formerly local surgeon of the Lake Shore & Michigan Southern Railroad at Air Line Junction; assistant physician at the Toledo State Hospital; was found dead in his room in that institution, May 17, from heart disease, aged 29.

**John J. Rice, M.D.** Cincinnati College of Medicine and Surgery, 1881; a member of the Missouri State Medical Association; a member of the school board of Kearney and president of the Clay County Telephone Company and Clay County Life Association; died in St. Joseph's Hospital, Kansas City, May 12, after a surgical operation, aged 61.

**Rollin Thomas Rolph, M.D.** University of Buffalo, N. Y., 1873; formerly a practitioner of Dunkirk and Fredonia, N. Y., of Chula Vista, Cal.; for several terms health officer of Dunkirk, and at one time surgeon to a mining company at Flagstaff, Ariz.; died at the Agnew State Hospital, Cal., May 15, from pernicious anemia, aged 60.

**Joshua Worley, M.D.** Starling Medical College, Columbus, O., 1861; assistant surgeon of the 126th Ohio Volunteer Infantry throughout the Civil War; for many years a member and president of the board of education of Belle Plaine, Ia.; died at his home at that place, May 14, aged 78.

**Samuel A. Hinton, M.D.** Cincinnati College of Medicine and Surgery, 1864; a member of the Medical Society of Virginia; for many years a practitioner of Petersburg; died at the home of his son near New Orleans, May 16, 1912, aged 67.

**James L. Husted** (license, Ohio, 1896); a member of the Ohio State Medical Association; for thirty-six years a practitioner of Darke County; died at his home in Woodington, May 11, 1912, from arteriosclerosis, aged 75.

**Steven Cary Henderson, M.D.** University of Alabama, Mobile, 1887; a member of the Medical Association of the State of Alabama and a practitioner of Brewton; died at an infirmary in Mobile, May 10, 1912, aged 50.

**Jacob Maximilian Lipschutz, M.D.** College of Physicians and Surgeons, New York City, 1905; died suddenly at his home in Bronx Borough, New York City, May 9, from heart disease, aged 30.

**Daniel Warren Scates, M.D.** Jefferson Medical College, 1879; a member of the Tennessee State Medical Association; died in his office in Martin, Tenn., May 18, from cerebral hemorrhage, aged 57.

**John Wesley Howard, M.D.** Atlanta (Ga.) Medical College, 1891; a member of the American Medical Association; died at his home in Irondale, Ala., May 16, from cerebral hemorrhage, aged 53.

**Samuel Hall Anderson, M.D.** University of Maryland, Baltimore, 1870; a member of the Medical and Chirurgical Faculty of Maryland; died at his home in Woodwardville, May 17, aged 63.

**Albert Pain, M.D.** University of Toronto, Ont., 1906; of Fisherville, Ont.; aged 27; was a passenger on the *Titanic*, which was lost off the coast of Newfoundland, April 15.

**William Duncan McNab, M.D.** Trinity Medical College, Toronto, 1895; a veteran of the Riel Rebellion; died at his home in Toronto, May 14, from heart disease, aged 52.

**Harry L. Reinhart, M.D.** Starling Medical College, Columbus, Ohio, 1898; formerly coroner of Lawrence County, Ohio; died at his home in Ironton, May 13, aged 38.

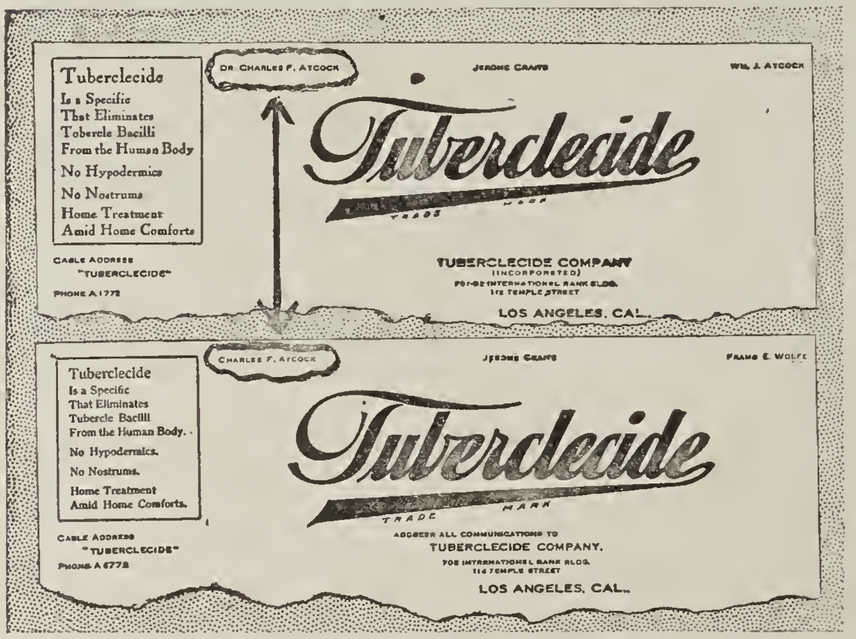
# *The Propaganda for Reform*

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

## TUBERCLECIDE

### A Worthless Nostrum and Its Disreputable Promoter

At various times in the process of investigating and exposing "cancer cure" and "consumption cure" frauds, The Journal has called attention to the disreputable character of the individuals who are engaged in this business. The relation of personal character to commercial enterprise is, of course, not so much a matter of coincidence as of cause and effect. It is natural that individuals who would engage in such cruel and disreputable businesses as those of exploiting cancer and consumption cures should themselves be disreputable. There are, it is true, occasional well-meaning, unbalanced ignoramuses who really believe that they have discovered cures for these deadly diseases and who sell their nostrums under that honestly mistaken belief. Such cases are rare; so rare as to be negligible. Practically every individual who takes money from a consumptive, or from a sufferer from cancer, for a worthless nostrum sold as a cure for either of these diseases, knows that he is defrauding his victims just as truly as the highway robber knows that he is plundering the citizen whom he holds up at the point of a revolver.



Tuberclecide
Is a Specific
That Eliminates
Tobercle Bacilli
From the Human Body
No Hypodermics
No Nostrums
Home Treatment
Amid Home Comforts

Dr. Charles F. Aycock
Jerome Craits
Wm. J. Aycock

Tuberclecide
Trade Mark

Cable Address
"Tuberclecide"
Phone A 1772

Tuberclecide Company
(Incorporated)
701-02 International Bank Bldg.
115 Temple Street
Los Angeles, Cal.

Tuberclecide
Is a Specific
That Eliminates
Tubercle Bacilli
From the Human Body.
No Hypodermics.
No Nostrums.
Home Treatment
Amid Home Comforts.

Charles F. Aycock
Jerome Craits
Frank E. Wolfe

Tuberclecide
Trade Mark

Cable Address
"Tuberclecide"
Phone A 6778

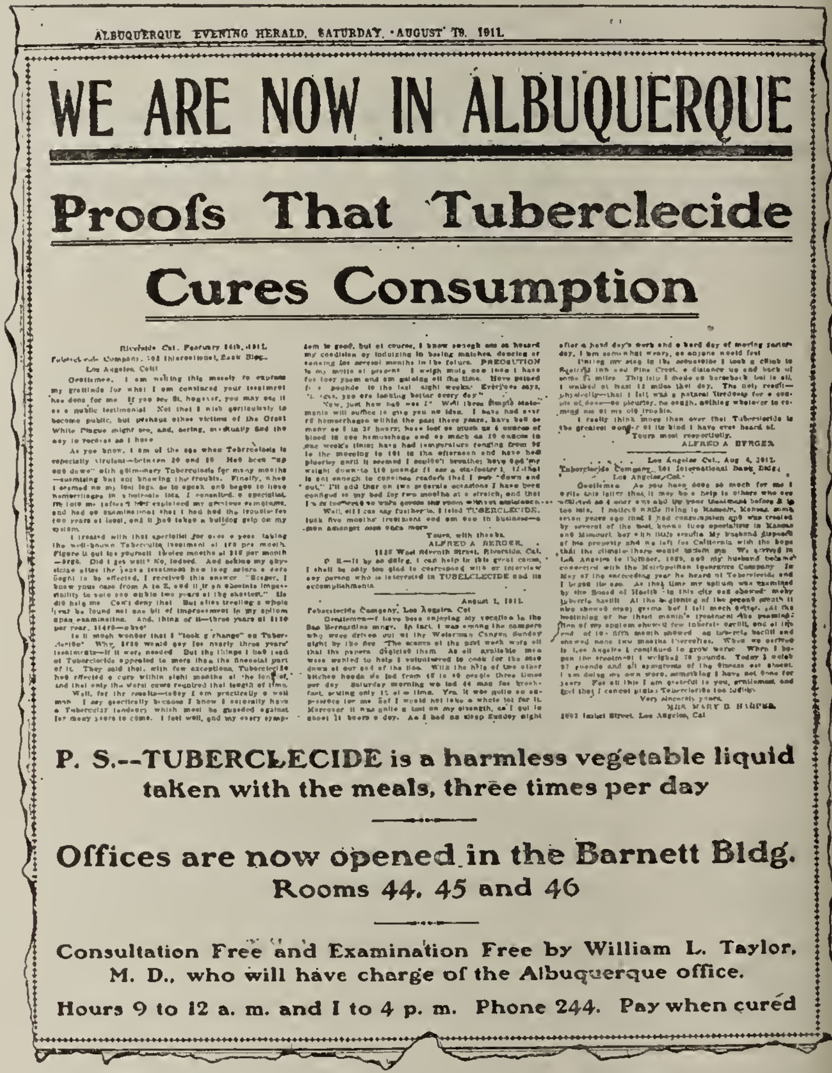
Address all communications to
Tuberclecide Company,
706 International Bank Bldg.
114 Temple Street
Los Angeles, Cal.

Fig. 1.—Photographic reproductions of the Tuberclecide Company's letterheads at different periods. It will be noticed that the older (upper) letterhead has Aycock as a "Doctor;" the more recent (lower) letterhead omits the fraudulently used title.

SOME PERSONAL HISTORY

Tuberclecide is a fraudulent consumption cure sold by the Tuberclecide Company which has headquarters at Los Angeles and agencies in various southwestern states. The leading spirit of the concern and the reputed "discoverer" of Tuberclecide is one Charles F. Aycock. From the evidence at hand, Aycock seems to be just the type of man one would expect to find engaged in taking money from indigent consumptives under the fraudulent promise of a cure. A careful investigation seems to establish the following facts regarding Aycock: He was reared in Boone County, Arkansas, where he is said to have exploited, many years ago, a fraudulent catarrh cure. Even at that time, Aycock seems to have been able to fool the people successfully, as he was elected county treasurer. While holding this office, the people learned how foolish they were to trust a "patent-medicine" faker with other people's money, for Aycock is alleged to have embezzled over $2,000 of the county funds. A neighbor who, at the time, had some confidence in him went on his bond so as to permit Aycock to be at liberty until the trial. Aycock is said to have demonstrated his appreciation of this neighborly kindness by forfeiting his bail and fleeing from the state. For two and one-half years he seems to have kept out of the clutches of the Arkansas authorities but he was captured, it is said, as he was about to sell a fake gold mine.

The records show that Charles F. Aycock was sentenced to the penitentiary for five years on the charge of embezzlement. At the end of a year and a half he was pardoned, largely on the strength of a petition which his wife had circulated. Aycock again displayed his appreciation for help given, by deserting his wife and child soon after his release from the penitentiary. We next hear of him in Oklahoma where, although he had no medical education, he practiced medicine. After a while, Oklahoma seems to have become too hot for Aycock for he left for California where he organized the Tuberclecide Company. In the meantime he had married again, but two or three months ago the second wife began divorce proceedings against Aycock. Even after going to California Aycock posed as a physician, but more recently he has removed the prefix "Dr." from his name as it appears on the Tuberclecide stationery.



ALBUQUERQUE EVENING HERALD, SATURDAY, AUGUST 19, 1911.

WE ARE NOW IN ALBUQUERQUE

Proofs That Tuberclecide Cures Consumption

P. S.--TUBERCLECIDE is a harmless vegetable liquid taken with the meals, three times per day

Offices are now opened in the Barnett Bldg.
Rooms 44, 45 and 46

Consultation Free and Examination Free by William L. Taylor, M. D., who will have charge of the Albuquerque office.

Hours 9 to 12 a. m. and 1 to 4 p. m. Phone 244. Pay when cured

Fig. 2.—A greatly reduced photographic reproduction of a Tuberclecide advertisement that appeared in the Albuquerque, N. Mex., newspapers. Thanks to the activities of the local authorities, Aycock found it desirable to close his Albuquerque office.

These details are given not for the purpose of raking up an ex-convict's past, but because Aycock is at present engaged in a much more villainous business than the embezzling of public funds or the selling of fake gold mines.

THE "CURE" ITSELF

Of Tuberclecide itself, The Journal[1] has already spoken. It comes as a pale-yellow, oily liquid for which $15 for a two-ounce bottle is asked. When examined in the Association's laboratory, the chemists reported that Tuberclecide is "essentially a solution of creosote or guaiacol in some bland oil probably olive oil."

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[1] May 13, 1911; reprinted in "Nostrums and Quackery," p. 168

About the time that Tuberclecide was exposed in The Journal, Aycock opened a branch office in Albuquerque, New Mexico, and at once commenced a vigorous advertising campaign. Fortunately for the consumptives of Albuquerque and vicinity, this town has an intelligent wide-awake layman who, recognizing the viciousness of Tuberclecide, took active steps to combat it. When he first opened the Albuquerque office, Aycock continued to give the impression that he was a physician, going so far as to have "Dr. Charles F. Aycock" printed on the company's stationery. It was not long before he was arrested on the charge of violating the medical practice act and although, owing to local conditions, he was not convicted he found it the part of discretion to omit the title "Dr." The notoriety that he gained in Albuquerque was such as to make him close that office and seek other fields where less was known about him.

### THE ALLEGED GOVERNMENT TEST

Like other consumption cure fakers, Aycock attempted to get advertising ammunition by entering into correspondence with government officials relative to his nostrum. He wrote to the Secretary of the Interior and asked that official to turn over to him "six or eight patients who are in the last stages of tuberculosis" for treatment with Tuberclecide. Following this impudent request, newspaper advertisements were published—as reading matter—headed "Tuberclecide to be tested by United States Government." When Mr. C. S. Ucker, chief executive officer of the Department of the Interior, was written to regarding the truthfulness of the claim that the government was going to test Tuberclecide, the following reply was received:

> DEPARTMENT OF THE INTERIOR
> FREEDMAN'S HOSPITAL
>
> November 14, 1911.
>
> *Sir:*—By departmental reference I have a copy of your letter dated November 6, 1911, addressed to Mr. Ucker, regarding "Tuberclecide," and beg to state this office did not look with favor on the preparation, consequently took no notice of the same.
>
> Very respectfully,
> W. A. Warfield, Surgeon in Chief.

Of course, Aycock, being more rogue than fool, did not expect any action to be taken by the government and doubtless would have been greatly chagrined had his bluff been called. The important point, to him, was that he had been able to put his worthless nostrum before the public in such a light as to deceive credulous consumptives.

### TESTIMONIALS

Of course Aycock publishes testimonials telling the wonderful results that have been accomplished by the use of Tuberclecide. There never has been a consumption cure fraud but could obtain all the testimonials that could be used. Some such testimonials are fraudulent; others—the majority—are honestly given by those who, in the optimism born of any new treatment, really believe at the outset that they are being helped. It is testimonials of this last class that make up one of the most tragic chapters of "patent medicine" frauds. As The Journal has shown time and again, it is only necessary in many an instance to wait a few months or a year to be able to publish side by side with the testimonial the death certificate of the poor victim who gave it.

The following brief record gives the names of a few individuals who have taken Tuberclecide but about whom the exploiters of this fraud are careful to say nothing:

Case 1.—H. Wenzell took twelve bottles. Worse.

Case 2.—J. M. Horner took five bottles. Died August 20, 1911.

Case 3.—F. Allen took four bottles. Died July 7, 1911.

Case 4.—A. J. Imel took two bottles. Died June 6, 1911.

Case 5.—J. D. Hoyt took two bottles. Worse.

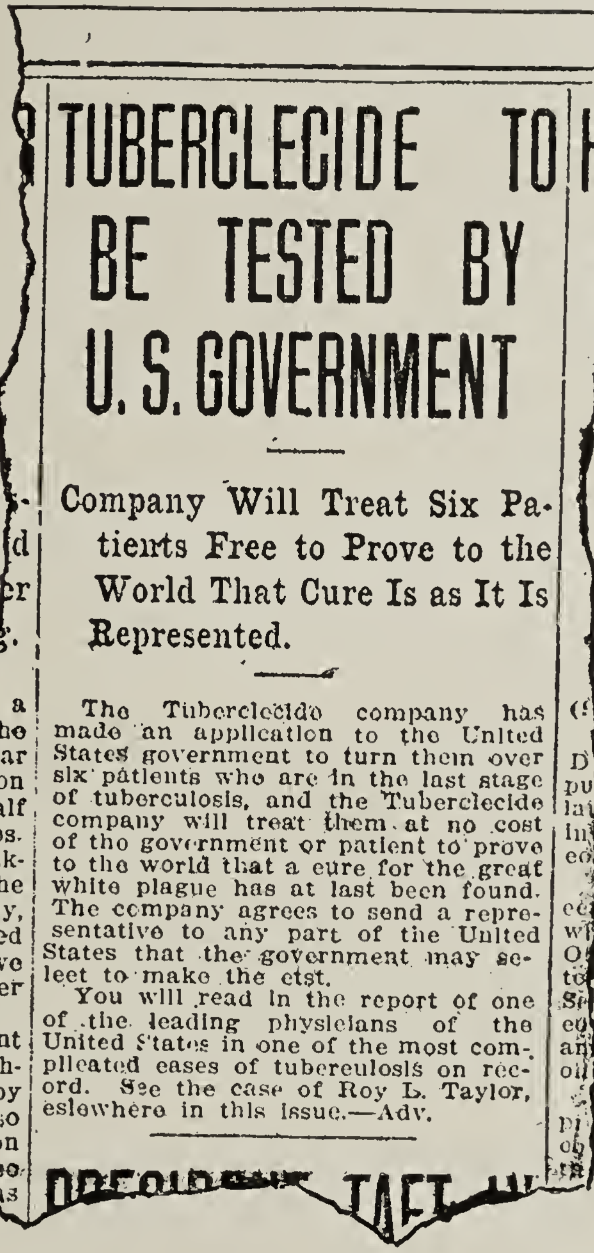
Case 6.—J. Goldfinger took one bottle. Worse.

Case 7.—W. Porterfield took one bottle. Died March 2, 1912.

### CONCLUSION

So much for Tuberclecide. That a mixture of guaiacol in olive oil will not cure tuberculosis, every physician knows. In fact, if the public were informed of the composition of Tuberclecide, it would be impossible to sell this preparation either at the exorbitant price that is asked for it—$15 for two ounces—or at practically any price.

There is a ghastly sameness in the description of various consumption cure frauds. Exploited in nearly every case by men who are as lacking in professional training as they are in moral responsibility, "these cures" are sold under claims that are grossly false and with an utter disregard of the most elementary canons of commercial honesty. The same tragedies of money wasted that can be ill-spared, of time squandered that can be spared still less, of the occasional testimony favorable to the preparation given at the beginning of the "new treatment" and, finally of the same depressing death lists.



TUBERCLECIDE TO BE TESTED BY U.S. GOVERNMENT

Company Will Treat Six Patients Free to Prove to the World That Cure Is as It Is Represented.

The Tuberclecide company has made an application to the United States government to turn them over six patients who are in the last stage of tuberculosis, and the Tuberclecide company will treat them at no cost of the government or patient to prove to the world that a cure for the great white plague has at last been found. The company agrees to send a representative to any part of the United States that the government may select to make the ctst.

You will read in the report of one of the leading physicians of the United States in one of the most complicated cases of tuberculosis on record. See the case of Roy L. Taylor, eslewhere in this issue.—Adv.

Fig. 3.—This is one of the advertisements issued by Aycock at the time that he attempted to get advertising ammunition by writing a letter to the federal authorities making an offer which he knew could not be accepted and which he, in fact, would be the last to want to have accepted.

And thus it goes. Under our present insufficient laws, there is no way of halting this slaughter of the innocents. So long as men, immoral or unmoral, see fit to enrich themselves on the blood-money of the consumptive, there is nothing to prevent them so doing except the tediously slow process of educating the public to realize the utter worthlessness and potential danger of every consumption cure.

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Journal Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

# Correspondence

## The New Section on Hospitals

*To the Editor:*—We would like to say a few words in The Journal, just on the eve of the annual session, calling the attention of the profession to the new Section on Hospitals, which is to undertake its first program at Atlantic City this year.

Hereafter the Section will speak for itself through its work, but just at this particular time when its functions and its scope cannot be known to the profession in general, we feel that there should be a genuine and hearty support of its work for the following reasons, among others:

The hospital, under the new dispensation, is no longer merely a place for the care of patients who cannot be cared for at home; it is a place to which all sick people, who need the facilities provided by scientific modern medicine for the diagnosis and treatment of disease may get a better chance to get well than they could have in even the most luxurious home. There are, perhaps, 50,000 medical men who do all, or a large part, of their work in the hospitals of the country and who are, therefore, deeply interested in the welfare of the hospitals and who are greatly in need of all the information they can get concerning modern hospital methods, equipment and operation.

There is the American Hospital Association, whose chief interest is to view the hospital from the administrator's standpoint. This is doing most excellent work in this field, and is responsible in no small measure for the rapid improvement in hospital administration in the past few years, but there is no association whose chief interest is in the hospital from the standpoint of the physician who does his work there, and who is, therefore, to be considered the chief factor of interest in the hospital, if we except the patient himself.

It was to represent the physicians' interest in the welfare of the hospital that this new Hospital Section of the American Medical Association was created by the House of Delegates at Los Angeles last year.

The Section, we believe, has as good a program as could be created at the outset of its career; the papers to be read and the subjects to be discussed all touch the very quick of the physicians' interest in the hospital, and we cherish the hope that the profession will support the new Section as one demanded by this modern day.

This year the chairman's report will show the actual status from the physicians' point of view, in the matter of scientific equipment, of the hospitals of the country, not only for the purpose of taking care of the sick, but in regard to teaching facilities for nurses and interns, and material for medical staffs.

If this work shall prove satisfactory and shall receive that amount of encouragement that all human beings must receive in order to be effective and efficient, it is proposed next year to go another step and begin the classification and standardization of the hospitals in order to set high-water marks for the ambitious, and for those who are trying their best to meet the obligations of the present and the hopes of the future.

We believe that this program will eventually result in high standards in hospitals, large and small, and that one of its most useful purposes will be to make lighter and easier the labors of the practitioner of medicine.

W. B. Russ, Chairman, San Antonio, Tex.;
John Allan Hornsby, Secretary, Chicago,
Section on Hospitals.

## Sanatogen and the Burden of Proof

*To the Editor:*—I have been much interested in your recent explanations concerning Sanatogen. The great volume of advertising that the makers of this article are putting forth, the skill with which the advertisements are written and the apparently commonplace character of the substance itself, seem all matters of remark. I have noted the reply of the manufacturers to your criticism, and one point strikes me as of great importance and not brought out prominently in your reply. The manufacturer declares that the product is a compound of casein with the glycerophosphate. What proof is offered of this? Where are the laboratory data that show such a condition? The mere fact of close association does not constitute combination. It is generally thought that in normal milk some of the protein constituents—most likely the casein—are in some closer union than mere admixture with the phosphates, but in the light of modern colloidal chemistry, this association may be regarded as due to "adsorption," a special term which has been coined to cover the peculiar action of colloids in attracting other substances. It does not seem probable that artificially prepared materials could be made to exhibit this phenomenon, but under any circumstances surely the burden of proof is on those who assert that such a combination exists. No dogmatic, unsupported statement can have scientific standing. If we were to adopt such methods we would be back to days of old when an accused person was acquitted if he could bring a certain number of his neighbors to swear that they considered him innocent.

Henry Leffmann, Philadelphia.

## Synthetic Food and Artificial Nutrition

*To the Editor:*—As one who takes more than a passing interest in The Journal and its editorials, and derives not a little recreation from their perusal, may I be allowed to pen a few words in regard to your recent editorial on the above subject?

One contemplates with almost a feeling of awe the researches of Prof. Abderhalden, as he reduces nutrition to elemental simplicity—feeding his animals on amino-acids, glycerol, fatty acids, etc., with satisfaction to himself, and, doubtless, with gratification to his subjects.

From the standpoint of the physiologist, such experiments must be of intense interest, but when one leaves the scientific atmosphere of the laboratory and emerges again into the realms of every-day work and responsibility, one cannot help wondering where the utility of such work will be. Are we to feed our patients on tabloid nutrition, and will the physician, when diagnosing his patient's condition, write out a prescription in which his nourishment will be dispensed in an 8-ounce bottle, a tablespoonful t. i. d., or perhaps order some "proprietary" dinner capsules, as the case may be? When such a point is reached, it will not be improbable to suppose that life will have lost much of its interest. Of course, as the professor remarks, it is only a matter of cost. One might argue from this that "the simple life" will be another factor for the high cost of living.

Sir James Crichton Browne, in a recent article published in the *Tribune*, London, contended that in invalid-feeding it was of utmost importance that good flavor and good aroma should prevail, for nice food is more easily assimilated than that which is flavorless, while Jacobi has said, with much truth, that a child's stomach cannot be compared with a test-tube. He might go farther and say the same of an adult's.

It is evident, however, that the day is not far distant when dietetics will be reduced to an exact science, and will, as they ought to do now, form part of the curriculum of medical education, instead of being treated as at present, in many schools, in a rather cavalier fashion.

One danger of predigested foodstuffs is in those very cleavage products, for the line between digestion and decomposition is a very narrow one, and it does not need a great stretch of imagination to conceive the result of the administration of such foodstuffs in pathologic conditions.

Those who have the care of the sick find that idiosyncrasy is an important factor, for, from the pharmaceutic standpoint, it is of the utmost importance that prescriptions should be dispensed, not only in consonance with the art of dispensing but also with a view to influencing the mentality of the patient, from an appeal to the senses. I know many pharmacies where it is as much as the clerk's place is worth to send out a prescription that is carelessly finished. What is true in the administration of drugs, how much more must be so, in the administration of foods. The appeal to the senses of sight, taste and smell cannot be overlooked, so that I fear for many years at any rate we must utilize those methods that time and experience have proved efficacious and useful.

It might be interesting to carry the discussion further, for, as Sam Weller once remarked, "Much might be said on both sides."

W. Boulton Conyngham, Ph.C.E., M.A.P.A., F.C.S.E., New York

[Comment.—We quite agree with our correspondent regarding the current neglect of the study of dietetics in the average medical curriculum, and the importance of fostering a more wholesome interest in this subject among the profession. When, however, he attempts to draw a distinction between the utility of scientific investigation and "every-day work" in medicine, we protest against an erroneous point of view which has been one of the chief obstacles to the very progress which he advocates, namely, that toward rational dietotherapy. No one who follows the contributions of science in these times can fail to recognize that the laboratory knowledge of to-day may become the clinical procedure of to-morrow. The practical man of medicine needs above all to breathe the "scientific atmosphere of the laboratory," and to benefit from its invigorating properties. For this reason we aim to discuss in our editorial and current comment columns just such recent additions to scientific knowledge as the topic which has aroused our correspondent's interest. It matters little whether or not we shall be able to simplify human nutrition in precisely the way that Abderhalden succeeded in animals. The fundamental point is that the success of his experiments gives the clue to the underlying principles of nutrition—to the fact that the organism can actually synthesize its important constituents. Until we learn the chemical processes of which the body avails itself in metabolism, much of our applied dietetics must remain purely empirical in form. Our correspondent fears a physiologic confusion of decomposition products with the digestion products; but such danger exists only so long as science is ignorant of the facts. The possibilities of the newer knowledge of the laboratory must be translated into practice and there made effective. As Professor Ewing has appropriately remarked in another connection, "The feeding of healthy man, as well as the diet of the sick, cannot be left to chance, guided by appetite or ruled by tradition, but can be safely directed only according to the laws of digestion and metabolism."—Ed.]

### Vegetarianism

*To the Editor:*—Vegetarianism is based on sentiment and is supported by scientific evidence. Sentiment springs from the fundamental make-up of the individual. When not modified and restrained by education and reason it produces undoubtedly a lack of balance and of proportion in understanding. A like danger lurks in the path of intellect which falls into repulsive generalizations when it attempts to understand the world of feelings by the help of the physical sciences alone. Vegetarianism is mostly an effort to reduce the total amount of suffering and to stay the enormous destruction of animal life for no benefit to the human race. Philosophically it accepts the idea that animals have a *raison d'être* apart from us and a right to be allowed to live their lives as long as they are not destructive to our own. It is not illogical for vegetarians to use milk and eggs, as these animal products are distinctly less toxic than meat and also less likely to be disease-laden. They are obtained with a minimum of suffering on the part of the animals which furnish them to us.

All vegetarians should realize that any one combination of vegetable foods may lack some element that is important to the perfect working of our organism; that possibly a certain amount of animal protein, in the form of milk and egg, in our food makes a more perfect diet. I say "possibly" because no absolute proof is at hand. But with a moderate point of view it is better to use some animal food unless one is bent on making an experiment. For the present, the essential part of the vegetarian doctrine and that which is based on the largest amount of scientific evidence should be that meat is an unnecessary, a toxic, and at times a dangerous food; that we can supply ourselves with the modicum of animal food that we may possibly need by the use of milk and eggs.

The question of the absolute need of proteins is still open. Some unknown substances are taking the lead in the interest that the proteins had. So far as I know no one has demonstrated exactly what is the thing in lime-juice which prevents and cures scurvy. It will be difficult, if it is ever attempted, to prove what it is in corn-fodder and grain which makes it a better food for cows. One of the standby arguments against a low-protein diet, the improvement alleged to follow a higher one on the incidence of beriberi, has taken a transfer for oblivion. The dread disease is prevented and cured by a dializable body found in rice polishings. The conclusion is that there are food elements still unknown and undefined that are of very great importance in feeding; that those elements are not proteins; that they may be found in vegetable as well as animal foods, and that they constitute a chapter of physiology yet unwritten. I do not think it is unscientific to argue that there is a possibility of a lack of such a substance in the vegetable diet that sustained so poorly the albino rats of the Stanford University experimenter (The Journal, May 4, 1912, p. 1377).

A mistake that some vegetarians make is to discard with the meat all condiments and stimulants that they were in the habit of taking. It is possible that there is a physiologic need for a moderate amount of stimulants. It may be that some substances have a specific action very necessary for a normal metabolism—an action that is perhaps more like that of an enzyme than that of a food.

It is a very small mind that does not think that he may be mistaken. Vegetarians may have much to learn and some of them may be very misguided, but they are often essentially different from their critics. They are experimenting with their ownselves in matters that may be of great value to the human race. If they fail to develop admirable bodies the world will recognize their spirit and be the better for it. The vegetarians shall live.

J. L. Buttner, M.D., New Haven, Conn.

## Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### TREATMENT OF DOUBLE TALIPES EQUINOVARUS IN THE NEW-BORN

*To the Editor:*—What is the recognized present-day treatment of double talipes equinovarus in new-born infants? What is the prognosis when treated by apparatus, plaster, cutting operations or a combination of these?

E. L.

Answer.—As a rule orthopedists do not treat congenital talipes equinovarus in the new-born infant, preferring to wait until the child has learned to walk. This is because of the difficulty in holding the fat feet of a very young child straight until they stay straight. But in some cases in which the deformity is not very severe and in which it is possible to treat the child frequently and for two or more years, treatment is begun early by stretching with the hands and by retention of the feet in plaster splints. It is better not to operate in a case of this kind until the child has learned to walk, although some orthopedists operate early.

In many cases the deformity can be overcorrected (and it ought always to be overcorrected) by modeling with the hands over Koenig's block. In a considerable number of cases, however, it is necessary to divide the posterior tibial tendon and much of the anterior part of the inner lateral ligament of the ankle-joint by a subcutaneous tenotomy to overcorrect the varus. This should be done first, and then a tenotomy of the Achilles tendon and a stretching or tearing of the posterior ligament of the ankle-joint for the overcorrection of the equinus. If one operates in this way on a very young patient the ankle will sometimes bend or break at the lower epiphyses of the tibia and fibula before the posterior ligament can be made to give way. The after-treatment is by plaster splints until the feet stay straight.

In some older cases and in relapsed cases (which are more difficult to treat than cases that have had no treatment), a skiagram will show a wedge-shaped astragalus that demands an enucleation of that bone. A prominent orthopedist, whom we have consulted on this case, says that he has neither done nor seen a Phelps operation for more than twenty years nor a cuneiform osteotomy for more than thirty years; nevertheless he has heard of these operations having been done by general surgeons. He knows of no brace that can be used successfully in the cure of congenital club-foot, but braces may be used to hold a foot straight after an operation, or the use of plaster splints for some months, provided it is easy to hold the foot straight. If the foot shows much of a tendency to relapse, braces should not be used; plaster splints are more dependable. All cases of congenital club-foot can be cured. Some may best be treated one way and some another way. The duration of treatment may be as short as four months or longer than four years. A patient is cured only when the foot stays straight. Intelligent and skilful after-treatment is more essential than this or that method of straightening the foot.

## HEAT CRAMP

*To the Editor:*—Please give me a list of articles on the effects of heat on the human system in men engaged in working in hot places, such as blast furnaces, deep mines, etc.

For years employees of the Tamarack mine have been having seizures characterized by a set of curious symptoms: intense muscular cramps, profuse perspiration, great thirst, and weak but not very rapid heart. The exhaustion has been marked; but no rise in temperature, which is generally subnormal. There has been one death; no autopsy was allowed.

A. I. Lawbaugh, Calumet, Mich.

Answer.—Attention was called to this condition by D. L. Edsall (*Am. Jour. Med. Sc.*, December, 1904; The Journal, Dec. 5, 1908, p. 1969; also by Elliott, *Mil. Surgeon*, March, 1908), and since then there have been the following communications on the subject:

Welsh, H. M.: Muscular Spasm Due to Muscular Exertion in a Heated Atmosphere, The Journal, April 10, 1909, p. 1179.

Cameron, W. H.: A Disorder Due to Exposure to Intense Heat, The Journal, May 8, 1909, p. 1483.

Clendening, L.: Muscular Spasms Due to Heat in Cooks on Pullman Diners, The Journal, May 7, 1910, p. 1517.

The condition which depends on the combination of intense heat and hard work is more frequent in summer than in winter; it is likely to come on more quickly if rest between periods of exertion has not been obtained. It is favored by individual predisposition. While most of the patients are drinkers, some are total abstainers, so that it is probable that alcohol plays a minor part in the etiology. One attack seems to predispose to others. The patients usually state that they had not been feeling well before the exposure during which they were attacked. The temperature of the steel-mills in which many of the cases occur is said by W. H. Cameron to vary from 140 to 235 F. The principal symptom is muscular cramps which may affect either the smaller muscles or the larger muscles of the extremities and sometimes the abdominal muscles. In Dr. Edsall's cases the cramps were preceded by a condition of muscular fibrillation. In a well-developed case the cramps may occur every two or three minutes, the interval increasing later to ten minutes. They are accompanied by severe pain and by a dilated pupil. The attacks vary greatly in severity. The temperature is not raised and the pulse is seldom much affected, although the heart is said to be weak. The spontaneous spasms usually subside within twenty-four hours or a little more and no symptoms then remain, except slight exhaustion and some muscular soreness. The experiences of the patients have shown that a sudden slapping of the muscle will cause a relaxation of the spasm. The diagnosis is made from the symptoms, and the condition appears to be limited to the muscles, evidence of disease of other organs being entirely absent. The differential diagnosis is given as follows by W. H. Cameron (The Journal, May 8, 1909, p. 1484): "In all other conditions, presenting muscular twitchings, contractions or spasms (strychnin poisoning, epilepsy, uremia, hysteria, etc.), such twitchings, contractions or spasms are, as a rule, in proportion to the amount of toxemia or morbid condition present. Now, if this toxemia or morbid condition (whatever its character) were present in sufficient amounts to cause the intense myospasms present in these cases, then surely it would be present in sufficient amounts to affect all the voluntary and at least some of the involuntary muscles, and to affect materially the mental, nervous or circulatory systems. That this condition differs from all other recognized conditions due to exposure to heat is shown by the fact that there is absolutely no thermal disturbance."

The prognosis is usually good but a considerable number of deaths have been said to occur. Morphin is recommended for the relief of the pain. According to H. M. Welsh (The Journal, April 10, 1909, p. 1179), apomorphin in doses varying from 1/12 to 1/20 grain will produce immediate relaxation and he has employed this remedy with repeated success in the severer cases. For the milder cases warm baths are recommended to relax spasm.

A brief note of the condition is found in Anders' "Practice of Medicine."

## RESOR-BISNOL

*To the Editor:*—Has the Council on Pharmacy and Chemistry ever examined Resor-Bisnol, made by the Resor-Bisnol Chemical Company If so, will you please publish its formula. I think the advertisements used to give the formula, but those I have seen lately give no clew to its composition.

W. C. W.

Answer.—Resor-Bisnol was considered by the Council and refused recognition. The following formula for Resor-Bisnol was at one time given in advertisements in a number of medical journals:

"A scientific combination, in nicely balanced proportions of Bismuth Salts of antiseptic acids of the aromatic series, and Resorcin.

"Each 100 parts contains 20 parts Resorcin, and 52 parts Bismuth Oxid, combined with antiseptic acids."

Besides this formula other "formulas" equally indefinite, vague and misleading have been given in lieu of an actual statement of composition, thus:

"——— is a mixture of resorcin and bismuth salts of phenic acids such as salicylates, etc., and an aromatic alcoholate. Its composition is as follows:

| | |
|---|---|
| Bismuth salts of phenic acids..... | 60 per cent. |
| Aromatic alcoholate of bismuth... | 20 per cent. |
| Resorcin ........................ | 20 per cent." |

The product was recently analyzed in our chemical laboratory. The chemists report as follows:

"A specimen of Resor-Bisnol examined by us consisted of a light brown powder possessing a characteristic odor and a taste at first sweetish and then bitter. It was found to be only partially soluble in water. The examination indicates that Resor-Bisnol is probably a mixture consisting essentially of a basic bismuth salicylate (bismuth subsalicylate), a basic gallate of bismuth (bismuth subgallate), a basic compound o beta-naphthol (bismuth betanaphtholate) and resorcino (resorcin)."

It thus appears that Resor-Bisnol is probably a simple mixture of well-known substances. In other words, the Resor Bisnol advertising and literature are typical of that issued b various nostrum houses: it conceals the truth in a mass o semi-scientific verbiage, and while not frankly false, it deceive by what is left unsaid rather than by what is said.

## LIGATION OF DORSAL VEIN OF PENIS FOR PROSTATI HYPERTROPHY

*To the Editor:*—Is the ligation of the dorsal vein of the penis recognized procedure for the relief of prostatic hypertrophy? Ca you refer me to any literature relative to such an operation wit this object in view?

W. W. Spargo, Albuquerque, N. Mex.

Answer.—As far as we can learn, the ligation of the dors vein of the penis has never been done for the relief of prostat hypertrophy. It was done a few times a short time ago f the relief of impotence but with such poor results that it h fallen into disuse.

## WHY GOLD BLACKENS THE SKIN

A correspondent (The Journal, April 27, 1912, page 129 asked why a ten-carat gold chain blackens the neck, a furthermore, why this occurs on some persons and not others. J. R. Wood & Sons, jewelers, New York, are ki enough to inform us for the benefit of those interested in t subject that some time ago they had this matter investigat —particularly with reference to gold rings—and received t following answer:

> Under certain conditions, when worn either in contact wi or close to the skin, gold is apt to produce a blackening. Th condition was found to be true in 14-carat, 18-carat and p gold. In fact, it is most apparent in pure gold, and is n due to any particular properties of the gold but rather is t result of chemical changes in the body.
>
> While it is true that an excess of sulphur in the air a deposited on the skin, or an excess of sulphur in the bo will produce a blackening of the skin under gold rings, cause for the great majority of blackening of the fingers the oil of the skin, or the oil in ointments such as cold cre

etc., if not thoroughly washed off. Oil contains more or less oleic acid which, with friction and in contact with gold, produces a chemical deposit or oleate of gold, which is deposited in minute quantities on the surface of the skin and which is black in color. Rings which are loose will create this condition quicker than those that are tight.

If you desire a simple experiment, take a drop of oil, place it on a small piece of cotton and rub vigorously any gold surface: the oleate of gold is deposited and blackening is immediately discernible.

### THROMBUS—VARICOSE VEINS—SYNOVIAL SACS

*To the Editor:*—I have observed, in a female patient, a case of thrombus in superficial veins of the lower leg, about 3 or 4 inches in length, which has become acutely inflamed after each delivery, during the last six years. Would there be any great danger in tying off one-half inch above and below the thrombus and removing the hard mass under aseptic conditions?

2. What is the most approved operation for varicose veins of the saphenous veins?

3. What is the most approved treatment for filling up of synovial sacs of the knee (with synovial fluid) one month following a fall on knee-cap? L. T. A. Hottendorf, M.D., Bloomington, Idaho.

Answer.—1. There would be no danger in removing the enlarged veins; in fact that would be the proper treatment. Do not try simply to remove the thrombus, should one be present, but remove the enlarged veins.

2. The most approved operation for varicose veins of the leg was described in The Journal (Dec. 10, 1910, p. 2080), in answer to a similar query.

3. The knee should have rest and immobilization in a cast for two or three weeks. If at the end of that time the fluid is not all absorbed, the joint may be aspirated and a few cubic centimeters of a 2 per cent. dilution of liquor formaldehydi in glycerin injected and the joint again immobilized. If recovery does not follow this treatment, some injury to some of the joint-structures was undoubtedly produced which would call for special treatment, depending on the character of the injury sustained.

### ALKALINE URINE AND HEXAMETHYLENAMIN

*To the Editor:*—In the therapeutic department of The Journal (April 13, p. 1115), in discussion of enuresis, you say that "if the urine is alkaline this should be remedied by the administration of a drug to render it acid," and later say that hexamethylenamin should be given. If the alkalinity be due to putrefaction I can approve of the drug suggested, but how can hexamethylenamin reduce the alkalinity of the urine? H. M. Francis, Gilbert, Minn.

Answer.—It is a clinical fact that hexamethylenamin increases the acidity of the urine. So far as we know, there is no simple chemical explanation for this action.

# Medical Economics

This Department Embodies the Subjects of Post-graduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

## SENATOR SMOOT INTRODUCES A NEW HEALTH BILL

In a previous issue of The Journal[1] the text of Senate Bill 5972 introduced by Senator Smoot was given in full. This bill provided for a change in name of the present Public Health and Marine-Hospital Service to United States Public Health Service, for the transfer of the Division of Vital Statistics of the Bureau of the Census from the Department of Commerce and Labor and for the creation of a Division of Sanitary Engineering and a Division of Child Hygiene. It also provided for an assistant secretary in the Treasury Department to be designated as the Assistant Secretary for Public Health who should have charge of the administration of the Public Health Service.

On May 11, Senator Smoot introduced Senate Bill 6782, evidently intended as a substitute for his first bill. The text of the new bill is given herewith. Its provisions are, in the main, the same as Senate Bill 5972, the chief difference being that the new bill does not provide for a Bureau of Child Hygiene, or for an Assistant Secretary for Public Health. Under the new bill, the United States Public Health Service to be under the charge of the surgeon general of that service, and each of the divisions to be in charge of an assistant surgeon general. The new bill also specifically authorizes the public health service to study the question of pollution of navigable streams and water. It also continues the Advisory Board of the Hygienic Laboratory. The text of the bill follows:

### A BILL TO ESTABLISH A PUBLIC HEALTH SERVICE, AND FOR OTHER PURPOSES

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That the Public Health and Marine-Hospital Service of the United States shall hereafter be known and designated as the United States Public Health Service, and in addition to the administrative divisions now authorized by law there is hereby created a Division of Sanitary Engineering, and the Division of Vital Statistics of the Bureau of the Census is hereby transferred from the Department of Commerce and Labor and made a division of the United States Public Health Service: *Provided*, That nothing in this act contained shall be held or construed to discharge or reduce in rank, grade, or pay any officer or employee of the Public Health and Marine-Hospital Service or the Division of Vital Statistics of the Bureau of the Census: *And provided further*, that the Division of Sanitary Engineering shall be in charge of a competent sanitary engineer, who shall be appointed in the same way and receive the same compensation as the chiefs of division of the Hygienic Laboratory.

Sec. 2. That all laws pertaining to the Public Health and Marine-Hospital Service of the United States or the Division of Vital Statistics of the Bureau of the Census shall hereafter apply to the United States Public Health Service, and all regulations of the former now in force or made hereafter shall apply to and remain in force as regulations of the United States Public Health Service until changed or rescinded: *Provided*, That this act shall not be construed as attempting to authorize the United States Public Health Service to exercise or attempt to exercise, without express invitation from the chief executive or other proper authority of the state, any function belonging exclusively to such state, or to enter any premises without the consent of the owner or occupant thereof; and the United States Public Health Service shall have no power to regulate the practice of medicine or the practice of healing, or to interfere with the right of a citizen to employ the practitioner of his choice, and all appointments within the United States Public Health Service, including the head of that service, shall be made without discrimination in favor of or against any system of medicine or of healing: *Provided further*, That all properties, records, and rights pertaining to or in the possession of the Public Health and Marine-Hospital Service of the United States or the Division of Vital Statistics of the Bureau of the Census are hereby transferred to and shall be available for use for like purposes and in like manner by the United States Public Health Service.

Sec. 3. That the United States Public Health Service shall, under the Secretary of the Treasury, be under the charge of the surgeon general of the aforesaid service, who shall be appointed as now provided by law and regulations, and the several divisions of the said service, with the exception of the Division of Sanitary Engineering, shall each be in charge of an assistant surgeon general, as now provided by law for the Public Health and Marine-Hospital Service: *Provided*, That the present Chief of the Division of Vital Statistics of the Bureau of the Census shall be appointed by the President, by and with the advice and consent of the Senate, as a surgeon in the United States Public Health Service.

Sec. 4. That all matters relating to personnel and accounts of the United States Public Health Service shall be administered by the Division of Personnel and Accounts of the said service, and all accounts of moneys received and moneys expended on account of the said service shall be examined by the Auditor of the Treasury and so certified by that officer: *Provided*, That there may be employed in the United States Public Health Service such help as may be provided for from time to time by Congress.

Sec. 5. That the United States Public Health Service may study and investigate the sanitation and sewage and the pollution, either directly or indirectly, of the navigable streams and lakes of the United States, and it may from time to time issue information pertaining thereto in the form of publications for the use of the public.

Sec. 6. That the advisory board of the Hygienic Laboratory, in addition to its duties as now defined by law, shall, while in conference, consult and advise with the Surgeon General of the United States Public Health Service with respect to matters relating to the public health.

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[1] The Journal, April 6, p. 1054

## POSTGRADUATE COURSE FOR COUNTY SOCIETIES

### Tenth Month—Third Weekly Meeting

### Movable Kidney[1]

Etiology: Sex, age, right side. Emaciation, multiple pregnancies, lacing, traumatism, renal tumors. Enteroptosis.

Diagnosis: General symptoms. Dietl's crisis. Physical examination. Movable kidney, floating kidney. Differentiate from tumor of gall bladder, from wandering spleen, from ovarian or intestinal tumors. Differentiate Dietl's crisis from renal, hepatic or intestinal colic, appendicitis, acute obstruction of bowel.

### Acute Nephritis

Pathology: Gross changes slight or extreme. Microscopic changes (a) in glomerulus, (b) in tubular epithelium, (c) interstitial changes.

Symptoms: Onset, chill, fever, pain, gastric disturbance, dropsy,[2] puffiness and convulsions. Urine; quantity, specific gravity, color, reaction, albumin, microscopic examination. General symptoms: Edema, ascites, hydrothorax, hydropericardium; pulse and heart, blood; uremic manifestations. Variations in clinical course. Duration, terminations.

### Chronic Parenchymatous Nephritis

definition and synonyms

Etiology: Age and sex. Secondary to acute nephritis; alcoholic and malt liquors; association with amyloid disease in syphilis, tuberculosis and chronic suppurations.

Pathology: Gross and microscopic changes in (a) large white kidney, (b) small white kidney, (c) kidney of chronic hemorrhagic nephritis.

Treatment: Dietetic, eliminative. Anemia, heart and pulse. Dropsy. Dechloridation.[3] Diuretics.

## *Society Proceedings*

### COMING MEETINGS

American Medical Association, Atlantic City, N. J., June 4-7.

American Academy of Medicine, Atlantic City, May 30-June 2.
Amer. Assn. of Genito-Urinary Surgeons, Philadelphia, June 7-8.
American Association of Medical Examiners, Atlantic City, June 3.
American Climatological Association, Hartford, Conn., June 10-12
American Gastro-Enterological Association, Atlantic City, June 3-4.
American Neurological Association, Boston, May 30-June 1.
American Ophthalmological Society, Atlantic City, June 12-13.
American Orthopedic Association, Atlantic City, May 30-June 1.
American Otological Society, Atlantic City, June 10-11.
American Proctologic Society, Atlantic City, June 3-4.
American Society of Tropical Medicine, Atlantic City, June 3.
American Therapeutic Society, Montreal, May 31-June 1.
Maine Medical Association, Portland, June 12-13.
Massachusetts Medical Society, Boston, June 11-12.
Michigan State Medical Society, Muskegon, July 10-11.
National Association for Study of Epilepsy, Vineland, N. J., June 3.
New Jersey Medical Society, Spring Lake, June 11-13.
North Carolina Medical Society, Hendersonville, June 18-20.
Rhode Island Medical Society, Providence, June 12-13.
Washington, Idaho and Oregon associations, Portland, July 5-8.

## ILLINOIS STATE MEDICAL SOCIETY

*Sixty-Second Annual Meeting, held at Springfield, May 21-23, 1912*

The President, Dr. W. K. Newcomb, Champaign, in the Chair

### Officers Elected

The following officers were elected: president-elect, Dr. Charles J. Whalen, Chicago; vice-presidents, Drs. S. E. Munsen, Springfield; W. H. Curtis, Wilmington; secretary, Dr. E. W. Weis, Ottawa; treasurer, Dr. A. J. Markley, Belvidere; delegates to the American Medical Association, Dr. George S. Rainey, Salem; Dr. A. L. Brittin, Athens; Dr. A. C. Cotton, Chicago; Dr. William L. Noble, Chicago; Dr. John A. Robison, Chicago; Dr. E. W. Fiegenbaum, Edwardsville; Dr. J. T. Montgomery, Charleston; alternates, Dr. G. L. Armstrong, Taylorville; Dr. R. J. Coultas, Mattoon; Dr. E. Baur, Chicago; Dr. A. S. Hanna, Peoria; Dr. K. Zurawski, Chicago; Dr. A. B. Middleton, Pontiac, and Dr. H. A. Millard, Minonk.

Peoria was selected as the next place of meeting.

### Oration on Surgery: Essential Factors in the Development of Surgery

Dr. Dudley P. Allen, Cleveland: The conditions which will tend to the development of surgery are briefly these: broad, accurate preliminary training; in professional study a thorough knowledge of all general subjects, especially those of anatomy, pathology and medicine; thorough training in surgical anatomy, pathology and diagnosis; an intelligent knowledge of all special departments, in order that complicating diseases may be recognized. This much is essential. None but a school of the first grade can give it. No school can do more than this in four years. The influence of the entire medical profession should be in favor of medical schools of the highest standards. Training toward specialism should await postgraduate study. After graduation, hospital training is indispensable, and the man is fortunate when the various services of the hospital work are in such sympathetic association as to give the assistants, not to mention the chiefs, the benefit of mutual observation. Subsequent study in other hospitals of this country and Europe is greatly to be desired. The profession should show its approval of men of long training, high scientific attainment, and correct and honorable methods, by seeking in counsel such men and such men only and by discountenancing the pretensions of all others who do not measure up to this standard. The aim should be to develop hospitals of the highest grade, and to train assistants through a prolonged ser vice to thorough competency. A surgical service under single chief has great advantages, and should rightfully entai great responsibility. Assistants trained in such a service woul be fitted to occupy responsible positions in other hospitals an medical schools. Eminent ability displayed by men in smal hospitals and schools should lead to promotions, to position of greater influence and honor elsewhere. One of our greates needs is that medical schools should be able to call to a teacl ing position the man of the highest ability, wherever the may find him, and at the same time provide him with clinica material. Clinical material should go with the teaching pos tion rather than that men should be appointed as teache because they control clinical material. The relative progre made by surgery in the United States during the last thirt years is unsurpassed, if not unequaled, by any other countr What is needed is broader training and broader opportunitie

### President's Address: The Physician Considered from Economic Standpoint

Dr. W. K. Newcomb, Champaign: The twelfth census sho the death-rate of physicians to be twenty per thousand a again notes the rate as higher than any other profession class. Nervous diseases again stand the highest as a cause death, while the statistics of heart disease and tuberculo remain the same. Thus for thirty years the United Stat census reports tell the same story of high death-rate, high than any correlative profession and from causes that indica the high tension under which physicians work and live.

During the last few years writers on economic subjects ha had much to say of the waste of energy from unphysiolo hours and methods of work. This applies with unusual fo to physicians and is unquestionably an important factor developing the conditions above referred to, for the physic is the living embodiment of unsettled habits, and there see to be no means of correcting this unfortunate condition.

Teachers of economics have long pointed out the loss in ciency resulting from working under unfavorable conditio This applies with striking force to the practitioner of m icine in addition to the continued tension alluded to above the broken rest, the loss of sleep, the necessity of undertak some serious emergency or difficult operation at unusual ho of rising from sleep unexpectedly, and perhaps thoroug exhausted, to undertake some measure on which depend human life. Even if the services of the physician be dive of all those sentimental features which the character of s

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1. Progressive Medicine, December, 1905.
2. Bainbridge: Practitioner, December, 1905.
3. Javal: International Clinics, 1905, iv.

services imply, and they be regarded simply as a utility for which a certain price is demanded and paid, the same laws that apply to other utilities would suggest their preservation. In a case where so much depends on training, adaptability and experience of the individual, it would seem highly necessary to conserve his resources as much as possible, and the patrons of the medical man will admit that this should be done. That the laity should use every effort they can consistently to preserve the health and talents of their medical advisors does not seem to be asking too much.

### Address in Medicine

Dr. S. A. Knopf, New York City, discussed some modern medico-sociologic conceptions of the alcohol, tuberculosis and venereal disease problems. His address will be published in The Journal.

### Fulguration Treatment of Bladder Tumors

Dr. Herman L. Kretschmer, Chicago, reported five cases of bladder tumors treated by fulguration, and said: The value of any new therapeutic measure is based on its results. The immediate results were absolutely satisfactory in the cases of papilloma; that is, the fulguration caused a cessation of the hemorrhages, and after a variable number of treatments the tumors completely disappeared. These results correspond with the results of others who have used this form of treatment. The remote results can best be determined only as time goes on. In the longest published case that I have been able to find, the patient was reported well nineteen months after the cessation of the treatment. This was reported by Dr. Keyes, junior, who also reported two patients well one year after operation.

If we bear in mind the simplicity of the treatment which can be carried out in an ambulatory way and the ease of treating small recurrences should they arise, this mode of treatment at least deserves consideration in the treatment of benign papillomas of the bladder.

### The Vaccine Treatment of Some Unusual Infections

Dr. E. C. Rosenow, Chicago: Among other cases I report one of so-called idiopathic perforation of the nasal septum in a young woman. The difficulty referable to the nose consisted of occasional bloody discharges associated with what was considered a continuous cold in the head. The condition began three months ago, soon following a periosteal tooth abscess which perforated into the antrum, and which was a long time in healing. When I first saw the patient there was found an oval perforation of the cartilaginous portion of the septum one centimeter in diameter. The margin consisted of an angry looking bleeding ulcer. The adjacent mucous membrane was red. There was no reason to suspect nor any evidence on physical examination of a syphilitic infection, and a Wassermann test proved negative. There was found a moderate leukocytosis which disappeared promptly with the improvement. Three successive cultures showed the presence of *Staphylococcus pyogenes aureus* in almost pure form. A vaccine was prepared and from 80,000,000 to 300,000,000 injected every week or ten days. After two injections the margin looked less angry, the bleeding was markedly less, and the coryza had entirely disappeared for the first time in weeks. After six more injections the margin had entirely healed, and two cultures showed that the *Staphylococcus aureus* had entirely disappeared.

*(To be continued)*

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## MEDICAL ASSOCIATION OF GEORGIA

*Sixty-Third Annual Session, held in Augusta, April 17-19, 1912*

The President, Dr. W. L. Fitts, Carrollton, in the Chair

A list of the officers elected was published in The Journal, April 27, p. 1291.

### The Medical Society and Its Relation to Public Health

Dr. Thomas J. McArthur, Cordele, Ga.: It is absolutely necessary that our medical societies take some active part in the public health propaganda. Local medical societies should assume a great deal of responsibility for teaching preventive medicine and creating a sentiment in favor of better sanitary conditions. An ideal plan would be for each local society to arrange for occasional public health meetings to which the public should be invited. Each society should have an educational committee whose duty should be to disseminate knowledge of this kind. If the society was teaching the community that the same precautions against malaria used by the United States authorities in the Panama Canal Zone would free the community from malaria, and that it was criminal negligence when the attending physician failed to give proper directions in regard to such matters when he had a patient sick with malaria, typhoid, or tuberculosis, and that it was a reproach on the attending physician and attendants when they permitted a case of typhoid, malaria or tuberculosis to cause other cases in the family or among the attendants, then the individual physician would be forced by popular sentiment to give definite, positive directions along prophylactic lines and urge that they be carried out.

### What the Medical Profession of Georgia Has Done for Medicine

Dr. T. R. Wright, Augusta: To Dr. Milton Anthony belongs the credit of being one of the pioneers in lung surgery. In 1821, in Augusta, he dissected the fifth and sixth ribs and removed portions of lung tissues. He also first used the knee-chest position for the correction of uterine displacements. Richard D. Arnold, of Savannah, was one of the founders of the American Medical Association and took part in its organization in New York City in 1846. Dr. W. C. Daniel, of Savannah, first introduced Buck's extension apparatus, and in 1829 reported his cases of fracture of the thigh so treated. Robert Battey, of Rome, performed the first abdominal ovariotomy. References should be made to the work of I. P. Garvin of Waynesboro, Henry F. Campbell, Lewis B. Ford, Joseph A. Eve, Lewis A. Dugas, Crawford Williamson Long of Jefferson, Dr. Sims and many others.

### The Eugenic Conservation of Man

Dr. A. L. R. Avant, Savannah: Our national government pays no attention at all to the betterment of mankind. It seems to be perfectly indifferent regarding the sanity and perfection of its citizens, and the propagation of the better of our kind; but when men are needed in our defense against an invading foe, none but those who are physically and mentally perfect are considered; the dwarfs and imbeciles and degenerates are not wanted. Intermarrying of the unfit and weak-minded has dwarfed the intellect of some rural communities. A very unfortunate feature of this class of our citizens is that they are very prolific and rear large families. We are permitting this class of our population to go on multiplying unhindered, continually adding more wards to our already overfilled hospitals, almshouses, asylums, and penitentiaries. It is time for us to take up this matter. There are two remedies, vasectomy and castration. The former operation does not destroy the sexual appetite or pleasure, but does prevent the propagation of the race. I believe this should be performed on all the unfit male members of the race who are quiet and harmless. Such persons are to a great degree irresponsible and should be cared for, but should cease to propagate their kind.

DISCUSSION

Dr. Ralston Lattimore, Savannah: If a proper check were put on the multiplication of criminals and degenerates, in four generations the prisons, insane asylums, almshouses and other places where these people are cared for would be only partly occupied. This association should take up this subject and urge the General Assembly to provide bills for the care of these patients. The surgical procedure should be left to a committee of three who should pass on the individual case, as to whether any operation is called for in the best interests of the community and of the patient.

Dr. T. R. Wright, Augusta: There is no more crying need in Georgia than a provision for the care of defective and feeble-minded children, and it is up to us to remedy the evil. There should be a place for these children where, if they are feeble-minded, their minds may possibly be developed and if they are hopeless they may be cared for.

DR. HUGH H. YOUNG, Baltimore: Vasectomy is the only thing that need be done in these cases and this operation, properly performed, is perfectly safe. Some of the individuals on whom vasectomy was done in Indiana went over to Kentucky and had anastomosis done. Some law should be passed to prevent such anastomosing. No person should be operated on until passed on by a competent medical committee.

DR. V. H. BASSETT, Savannah: At present the matter is an educational one. The time has not yet come when this state should take measures to prevent the procreation of these degenerates. Adequate provision, however, should be made for the care of these persons.

DR. J. W. PALMER, Ailey: One point has not been brought out, the intermarriage of kin. A great many degenerates result from the intermarriage of relatives.

DR. J. L. HARRIS, Savannah: Vasectomy is a good operation to perform for the sterilization of the male. Laws should be enacted for the regulation not only of degenerates, but of tuberculous people and of those having incurable syphilis. Castration is a good remedy to apply to the insane, as often after the operation the violently insane become docile and useful subjects.

### So-Called Neurasthenia—Some Factors Causative and Curative

DR. HANSELL CRENSHAW, Atlanta: Probably most cases of so-called neurasthenia are merely expressions on the part of the nervous system of the action of some irritant or strain, and it is our duty to search diligently for sources of irritation or strain before classifying such cases as purely functional neuroses. The careful clinician will study each neurasthenic patient literally from the crown of his head to the soles of his feet. There is another factor in the causation of neurasthenia besides the element of irritation or strain, and that is nervous instability, chiefly inherited. To my mind, the blood-pressure findings have been somewhat neglected in the literature. While we are told that there is a high blood-pressure type of neurasthenia, my experience leads me to suspect that the majority of cases of nervous exhaustion present abnormally low blood-pressure. It would seem that the blood-pressure curve is a very fair index to the progress of the patient, for the closer this curve approximates the normal mean of 130 mm. (systolic), the more nearly normal becomes the patient's general condition. When the pressure is high, the patient feels better; when the pressure is low, the patient feels worse. Obviously, the rational treatment of these cases is to remove any irritation or strain which may be responsible for the patient's loss of nervous vigor and equilibrium. My experience with drugs in the treatment of these cases, such as the old-fashioned antispasmodics, the more modern glycerophosphates and the very modern cacodylate of soda, has been discouragingly negative. On the other hand, the use of epinephrin and digitalis for regulation of blood-pressure has been encouraging. More effective than any drug, however, in these cases of constitutional or acquired nervous instability is the rest treatment.

#### DISCUSSION

DR. LEWIS M. GAINES, Atlanta: Dr. Crenshaw's views coincide with mine. There are three points I wish to emphasize: 1. A thorough physical examination, made in a systematic and orderly way. 2. Sexual affairs cause many cases of neurasthenia. This factor is most difficult to demonstrate, but much has been accomplished by the analysis of dreams which often represent a subconscious influence of an irritant which is not present when the patient is awake. 3. It is my belief that the use of epinephrin by the mouth has no effect on the blood-pressure and that it is so altered by the digestive juices that it has no effect whatever. If injected intravenously or subcutaneously it will give rise to an increased blood-pressure.

DR. E. BATES BLOCK, Atlanta: A great deal of the glamor of neurasthenia has been taken away by the introduction of the term "psychasthenia" with a train of mental symptoms which were formerly spoken of under the term "neurasthenia." These patients are more properly designated as psychasthenics. So far as neurasthenia is concerned, most cases can readily be demonstrated as due either to abdominal or sexual disorders. I have seen cases of duodenal ulcer, dilated stomach, floating kidney and ptosis supposed to be cases of neurasthenia, as well as cases of prostatitis, sexual excesses, and all sorts of sexual malpractices. The cure depends on the proper understanding of the causes. It is mainly by a study of the habits of the patient that one is enabled to remedy what is wrong.

*(To be continued)*

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## AMERICAN ASSOCIATION OF MEDICAL MILK COMMISSIONS

*Sixth Annual Meeting, held in Louisville, April 30-May 1, 1912*

The President, DR. HENRY ENOS TULEY, Louisville, presided

An address of welcome was delivered on behalf of the local profession by Dr. Edward Speidel, president of the Jefferson County Medical Society, which was responded to on behalf of the association by Dr. Henry L. Coit, Newark, N. J.

The following officers were elected: president, Dr. Ogden M. Edwards, Pittsburgh; secretary, Dr. Otto P. Geier, Cincinnati; treasurer, Dr. Samuel M. Hamill, Philadelphia; councilors, Dr. T. C. McCleave, Berkeley, and Dr. John R. Williams, Rochester.

### President's Address: The Association and Milk Standards

DR. HENRY ENOS TULEY, Louisville: No one knows better than I what this association has developed into, and the enormous amount of work which has been accomplished by the two fathers present here to-day, Dr. Henry L. Coit, the founder of the first milk commission and Dr. Otto P. Geier, the founder of the American Association of Medical Milk Commissions. Both of these men have done a vast amount of work at a great deal of personal sacrifice. No new commission has ever been formed except after extensive correspondence with one or both of them. They are more responsible for the spread of the clean milk movement than any other persons.

No more typical example of true, altruistic service can be had than in the conscientious work of a member of a medical milk commission—unpaid, misunderstood, accused of graft and criticized for things done and undone. Yet the demand for certified milk is to-day greater than could ever have been the dream of Dr. Coit when he first wakened to the idea of the milk commission.

The term "certified milk" has a distinct meaning in th minds of the people. The Pure Food Department of the Kentucky Experiment Station was so certain of this popular conception that a suit was brought under a section of the pur food law against the misbranding of foods, in the case of dairyman whose product was not certified to by a milk commission, but by his private and paid commission.

The publication of the final standards of working method for all commissions should be commended. I urge that th time has come when the council of the association throug the secretary with the manual as a guide should keep in touc with those commissions which are too lenient in their rules c too lax in the enforcement of them and help them by sugges tion and if beyond help drop them from the roll of membership in the association. A single standard for all, lived up t by all, is the only assurance of the final success of the entir clean milk movement. The passage of state laws regulatin and limiting the appointment of milk commissions to a count medical society should be encouraged, and the laws of Ne York, Kentucky and New Jersey can be taken as good worl ing models.

The questionnaire sent out by the committee on standar asked for information on the following points: (1) the dai hygiene as it relates to the collection, handling and tran portation of the milk; (2) the chemical and bacteriologic co ditions of the milk; (3) the veterinary inspections of t animals, their feeding, housing, hygiene and health; (4) t physical examination of employees handling the milk, th health and personal hygiene.

Because of the demand for certified milk this grade of milk is coming to be looked on more as a high-grade market milk than a clinical milk, which was the original conception of the term "certified milk." As a prophylactic agent the use of certified milk should be encouraged. The more general use of certified milk in Louisville by babies of the well-to-do, and through the Babies' Milk Fund Association by the babies of the poor, has been the means of cutting down mortality and norbidity from gastro-intestinal diseases in infancy through-out the entire year and especially during the summer. If the ntput is limited its sale should be confined to the use of abies and invalids and none sold for general consumption ntil these classes have been supplied. It should be looked on s a prescription milk and sold only on the recommendation f a physician.

## A Volumetric Method for Determination of Fat in Milk

**Thomas B. Stillman**, Hoboken. N. J.: A process to deter-ine the percentage of fat in milk, that will be expeditious, orrect, simple and free from the use of corrosive chemicals, as long been sought, and if this test can be performed by ne not a chemist, then milk inspection before the milk is rwarded from the country to the cities would be of the reatest possible service in the securing of a better milk sup-ly. M. Albert Bruno, chief of the Central Laboratory of the ervice for the Suppression of Frauds, Department of Agricul-re, France, proposes the use of a new instrument for the etermination of fat in milk, calling it the bi-butyrometre of I. Muloteau, and the use of an alkaline reagent instead of id. It is not necessary to describe this instrument, as anipulation with the Babcock bottles is easier, but the ouard reagent" used will prove of interest. This reagent is mposed as follows:

| | Gm. or c.c. |
|---|---|
| KHO | 10 |
| Alcohol, 95 per cent. | 50 |
| Alcohol amylic | 15 |
| Ammonia, pure, at 22° B. | 25 |

In place of amylic alcohol, as given in the Fouard reagent, would substitute isobutyl alcohol, because the former has a ry disagreeable, penetrating odor, whereas the latter has a easant, agreeable perfume, and its chemical properties, as quired in this reagent, are similar to those of amylic alcohol. Take 17.6 c.c. of the milk, transfer to a Babcock milk-testing ttle, add 10 c.c. of modified Fouard reagent, and place the ttle in a water bath and *gradually* heat the water to a point t below boiling, maintaining this temperature about fifteen nutes, shaking the bottle slightly at intervals. The color the liquid becomes finally a deep red and the coagulated ein is dissolved. Add warm water carefully until the fat ches nearly to the upper mark of the graduated stem of bottle. The fat arises in the tube in a clear, transparent, low body, and the amount is read off in the per cent. of milk fat. The space between 0 and 10 on the scale of the bcock test bottle is divided into fifty divisions, each five of ich represent 1 per cent. The Fouard reagent can be pre-red in large amounts and, since it keeps well, can be avail-e for use at any time.

## acteriologic Contents of Milk Prepared and Kept in Vacuum Bottles

**r. R. Hayes Davis**, Louisville: At the suggestion of the sident of this association, I have made five series of counts h certified milk, all of which contained 10,000 or less teria per cubic centimeter, placed in vacuum bottles at peratures of 120, 130, 140, 145, 167 and 212 F. The bottles e carefully cleansed, rinsed with warm water, increasing temperature until boiling water could be placed in them hout danger of cracking. They were then rinsed with the ng water once, and then more boiling water was allowed emain in them for about five minutes. The milk was now ght to the proper temperature and placed at once in the le. This proceeding was carried out at night and the es were made after twelve hours had elapsed. In tabulat-the results I have used the term 100,000 plus as a max-n, which is sufficiently high to demonstrate the absolute unfitness of such milk for infant-feeding, but many of the plates so described showed bacteria in such overwhelming numbers that counting was absolutely impossible without making further dilutions, which I did not deem necessary. Only three plates showed less than 100,000 bacteria. These were as follows: First milk at 130 F., 28,000; same at 140, 10,100; third milk at 145, 27,000. In all the other plates the count was 100,000 or more. In most of the plates the 212 milk showed considerably fewer colonies than the others, although all were distinctly above 100,000 bacteria. In the lower temperatures, such as 120 and 130, most of the plates were almost solid with bacteria.

These experiments would seem to demonstrate conclusively that the spores present in the milk are not destroyed by simply heating it to a high temperature, but will multiply very rapidly as soon as the temperature becomes sufficiently reduced for bacterial growth.

I then carried out several tests with market milk, and these gave practically the same results, except that the control milks before heating gave much higher bacterial counts than the certified milks, all reaching 100,000 or over.

Finally, I made an interesting experiment with the sterilization of vacuum bottles. The milks which were used in this test were all completely sterilized by subjecting them to live steam for twenty minutes in an Arnold sterilizer for three consecutive days, and were shown to be sterile by appropriate bacteriologic examination. The bottles were then treated by the boiling water method described above, which is the only practical one for mothers. The milk was then placed in the bottles at 100 F. and allowed to remain for twelve hours, at which time the plates were all found to contain the usual large number of bacteria. This showed that the method of sterilization of bottles within the reach of mothers would not be satisfactory at all.

### DISCUSSION

**Dr. Henry E. Tuley**, Louisville: I was surprised to find how many mothers were using these bottles to keep milk warm, and, having seen two babies rendered ill by the use of such milk, I tried to discourage this method of warming milk.

**Dr. Harris Moak**, Brooklyn: In investigating complaints against certified milk in our city, we have found, in practically every instance, that the same principle had been violated as shown by Dr. Davis' experiments. We have found that it is customary, not in homes alone, to use hot boiled water in the modification of milk. I know of a certain hospital where, in four days, they lost nine babies out of a total population of thirty-six, and investigation showed that hot boiled water had been used in modifying the milk. At the present time our supervision of the production and handling of certified milk ends when it is deposited at the door of the consumer, but it appears to me that we should take a very great interest in what becomes of it afterwards.

**Dr. John R. Williams**, Rochester: My experience in my own home has taught me that the most safe and practical way to warm the milk when modifying it for infant-feeding is to keep boiling water in a vacuum bottle, and keep the milk cold by placing it in a pail of ice.

**Dr. Martin J. Synott**, Montclair, N. J.: Why did Dr. Davis select twelve hours as the incubation period in his test? It seems to me that with a shorter number of hours the results might have been more interesting, as in every-day use the milk would hardly be left in the bottle for such a long period. It is possible that milk placed in the bottle at bed-time might be sterile at, say 12 o'clock, and yet at the end of twelve hours show a large bacterial count.

**Dr. I. A. Abt**, Chicago: I think we need more light before we can accept the statement of the gentleman from Brooklyn that the nine children he mentioned died from milk which contained bacteria. What time of the year did these deaths occur? What was the pathogenic microorganism that produced death? The mere fact that the milk contained 90,000 to 100,000 bacteria would not, to my mind, be the crucial point; they might be non-pathogenic. On the other hand, if it contained ten, or any small number of typhoid bacilli, or the bacilli of dysentery, it would be dangerous.

Dr. Chas. F. Tenney, Toledo: The fact that milk heated to 212 degrees and placed in a sterilized vacuum bottle and kept for twelve hours will show a bacterial count of more than 100,000 per cubic centimeter is appalling. Last summer I was told by a chemist and bacteriologist for one of the milk concerns in Toledo that pasteurization at 160 F. would destroy the spores of typhoid bacilli, and I wondered what bacteria could resist 212 degrees of heat and produce such a growth as this in twelve hours.

Dr. R. Hayes Davis: In reply to the question why a shorter period of incubation was not selected, I will say that I selected the period most likely to be employed by the mother. She could not realize the importance of time and would place the milk in the bottle at the time most convenient to her, whether early or late in the evening, and would continue to use from it until more was prepared the next morning, and I regarded twelve hours as a fair average. The results might be different in a period of six or eight hours, and it will be interesting to work that out at another time. While bacteria themselves are easily destroyed by heat, spores are very resistant, and if the milk is subjected to only one heating for a short time various bacteria will take the form of spores and will not be destroyed, and as soon as the temperature becomes favorable they will multiply very rapidly.

### Further Observations on the Germicidal Action of Milk

Mr. Martin Beck, Louisville: The "germicidal" action of milk varies in different animals and at different times. At most the action is variable and feeble. It cannot take the place of cleanliness and ice, but may be taken advantage of in good dairy methods. A decrease in the number of colonies developing in agar was shown, continuing, in some samples as far as the ninth day. In every case an increase in the number of bacteria growing at 20 degrees C. occurred several days previous to the increase of the 37 C. cultures. In samples kept for from three to four weks, the number of 20 C. organisms greatly exceeds those developing at 37 C., the increase being due, apparently, to an organism which does not grow at 37 C. This is suggested as the cause of some cases of ice-cream poisoning.

DISCUSSION

Dr. Leon K. Baldauf, Louisville: Recent experiments tend to show that the decrease in the number of organisms is not due to a germicidal action of milk, but to the agglutinins present in it; that if the milk is heated to 56 C. for half an hour, this restraining action is not affected, but if heated to 70 or 75 C. it is more or less completely destroyed.

Dr. Harris Moak, Brooklyn: I have often wondered why this germicidal action of milk, if it exists, should not take place in the cow's udder, and give us milk practically free from bacteria.

Dr. Charles E. North, New York: We know that there are certain species of bacteria which form gelatinous substances which make it possible for them to stick together in clumps, and I think this, among other things, must be considered in making bacterial counts of milk, especially that which is studied at a cold temperature. A higher count might be obtained by shaking up the milk thoroughly, thus breaking up the clumps.

Dr. Mazyck P. Ravenel: Experiments started in my laboratory have pretty thoroughly convinced me that there is a real germicidal action of milk. It could not take place in the cow's udder because the udder is a gland which secretes during the process of milking, and therefore, the milk does not have an opportunity to act on the bacteria which are normally in the acini of the gland.

Mr. Martin Beck, Louisville: Regarding the bactericidal action of milk in the cow's udder, it has been demonstrated that absolutely sterile milk can be obtained from a healthy cow under proper precautions. In regard to the reduction being due to the clumping of the bacteria, it has been shown that by shaking the milk vigorously as many as twenty-five times, an enormous increase in the count was obtained. This was done in all of our experiments in order to break up all clumps that could possibly have formed.

### Report on the Tuberculin Testing of Dairy Herds

Dr. Charles E. North, New York: Summarizing the twenty-seven complete reports of commissions, it appears that during the past year there have been 7,974 dairy cows tested, of which 319 reacted. The committee is unable to make a report regarding the slaughtering of these animals or other method of disposal, or concerning the nature of the tuberculous lesions in these animals, because the information is too meager. A comparison of these results with those obtained from a similar inquiry conducted by a special committee of the Certified Milk Producers' Association, last year, shows that in the inquiry of last year the percentage of reactors was about 3 per cent., while in the inquiry of this year the percentage of reactors is about 4 per cent.

The committee made a number of recommendations concerning membership in medical milk commissions and the certification of dairy farms. The recommendations were adopted.

*(To be continued)*

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## INTERNATIONAL CONGRESS ON TUBERCULOSIS

*Held in Rome, April 14-20, 1912*

*(Concluded from page 1627)*

### Artificial Pneumothorax

Carlo Forlanini, of Pavia, urgently recommended artificial pneumothorax. Many patients with severe involvemen of one lung who could not be helped in any other way ar cured by this method. The injection of nitrogen into th pleural cavity is frequently followed, by a prompt fall i temperature, euphoria and an improvement in nutrition. Th contra-indications are emphysema, splanchnoptosis, adhesion of the pleura and extensive involvement of both lungs. Th technic is free from danger.

L. Brauer, of Eppendorf, recommended the procedure bu only by the open method, which in his opinion was the onl way to avoid serious complications; the puncture metho could be used after the lung had been collapsed to renew tl gas in the pleural cavity. He recommended a simple manon eter to measure the pressure by which the gas was intr duced. An attempt to stretch pleural adhesions is useles Air embolism is the most dangerous complication and may fatal. Hemiplegia is a complication that may persist.

F. Dumarest, of Hauteville, speaks in high terms of t method, but mentions serious complications, among othe septic empyema and acute involvement of the other lung. did not speak of air embolism or hemiplegia.

A. Zubiani, director of the Pineta di Sortenna Sanatoriu reported on forty-three cases of artificial pneumothora seventeen of which had been at first treated by others a had later come under his care. Twenty-six were cases which he had begun and ended the treatment. In all cas the technic of Forlanini was followed, the nitrogen gas filte and injected under measured pressure. The results in the l series of cases are fully recorded. In fourteen cases it w good and the complications in the others were not severe. no case did he have embolism or hemiplegia. In several ca of spontaneous pneumothorax the gas was injected to ma- tain the lung collapse, with good results. Adhesions of pleura and involvement of the lungs are contra-indicatio In his opinion, the operation should only be done in hospit or better, sanatoriums in which the hygienic after-treatm can be carefully directed.

Sillig, of Leysin, reported an eclamptic attack which regarded as unquestionably due not to gas embolism but a pleural reflex. A pleuritic exudate was withdrawn and injected; when 600 c.c. were introduced the patient sudde became pale, had severe pain in the chest and lost power his right side, with complete amaurosis. In a few min these symptoms disappeared. This was his fourth inject The third, in which 900 c.c. of gas were introduced, was followed by symptoms. The patient ultimately recove In another case death occurred suddenly on a second atte to collapse the lung.

### Light

N. Zuntz discussed solar radiation in the treatment of tuberculosis. Special studies show that the effect of intense light on those parts of the body usually protected by clothing is to cause a heightened ventilation of the lungs and an accompanying increased depth of respiration. This difference was especially noticed in youthful persons. In one individual the respiratory rate fell from 9.5 to 4.2 per minute with an augmentation of the volume from 746 to 1,520. The respiratory volume and oxygen consumption were practically the same. It would be rash to draw conclusions from these data as to the effect of light in tuberculosis. Experiments should be conducted in a systematic way on those suffering from this infection.

F. Morin, of Leysin, maintained that the solar rays were strongly bactericidal. Under certain conditions light rays penetrate deeply into the tissues. The dilatation of the superficial vessels causes a decongestion of the deeper structures, stimulates nutritive changes and tones the nervous system augmenting the production of hemoglobin and the cellular constituents of the blood. All these are of value in the treatment of tuberculosis, but as prophylactic measures they have been better recognized. It is especially important that children should have prolonged air- and sun-baths. The sun-rays are of especial value in the treatment of latent, surgical and visceral tuberculosis, but some care must be exercised in its use in pulmonary cases, and its use in this class needs further study, but many patients are benefited by its employment.

H. von Schroetter, of Vienna, and Sophus Bang, of Denmark, further elucidated the subject, the latter dealing with the bactericidal action of sun-light. He points out the importance of biologic measurements in contradistinction to physical studies. Certain narrow portions of the spectrum may be bactericidal in high degree, others less or not at all.

Schroetter advances no definite conclusion on the relation of light to pulmonary tuberculosis, but is of the opinion that it is of distinct value in the so-called surgical tuberculosis. Both communications go too much into detail to admit of satisfactory presentation here. The work of Schroetter and Bang was the leading research contribution to the congress. The communication of Schroetter is a monograph of 169 pages, dealing first with the physical and chemical problems, and the measurement and duration of sunshine with its intensity, and a description of the photochemistry of light. He then takes up the physiology of light and heliotherapy in relation to tuberculosis. Then follows a lengthy discussion of the treatment of surgical and pulmonary tuberculosis.

Rollier presented the results in 650 cases treated at Leysin. The results were strikingly favorable, but it is to be noted that the patients had the benefit of sanatorium care, and the reporter does not attribute all of the good results to the irradiation but he regards it as an important factor.

### Diagnosis

L. Giuffrè, Palermo, and F. Kraus, Berlin, discussed the early diagnosis, advancing nothing new, but approaching the subject from the biologic standpoint and giving a full summary of present methods.

Hutinel, of Paris, presented a carefully prepared summary of the diagnostic methods in young children. He stated that he disease was far more common in infancy than was generlly believed. He emphasized the importance of study of the surroundings of infancy with especial reference to exposure. The infection in children is usually fixed in certain organs and s marked by a profound effect on nutrition. Laboratory methods are of special importance in the diagnosis of the disease in infancy. The cutaneous and intradermal methods re preferable to either the ocular or injection method in using uberculin.

Flick, of Philadelphia, recognizes the impossibility of tandardizing normal and abnormal sounds, yet it is desirable o have some international agreement as to sounds and the igns used to designate them. It would seem to be expedient t the present time to adopt an international history-sheet n which could be recorded a complete history of the case, a full record of all the symptoms of the patient, a diagrammatic charting of the diagnosis and if possible the prognosis, and a record on the side of the diagram of all the normal and abnormal auscultation sounds and percussion notes, of all normal and abnormal vibration sounds, of all alterations in the form of the chest, and of all adventitious sounds which may appear to be of importance to the examiner, expressed in such language as would be clear to others. The diagnosis should always contain a definite opinion on healthy tissue as well as on diseased tissue.

### Milk

L. Panisset, of Paris, believes that 10 per cent. of all samples of commercial milk is contaminated with virulent tubercle bacilli. The bacillus comes from diseased mammary glands. If they are sound, the milk is probably contaminated from outside sources. In milk and its products, cheese, butter, etc., the bacillus retains its virulence for a long time. This source of infection is to be met by eliminating the tuberculous cow and pasteurizing the milk.

Nathan Straus, of New York, pointed out the importance of prevention and emphasized the necessity of pasteurizing milk. His experience in providing a pure milk for babies in New York demonstrated that raw milk was a considerable factor in spreading infection. He said: "It is from twenty-one years of practical experience that I speak when I commend all efforts to produce clean milk from healthy cows, but recognize that there is really no such thing as raw milk that can be depended on to be clean and pure and free from disease day after day, even though it be produced with such elaborate precautions that it cost three times as much as ordinary market milk."

### Modes of Infection

F. Weleminsky, of Prague, described a method of infection sufficiently different from the commonly accepted notions to be worthy of extended comment. It is significant that A. Calmette, of Lille, presented identically the same views. Tuberculous infection is said to take place in 90 per cent. of children before the fifteenth year. As tuberculosis in infancy usually involves the lymph-nodes and pulmonary tuberculosis is rare, it is almost certain that the infection gains entrance through the lymphatics. A natural corollary of this is that tuberculosis in adults is often not primary but only a continuation of infantile tuberculosis of the lymphatic glands. This accounts for the fact that the lymph-nodes in consumptives often remain sound and that patients suffering with mitral stenosis rarely have tuberculosis, though with insufficiency of the pulmonary valve they easily acquire the disease. Early involvement of the bronchial glands is easily explained by the direct connection with the lymphatic system.

Hillenberg, of Zeitz, expressed opposite views, stating that consumption in the adult is in the great majority of instances independent of tuberculous infection in infancy.

### Exploitation of Proprietaries

The following remedies are cited as an example of the laxity of the Committee of Arrangements in permitting the exploitation of proprietary remedies. Such literature was freely distributed and was the subject of severe criticism.

Sophie Fuchs-Wolfring, a co-worker of Carl Spengler of Davos, referred to the enormous cost in Germany of sanatoriums for the treatment of tuberculosis. The results she maintained, were problematical, but all this could be changed by the "I. K." treatment of Spengler. She urged the employment of this remedy in early cases and in dispensaries.

Radium therapy was exploited by S. Bernheim, Paris, recommending a preparation called "Dioradin" which can be obtained anywhere in the world by application to the special agencies which have been established for the sale of this remedy. As to what this substance is we are left completely in the dark except for the statement that it is a combination of "mentholated radio-active iodin," whatever that may be.

"Phymalose," a new preparation by Doyen of Paris, belongs to the above group. It is said to be composed of "Mycolysin" and tuberculin. It is asserted that this substance is superior to all others and destroys at once the tubercle bacillus and the associated microbes.

"Emoantitossina," a substance invented by F. Figari of Genoa is declared to be composed of antituberculous substance combined with alcohol water and aromatic substances. It is to be taken by the mouth.

### Conclusion

While but little of definite value that is new was developed by the congress, it was interesting to note the decline of former views with regard to the influence of climate and the growing sentiment, not only in favor of sanatorium treatment, but the further fact that the results by other methods are unsatisfactory.

The hygienic and dietetic treatment of tuberculosis seems to be accepted in Europe as fundamental, and that whatever changes are made will be with the present methods of treatment as the basis. The use of tuberculin as a diagnostic and therapeutic agent is no longer questioned by those in a position to speak authoritatively. Vaccines and serums are regarded with favor, but are still in the experimental stage.

A dominant note of the proceedings was that instead of looking for a specific remedy for tuberculosis, the protean character of the disease was recognized, and instead of energies being directed to the discovery of a single remedy or method, intensive study is being focused on the several methods which must be devised to meet varying conditions.

If nothing new of practical value was developed, the work of the congress was none the less notable. Several new lines of attack were developed, and while practical results have not been obtained the indications are that some of them will prove successful. Be this as it may, the most encouraging feature of the congress is shown by the activity which must result in vastly improved methods of treatment, as has hitherto been done in other diseases, which seemed as formidable as tuberculosis now does.

The next congress will be held five years hence in London. In the meantime it is hoped that many of the errors of the last congress will be corrected. At least the English-speaking delegates present expressed themselves very freely in favor of a censored program, in which the papers should be limited and only papers or reports of distinct merit submitted.

This method is suggested in the interest of the delegates who attend, and also for the more important reason that the papers presented to an international congress are regarded as more or less authoritative by laymen; hence exceeding care should be taken that no papers shall be presented that are simply for the purpose of advertising the author, or exploiting doubtful and even quackish methods as was the case with the present congress.

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## OHIO STATE MEDICAL ASSOCIATION

*Held at Dayton, Ohio, May 7-9, 1912*

*(Concluded from Page 1631)*

### The Anatomic and Physiologic Effects of Iodin on the Thyroid of Exophthalmic Goiter

Dr. David Marine, Cleveland: The clinical evidence, especially that of surgical therapy, tends to support the thyroid hypothesis. Anatomically, the changes found in the thyroid are neither constant nor specific, and the extensive studies based on the iodin content of such thyroids have given negative results. The same is true of the feeding of desiccated thyroid made from exophthalmic goiter thyroids and the administration of extracts of such thyroids. In cases of cretinism or myxedema, such feeding gives the same results that other forms of desiccated thyroid do if of like iodin content; and the feeding of large amounts of exophthalmic goiter thyroid to patients with complete exophthalmic goiter syndromes induces the same effects that similar amounts of desiccated thyroids from other sources produce, if the latter have a like iodin content. Neither specific nor constant anatomic changes have been demonstrated; the storage of iodin in the gland and the involution of active hyperplasia by the use of iodin is, so far as at present known, identical with those iodin relations common to other clinical associations. The thyroid of exophthalmic goiter has no different pharmacologic action on animals, or therapeutic action on myxedema or toxic action on patients with exophthalmic goiter than thyroid preparations of other clinical associations with like iodin contents.

### The Clinical Evidences of Relation Between Exophthalmic Goiter and Altered Function of the Thyroid

Dr. C. F. Hoover, Cleveland: If "hyperthyroidism" or "dysthyroidism" or "thyrotoxicosis" are proved, then, of course, amputation of a part of the thyroid would be a rational procedure; but if the thyroid secretion is not the cause of the group of symptoms called Graves' disease or exophthalmic goiter, the amputation may still be of service on purely empirical grounds. An investigation of what is actually known in regard to the amputation theory will offer decided evidence against it. While some patients will improve after having a part of the goiter removed, it is not because the procedure lessens their hyperthyroidism, dysthyroidism or thyrotoxicosis. While one is justified in saying there is a relation between goiter and hypothyroidism, there is no justification in claiming a relation between the frequency of goiter and hyperthyroidism. All the known evidence shows that when the thyroid varies from the normal type, the change is toward hypothyroidism rather than hyperthyroidism. If the hyperthyroid patient develops an atrophy of the thyroid instead of the colloid state, then there appear all the symptoms of myxedema or hypothyroidism, and the symptoms of Graves' disease or hyperthyroidism remain unchanged.

### Vaccine Therapy of Tuberculous Adenitis

Dr. W. G. Gardiner, Jr., Toledo: It was impossible to regulate the routine of the daily life of these patients. Many of them lived in conditions far from ideal, and therefore any improvement may be attributed safely to the vaccines. To get the best results, it is necessary to treat the patients generally, as in other tuberculous affections. The bacillary emulsion gives very good results in this disease. One should be very conservative in increasing the dose, as small doses repeated often give better results than larger doses. Since good results have been obtained with the tuberculin treatment and also with the *x*-ray treatment, it would seem tha a combination of the two, used guardedly, might give eve better results.

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## MISSISSIPPI STATE MEDICAL ASSOCIATION

*Fortieth Annual Meeting, held at Jackson, April 9-11, 1912*

The President, Dr. D. J. Williams, Gulfport, in the Chair

### Officers Elected

The list of officers elected was published in The Journal April 27, p. 1292.

### Hydrothorax in Its Relation to Cardiorenal Lesions

Dr. Frank Jones, Memphis, Tenn: Hydrothorax is ofte an acute condition instead of a part of a general dropsy Acute nephritis is often ushered in by an attack of acut edema of the lungs followed by acute fulminating hydrothorax In all probability the attack of edema of the lung is due t the same toxic agencies which produced the renal change In these cases passive congestion, venous stasis, etc., hav nothing to do with the production of the edema. The larg black lung is analogous to the large red kidney. When dyspne is marked, either in cardiac or renal lesions, examine th patient's chest critically for hydrothorax. Hydrothorax, ma sive in nature, is often latent. Saline cathartics and digitali when hydrothorax is present to any appreciable degree, a dangerous. They invite edema of the lungs and paralysis the heart.

### Gastric Ulcer

Dr. R. M. Boyd, Aberdeen: I believe that gastric ulcer due to mechanical irritation alone. The treatment of t ulcer is the province of the physician, the complications alo belong to the surgeon. I would lay special stress on the di

DISCUSSION

Dr. P. R. Brown, West Point: There is no field in medicine in which prophylaxis is more important than in the treatment of gastric ulcer. If it is recognized early the tendency is toward healing. Unless gastric ulcers are diagnosed early and sufficiently treated, we have an invalid on our hands. Many cases do not come to the attention of the physician until the patient is found in a very bad condition from hemorrhage. The treatment should be very simple. Put the patient to bed and withhold all food and drink for five days. A great many cases occur from the constant leakage of gastric juice.

Dr. John Darrington, Yazoo City: Those men who are doing surgical work are apt to think too often that certain diseases of man are subject to surgical treatment. We must not be extremists. But I believe that gastric ulcer is strictly a surgical disease. Those suffering from chronic gastric ulcer certainly should be advised to have the operation performed because of the marvelous success attained by it.

Dr. J. G. Gaither, Oxford: The churning action of the stomach is more important than the digestive function. I believe that the whole proposition centers in the proper passage of the chyme from the stomach into the intestines.

### Some Interesting Cases of Uncinariasis

Dr. H. Boswell, Laurel: Four cases have come under my observation in which the predominant symptoms were those of malaria, gastric ulcer, epilepsy and spinal sclerosis—all yielding to thymol.

DISCUSSION

Dr. J. E. Johnson, Hudsonville: I have had several cases similar to those mentioned. I gave thymol and the patients recovered.

Dr. G. S. Bryan, Amory: About two years ago I saw a young lady who had had a slight convulsion two or three years before, about the menstruation period. She paid little attention to it thinking it was the menstrual epoch. Later she had a similar attack but more severe. Two months later she had another attack still more severe. Then the attacks became more frequent. The family history was good. The patient was red-checked, well developed and quick-witted. She was good in her studies. I had no specimen of her feces and could not get her blood examined. I had no idea what was he matter with her. I told her father to take her home and would look into it. Later, I suggested treatment for hookworm. She was given a dose of thymol and has never since ad another attack.

Dr. H. Boswell, Laurel: I had a case very similar to Dr. Bryan's. The girl was in excellent health. I suggested hat she be examined for hookworm, which was done and the infection found to be present. One dose of thymol cured her. The stomach cases are very prevalent, especially patients who ave indigestion. It is true that thymol sometimes makes atients very sick, but in doing the work over the state I ave come to the conclusion that magnesium sulphate is the cause of much of the sickness attributed to thymol. I saw a man given a number of doses of thymol in alcoholic solution in 60-grain doses and followed with castor oil; he is now well. have tried three different methods and I prefer the capsule, mixing it with from 25 to 50 per cent. sugar of milk. I do ot like the tablets as they do not dissolve in the intestines.

### Tuberculosis Among the Insane

Dr. J. C. Herrington, Asylum: Most of the tuberculous atients at the State Insane Hospital are infected before coming to the institution. Those who have been long in confinement are infrequently attacked. The degree of the confinement does not have so much to do with the incidence of the sease as one would suppose. All patients are cared for in mps outside the buildings. It is difficult to make early diagnosis in insane people. Treatment presents some difficulties. ooperation by the patient is sometimes hard to secure. This in some degree offset by the fact that the physician has bsolute control over the patient's manner of living. The revalence of tuberculosis among those mentally deranged in rmer times was evidently due to the bad hygiene of the ace of confinement. Open air, a nutritious diet and the least medication with which the patient can get along give best results. The death-rate in the camps since July, 1910, has been: White males, 26 per cent.; white females, 23 per cent.; colored males, 26 per cent.; colored females, 59 per cent. The preponderance of mortality in colored females has not been explained to my satisfaction. In the camps they are under identically the same conditions as the other patients. Overfeeding and overmedication are real dangers.

Dr. S. Myers, Vicksburg: I differ with Dr. Herrington on one point. The feeding of raw eggs will disgust the patient. A coddled egg is better, and so is the slightly warm egg, and has a greater food value.

### Management of Complicated Compound Fractures

W. W. Crawford, Hattiesburg: There is scarcely any limb in a hopeless condition if the blood-supply has been left intact. With very rare exceptions, the question of immediate amputation need not concern us. If the patient is admitted in a state of shock, do not amputate immediately, no matter how unpromising the limb, unless it can be done by one or two simple strokes of scalpel or scissors. Do not do an immediate amputation of any limb until sure that the blood-supply has been entirely destroyed. Do not forget that extensive destruction to bone and muscle will be compensated by Nature if given an opportunity. Do not despair of saving a limb because there are a few points of necrosis. Curet and give free drainage; Nature will do the rest.

DISCUSSION

Dr. E. J. Johnson, Yazoo City: I agree with Dr. Crawford with reference to conservative treatment and great effort to save the limbs. I have amputated limbs which if I had taken more time I might have saved. Since I have found that we can treat an open wound with good effect, I think we should try by all means to save the limb. One of my patients was an Italian who was shot in the leg with a 38 pistol ball and sustained an extensive fracture. I made a free incision and rendered the field perfectly clean and brought together all the pieces of bone and bunched the fragments with catgut. I made the leg stationary and did not put it in splints. I dismissed the patient with only ½ inch of shortness in his leg.

### The Making of an Agreeable Prescription

Dr. S. Myers, Vicksburg: The usual horrible mess which the average physician concocts is the real basis of the use of proprietary medicines. I would lay down as a rule: A prescription ought to look good, taste good and smell good. The value of glycerin as a sweetening agent for liquids is great and so is the use of citric acid, 2 grains to the ounce, for improving the taste of prescriptions of the various salts.

Dr. A. M. Haralson, Newton: The physicians are to blame for prescribing the proprietary medicines by their ordinary names. We should prescribe drugs by the Pharmacopeial or National Formulary name. We should make our prescriptions as agreeable as possible, especially for young patients. It does not make much difference with the older patients.

### Senile Gangrene: Selection of Amputation Site

Dr. W. R. McKinley, Columbus: The choice of the site for amputation is the great problem. Shall it be high or low? I have adopted the plan of following up the blood-vessels, from the lowest level in healthy tissue, until a point is reached above the circulatory obstruction or insufficiency. My series of six cases has shown satisfactory results. By operating at the lowest safe point, I avoid the added shock of amputation at the higher level and conserve tissue.

### Importance of Early Surgical Interference in Mammary Cancer

Dr. Julius Crisler, Jackson: Every tumor of the breast should be treated as malignant and removed. In the beginning, when the tumor is small, it should be enucleated—and this can frequently be done under local anesthesia—and submitted to a microscopist. If the findings show malignancy, a complete amputation should be done.

DISCUSSION

Dr. J. S. Ullman, Natchez, Miss.: Early operation is the only means of preventing recurrence of cancer.

Dr. H. P. Cole, Mobile, Ala.: Almost all cancers occur in women beyond the lactation period. During the lactation period we should not operate unless necessary for the reason that the woman has need of the breast.

Dr. E. M. Holder,* Memphis, Tenn.: Statistics show that 80 or 90 per cent. of breast tumors are malignant or become so. I have often thought that lack of care in confinement is the cause, also lack of care of the nipple. We can trace back many of these cases to early life. In Austria there is an educational campaign being conducted in regard to these cases. We should have the same thing in this country. Here I have known a woman to go from five to ten years afflicted this way without saying anything about it, "because she is embarrassed," and when such cases come to the physician or surgeon they are frequently beyond control. These cases of tumor of the breast should be cared for at once. Take the tumor out and have it examined by a competent man. There is a tendency among physicians to ask if there have been any cancers in the family, and if the woman says that there have not, the physician frequently tells her that it is only a little cyst. Do not do that. Cancer is not hereditary.

### The Cause and Cure of Race Degeneracy

Dr. J. H. Fox, Asylum: Alcoholism and venereal diseases are the chief causes of degeneracy, and I plead for education looking to the prevention of drunkards and syphilitics. Education must precede legislation.

DISCUSSION

Dr. B. L. Culley, Jackson, Miss.: Possibly I shall not see the day when we will get the legislation needed on these matters, but I commend an effort in the younger men in that direction. We are fighting tuberculosis and hookworm, but the diseases under discussion we are ashamed to mention. Fathers and mothers need to know these things. If we can eradicate these diseases we shall have taken a long step toward the eradication of other diseases. I believe it can be done without compromising the social feelings of anyone.

Dr. G. S. Bryan, Amory, Miss.: If we want legislation it is up to us to get it. Education of the public is necessary. We also need education and reformation among the physicians in their handling of these matters. We should be consistent, and first educate and reform ourselves and then get the needed legislation.

Dr. J. D. Gilleylen, Jackson, Miss.: We shall get more from education than from legislation. I have never been able to believe that we can legislate sin from our people. We must educate the child. It can be done at school and at home. I want to lay special stress on the educational route to get results.

Dr. C. Kendrick, Kendrick: From a study of statistics of the great increase of such degenerates it looks as if the human race may soon be overburdened with the care of weaklings. I have nothing against the education of the public in regard to sex matters and how to avoid the pitfalls of sexual immorality, but all the knowledge you can put into a man's brain will not control the sexual instinct. He will brave any and all dangers to satisfy his lust. I do not think we can legislate in such a way as to prevent illicit intercourse. But we can deny marriage to those who are sexually diseased and that will help a great deal. We can require a certificate of good health before marriage is allowed. Any sexual disease can be made the subject of a report to the state board of health. A law requiring a health certificate from the health authorities is as far as we can go before attempting further legislation.

Dr. E. F. Howard, Vicksburg, Miss.: As to legislation, a few years ago I had a paper in which I advocated the prevention of all venereal diseases by law. When they got through discussing it one could not see me because of the dust. I witnessed a little experience in the police court of Vicksburg. A physician was being tried for concealing a case of diphtheria. Another physician went on the stand and made the statement that the law requiring reports was a farce. He said: "Gonorrhea comes under the head of diseases required to be reported by this law. If I should report all the cases of gonorrhea I have treated it would be interesting reading." The law was immediately modified so as to exclude gonorrhea. It is up to the physicians to educate. It is easier to educate the legislature than all the people as to the advisibility of reporting gonorrhea. The individual man does not want the family secrets on the public record. The education of the young is the whole story. It has been advocated by men all over the country and much good has been done. But how far are we to go in educating them? If one does not say enough one will excite their minds and curiosity and they will get more and dangerous information. What can I say to my boy when he gets old enough? One cannot have a blanket law in this respect; that is the stumbling block.

Dr. R. S. Curry, Jackson, Miss.: Education of the people is the keynote. Education in regard to hookworm has had marvelous success. A few years ago the people did not know about the mosquito but now they do, through education. We must educate the children; we must teach them that alcohol is a drug and not a beverage. These lessons must be taught in the home and in the school. The teacher should have a scientific knowledge of alcohol. It should be taught by a physician who knows his subject. Let us give this instruction because we can do it best. We can get legislation if we need it. There is not a physician in this state who has no political influence, if he is a good man. We ought to educate the people. This is one of the most vital subjects before the American people to-day.

Dr. B. L. Culley, Jackson, Miss.; Education must come first and then legislation.

### Enuresis

Dr. S. G. Wilson, New Orleans, La.: This condition is psychosis and treatment by bitter tonics, the faradic curren and, in boys, by prostatic massage is indicated. The condition occurs chiefly between the ages of 3 and 5 years, an twice as often in boys as in girls. Many cases, however, ar seen after 5 years of age, up to 13 or 14, and the older th patient the harder it is to effect a cure.

### Some Sanitary Measures Which Should Be Required of Public Service Corporations

Dr. F. M. Sheppard, Richton: Telephone companies shoul be forced to keep toll-stations clean and disinfect the mont pieces of the instruments therein. Express companies shoul see to it that they do not handle packages that may hav been infected in such a manner as to contaminate other pac ages. Passenger cars and depots should be screened an toilets should be so constructed as to afford the highe degree of sanitation. Incinerators should be used at depo in towns where there is no sewerage.

### The Use and Abuse of The Uterine Curet

Dr. A. G. Payne, Greenville: We are too prone to use th handy little instrument, which, when improperly used, potent for much harm. Its indiscriminate use has great increased the death-rate in the infection following misca riage and labor at term. Where we have uterine hemorrha of unknown cause it is permissible to use the curet to obta a specimen. It is used to advantage in inoperable uteri fibroids, preparatory to the application of the cautery. may be used in chronic abortion or for emptying the uter when the infection is limited to the uterine cavity. Its n is contra-indicated when the uterine adnexa or peritone are involved or in cases of streptococcic infection. The da ger of perforation should be remembered when operating aft an abortion.

DISCUSSION

Dr. Julius Crisler, Jackson, Miss.: I believe that t doctor who picks up a curet had better pick up a scalp The use of the curet subjects the patient not only to imm diate danger but to after and chronic effects. And when t patient comes to the operating-table later, it is usua because of the use of the curet.

Dr. G. S. Bryan, Amory, Miss.: The uterus can be m effectively emptied by the use of the finger than the use the curet.

# *Medical Education and State Boards of Registration*

## COMING EXAMINATIONS

DELAWARE: State Society and Homeopathic Examining Boards, Dover and Wilmington, June 18-20. Secretary of Medical Council, Dr. Henry W. Briggs, Wilmington.

ILLINOIS: State Armory, Springfield, June 13-15. Sec., Dr. James A. Egan.

IOWA: Capitol Building, Des Moines, June 13-15. Sec., Dr. Guilford H. Sumner, State House, Des Moines.

KENTUCKY: The Armory, Louisville, June 3-5. Sec., Dr. J. N. McCormack, Bowling Green.

MARYLAND: Regular, 1211 Cathedral Street, Baltimore, June 18. Sec., Dr. J. McP. Scott, 129 West Washington Street, Hagerstown; Homeopathic, St. Luke's Hospital, Baltimore, June 13-14. Sec., Dr. O. N. Duvall, 1326 North Mount Street, Baltimore.

MICHIGAN: Ann Arbor, June 11-13. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

MINNESOTA: State University, Minneapolis, June 4. Sec., Dr. Thomas S. McDavitt, Lowry Building, St. Paul.

MISSOURI: Gymnasium of the St. Louis University, St. Louis, June 24-26. Sec., Dr. Frank B. Hiller, State House, Jefferson City.

NEW JERSEY: State Capitol, Trenton, June 18. Sec., Dr. H. G. Norton.

NEW YORK: June 25-28. Chief of Examinations Division, Mr. Harlan H. Horner, Department of Education, Albany.

NORTH CAROLINA: Hendersonville, June 11. Sec., Dr. Benjamin K. Hays, Oxford.

OHIO: Columbus, June 18-21. Sec., Dr. George H. Matson, State House, Columbus.

PENNSYLVANIA: Philadelphia, Pittsburgh and Harrisburg, June 24-27. Secretary of Bureau of Medical Education and Licensure, Nathan C. Schaeffer, Harrisburg.

SOUTH CAROLINA: Columbia, June 11. Sec., Dr. A. Earle Boozer, 1806 Hampton Street.

TEXAS: Austin, June 27-29. Sec., Dr. J. D. Mitchell, Fort Worth.

VIRGINIA: Richmond, June 18-21. Sec., Dr. R. S. Martin, Stuart.

WYOMING: State Capitol, Senate Room, Cheyenne, June 12-14. Sec., Dr. A. B. Tonkin, Riverton.

## Maine March Report

Dr. Frank W. Searle, secretary of the Maine Board of Registration of Medicine, reports the written examination held at Portland, March 12-13, 1912. The number of subjects examined in was 10; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 18, of whom 10 passed and 8 failed. Two candidates were licensed through reciprocity. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Baltimore Medical College | (1911) | 81 |
| Baltimore University | (1902) | 80 |
| Tufts College Medical School........(1908) 81; | (1909) | 83 |
| College of Physicians and Surgeons, Boston | (1911) | 77 |
| Columbia Univ. Coll. of P. and S. | (1898) | 83 |
| New York Homeo. Med. Coll. and Hosp. (1910) 90; | (1911) | 83 |
| Medico-Chirurgical College, Philadelphia | (1910) | 84 |
| Queen's University, Kingston, Ontario | (1911) | 87 |

FAILED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Maryland Medical College | (1911) | 72 |
| College of Physicians and Surgeons, Boston | (1911) | 67 |
| Tufts Coll. Med. School..(1905) 79;* (1909) 78;* | (1911) | *81 |
| Medico-Chirurgical College of Philadelphia | (1911) | †77 |
| Laval University, Montreal..........(1910) 72; | (1911) | 74 |

LICENSED THROUGH RECIPROCITY

| College | Year Grad. | Reciprocity with |
|---|---|---|
| University of Maryland | (1894) | Maryland |
| Harvard Medical School | (1905) | Penna. |

* Fell below 60 in chemistry.
† Fell below 60 in physiology.

# *Book Notices*

A CYCLOPEDIA OF AMERICAN MEDICAL BIOGRAPHY. Comprising the Lives of Eminent Deceased Physicians and Surgeons from 1610 to 1910. By Howard A. Kelly, M.D. Two Volumes. Cloth. Price, $10 net. Illustrated with portraits. Philadelphia: W. B. Saunders Company, 1912.

Dr. Kelly's aim has been to give "a brief outline of the life of every medical worthy who has lived in the United States and in Canada," meaning by "worthy," "a man who has been distinguished, either as an original thinker, a writer, as a teacher or great leader in medicine in any part of the country." Over 1,200 biographies are included.

The chronologic scope of the work is indicated by the fact that it embraces biographies of Lawrence Bohune, first physician-general to the colony of Virginia, of John Morgan, founder of the first medical school in America, and of Joseph Warren, the Revolutionary hero who fell at Bunker Hill, as well as of men whose deaths seem to have occurred but yesterday, like that of Howard Taylor Ricketts, who died in 1910 of typhus contracted during the investigation of its cause. Among them are biographies not only of medical men eminent in the profession, but also of physicians who have been prominent in other walks of life, of notable men whose lives and achievements are rapidly becoming obscure and forgotten and of men who, though not members of the medical profession, have done notable things which have contributed to medicine. To name a few at random, we have Samuel Howe, who was the first to train blind and deaf mutes in America; Amos Twitchell, who tied the common carotid eight months before Sir Astley Cooper performed the same kind of operation; Benjamin Franklin, who invented bifocal lenses for spectacles and investigated many other medical subjects; Hugh Lenox Hodge, who invented the pessary which bears his name; Crawford Williamson Long, who first used ether as an anesthetic; Jesse William Lazear, who laid down his life in investigating the mosquito theory of the transmission of yellow fever; Marion Sims, among whose many achievements in surgery are the invention of the duckbill speculum and the origination of an operation for vesicovaginal fistula; Caspar Wistar, whose memory is perpetuated by the Wistar Institute of Anatomy and Biology, and by the name of the beautiful vine, the wistaria; Benjamin Rush, the "American Sydenham;" Joseph Le Conte, the geologist; William James, the philosopher; Elizabeth Blackwell, the first woman to receive a medical degree; Usher Parsons, the only surgeon on Perry's flag-ship, the *Lawrence*, during the battle of Lake Erie; and many others of greater or lesser fame.

Dr. Kelly remarks that the whole work will be found lacking in uniformity of style and treatment owing to the many writers who have contributed, but that this is no disadvantage except where comparatively unimportant men have received extended treatment that might better have been accorded to those of greater interest and importance. As a whole the work is very interesting, being enlivened by many little anecdotal touches. It is, moreover, of importance as a creditable attempt to meet a real need. The introduction contains signed historical sketches of various medical subjects and Dr. Kelly personally requests that we record his regrets for the accidental omission of the signature of Dr. D. B. Delavan from the end of the summary of laryngology.

THE SURGICAL CLINICS OF JOHN B. MURPHY, M.D., AT MERCY HOSPITAL, CHICAGO. Vol. 1, No. 2. Paper. Price, $8 per year. Pp. 291. Philadelphia: W. B. Saunders, 1912.

The second number of these clinics contains much more matter than the first. It is illustrated with a selection of well-made pictures which help to elucidate the text very considerably. Even a cursory examination discloses the fact that this volume has been edited more carefully than the first number was. It cannot therefore fail to meet with greater approval than its predecessor. Nineteen cases are reported. Among these are cases of ununited fracture, arthritis, tenoplasties, ankylosis in which arthroplasty was done, neuroplasty, sarcoma, ischemic myositis and a Charcot ankle which was nailed successfully.

THE FRIENDS OF THE INSANE. THE SOUL OF MEDICAL EDUCATION AND OTHER ESSAYS. By Bayard Holmes, M.D. Cloth. Price, $1. Pp. 270. Cincinnati: Lancet-Clinic Publishing Company, 1911.

A series of essays covering a wide range of subjects both medical and surgical. Most of them, however, are devoted to psychiatry and contain a rather severe criticism of existing conditions. One is impressed by the evident earnestness and sincerity of the author, who frequently permits himself to be carried away by his fervor to statements which seem hardly justified. The statement cannot be disputed, however, that the methods of commitment of the insane "are, in many states a relic of barbaric procedure," that the criminologic, sociologic and economic aspects of insanity are sadly neglected, that the nursing in our state institutions is unsatisfactory, that the medical staffs consist largely of men insufficiently trained in psychiatry and overburdened witth routine work, so as to leave no time for scientific endeavor. Proper recognition, however, is not given to the great improvement which the last few years have brought in most of the conditions criticised. Dr. Holmes dwells on the absence of any serious attempts at the scientific study of causes, prevention and cure of insanity in our hospitals for the insane. To him the problem of the etiology is one of biologic chemistry and the time given to psycho-analysis after the methods of Freud and Jung, a waste pure and simple. As a remedy for these evils he suggests that the friends of the insane organize to bring about desired reforms. The first step in this endeavor is to be an agitation which is to lead to the establishment of a laboratory for the investigation of insanity, its causes, etc.; this laboratory to form part of and to be under the control of the state university.

We earnestly recommend the article on "The Soul of Medical Education" to those who are interested in this topic—and that should mean the entire medical profession. Throughout the small volume the versatility of the author and his familiarity with the most advanced ideas is evident.

Physikalische Heilkunde. Von Dr. Fritz Frankenhauser. Leitfäden der praktischen Medizin. Von Dr. Ph. Bockenheimer, Berlin. Band 4. Paper. Price, 7.50 marks. Pp. 323, with 77 illustrations. Leipzig: Werner Klinkhardt, 1911.

The author, who is connected with the hydrotherapeutic establishment of the University of Berlin, has written a clear and brief account of physical methods of treating disease. The first section is devoted to exercise and its effect on muscles, nervous system, circulation, digestion, skin, kidneys, etc. The effects of various kinds of exercise such as sports, gymnastics, and massage are described carefully. Rest is also considered, though more briefly. The second section is devoted to thermic methods of treatment. After a consideration of the general subject of bodily temperature, the physical and physiologic effects of different temperatures are discussed. In this section the subject of climate also is described. Air and water baths are then described in some detail. A third section is devoted to light cures; a fourth, to electricity; a fifth, to the influence of physical forces on human beings in their various ages or periods of growth, and the last, to the treatment of various groups of diseases by these forces. The book is well illustrated.

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# Medicolegal

## Validity of Pure Food Municipal Ordinances

(*City of Chicago vs. Union Ice Cream Manufacturing Co. (Ill.), 96 N. E. R. 872*)

The Supreme Court of Illinois says that the state legislature clearly did not intend by the passage of the pure food act in 1907 to deprive municipal authorities of all power to legislate on subjects touched on or regulated by that act. The pure food act was not intended to deprive cities and villages of the authority to regulate and control, by ordinances not in conflict with the pure food law, the sale of foods, given by the provisions of Article 5 of the city and village act, authorizing cities and villages to make regulations for the promotion of health or suppression of disease. So a city ordinance is not invalid which provides that any person or corporation, or any agent or employee thereof, who shall keep for sale, offer for sale or exchange, or shall sell or deliver or expose for sale, any food which shall be impure, unwholesome, adulterated, or to which any harmful or injurious foreign substance has been added, shall be fined not less than $5 nor more than $100 for each offense. However, municipal authorities cannot, under a general grant of power, such as said Article 5, adopt ordinances which infringe the spirit of a state law or are repugnant to the policy of the state as declared by general legislation, although the police regulations of a municipality may differ from those of the state on the same subject, if they are not inconsistent therewith. The ordinance quoted does not prohibit what the statute permits. While the ordinance attaches a less penalty for its violation than does the statute, the court finds no repugnancy between them. The general policy under both is the same.

## Scheme of Pretended Specialist Likened to Bohemian Oats Swindle—Validity of Note Given to Unlicensed Practitioner

(*State Bank of Greentown vs. Lawrence (Ind.), 96 N. E. R. 947*)

The Supreme Court of Indiana affirms a judgment for the defendant, who was sued on a note given in September, 1905, for alleged medical services. The court says that the uncontroverted facts were that for some years prior to said date the payee of the note, "Doctor" W. A. Magee, was a resident of Chicago, and claimed to be a medical and surgical specialist. He had no license to practice in Indiana. He carried on an extensive system of swindling operations in a number of counties in Northern Indiana. His scheme was somewhat similar to the Bohemian oats swindle, which was used extensively in Indiana some years ago. The plan of the "doctor" was to call on people in the country who were in ill health, and assure them that he could cure them in a definite time, the patient to execute to him a note, due at the end of such time, for the treatment, and he to execute a written agreement to return the note when due if no cure was effected. He then sold the note before maturity.

When the note for $120 sued on in this case was executed, the practice of medicine without a license was prohibited in Indiana, under a penalty of fine. Consequently the note in the hands of Magee was not enforceable, because the consideration therefor was an illegal one. But in the hands of an innocent holder it would be enforceable. However, while the plaintiff bank purchased the note before maturity, for value, it was, in the exercise of ordinary care, under the legal duty to inquire into the consideration of the note, under the facts disclosed by the testimony of its president and cashier, who bought the note.

The officers of the bank knew, or believed, that Magee was a Chicago specialist, and that he was offering to treat eyes and perform operations thereon, and that some of the notes handled by the bank were given for the treatment of eyes. They knew that he called himself a doctor. The treatment of the eyes, either by medicine or by a surgical operation, is prohibited by the Indiana statute, unless the physician or surgeon is licensed. The statute prescribes under what contingencies a physician or surgeon licensed in another state may practice in Indiana. The evidence did not disclose any fact that would have warranted Magee in practicing in Huntington county, Indiana, even if he had a license to practice in Chicago. The note in suit showed on its face that his post-office address was Huntington county. The evidence introduced by the defendant showed that Magee had no license to practice in Huntington county, and that he was a resident of Chicago, Ill. That was sufficient to prove prima facie the allegation that Magee was unlicensed. There was no evidence tending in any way to show that Magee had a license to practice medicine or surgery anywhere. An Indiana statute provides that no judgment shall be reversed where it appears that the merits of the cause have been fairly tried and determined in the court below. The Supreme Court thinks that that statute was applicable here.

## City Physician Appointed Without Authority or as an Employee

(*Jacobs vs. City of Elmira (N. Y.), 132 N. Y. S. 54*)

The Third Appellate Division of the Supreme Court of New York says that the common council of the defendant city appointed the plaintiff city physician at a stated salary. His duty was to attend on the employees of the various city departments and the indigent poor when called on. There was no express provision in the city charter giving power to appoint a city physician, but it had long been the custom of the common council to make such appointments from year to year under its general power "to enter into contracts for services or supplies and order payment of the same, and to provide generally for the welfare of the city." On March 23, 1903, he was appointed to succeed himself. But a new common council, in January, 1904, appointed another city physician in place of the plaintiff. The plaintiff claimed that his appointment, or hiring, continued until the 23rd of March, 1904, and he offered to perform the services during that period. He was not permitted to do so, but, holding himself in readiness, thereafter brought this action and recovered judgment for such part of the year, which judgment was affirmed by the county court, but is now reversed.

The court does not consider that the plaintiff was a city official, for the city charter did not provide for any such office, and it was beyond the power of the common council to create an office which the statute made no provision for. Nor could he be counted an employee of the city. The common council did not have power to enter into a contract with him to give medical treatment to the members of the various city departments, including fire and police, and to attend on the indigent poor of the city. The provision of the charter quoted fell far short of giving even implied authority to enter into a binding contract with him for the rendering of services for a specified time. The common council had no more power to bind the city by a contract with the plaintiff than it had to create the office of city physician and agree to pay a salary. And, while a municipality is bound by contracts which it has the power to make, it is not bound by contracts which its officials have no authority to enter into.

Furthermore, if the plaintiff be deemed a mere employee whom the council had authority to employ at a fixed compensation, the term of his employment must be deemed to be at the pleasure of the appointing power notwithstanding a definite term was fixed. In other words, the plaintiff, even if the common council had power to employ him, could have resigned before the expiration of the time specified without making himself liable for damages; and so could the common council terminate his employment without subjecting the city to damages for failure to fulfil the contract on its part. The city made an offer of judgment to the amount of the plaintiff's salary for the time he actually served and until his successor was appointed. That sum was the only sum which he was entitled to recover.

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# Current Medical Literature

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### Texas State Journal of Medicine, Fort Worth

*May, VIII, No. 1, pp. 1-30*

1 *Preservation and Restoration of Tendon Function. W. L. Brown, El Paso.
2 Perforating Duodenal Ulcer: Report of Case. A. I. Folsom, Dallas.
3 Cause and Effect in Gynecologic Practice. M. Duggan, San Antonio.
4 Local Medical Examiner, Medical Director, Insurance Company and Public Health. M. M. Smith, Dallas.
5 Relation of Patient and Physician; What Is Confidential and What Is Not. C. E. Mays, San Angelo.
6 Errors of Refraction. N. H. Bowman, Memphis.

1. **Tendon Function.**—Emphasis is laid by Brown on the fact that limbs should not be too long or too continuously immobilized in fractures, because of the danger to the future tendon function. Great caution should be used in making incisions for cellular tissue infections, to see that the tendon sheaths are not unnecessarily opened or the tendons severed by making reckless incisions without due regard to these structures. The permanent disability of many hands has been due as much to improper incising of abscesses as to the infection. All recent wounds of tendons should be immediately repaired, and if surroundings are not such as to justify this procedure, they should only be temporarily dressed until such time as the tendons may be properly repaired. In the repair of every tendon, from either recent or old injury, the field should be rendered absolutely bloodless and a careful dissection made. In the repair of every tendon, whether recent or old injury, a new sheath should be provided in place of that destroyed, that the future function of the repaired tendon may not be reduced because of adhesions. The most practical method for constructing a new sheath is to use subcutaneous areolar tissue. Cargile membrane, sections of veins, etc., have been used, but not with satisfactory results. In operating to restore function to tendons that have had old injuries or infection, all scar tissue should be carefully dissected away. After all tendon repairs complete immobilization should be sustained for three weeks, then passive motion begun cautiously. Tendons have almost no blood-supply, and consequently heal slowly. Immobilization should be in the position which will give the tendon greatest relaxation. In amputations at the wrist or ankle joints, or through the leg or forearm, in the presence of infection, all the larger tendon sheaths should be split open, the tendons pulled down and cut as high as possible and the larger tendon sheaths drained through separate incisions after they have been thoroughly swabbed out with tincture of iodin. All elective operations on tendons should be preceded by a thorough study of the anatomy of the parts, then first performed on the cadaver, after which surface measurements are carefully made in order that the dissection may be made with as little trauma to the tissues as possible.

### Journal of Tennessee State Medical Association, Nashville

*April, IV, No. 12, pp. 473-516*

7 Peritonitis. R. A. Barr, Nashville.
8 Appendicitis, Its Topographic Variations and Treatment. J. B. Haskins, Chattanooga.
9 Staphylococcus Infections of Skin. E. D. Newell, Chattanooga.
10 Trachelorrhaphy. G. R. West, Chattanooga.
11 Vaccination. S. S. Moody, Shelbyville.
12 Chronic Gonorrheal Semino-Vesiculitis. R. M. Colemore, Chattanooga.

### Surgery, Gynecology and Obstetrics, Chicago

*May, XIV, No. 5, pp. 425-536*

13 Stereoscopic Photography with Natural Colors. E. G. Beck, Chicago.
14 Surgical Diseases of Pancreas. M. H. Richardson, Boston.
15 Surgery of Biliary Passages. G. E. Brewer, New York.
16 Surgical Pathology of Stomach and Duodenum. J. F. Binnie, Kansas City, Mo.
17 Coordination of Undergraduate and Postgraduate Teaching of Clinical Surgery with View to Securing Efficiency. A. J. Ochsner, Chicago.
18 *Fibrous Atrophy of Parotid, with Special Reference to Treatment of Salivary Fistula. D. Tait, San Francisco.
19 Apparatus for Thoracic Surgery Under Intratracheal Insufflation or Positive Pressure; Also for Ether Anesthesia by Mask, Intrapharyngeal, Intratracheal and Intrabuccal Methods. S. Robinson, Boston.
20 *Secondary Parotitis Following Operations for Appendicitis. J. Frank, Chicago.
21 Report of Ninety-Three Cases of Circular Valve Gastrostomy. E. J. Senn, Chicago.
22 Rupture of Pyosalpinx as Cause of Acute Diffuse Purulent Peritonitis. W. M. Brickner, New York.
23 Umbilical Tumors Containing Uterine Mucosa or Remnants of Müller's Ducts. T. S. Cullen, Baltimore.
24 Compiled Report on Certain Questions Relating to Appendicitis. W. Hessert, Chicago.
25 Choice of Technic in Enterostomy Incident to Operations for Intestinal Obstruction. J. P. Lord, Omaha, Neb.
26 *Artistic and Mathematically Accurate Method of Repairing Defect in Cases of Harelip. J. E. Thompson, Galveston, Tex.
27 *Rare Fracture and Its Treatment. P. F. Rogers, Milwaukee, Wis.

18. **Fibrous Atrophy of Parotid.**—The following is a summary of Tait's views: Atrophic sclerosis of the parotid gland follows obstruction of Steno's duct. Its extent is in direct proportion to the degree and duration of obstruction. The addition of an element of infection may hasten the hyperplastic process. Distention of the duct may persist long after the gland has undergone almost complete fibrous atrophy. Fistula of Steno's duct may be permanently cured by double ligation and section of the duct as close as possible to the gland. Operations on the bacterially rich outer third of Steno's duct are much more frequently followed by fistula than are similar interventions on the inner third of the duct. The effects of incomplete obstruction (stenosis) of the salivary ducts are frequently found in the parotid and submaxillary glands where, by simulating malignancy, they may lead to grievous mistakes in surgical therapy. In experiments on duct obstruction (glands, pancreas, liver, testes, kidney, etc.) single ligation should never be resorted to; the only reliable method is double ligation and section.

20. **Secondary Parotitis.**—Frank regards it as highly probable that secondary parotitis is due to an ascending infection of Stenson's duct. The onset of this complication may be prevented by attending to the following details: (a) Mouth carefully cleansed before and after operation. (b) Everything used for the anesthetic should be sterile. (c) The anesthetizer should avoid pressure on the gland while attempting to elevate the jaws during anesthesia. When the swelling does not show any tendency to decrease in size in about four days, it is advisable not to wait for fluctuation, as the location of the pus is beneath the dense parotid fascia. Therefore, free incision and drainage should be resorted to early.

26. **Repairing Defect in Harelip.**—In order to obtain a satisfactory result from any operation for harelip, Thompson says the following requirements must be satisfied: 1. The red line of the lip must extend in a clean, unbroken curve from one side of the newly formed lip to the other. 2. The depth of the mucous membrane must be equal on each side of the line of suture. 3. The newly formed lip must not be too short, but must be lengthened so that it will more than cover the gums. 4. The nostril must be reproduced so as to have exactly the same dimensions as the sound nostril and must consist of tissue of the same texture as the normal nostril. 5. There must be no flattening of the nose or ala nasi on the affected side. For the last fifteen years he has been operating by a method which he believes has given results that satisfy fully the first four requirements. Every incision is carefully and accurately measured by the simple expedient of pricking out the beginning and end of a cut with a pair of sharp pointed compasses. Incisions made into the lip on one side of the cleft must always be of the same length as those on the other side, if the sides are to fit accurately. No tucking in of the skin is allowable, as in other regions of the body, and if it is attempted the result will be disastrous, for it is sure to lead to ugly elevations, depressions and irregularities. The mucous membrane, on the other hand, is more extensible than the skin, but as it is essential to unite mucous membrane to mucous membrane only, it is equally necessary here to have incisions of same length on each side of cleft. For a detailed description of the method the original must be consulted as it is freely interspersed with cuts.

27. **Rare Fracture.**—A man looked over the top of the gate guarding the entrance to the elevator shaft which passes up through his ware-room. The elevator, just then descending, caught him about midway between the occiput and the vertex, and, his mouth being open, the superior maxillary arch was jammed squarely down on the top of the gate, leaving a perfect print of the arch where the teeth bit into the solid oak. Fortunately the elevator boy, happening to glance down the shaft, took in the situation an instant before the contact and applied the brake just in time to avoid crushing the man's skull. As it was, the scalp for a width of five or six inches was scraped off the vertex forward to the superciliary ridge and in the median line the skull was planed bare. The lower lip was somewhat lacerated by the teeth, but not a tooth of either upper or lower jaw was broken or even loosened, and yet the superior maxilla was completely severed from all its bony attachments in a plane just above the nasal floor and dropped down into the buccal cavity like an ill-fitting plate making articulation difficult. Finally Rogers made a very small vertical incision over the front end of the zygomatic arch, down to the bone. A long, spear-shaped needle with an eye near its point was then thrust down to the inner side of the zygoma, emerging close alongside the upper third molar. One end of a fairly heavy aluminum-bronze wire which had been previously looped and twisted tight about the neck of the tooth was threaded into the eye, bent sharply on itself and the spear withdrawn. The latter being disengaged was again inserted through the small incision and forced down outside the zygoma, emerging at exactly the same point and the other end of the wire was similarly threaded and drawn out. This operation being duplicated on the other side, the two sets of wires were pulled firmly upward until taut and were then twisted tightly over the zygoma, the ends being allowed to protrude through the skin. This brought the maxilla firmly up against its broken supports and allowed perfect occlusion of the teeth. A small collodion dressing was applied on each side. The wires gave very little discomfort. In removing them, a brief anesthetic was given, the wires were cut inside the mouth and pulled out by the projecting ends and the loops were slipped off over the teeth. The result was perfect.

### Virginia Medical Semi-Monthly, Richmond

*May 10, XVII, No. 387, pp. 53-80*

28 Preventive Medicine. A. J. Burkholder, Staunton.
29 Syphilis, Diagnosis and Treatment. G. B. Trible, Washington, D. C.
30 General Diet in Typhoid, Report of 200 Cases. G. C. Rodgers, Elkins.
31 Diagnosis of Surgical Conditions of Ureter by Means of Roentgen Ray. D. D. Talley, Richmond.
32 Rheumatic Diseases of Eye and Throat. C. R. Dufour, Washington, D. C.

### Journal of Missouri State Medical Association, St. Louis

*May, VIII, No. 11, pp. 413-450*

33 *Use of Restraint in State Institutions for Insane, with Some Suggestions for Its Reduction. E. H. Trowbridge, St. Josepn.
34 Differential Diagnosis of Ulcers of Nose and Throat. H. C. Creveling, St. Louis.
35 Goiter: Its Medical and Surgical Treatment. C. O. Dewey, Breckenridge.
36 Puerperal Infection. W. R. Beatie, Marshfield.
37 *County Society: What It Should Do to Advertise the Quack. H. E. Songer, Jamesport.
38 County Medical Society; Its Use to Profession and Public and Technic of Its Administration. E. L. Stewart, Kansas City.
39 Practical Problems in Ear, Nose and Throat Practice. R. Barclay, St. Louis.
40 *Notes, Chiefly Therapeutic, on Various Diseases of Skin. W. A. Hardaway, St. Louis.

33. **Restraint in State Institutions for Insane.**—By using the following methods Trowbridge has reduced his mechanical restraints to naught; but seclusion at times is necessary in a very few cases for short periods. The violent, disturbed patient, after well-applied hydrotherapeutic treatment placed in seclusion for a time, quiets down nine times out o ten and usually goes to sleep. The straight-jacket will no quiet his screaming or soothe his irritable mental condition Instead, it has a tendency to aggravate him and he become even more violent and uncontrollable. For chronically disturbed patients hydrotherapy is most quieting. These patient are ,as a general rule, more or less destructive to their clothing. To overcome this Trowbridge has them wear one-piec suits made of extra strength denim cloth, which is laced u the back. This will suffice for the average case; but if necessary their fingers are wrapped separately with adhesive tap to the second joint; the use of adhesive in this way als prevents the average patients from digging or scratchin themselves. Again, there is a class of patients who ar physically weak, such as the senile dements or failing paretic who are continually getting out of bed at night and wande ing round. To prevent this, use detachable side-boards for th beds which extend about 18 inches above the mattress, allow ing the patient perfect freedom in bed. It is very unusu to have these patients try to climb over the side-boards durin the night. The one class of patients that are hard to hand are the disturbed patients with tendencies for self-injury; bu close attention to their case, with well-applied hydrotherap combined with limited seclusion, will work wonders. Wor such as that on the farm for those who are able, plenty outdoor air for those unable to work, good, wholesome foo amusements such as dances and moving picture shows wi with the above few suggestions, reduce restraints and one w have fewer disturbed patients than ever before.

39. **County Society and the Quack.**—While teaching t people how to choose between the honest physician and t quack, Songer says we may at the same time instruct the how to choose between the man who attends the society mee ings and keeps up with the times and the man who nev goes to a society, who takes no medical journals, who buys new books, has a dirty, filthy office, is found either on t street loafing, telling funny stories, or in a card game or game of checkers. Teach them how to differentiate betwe the two and in so doing it will aid in getting men into o societies who now pay very little if any attention to th county society. In organization there is union, and in uni

there is strength. Teach the people that it is for their interest that physicians are working in society meetings, that it is for their interest that physicians leave their homes and business to attend these meetings; then will the people and their representatives be in a position to vote intelligently on medical questions when they come up in the legislature, for the public does as it is taught.

**40. Skin Diseases.**—The internal treatment of urticaria Hardaway says consists in the administration of 5 or 10 grains each of a powder containing subcarbonate of bismuth and carbonate of magnesium every three or four hours, coupled with the liberal drinking of Vichy water, which should be fortified with a pinch of sodium bicarbonate on each occasion that the Vichy is drunk. The local application of menthol, carbolic acid, tar, etc., give at least temporary relief. When carbolic acid, or the tincture of mineral tar is used, it acts best when sprayed on with an atomizer.

| | | |
|---|---|---|
| ℞ | Phenolis (vel tinct. picis mineralis) | ʒii |
| | Glycerini | ℥ss |
| | Aquæ, q. s. | ad ℥xvi |

M. S.: Mop on with a rag or use as a spray.

A prescription containing menthol, and carbolic acid added to zinc lotion (non-sprayable) is the following:

| | | |
|---|---|---|
| ℞ | Mentholis | ʒi-ii |
| | Alcoholis | q. s. |
| | Phenolis | m.xx-xl |
| | Zinci oxidi | ʒiv |
| | Pulv. calaminæ præp | ℈ iv |
| | Glycerini | ʒii |
| | Liq. calcis | ℥ii |
| | Aquæ, q. s. | ad ℥viii |

M. S.: Mop on with rag.

McIntosh's cream is sometimes better borne than any form of lotion.

| | | |
|---|---|---|
| ℞ | Bismuthi subnitratis | ʒii |
| | Zinci oxidi | ʒss |
| | Glycerini | ʒiss |
| | Phenolis | m.xx-xxx |
| | Vaselini | ℥vi |

M. S.: Apply with finger or brush.

### Interstate Medical Journal, St. Louis

*May, XIX, No. 5, pp. 399-486*

41 Serum Treatment for Hyperthyroidism. S. P. Beebe, New York.
42 What Is Internal Secretion? E. L. Opie, St. Louis.
43 Insidious Chronic Appendicitis. M. J. Lichty, Cleveland.
44 Clinical Indications for Major Operations on Temporal Bone and Their Pathologic Interpretation. E. T. Sensency and L. K. Guggenheim, St. Louis.
45 Scorpion Venom. H. V. Jackson, Durango, Mexico.
46 Surgical Treatment of Intestinal Stasis. J. Y. Brown St. Louis.
47 Version in Transverse Presentations Resulting from Thigh-Pressure Produced by Posture. A. F. A. King, Washington, D. C.
48 Pentosuria. E. D. Watkins, Memphis, Tenn.

### Journal of Nervous and Mental Diseases, Lancaster, Pa.

*May, XXXIX, No. 5, pp. 289-360*

49 Bilateral Supranuclear Paralysis of Upper Facial Distribution. H. Carncross, Philadelphia.
50 *Intermittent Claudication in Upper Extremities. E. M. Williams, Philadelphia.
51 Acute Delirium in Psychiatric Practice, Special Reference to So-Called Acute Delirious Mania (Collapse Delirium). E. L. Hanes, Rochester, N. Y.

50. **Claudication in Upper Extremities.**—The case cited by Williams presents unusual symptoms, in the absence of any involvement of the lower limbs, in the almost continuous pain present, this extending even through the interparoxysmal periods, and in the absence of any abuse of the system that might, by a toxemia, cause arterial changes, but with an indirect cause apparently in frequent exposure to cold and over-exertion, with the possibility of an acutely exciting cause in an attack of influenza.

### Journal of Medical Society of New Jersey, Orange

*May, VIII, No. 12, pp. 611-664*

52 Ideals of Profession of Medicine. F. S. Meara, New York.
53 Consideration of Surgical Diseases of Upper Abdomen. L. J. Hammond, Philadelphia.
54 Prophylaxis of Scarlet Fever. F. H. Pierson, Elizabeth.
55 Hypertension. W. Martin, Atlantic City.
56 Cerebral Diagnosis. F. D. Gray, Jersey City.
57 Specialties and Specialists. J. H. Clark, Newark.
58 National Department of Health and National League for Medical Freedom; or Organized Medicine vs. Organized Quackery. W. J. Robinson, New York.

### American Journal of Public Health, New York

*April, II, No. 4, pp. 223-314*

59 Typhoid in Rural Virginia. A. W. Freeman and L. L. Lumsden, U. S. P. H. and M.-H. Service.
60 North Carolina Campaign Against Uncinariasis. J. A. Farrell, Raleigh, N. C.
61 Bacteriologic Study of Milk-Supply of Washington, D. C. J. J. Kinyoun and L. V. Dieter, Washington, D. C.
62 Portable Outfit for Determination of Visible Dirt in Milk. F. O. Tonney, Chicago.
63 *Sterilization of Milk Bottles with Calcium Hypochlorite. H. A. Whittaker and B. M. Mohler, Minneapolis, Minn.
64 Treatment of Baltimore Drinking Water by Means of Calcium Hypochlorite. W. R. Stokes and F. W. Hachtel, Baltimore.
65 Distribution of Cases Among Several Producers in Epidemics of Non-Milk-Borne Infectious Disease. W. T. Carpenter, Cincinnati.

63. **Sterilization of Milk Bottles.**—The investigations conducted by Whittaker and Mohler have been confined to a determination of the relative efficiency of various solutions of calcium hypochlorite in the sterilization of milk bottles. A number of dairies were visited and the work was done on the spot with the apparatus actually in use by the dairymen at that time. The milk bottles used in the experiments were selected from those already cleaned and ready for refilling with milk for distribution. A solution of calcium hypochlorite of known strength was carried so that a definite amount could be added to the local water used in the process of treatment. During the investigation the amount of chemical rendering efficient results was reduced from 20 to 10 parts per million of available chlorin and the time of exposure from one hour to twenty minutes. The summary of results computed from the average results under the conditions indicated, show a removal of over 99.9 per cent. of the bacteria by this treatment. From the results it appears that by submerging milk bottles in a water to which calcium hypochlorite in the amount of 19 parts per million of available chlorin has been added, a very marked reduction in the bacterial count is effected. An examination was made of the organisms remaining after treatment on the plates from two dairies and over 95 per cent. of these organisms were found to be spore bearers.

### Western Medical Review, Omaha, Neb.

*May, XVII, No. 5, pp. 285-306*

66. Fly as Communicator of Disease. W. H. Wilson, Lincoln.
67 Prostatectomy. A. I. McKinnon, Lincoln.
68 Prevention of Colds. D. C. Hilton, Lincoln.
69 Tuberculous Meningitis. F. M. Conlin, Omaha.
70 Treatment of Puerperal Infection. J. S. Lancaster, York.
71 Methods of Skin Grafting. F. B. Hollenbeck, Lincoln.

### Cleveland Medical Journal

*April, XI, No. 4, pp. 241-316*

72 Newer Meaning of Symptoms in Hysteria. G. M. Parker, New York.
73 *Syphilis and Amentia: 1,050 Cases with Special Reference to Serologic Findings. W. C. Stoner, Cleveland, and E. L. Keiser, Columbus.
74 *Roentgentherapy of Leukemia. G. F. Thomas, Cleveland.
75 Causes of Perforation of Nasal Septum. W. B. Chamberlin, Cleveland.
76 Two Cases of Injury to Eye by Pieces of Steel, One a Double Perforation. C. C. Stuart, Cleveland.

73. **Serum Reaction in Amentia.**—Stoner and Keiser found 83 or 7.9 per cent. positive Wassermann reactions in their series of 1,050 cases of all grades of amentia. They found nothing strikingly suggestive in the way of common characteristics in any clinical class of the positive cases and are unable to formulate any conclusion that congenital syphilis acts in a definite way. Notwithstanding the well established fact that congenital syphilitics lose their antibody content with age they found a number of positives past middle life. One case at the age of 61 years showed a positive reaction; this is much older than other observers have found the reaction positive in congenital syphilis. It shows that the specific antibody content is not markedly lost with age. Two paralytic cases seemed to be progressive. This and the relatively high per cent. of positives in this class make syphilis suggestive as an important causative factor. Two of the paralytics showed

Hutchinson teeth but no other ear-marks of syphilis. No definite history of congenital lues in any of these cases was obtainable. Tredgold says 80 per cent. of all cases of amentia are due to a morbid heredity, which includes all forms of nervous instability as well as alcoholism, tuberculosis, syphilis, etc. Of the cases in this series showing a positive reaction, 80 per cent. show a morbid heredity and 40 per cent. a neuropathic heredity; in 15.6 per cent. of the cases the history was unattainable; 14.4 per cent. of the positive cases show clinical signs of inherited syphilis. The classification of the eighty-three positive cases, according to the Binet test, is as follows: Idiot, seventeen or 20.4 per cent. Imbecile, forty or 48.1 per cent. Moron, twenty-three or 27.7 per cent. Backward, three or 3.6 per cent.

74. **Roentgen-Ray in Leukemia.**—During the past five years Thomas has had opportunity to observe the results of Roentgen-ray treatment in six cases of leukemia of the splenomyelogenous type. Four of these patients followed the usual habit of discontinuing treatment as soon as the beneficial effect of the Roentgen-ray made them feel perfectly well and enabled them to resume their usual pursuits. The only facts of importance taught by these cases are that under proper dosage almost hopeless cases will respond rapidly to treatment; that this improvement is marked enough to cause the patients to feel that they are practically cured; that after cessation of treatment the disease recurs; and finally, that these recurrences are also amenable to treatment, though the response is successively less satisfactory. In none of the cases treated were there any untoward results of Roentgen radiation, such as toxemia or burns. Thomas believes that Roentgen-ray treatment is the best therapeutic agent so far suggested for leukemia, the least dangerous, the most uniform and the most permanent. The Pancoast method is the most rational and most successful form of Roentgen-ray treatment. Under favorable conditions the leukemic patient may be restored to comparative health in a few weeks and his length of life increased by a period of three to six years. During this period of increased life he is comparatively free from distressing symptoms.

### Ohio State Medical Journal, Columbus

*May 15, VIII, No. 5, pp. 241-286*

77 The Smith Intracapsular Extraction of Cataract. A. Timberman, Columbus.
78 Penetrating Wounds of Abdomen. F. Fee, Cincinnati.
79 Huntington's Chorea, with Report of Cases. C. C. Kirk, Toledo.
80 Use of Antitoxin in Prevention of Diphtheria. D. O. Weeks, Marion.
81 Macular Chorioiditis. C. C. Stuart, Cleveland.

### American Medicine, Burlington, Vt.

*April, VII, No. 4, pp. 179-232*

82 Auditory Vertigo and Tinnitus Aurium. A. A. Gray, Glasgow, Scotland.
83 Therapeutics of Uric-Acid Diathesis. O. L. Mulot, Brooklyn.
84 First Woman Practitioner of Midwifery and Care of Infants in Athens, 300 B. C. G. T. McMaster, New Haven, Conn.
85 Influenza in Infants and Children. H. Schwarz, New York.
86 Influenzal Meningitis. G. R. Pisek, New York.
87 Complication of Influenza Affecting Ear, Nose and Throat of Children. S. Oppenheimer, New York.
88 Pulmonary Abscess Associated with Influenza. W. P. Northrup, New York.
89 Treatment of Cancerous Growths with Selenium Compounds. F. von Oefele, New York.
90 *Diagnostic Value of Intradermal Injection of Gonococcus Vaccine. J. London, New York.

90. **Gonococcus Vaccine.**—In testing out a number of cases for the reaction by vaccination of gonococcus vaccine in saline solution, London's results were negative, but in the same patients the same vaccine injected into the skin showed a beautiful result similar to the "stich" reaction obtained by Hamburger and by Manheimer in tuberculin diagnosis. London calls attention to the diagnostic value of this method of intradermal injection of a few drops of gonococcus vaccine, 50,000,000 to 100,000,000 per c.c. in saline solution. In positive cases an area of erythema develops from one to three inches in diameter, in the center of which there is a small red papule, a little deeper in color than the surrounding areola. This central papule is really composed of two parts, one at the site of needle puncture and the other at the periphery of injection. Normal saline solution may be used as control, but is not necessary as London has used a few drops of a solution containing 500,000,000 per c.c. without any reaction in negative cases. Oftentimes the entire area of reaction is slightly elevated. Adjacent lymph-nodes are not enlarged. In negative cases there is no reaction or yellowish discoloration at site of injection. The reaction appears in from twelve to twenty-four to forty-eight hours, the central papule being the last to disappear.

### Journal-Lancet, Minneapolis

*May 1, XXXII, No. 9, pp. 225-252*

91 Cancer Problem. J. C. Stewart, Minneapolis.
92 Some Ideas on Aborting Gonorrhea. F. R. Wright, Minneapolis.
93 Two Cases of Sporotrichosis. G. F. Ruediger, Grand Forks, and O. Smith, Manning, N. Dak.

### Bulletin of Manila Medical Society

*March, IV, No. 3, pp. 41-66*

94 Report of Certain Diseases in Korea. R. G. Mills, Seoul, Korea.
95 Some Inquiries Regarding Sprue. P. M. Ashburn, Manila.
96 *Senile Phimosis. A. M. de Silva, Colombo, Ceylon.

96. **Senile Phimosis.**—Three anomalous cases of phimosis are reported by deSilva. The patients were all old subjects, men over 60; they were able to draw the prepuce backwards and forwards freely when they were young men and also during middle-age; but for many years their sexual power has been lost and they have been unable to draw the prepuce backward. On examination the orifice of the prepuce was reduced to a pin-hole size and the entire prepuce shrunken and in close contact with the glans. They were treated by circumcision under local anesthesia. At the operation the foreskin was seen to be free and not adherent to the glans anywhere and there were no collections of smegma, as usually is seen in congenital cases. There were no ulcers or papillary growths on its surface. The whole prepuce felt thick, but specially so at its orifice. Microscopic examination in two cases showed the hyperplasia to be composed of simple fibrous tissue, there was no evidence of malignancy anywhere. These patient's troubles were not due to enlargement of the prostate because no sooner was circumcision performed than their urinary difficulties vanished. DeSilva considers the condition an atrophic change taking place in old people, in consequence of which the prepuce gets shortened and shrunken, its orifice is narrowed and it comes to lie close against the glans.

### Lancet-Clinic, Cincinnati

*May 4, CVII, No. 18, pp. 479-504*

97 General and Dietetic Treatment of Typhoid. G. Dock, St. Louis.
98 Relation of Scoliosis to School Life. R. W. Lovett, Boston.
99 Feeding of Children from Bottle to Puberty. E. Campbell, Cincinnati.
100 Typhoid. L. Heimann, Evansville, Ind.

*May 11, CVII, No. 19, pp. 505-530*

101 Mechanical (Non-Surgical) Treatment of Splanchnoptosia. E. Gallant, New York.
102 Pulmonary Tuberculosis as Studied by Stereo-Roentgenogram. K. Dunham, Cincinnati.
103 *Suture of Bullet Wound of Lung with New Method of Closing Pleural Defects. J. L. Ransohoff, Cincinnati.
104 Inguinal Hernia Under Local Anesthesia, with Report of Cases. A. H. Barkley, Lexington, Ky.
105 Care of Inebriates at Home. T. A. Williams, Washington, D. C.

103. **Suture of Bullet Wound of Lung.**—Ransohoff describes his method as follows: The rib adjacent to the bullet wound is rapidly resected and the pleura widely opened. The search for the bleeding point can only be successful if that lobe of the lung in the direct course of the bullet wound is grasped and delivered through the incision. The bleeding may be temporarily controlled by pressure on the root of the lung. The method of permanently controlling the bleeding is adequately described in the case report. After the bleeding is stopped, the pleura should be washed clean of blood and clots and the wound closed without drainage. The wound must be closed in layers, hermetically sealing the pleural cavity. If this is not done, the pneumothorax, which is invariably present, is likely to be complicated by infection. In the event of this unfortunate complication supervening the prognosis becomes grave. The most interesting feature of the case cited by him is the use of the fascial flap as a substitute for pleura.

### Medical Record, New York

*May 18, LXXXI, No. 20, pp. 927-972*

106 *Neurology of Voluntary Movement. G. V. Dearborn, Cambridge, Mass.
107 Vaccination of Tuberculous; Dual Existence of Contagious Diseases. J. J. Walsh, Scranton, Pa.
108 *Passing of Bismuth Paste. W. Blanchard, Chicago.
109 Pneumonia Simulating Localized Peritonitis. Typhoid Observed During Incubation Period. H. F. L. Ziegel, New York.
110 Treatment of Tuberculosis. C. G. Am Ende, New York.
111 New Crutch for Exposing Perineum. C. A. Bucklin, New York.

106. **Neurology of Voluntary Movement.**—The main thesis of Dearborn's paper is succinctly stated in three sentences, thus: As a necessary preliminary to the exact neurology of the will, every deliberate movement, however simple, must be accorded a personal motive, often intricate, whose factors, in part merely neutral, must be sought for. Each of these factors, psychologic or physiologic, implicit in a voluntary movement, has as its concomitant a functional set of nervous impulses. Because of the variety and complexity of the factors determining it, every deliberate movement must be considered the resultant of influences coming from practically every part of the brain or even of the entire gray fabric of the nervous system.

108. **Passing of Bismuth Paste.**—Having treated 106 cases of sinuses from tuberculous bone disease very successfully with bismuth paste, and having treated 152 cases even more successfully with a nontoxic substitute, Blanchard offers a vigorous protest against further use of bismuth paste.

The ideal paste for flooding tuberculous sinuses and filling pus cavities must be nontoxic and absorbable. It must sufficiently solidify at body temperature to crowd out the pus, compress the unhealthy granulations, and exclude the air. The following formula for a sinus-flooding paste is offered by Blanchard and he says it meets every requirement and is entirely innocuous. Formula 1: White wax, 1 part; vaselin, 8 parts; mix while boiling.

Iodin may be added in badly infected cases. Iodin scales can be reduced to a powder by the addition of 20 per cent. of potassium iodid. One, two or more grains may be put in a small cup. The usual glass syringe should be filled with the hot paste. Half the contents of the syringe must now be injected into the cup and the nozzle of the syringe used to mix the iodin powder into the hot paste. When this mixture is drawn into the syringe the fresh iodin is rather unevenly distributed in the hot paste and it is ready for use. Immediately after injecting the sinus a thick pad of gauze saturated with alcohol should be bound over the opening. The evaporation of the alcohol cools and hardens the paste and prevents its escape. In some cases it is well as a preliminary step to get a skiagram showing all the sinus ramifications and pus pockets. For this purpose Blanchard is injecting sinuses with the following mixture. Formula 2: Iron subcarbonate, 1 part; white vaselin, 2 parts; mix and boil.

The iron makes as good a skiagram for diagnostic purposes as the bismuth, without its dangers.

The results in over 150 cases of old tuberculous sinuses flooded with the wax-vaselin-iodin paste showed about 35 per cent. cured by from one to eight treatments. Thirty per cent. more were cured in a year and about 35 per cent. remained unimproved. This last 35 per cent. had retained sequestra or were amyloid and hopeless. The ultimate results of cases cured show just about the same with the wax-vaselin-iodin paste as with bismuth paste. But in the uncured and the relapsing cases the advantages of the wax-vaselin-iodin treatment were very great. There were no deaths. There were no cases of poisoning with a painful train of symptoms. There were no cases in which the sinuses and pus sacs were clogged by the heavy bismuth settling down and becoming permanently residual. Blanchard claims that in occasional favorable cases the abscess stage of tuberculous hip or other joint disease may be cut short by opening the cold abscess with a small puncture, draining it by mild manual pressure and filling it to its full capacity with a thick paste so as to completely exclude the air and keep the sac sterile till it becomes obliterated. For this purpose the following is said to be an excellent paste. Formula 3: White wax, 3 parts; soft paraffin, 2 parts; white vaselin, 24 parts; mix while boiling. This abortive treatment can succeed only when the abscess shows on the surface, the area of tuberculous destruction is small and the quantity of pus is limited. Fully 70 per cent. of the old neglected or unfortunately treated cases of Pott's disease and tuberculous hip disease with from two to a dozen sinuses and a constant semiserous, slightly pus-colored discharge were cured in from a week to three months.

### Canadian Medical Association Journal, Toronto

*May, II, No. 5, pp. 366-460*

112 Inflammatory Cysts and Cancer of Breast. O. Klotz, Pittsburgh.
113 Some Acute Abdominal Emergencies. H. A. Bruce, Toronto.
114 Disinfection in and After Infectious Diseases. W. T. Connell, Kingston.
115 Wassermann Reaction. R. P. Campbell and F. S. Patch, Montreal.
116 Tabes Dorsalis: Exhaustion Theory with Experimental Evidence. C. K. Russel, Montreal.

### Boston Medical and Surgical Journal

*May 16, CLXVI, No. 20, pp. 723-758*

117 Gui Patin: His Life and Character as Contained in His Letters. A. N. Blodgett, Boston.
118 Gonorrheal Arthritis. J. W. Sever, Boston.
119 *Cold-Water Cure for Nervous Dyspepsia. A. E. Austin, Boston.
120 *Hemoptysis; Its Significance and Treatment at Out-Patient Departments, Dispensaries and in Private Practice. J. B. Hawes, Boston.
121 *Prevention of Ophthalmia Neonatorum. R. C. Mackenzie, Boston.
122 Salvarsan and Measles: Clinical Note. L. L. Williams, Boston.

119. **Cold-Water Cure for Nervous Dyspepsia.**—The cold sponge, the cold plunge and the cold water clyster are the agents employed by Austin in the treatment of this condition.

120. **Hemoptysis.**—At the Out-Patient Department of the Massachusetts General Hospital from July, 1903, to Jan. 1, 1912, 114 patients came to the hospital because of hemoptysis. Of these 114 patients, nine were children 15 years old or less. In six of these pulmonary tuberculosis was considered to be the cause of the bleeding. Seventy-eight patients, or 68.3 per cent. of the total number, were either strongly suspected or proven to have pulmonary tuberculosis. Of these seventy-eight patients, eleven were at once admitted into the hospital on account of active hemorrhage while in the out-patient department. Here they were given careful study, treatment and advice. Twenty-eight of these patients, or 35.8 per cent. of the total number diagnosed as pulmonary tuberculosis or strongly suspected of having it, never returned and thus received no adequate treatment for their condition. In order to properly handle patients with pulmonary tuberculosis, or patients suspected of having it, in large out-patient clinics or dispensaries, Hawes says there should be a special department devoted to this work. The general practitioner should bear in mind that unless there is definite evidence to the contrary and a source for the bleeding found in the gums, throat, nose or elsewhere, a hemorrhage from the mouth means pulmonary tuberculosis and should be treated accordingly.

121. **Prevention of Ophthalmia Neonatorum.**—The fact that there were 388 newly-born infants admitted to the wards of the Massachusetts Charitable Eye and Ear Infirmary in a period of four years Mackenzie says means something. Of these 388 babies, twenty-three were discharged from the hospital totally blind and forty-two partially so, all so disabled that their future livelihood is made seriously more difficult. The vision of sixty-seven was affected at the time of their appearance at the hospital. Of this series of cases, 272 were attended at birth by physicians in private practice, thirty by dispensary physicians, sixty-three by physicians in hospitals, three by doctors employed by the city, ten by midwives, three were unattended, and in five cases the attendant could not be determined. Of the sixty-five babies who became blind or partially so, there were fifty-five cases or over 20 per cent. of all those occurring in private practice, four cases or about 6.3 per cent. of all attended by hospital physicians, and three cases, or 33.3 per cent. of those attended by midwives.

### Maryland Medical Journal, Baltimore

*May, LV, No. 5, pp. 105-130*

123 Tribute to Minotaur. J. R. Kean, Washington, D. C.
124 Ulcers of Pyloric Region: Case of Pylorectomy. H. B. Stone and E. B. Freeman, Baltimore.

### New York Medical Journal

*May 18, XCV, No. 20, pp. 1021-1072*

125 Treatment of Prolapsus of Uterus with Attendant Cystocele and Rectocele. J. R. Goffe, New York.
126 Apophysitis of Os Calcis. J. W. Sever, Boston.
127 Eye Training for Cure of Functional Myopia. W. H. Bates, New York.
128 Mechanotherapeutics of Muscular Torticollis. E. F. Cyriax and A. Kellgren-Cyriax, London.
129 Fragment of Glass Irrigating Nozzle Removed from Bladder Without Open Operation. V. C. Pedersen, New York.
130 Conditions Resulting from Ritual Circumcision. F. Bierhoff, New York.
131 Treatment of Chronic Diseases at Spas, Particularly with Reference to Modern Conception of Radium Emanation. G. A. Persson, Mount Clemens, Mich.
132 *Causes of Pain in Upper Right Quadrant of Abdomen as Determined by Means of Roentgen Rays. G. E. Pfahler, Philadelphia.
133 Catching Cold. W. Brady, Elmira, N. Y.

132. **Pain Explained by Roentgen-Rays.**—Pfahler summarizes his paper as follows: 1. Practically all pathologic conditions in the chest which may cause pain in the right upper quadrant of the abdomen can be demonstrated by the Roentgen-rays.

2. Subdiaphragmatic abscess can usually be demonstrated.

3. Biliary calculi can be shown in some cases.

4. Duodenal, gastric and colonic adhesions can practically always be demonstrated by their effects on the position and movements of these organs.

5. Gastric ulcer can be shown only when it has perforated, and can be suspected by spasmodic contractions, which may be present in the stomach.

6. Duodenal ulcer may be suspected if spasmodic constrictions are present in the duodenum.

7. Gastric carcinoma, Pfahler believes can be almost always demonstrated.

8. Renal calculus can be demonstrated in at least 98 per cent. with good technic.

9. Renal abscess can often be demonstrated by combined cystoscopic and roentgenoscopic examinations.

10. Perinephric abscess can be demonstrated when it is large enough to produce a palpable tumor, or when it displaces neighboring organs.

11. Colonic kinks and constrictions can be demonstrated.

12. Each of the foregoing conditions requires careful technic and careful study in the sequence of the various steps during the examination, and usually requires not only a fluoroscopic examination, but a number of plates.

### Journal of Arkansas Medical Society, Little Rock

*March, VIII, No. 10, pp. 263-284*

134 Etiology and Pathology of Cholelithiasis. S. Cooper, Fort Smith.
135 Symptomatology and Diagnosis of Cholecystitis. A. E. Sweatland, Little Rock.
136 Treatment of Trachoma. H. Moulton, Fort Smith.
137 Postoperative Ileus: Case Relieved by Intestinal Puncture. L. Long, McAlester, Okla.
138 Etiology and Treatment of Clinical Manifestations Resulting from Cervical Anteflexions. C. S. Holt, Fort Smith.

*April, VIII, No. 11, pp. 285-316*

139 Infection of Urinary Tract by Bacillus Coli. S. Cooper, Fort Smith.
140 Cancer of Uterus and Importance of Making Early Diagnosis. E. E. Barlow, Dermott.
141 Conservation of Ovaries. W. Crutcher, Pine Bluff.

## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### British Medical Journal, London

*May 4, I, No. 2679, pp. 989-1052*

1 Chronic Intestinal Stasis. W. A. Lane.
2 *Infection of Urinary Tract by Bacillus Coli. L. G. J. Mackey.
3 *Correlation and Distinction Between Certain Symptoms in Some Abdominal Diseases. E. S. Bishop.
4 *Appendicitis and Quickness. E. Owen.
5 *Retroperitoneal Perforation of Duodenum. E. D. Telford and S. B. Radley.
6 Mechanism and Treatment of Shock. H. T. Gray and L. Parsons.

2. **Infection of Urinary Tract by B. Coli.**—In severe and obstinate cases Mackey advises that an experienced urinary surgeon should be consulted, and it should be his object to determine whether the infection is in the bladder or kidney, or both; whether it is limited to one kidney or present in both; whether it is a primary infection or secondary to stone, tubercle, or obvious obstruction. How far the surgeon is able to remedy a moderate dilatation of the kidney pelvis Mackey does not know; but where the infection is obstinate and associated with nephroptosis, he believes nephropexy should be tried. If the surgeon discovers no indication for operative interference, there is in vaccine treatment a remedy which will always relieve, and sometimes cure, the disease; and in some cases a course of vaccine might with advantage be used as a preliminary to operation. In mild infections without symptoms the condition will often remain undiscovered, but once the infection is known to exist, it must be borne in mind that the disease may at any time become more acute or spread to another part of the urinary tract, so that even if a case does not appear to call for treatment, the condition should never be altogether ignored. Although infection of the urinary tract by *B. coli* is of common occurrence, the symptoms will often fail to draw attention to the urinary organs; and the physician will certainly fall into the error of his predecessors of attributing the symptoms to other causes, unless he is prepared to adopt the simple measures necessary to make a correct diagnosis.

3. **Symptoms in Some Abdominal Diseases.**—It would appear from Bishop's observations that cases of appendicitis must be reclassed as: (1) Acute, (2) relapsing or subacute, and (3) chronic, in which latter class all these cases under consideration must be included. It is in this class that difficulty is found as to diagnosis before operation, difficulty which it is very necessary to overcome and which Bishop suggests may be cleared up by a more careful search among the records of the earlier attacks and comparison with those of the later ones. Such search should be directed to (1) any difference as to the localization of the pain; (2) any alteration in the relationship of pain and vomiting; (3) the relief afforded or not by vomiting; (4) the effect of purgatives.

4. **Appendicitis and Quickness.**—The word quickness is used by Owen in a double sense: first, with regard to the speed in which appendicitis may run its course, and, second, with regard to the need of the surgeon losing no time in getting to work when once the presence of the disease is recognized, or, on good grounds, suspected. The more he sees of appendicitis the more convinced he is that the greatest safety lies in the quickness with which the radical operation is undertaken.

5. **Retroperitoneal Perforation of Duodenum.**—A case is cited by the authors which had a fatal termination, but in which they were able to show that a duodenal ulcer which had perforated in the retroperitoneal area of the second stage could be reached with ease and closed by sutures. Under "open" ether anesthesia the abdomen was opened by a long incision through the right rectus; the peritoneal cavity was normal and no ulcer was seen on the anterior surface of the duodenum. A large gauze packing was inserted, and with good retraction it was a quite easy matter to expose the second portion of the duodenum. A vertical incision was made through the peritoneum immediately to the outer side of and parallel to the descending portion of the gut. There escaped at once a large quantity of fluid of the same nature as that obtained from the drainage tube. The duodenum thus "mobilized" was quite easily turned forward and to the left, when the perforation was at once apparent. The opening was in the center of the posterior wall of the descending portion 1 in. from its beginning. The perforation admitted the tip of the index finger and there was hardly any induration of its edges. It was an easy matter to close it by four Lembert sutures, and in fact it was closed more readily than is possible in many cases of intraperitoneal perforation. A posterior gastro-enterostomy was quickly done and the pylorus closed by a ligature. The whole operation occupied less than half an hour. After the operation there was a distinct rally, probably due to the ether, but during the afternoon the signs of collapse were apparent, and the patient died at noon of the following day.

### Journal of Obstetrics and Gynecology of British Empire, London

*March, XXI, No. 3, pp. 129-192*

7 Classification in Gynecology. W. E. Fothergill.
8 Cause and Treatment of Procidentia Uteri as It Occurs in Parous Woman. E. H. Tweedy.
9 Combined Pregnancy. R. H. Lucy.
10 Solid Teratoma of Ovary in Which Patient Is Free from Recurrence Six Years After Operation and Bore Child Three Years After Removal of Tumor. H. Williamson.
11 Prolapse and Pregnancy; Vaginal Suspension. B. Solomons.
12 Treatment of Acute Puerperal Inversion of Uterus. M. H. Phillips.
13 Concealed Accidental Hemorrhage Treated by Cesarean Section and Hysterectomy. M. H. Phillips.
14 Curious Instance of Vicarious Menstruation. D. M. Greig and J. A. Kynoch.
15 Primary Mesothelioma of Fallopian Tube. C. Eglington.

### Lancet, London

*May 4, I, No. 4627, pp. 1175-1252*

16 *Cardiac Debility and Cardiac Dilatation. G. A. Gibson.
17 Cellular Activity in Health and Disease. E. E. Goldmann.
18 Case of Ligneous Thyroiditis. G. R. Murray and F. A. Southam.
19 Treatment of Muscular and Joint Injuries by Graduated Contraction. M Smart and W. R. Bristow.
20 Spa Treatment of Neuritis. W. Armstrong.
21 Temperatures of One Thousand Children. M. H. Williams.
22 Family Susceptibility and Virulence in Scarlet Fever. G. S. Banks.
23 Organization of Antituberculosis Crusade. R. A. Lyster.

16. **Cardiac Debility and Cardiac Dilatation.**—In the management of milder cases of weakness, with little or no dilatation, Gibson says regulation of rest and diet, as well as attention to digestion and elimination, will suffice to bring about recovery. Even in such instances the employment of some cardiac tonic is helpful as a means of accelerating improvement. Long experience has convinced him that, for this purpose, small doses of digitalis are beyond question most useful. If not causing gastric or enteric irritation the tincture is best and the dose should not exceed 5 minims twice a day. The remedy may be combined with nux vomica, if it seems advisable to do so. In graver cases absolute rest and general massage, with careful diet and free elimination, must be employed, as well as larger doses of digitalis and strophanthus. If the arterial pressure is high, it will suggest the employment of the nitrites; if the liver is enlarged the use of mercury, along with digitalis, will be indicated; if the renal secretion is scanty the addition of citrate of caffein and of citrate of potassium will be helpful.

### Edinburgh Medical Journal

*May, VIII, No. 5, pp. 386-480*

24 Local Specific Treatment of Infections, with Special Reference to Epidemic Meningitis. S. Flexner, New York.
25 Nocturnal Urination. A. G. Miller.
26 Treatment of Contraction of Pelvic Outlet; Two Cases, One Treated by Pubiotomy, the Other by Induction. J. Young.
27 Trauma as Factor in Disease. A. James.
28 *Methods of Examining and Enumerating Blood-Plates. H. S. Reid.
29 Multiple Osteomata with Supervening Sarcoma. D. M. Greig.
30 Reinfection with Syphilis. J. M. Graham.

28. **Methods of Examining Blood-Plates.**—A comparison of the various methods of enumerating blood-plates has been made by Reid. The simplest and most accurate method he says is to puncture the skin through a drop of a diluting fluid, transfer some of the mixture to a slide, dilute further, if necessary, on the slide. With the aid of a "Retz" eyepiece ascertain the proportion of plates to red blood-corpuscles, the latter being previously or subsequently counted. The best available diluting fluids are those of Pratt, Kemp, van Emden. Pratt's solution is greatly improved by the addition of sufficient methyl green to tint it fairly deeply. The number of plates per c.m. in a normal adult may vary from two to four or five hundred thousand, the average count being about 300,000. Fragmentation of the plates may account to some extent for differences in the results of emumeration of plates.

### Medical Press and Circular, London

*April 17, XCIII, No. 3806, pp. 393-420*

31 Diseases of Hypophysis Cerebri in Relation to Acromegaly. H. C. Thomson.
32 Shreds in Clear Urines. L. G. Gunn.
33 Cancer of Cervix. S. J. Cameron.
34 What We Know To-Day About Trypanosomiasis. F. M. Sandwith.

*April 24, XCIII, No. 3807, pp. 421-446*

35 Examination of Sputum. V. H. W. Wingrave.
36 Present Position of Surgery of Malignant Tumors. C. A. Morton.
37 *New Blood-Counting Pipette for Estimating Number of Leukocytes and Blood Parasites Per Cubic Millimeter. D. Thomson.
38 Tubercle Bacillus and Initial Hemorrhages of Pulmonary Tuberculosis. F. Bezancon and M. P. Weil.

*May 1, XCIII, No. 3808, pp. 447-474*

39 Pruritus Vulva: Its Etiology and Treatment. R. A. Gibbons.
40 Few Therapeutic Points. H. French.
41 Subcutaneous Injection of Oxygen: Indications, Technic and Results. D. Derose.
42 Want of School Dentistry. G. Sheppard.

37. **Blood-Counting Pipette.**—Thomson's pipette is about 5 inches long and is made of glass tubing similar to that used for thermometers, with a white opal background and powerful magnifying surface. The capillary bore, however, is not flattened out like that of a thermometer but is more nearly circular in cross section. The bore is exceedingly fine and hair-like, such that a portion of the capillary about 60 to 70 millimeters long has a capacity of 1 cubic millimeter. This cubic millimeter length is graduated into equal parts, so that a given fraction of a cubic millimeter of blood can be accurately blown out. A rubber tube with a glass mouthpiece is attached to one end of the pipette, and the other end tapers to a very fine point, which is necessary for expelling accurate small droplets of blood.

Method of using the pipette: (1) Prick the ear or finger and allow a tiny droplet of blood to exude. Do not squeeze (or only very little), as squeezing drives out lymph and lymphocytes from the lymphatics. (2) Suck the blood into the pipette. (3) Expel the blood until the column coincides with a line on the magnifying surface. Wipe the point of the pipette and expel one-eighth or one-fourth c.m. of blood on to a clean glass slide. After this has been carefully done, expel all the blood immediately from the pipette, otherwise it will clot in the bore. (4) Breathe on the measured droplet of blood on the slide, and spread it by means of the point of the pricking needle into a small square, about 4 mm. by 4 mm. This square should be spread as uniformly and as neatly as possible. (5) Allow the little square blood-film to dry in air. Fix for about two minutes in absolute alcohol and stain with the usual blood-stains. Wash gently and dry on blotting paper. (6) If it is desired to enumerate asexual malaria parasites, the square film should be spread over a smaller area into a thicker film and fixed in acid alcohol (5 per cent. dilute acetic acid in absolute alcohol) before staining. (7) The pipette should be cleaned and dried immediately after use. This is done by sucking up water and expelling it alternately several times. Repeat this process with absolute alcohol or ether and finally suck air through to dry the bore.

### Glasgow Medical Journal

*May, LXXVII, No. 5, pp. 321-399*

43 Problem of Feeble-Minded. J. Macpherson.
44 Analysis of 100 Consecutive Cases of Stricture of Esophagus. W. Downie.
45 Syphilis and Deafness. J. K. Love.

### Bulletin de l'Académie de Médecine, Paris

*April 16, LXXVI, No. 16, pp. 307-317*

46 *Curable Forms of Permanent Arterial Hypertension. C. Fiessinger.

*April 23, No. 17, pp. 319-338*

47 *Ecchymosis as Sign of Fracture of Humerus. (De l'ecchymose transversale au pli du coude comme signe de fracture de l'extrémité inférieure de l'humérus.) E. Kirmisson.
48 Ultimate Results of Experimental Hypophysectomy. (Etude des synergies hypophyso-glandulaires. Les résultats de l'hypophysectomie subtotale avec survie prolongée.) C. Livon and M. Peyron.

46. **Permanent Arterial Hypertension.**—Fiessinger refers to the abnormally high blood-pressure liable to accompany obesity and asystole and which subsides as the cause is removed. Even when the blood-pressure is continuously high, the patients can live in comfort for years if they avoid imprudences which open the gate to cerebral accidents or render the kidney insufficient. When with a permanently high blood-pressure some imprudence sends it up still higher, dieting and rest will tide the patient along to safe ground again. As a rule, he says, physicians are too apt to mistake the effect for the cause in these cases. Among 160 patients with permanently high arterial pressure he found that eighty-four had interstitial nephritis, forty-four arteriosclerosis without kid-

ney disease, and thirty were obese but free from kidney and aortic disease and two had asystole, that is, the left ventricle failed to contract normally. Under the influence of a hearty meal, an emotion, a long railroad journey or fatigue of any kind, transient crises of hypertension are liable to occur but they subside under strict hygienic measures, a milk and vegetable diet and bed rest. No other measures are effectual, and if electricity, etc., are used they only divert the patients from the above indispensable restrictions. Many mishaps have resulted from the foolish attempts to substitute other measures for the strict dieting and bed rest which alone are liable to tide the patients past the danger point. Digitalis may be needed as an adjuvant, especially in the asystolic.

47. Summarized in the Paris Letter in The Journal, May 11, p. 1457.

### Presse Médicale, Paris

*April 27, XX, No. 34, pp. 345-356*

49 Technic, Apparatus and Findings in Operations on the Lungs. (Traitement chirurgical des maladies du poumon.) H. Hartmann.

*May 1, No. 36, pp. 357-392*

50 Joint Disease Due Directly or Indirectly to the Tubercle Bacillus. (Démonstration et pathogénie des arthropathies bacillaires séreuses et congestives.) L. Landouzy, H. Gougerot and H. Salin.

### Journal de Médecine de Bordeaux

*April 21, XXIV, No. 16, pp. 241-256*

51 *Typhoid Process in the Elbow. (Fièvre typhoide et adénite épitrochléenne.) L. Verdelet.

51. **Typhoid Adenitis.**—In the first of Verdelet's two cases staphylococci were found in the pus evacuated from a suppurative process in the epitrochlear lymph-node in the elbow of a young child convalescing from typhoid. A small wound of the thumb was probably the entering point of the pyogenic germs. In the second case the epitrochlear lymphadenitis subsided without suppuration under systematic application of wet compresses. The patient was a child of 9, convalescing from a relapse of typhoid fever. In this case the elbow process was probably a primary typhoid lesion.

### Lyon Médical, Lyons

*April 21, XLIV, No. 16, pp. 873-916*

52 *Artificial Premature Delivery in Two Diabetics. (Accouchement provoqué thérapeutique chez des diabétiques.) Vorou and L. Folliet.

52. **Pregnancy in Diabetics.**—It frequently happens that the diabetes becomes aggravated during a pregnancy, or there is a history of mishaps during previous pregnancies, and it may be advisable to bring on a premature delivery at eight and a half months in the interests of both mother and child. Another reason for this is that the fetus in a diabetic woman is liable to grow unusually large. If it is found to be increasing rapidly in size, this is another argument for the premature delivery. Another reason is that the mother's diabetes seems to affect the fetus especially during the last few weeks, so that the infant has better chances of survival safely sheltered in an incubator than left in the uterus under the influence of the diabetes poison. In two cases reported the induced delivery passed off favorably for the mothers but both infants seemed apathetic and breathed with more and more difficulty, becoming cyanotic and dying five and thirty-six hours after birth. The adrenals were abnormally large in both, but otherwise the organs were apparently normal. One child had an unusual development of fat around the viscera, and it weighed over 4,000 gm.

### Revue de Gynécologie, Paris

*March, XVIII, No. 3, pp. 257-352*

53 *Vater-Paccini Corpuscles in Fallopian Tube. P. Coryllos.
54 *Horseshoe Kidney. I. (Le rein en fer à cheval. Etude anatomique, pathologique et chirurgicale.) F. Legueu and E. Papin.
55 Urethrovesicovaginal Fistula. G. Luys.

53. **Vater-Paccini Corpuscles in Fallopian Tubes.**—Coryllos says that only one case of this occurrence is on record, that published by Ries of Chicago, but he has encountered a second case, of which he gives an illustrated description, with discussion of the origin and negative physiologic rôle of these corpuscles.

54. **Horseshoe Kidney.**—Legueu and Papin remark that the progress in diagnostic technic has demonstrated that horseshoe kidney is more common than previously supposed. They think the time has come for an exhaustive study of this anomaly, and here present the first report of their work in this line, based on study of 300 cases. Some of them were personally observed and a number of others have never been published before. Twenty-four illustrations accompanying the article show the wide divergence in shape and other features of horseshoe kidneys. The earliest case on record was published in 1522.

### Revue Médicale de la Suisse Romande, Geneva

*March, XXXII, No. 3, pp. 205-280*

56 *Dangers and Advantages of Salvarsan. H. Oltramare.
57 *Psychotherapy in General Practice. Its Sphere of Action and Its Limitations. E. Thomas.
58 Therapeutic Pneumothorax for Pulmonary Tuberculosis. Sillig.
59 Intradermal Tuberculin Reaction in Children. (La réaction de Mantoux en clinique infantile.) Combe.

56. **Salvarsan in Syphilis.**—Oltramare remarks that in these days of *reportage intensif* everything is seized on for news, and the physician's task is rendered more difficult by the delirium of the public when a therapeutic possibility is heralded abroad as a certainty, and then, during the period of reaction, when the public fears and discredits the new remedy. From his own experience and the literature, Oltramare concludes in favor of a single intravenous injection of salvarsan in the dose of 0.01 gm. per kilo of body weight, never surpassing a total of 0.6 gm. With this single injection, during the first stage of syphilis, before any secondary manifestations have appeared, he thinks we can count on warding off the secondary manifestations in 85 per cent. of the cases, and thus trust that we have aborted the disease. Diligent search of the literature, he says, has failed to reveal more than one fatality (Queyrat) after a single injection in the primary phase. He does not believe in the advisability of repeating the injection. The indications are different in the secondary stage, and opinions differ widely as to the best technic. It is foolish, he thinks, to base treatment on the Wassermann reaction, as this may prove a false guide. He has witnessed roseola develop while the Wassermann reaction was negative.

57. **Psychotherapy in General Practice.**—Thomas argues that psychotherapy can be effectually applied not only in neuroses and psychoneuroses but in a number of morbid conditions connected with various organs as well as with the nervous system. Patients liable to benefit by psychotherapy are those who complain of symptoms which are out of proportion with the objective findings; especially is this the case with gastrointestinal disturbances. Further, the persons who are fatigued and easily become exhausted, who find that they forget their malaise and exhaustion in pleasant company. Further, persons who worry and dread, who are afraid they will not sleep and consequently do not. The self-centered, the constitutional neuropaths—these are especially amenable to psychotherapy. Some slight actual or imagined organic trouble maintains the neuropathy. The physician must call on the forces which seem to him the most developed. He must strike on the vulnerable point not to elicit pain but to induce a favorable reaction. Many a patient when spoken to in this manner rouses as from a nightmare and skilful psychotherapy will soon restore conditions to normal. Patience and time are necessary for it, and it should be supplemented by the proper diet and drugs with stomach and cardiovascular disturbances. But Thomas warns never to use drugs to cure insomnia; they act only by depressing the nervous system. Hypnosis and direct suggestion are also tabooed. All agree that suggestion should be by indirect persuasion. He declares that if the general practitioner will once become convinced of the value of psychotherapy, the old and regretted type of family physician will rise once more from its ashes. Among the special affections most liable to be influenced by psychotherapy he mentions mucomembranou enteritis, the disturbances persisting after appendicectomy cardiovascular disturbances, incipient arteriosclerosis which a first is merely a lack of balance between the action of th vasoconstrictor and vasodilator nerves, exophthalmic goite and sexual pathology.

### Semaine Médicale, Paris

*April 24, XXXII, No. 17, pp. 193-204*

60 Pathogenesis of Albuminuric Retinitis. (Pathogenie des rétinites albuminuriques.) A. Chauffard.

### Archiv für klinische Chirurgie, Berlin

*XCVII, No. 4, pp. 831-1075. Last indexed April 27, p. 1318*

61 *Disadvantages of Silver Wire as Suture Material. (Verwendung des Silberdrahtes in der Chirurgie.) O. v. Frisch.
62 *Perineal Prostatectomy with Lateral Incision. (Prostatektomie nach Wilms.) A. Stieda.
63 *Site of Traumatic Injuries of the Spine. (Die Prädilectionsstellen der indirecten Verletzungen und der chronischen traumatischen Erkrankungen der Halswirbelsäule.) F. Orsos.
64 *Volvulus of the Small Intestine. (Weitere Beiträge zur Casuistik und Actiologie des Dünndarm-Volvulus.) W. Philipowicz.
65 Dangers of Almatein Filling for Bone Cavities. (Experimentelle und klinische Untersuchungen über die Almateinknochenplombe.) M. Lawrowa.
66 Chromaffin Tumor in Adrenal; Two Cases. (Zur Lehre der Paragangliome der Nebenniere.) M. Herde.
67 Roentgenoscopy of Congenital Hernia of the Diaphragm. (Die congenitale Hernia diaphragmatica im Foramen Morgagni und ihre Röntgendiagnose.) E. Waelli.
68 *Appendicitis and Dysmenorrhea. D. Rona.
69 Participation of Prostate in Micturition. (Bedeutung der Prostata beim Harnlassen und Mechanismus der prostatischen Harnbeschwerden.) A. Lendorf.
70 *Rupture of Hydronephrosis and Pseudohydronephrosis. P. Babitzki.
71 *Torsion of Sigmoid Flexure. (Zur Frage der radicalen Behandlung und Verhütung von Recidiven bei Achsendrehungen des S. romanum.) I. I. Grekow.
72 Varicose Tumors of the Arm. (Genuine Phlebektasie des Armes.) E. Bircher.
73 *Surgery of the Heart. (Conservative oder radicale Herzchirurgie? Ein Beitrag zur Herznaht.) E. Bircher.
74 Ileus from Diverticulum. (Eigenartiger Fall von Divertikel-Ileus.) E. Höpfner.

61. **Silver Wire as Suture Material.**—Frisch has found that silver wire is liable to rust away or break at points where it is bent, and he reports a case in which eighteen years after an operation for umbilical hernia, the sharp points resulting from broken wire caused serious irritation in the abdominal cavity, culminating in an acute ileus, but after clearing out all traces of the wire suture, the patient, a woman of 56, has been free from disturbances since. The wire points had not caused any subjective trouble. This same absence of subjective disturbances was noted in a case of von Eiselsberg's of injury from broken gold wire suture material.

62. **Perineal Prostatectomy.**—Stieda has applied Wilms' technic in five cases, the incision being lateral, parallel to the left ascending ramus of the pubis, about 4 or 5 cm. long. The operation was successful in all but one case in which the trouble proved to be malignant disease and the patient had also hydronephrosis. He operated under spinal anesthesia in each case. There has been no tendency to incontinence since in any instance. The men were between 66 and 74 and the whole operation took only ten or fifteen minutes at most, and healing was complete in from eleven to forty-six days without further disturbance in micturition. The enlarged left and central lobes were easily removed. The effectual drainage and slight hemorrhage with this technic and its rapidity of execution are the main advantages.

63. **Trauma of the Spine.**—Orsos has been studying on the cadaver the points that suffer most in case of trauma affecting the spine. These points are liable to be particularly fragile and later yield anew to comparatively slight trauma, the findings in such cases being often puzzling from the medicolegal standpoint.

64. **Volvulus of the Small Intestine.**—Of the 232 cases of internal occlusion of the intestines at the Czernowitz hospital, torsion of the small intestine was responsible for the disturbances in fifty-three; that is, in 23 per cent. In seven recent cases the small intestine was kinked as well as twisted around its own axis; in the others, around the axis of the mesentery. In sixteen cases the outcome was fatal.

68. **Appendicitis and Dysmenorrhea.**—Rona relates a number of cases in which an unsuspected chronic appendicitis caused symptoms during the congestion of menstruation but which were interpreted as ordinary dysmenorrhea. After removal of the inflamed appendix, the dysmenorrhea ceased permanently. One patient was an unmarried woman of 38 who had been treated for her dysmenorrhea in various ways without effect, dilatation of the os, slitting the cervix, radiotherapy, etc., with brief or no benefit. The restrospective diagnosis then showed a typical acute appendicitis two years before—not recognized at the time—with exacerbation at each menstruation of the chronic lesions left. All her dysmenorrhea ceased after removal of the appendix. Rona has had the same experience in two other cases. In another a girl of 17 had acute appendicitis coinciding with the onset of dysmenorrheic menstruation, but the attending physician assumed merely hysteria or possibly a secret abortion, and six days were thus lost before an appendicectomy was considered, but the patient was then moribund. Lenhartz has reported a similar case in a girl of 19, the delay in differentiation here also proving fatal.

70. **Rupture of Hydronephrosis.**—Babitzki has found twenty cases on record in which a hydronephrosis ruptured and the resulting retroperitoneal cyst was taken for true hydronephrosis, the result being a blunder in operating, the surgeon opening the abdomen from the front and having to go through the peritoneum or make another incision in the rear. The rapid growth of the tumor is not characteristic of true hydronephrosis. He reports three cases and tabulates those he has compiled. Mistakes in diagnosis are almost inevitable where the escaping fluid does not become encapsulated; the symptoms in this case are liable to simulate peritonitis.

71. **Treatment of Torsion of Sigmoid Flexure.**—Grekow reports two cases in which the torsion recurred a year or so after a supposedly radical operation. These discouraging results compel some more effectual operation than those currently in vogue, and he suggests a technic which he has found effectual when the flexure has been torn from its mesentery. After untwisting the loop, he introduces through the rectum or through an incision in the intestine, a tube to permit evacuation of the contents of the loop. Then forceps are passed by an assistant up through the rectum and the mucosa of the loop of the flexure, at its highest point, is seized in the forceps and is drawn down and out, turning the loop thus inside out like the finger of a glove. The loop is drawn out until the upper end of the flexure joins the upper end of the rectum. The part protruding from the anus is then cut off and a big, partially flexible, drain tube is introduced into the loop around which the loop is tied and the outer end is fastened to prevent its slipping out. The tube and the segment of the loop inside the rectum drop off before long. Pressure gangrene is prevented by repeated enemas and frequent changes of position. The operation is as effectual as resection of the loop, while it is far easier and simpler.

73. **Treatment of Wounds of the Heart.**—Bircher reports a case of serious gunshot injury of the heart which healed under conservative measures alone. In another case, multiple stab-wounds of the heart required operative treatment but one of the stab-holes in the pericardium was overlooked and a second operation had to be done twelve hours after the first. The young man recovered. Bircher extols the peculiar advantages and valuable assistance of the positive pressure apparatus in this case. The heart bore the two sutures well although the interval between had been twelve hours. The second operation showed the prompt repair already under way of the wound first sutured. Bircher's experience has convinced him that it is well to drain, as in this case, leaving a drain at both ends of the incision. Conservative measures seem more promising for gunshot wounds.

### Archiv für Verdauungs-Krankheiten, Berlin

*March, XVIII, No. 2, pp. 121-272*

75 Tests for Pancreas Functioning. (Wert der Methoden zur funktionellen Pankreasdiagnostik.) F. Frank.
76 Serodiagnosis of Cancer in Gastro-Intestinal Tract. (Ueber die Frühdiagnose der Krebse des Verdauungskanales mit bes. Berücksichtigung der serologischen Methoden.) G. Kelling.
77 Laxative Action of Bile Acids. (Die abführende Wirkung der Gallensäuren.) G. Singer and K. Glaessner.
78 *Lack of Saliva Secretion. (Ueber Xerostomie.) H. Curschmann.
79 *Improved Test for Occult Blood. (Neues Verfahren zum Nachweise von Blut.) Z. Inouye and T. Yastomi.

78. **Xerostoma.**—This term was coined by Hadden to express dryness of the mouth from deficient secretion of saliva. It is common in old women, according to Curschmann's experience,

but he has never noted it in aged men. Possibly liquor and tobacco in men have a stimulating action on the buccal mucosa while the very hot tea and coffee of which old women are fond may be a causal factor in the atrophy of the mucosa. Entirely different from this form of xerostoma is that developing on a nervous basis in younger persons. Kraus has reported the case of a widow during whose early widowhood the salivary glands ceased to secrete. She could not swallow her food unless with a sip of water. There were no organic changes in the salivary apparatus. Curschmann has encountered a similar case in a man of 29 in a responsible official position. The dryness of the mouth was first noticed at the age of 10, and it seriously interferes with speaking and facial expression, but during mastication and swallowing saliva is secreted in adequate amounts. The patient had no inherited nervous taint, but he has gradually developed neurasthenia of a sexual and vasomotor character. There are no signs of atrophy or lesions in the mucosa or salivary apparatus. Curschmann prescribed pilocarpin to stimulate the secretion, but no benefit was apparent until the dosage was increased to 0.25 gm. pilocarpin in thirty pills, three or four being taken during the day. The effect of the pilocarpin becomes manifest in thirty or forty-five minutes. The knowledge that he has an efficient remedy with him has restored the patient's confidence so that he has lost the phobia which had been aggravating the trouble. He still takes three pills a day with an extra one half an hour before any occasion for much speaking, and a complete cure of the xerostoma is in sight.

79. **Improved Test for Occult Blood.**—Inouye and Yastomi state that the technic described is more sensitive than any other method to date while it can be applied after the Kossa, van Deen or Weber tests have been applied. The transient character of the color reaction is the main drawback. The test is made by mixing 10 c.c. of the fluid to be examined for occult blood with 10 c.c. of 90 per cent. alcohol and 5 c.c. of chloroform. After lightly shaking, add from 10 to 20 drops of freshly made 5 per cent. tincture of guaiac and of ozonized turpentine. In the presence of blood the layer of chloroform or the entire fluid turns a bluish violet in proportion to the amount of blood present. With this test, 0.00001 c.c. of blood can be detected in distilled water or urine, surpassing by 10 per cent. the most delicate of other tests. When an ethereal extract is used, the test is more sensitive if the fluid is first neutralized with an alkali to overcome the acidity of the ether. A special tube for preparing the ethereal extract is illustrated; it is merely a test tube with one or two openings on one side, plugged with rubber stoppers. This permits one layer of the fluid to be poured out without disturbing the other layers.

### Berliner klinische Wochenschrift

*April 22, XLIX, No. 17, pp. 773-824*

80 Relations Between Arterial Blood-Pressure and Velocity of Current. (Beziehung zwischen Druck und Geschwindigkeit des Blutes im Arteriensystem.) K. Hürthle.
81 Thorium Treatment in Arthritis. (Ueber Mesothorium-, Thorium X- und Thoriumemanationstherapie.) A. Bickel.
82 Biologic Action of Mesothorium. (Biologische Wirkung der Thoriumemanation beim Menschen nach der Aufnahme derselben durch den Verdauungskanal. V.) K. Kojo. (Wirkung der Thoriumemanation auf Verdauungsfermente und Autolyse. VI.) Minami.
83 Actinium Therapy. (Ueber die percutane Anwendung radioaktiver Substanzen, speziell des Aktiniums.) A. E. Stein.
84 Disturbances in Bone Growth from Deformity of Periosteum and Cartilage. (Störungen in der periostalen und endochondralen Knochenbildung.) G. Joachimsthal.
85 Cultivation of Spirochæta Pallida. E. Tomasczewski.
86 Negative Experiences with Antimeristem in Cancer. (Zur Antimeristemfrage.) K. Kolb.

### Deutsche medizinische Wochenschrift, Berlin

*April 25, XXXVIII, No. 17, pp. 785-832*

87 *Duodenal Ulcers. (Duodenalgeschwüre.) C. A. Ewald.
88 *Improved Technic for Medical Electrodiagnosis and Treatment. (Zur Verbesserung der elektromedizinischen Diagnostik und Therapie.) R. Sommer.
89 The Quality of Proprietary and of Official Drugs. (Kollargol und Argentum colloidale.) E. Harnack.
90 Prophylactic Tuberculin Treatment in Experimental Tuberculosis of the Eyes. (Quantitativ-experimentelle Untersuchungen über die Wirksamkeit der Tuberkulintherapie—TA und BE—bei Augentuberkulose.) F. Krusius.
91 Cultivation of the Syphilis Spirochete. (Methode zur Reinzüchtung der Syphilisspirochäte.) H. Sowade.
92 *True Plethora. (Zur Frage der Plethora vera.) K. Hart.
93 *The Wassermann Reaction in the Cadaver. (Die Wa.R. am Leichenserum.) H. Schmidt.
94 Method of Radium Treatment of Upper Air Passages, Trachea and Esophagus. (Die Methodik der Radiumbestrahlung in der Nasen-Mund-Rachenhöhle, im Kehlkopf, in der Luftröhre und im Schlund.) G. L. Albanus.
95 Swellings in the Temporal Region. (Ueber Schwellungen am Schläfenbein.) A. Blumenthal.
96 *Participation of Ear, Nose and Throat in Constitutional Diseases. (Die Beteiligung des Ohres, der Nase und des Halses bei Stoffwechselkrankheiten.) G. Brühl. Commenced in No. 15.
97 *Chvostek's Sign in Older Children. (Bedeutung des Fazialisphänomens jenseits des Säuglingsalters.) H. Neumann.
98 Fever from Saline Infusion. (Zur Frage der Infusion physiologischer Kochsalzlösung.) A. Sippel.

87. **Duodenal Ulcer.**—Ewald remarks that a correct diagnosis is generally possible only when several of the alleged characteristic symptoms are present. He emphasizes in particular the periodicity of the pains, the vasomotor phenomena, the exclusive and repeated finding of blood in the stool, and pylorospasm. He thinks the "hunger pains" are less important for the diagnosis. It would be very instructive, he declares, if surgeons would publish their mistakes in diagnosis as well as the statistics of their operative cases. Ewald applies internal measures alone in recent cases but in the old ones he advocates immediate operation. In his experience with twelve cases, four patients were cured and three improved by medical measures alone. He adds that in looking over many reports of operations he is astonished at the few and vague symptoms on which frequently the operation was based.

88. **Improved Technic for Medical Electric Measures.**—Sommer reports that it is possible to do away with the disturbing influence of the resistance on the part of the skin in the application of galvanic electricity for diagnosis and treatment. He accomplishes this by interposing a device to supply a great resistance in the system, before connecting it with the body. The current that reaches the body after overcoming this resistance of 8,300 ohms passes through the skin with slight change.

92. **True Plethora.**—Hart has encountered true plethora in a number of young male cadavers, the blood-producing apparatus having been evidently functioning to excess.

93. **The Wassermann Reaction in the Cadaver.**—Schmidt examined 233 cadavers, his findings showing that syphilis in any form can be disclosed in the cadaver serum with 94 per cent. certainty. Comparative tests before and after death always harmonized.

96. **Participation of Ear, Throat and Nose in Constitutional Disease.**—Brühl discusses gout, obesity, myxedema and diabetes as affecting the ear, nose and throat, mentioning that Banting found his hearing improve after he had lost 35 pounds by his system of reducing weight. Persons with myxedema are often inclined to deafness and in many cases the hearing has improved with other symptoms of the disease under thyroid treatment. Brühl has observed a number of cases of the kind, confirming the close connection between the thyroid and the ear. Cretins with goiter are sometimes deaf mutes. Brühl has found great improvement in hearing follow thyroid treatment in cases of goiter and nervous deafness, while he has never witnessed any improvement under it in pure otosclerosis. One patient had myxedema and aplasia of the thyroid with typical nervous deafness and myxedematous swelling of the auditory meatus walls; the hearing became better and tinnitus less under thyroid treatment. The benefit from thyroid treatment must be due to the subsidence of myxedematous tissue in the ear passages and of toxic influences injuring the auditory nerve. With diabetes, the dryness of the auditory meatus walls may lead to itching and scratching, with infection and furuncles. Haug has called attention to a furuncle in the ear as possibly the first sign of diabetes, and Kipp has reported a case in which a furuncle in the outer ear in a diabetic child led to fatal coma within twelve hours notwithstanding its evacuation; no case of the kind in an adult is known. Brühl has, however, had fatal coma come on a few days after the onset of an otitis media in a man and woman of 50. The diabetes in these cases could not be controlled altogether by dieting and the acute otitis led to sudden acidosis, as is observed sometimes after general anesthesia or

other shock. In these cases no operation had been attempted. In very severe diabetes the otitis may rapidly lead to involvement of the mastoid process; he reports three cases of this kind. In case of mild diabetes an otitis media with profuse discharge from the ear following a coryza kept up for three months but Brühl finally cured it by four weeks of conservative measures. The necessity for abstaining from operations on diabetics prevails in regard to the ears as elsewhere; only when there is a vital indication is operative treatment indicated. The diabetes may be responsible for the chronic character assumed early by an acute process. In a recent instructive case a very old clinically latent suppuration in the middle ear suddenly flared up and perforated into the labyrinth. The syndrome was at first mistaken for ordinary influenza. A large cholesteatoma and a fistula into the horizontal semicircular canal were found at the urgent radical operation; but coma followed and the shock of the operation proved fatal. The ear process would have been inevitably fatal without the operation, so the chance was taken. Mastoid operations are followed by smooth healing as a rule if coma can be warded off, and he advises preparing the patient for the operation by dieting, large doses of sodium bicarbonate and a sedative, and preceding the general anesthesia with an injection of morphin or scopomorphin. In conclusion Brühl warns of the necessity for a systematic general examination in all cases of deafness due to the nerve itself, its explanation frequently being found in a general diathesis, diabetes, tendency to gout or other disturbance in the metabolism.

97. **Chvostek's Symptom in Children.**—Neumann found the active facial nerve spasm only in neuropathic children but it was almost constant in them after weaning. He cites the ietails of 180 children tested for Chvostek's symptom, and xpatiates on its diagnostic importance as a valuable objective ign of the neuropathic constitution when there may be no ther objective sign of its existence.

### Deutsche Zeitschrift für Chirurgie, Leipsic

*April, CCIV, No. 4, pp. 301-415*

99 *Direct Sunlight in Treatment of Surgical Tuberculosis. (Zur Sonnenbehandlung bei chirurgischen Tuberkulosen.) F. de Quervain. (Einfluss der Sonnenbehandlung bei der Hochgebirgsbehandlung der chirurgischen Tuberkulosen.) J. Witmer. (Einfluss der Sonnenstrahlen auf tuberkulöse Sequester.) A. Franzoni.
00 *Incision of Common Bile Duct for Obstruction by Ascarides. (Choledochotomie wegen Spulwürmern.) J. Fertig.

99. **Direct Sunlight Treatment of Surgical Tuberculosis.**—itmer and Franzoni report from Leysin, Switzerland, the xperiences at Rollier's private sanatorium in the treatment f surgical tuberculosis. Their communications are preceded an article from de Quervain describing the working out of e method of sunlight treatment during the nine years since ollier first sought to apply it systematically. Witmer scribes some typical cases of tuberculous processes in the oulder, elbow, wrist, spine, pelvis, hip joint, knee and ankle. ith other cases in which the long bones were involved, or the ands, peritoneum, urogenital apparatus, etc. He lists 546 es of these various groups with only twenty-three out of e total in which no benefit was realized. It is evident, he clares, that such results as he reports will do much to strict operative measures in extrapulmonary tuberculous ocesses. They should be applied only when it is positive at the focus is an isolated one and when it is certain that ery trace of diseased tissue can be removed. Franzoni dis- ses in particular the influence of the heliotherapy on tuber- ons processes with sequesters, giving detailed descriptions five particularly severe cases, the outcome confirming, he tes, that heliotherapy in sequester production with fistulas the most ideal treatment known to date. The three com- nications fill 108 pages and are accompanied by fifty-six strations "before and after," but they do not describe the cial technic for the exposures. (Rollier's work was men- ned recently in these columns, May 25, p. 1646.)

00. **Obstruction of Bile Duct with Ascarides.**—Fertig's ient was a woman of 32 who had complained for several rs of recurring attacks suggesting gall-stones. More than e an ascaris had been found in the vomit but none was known to have passed in the stools. The patient had been treated for years for "stomach trouble" and chlorosis. Last January an unusually severe attack occurred with repeated vomiting for ten days, and two ascarides were found in the vomit. High fever and a chill accompanied the severe pain radiating from the stomach and liver region. Besides a few calculi, two ascarides were found in the gall-bladder and also six, 15 to 25 cm. long, were found in the common bile-duct and two more in the hepatic duct, all alive. Fertig reviews the similar cases on record, mostly necropsy findings. In Clemm's case all disturbances ceased after a single ascaris had been vomited.

### Jahrbuch für Kinderheilkunde, Berlin

*April, LXXV, No. 4, pp. 403-532*

101 Necessity for Individualizing Intervals Between Breast Feeding During First Weeks of Life. (Zur Technik der Ernahrung der Brustkinder in den ersten Lebenswochen.) H. Rietschel. To be continued.
102 *Modification of Tuberculin Reaction During Acute Infectious Diseases in Children. (Beobachtungen über v. Pirquets Tuberkulinreaktion bei akuten Infektionskrankheiten bei Kindern.) W. J. Moltschanoff.
103 *Later Development of Children with Inherited Syphilis. (Die weiteren Entwicklungs- und Gesundheitsverhältnisse der mit Lues congenita behafteten Kinder.) J. Vas.
104 *Thickness of Adipose Layer in Children. (Dicke des Fettpolsters bei Kindern.) H. Neumann.

102. **Tuberculin Skin Reaction in Acute Infectious Diseases.**—Moltschanoff applied the Pirquet technic to 150 children with various acute infections, including forty-two with measles and fifty each with scarlet fever and diphtheria. Although the tuberculin reaction had been positive before the acute infectious disease in a large number of the children, it became negative in 100 per cent. of the measles cases, in 85 per cent. of the scarlet-fever cases, but only in 12.5 per cent. of the diphtheria cases. The congestion and other changes in the skin readily explain the modifications in the response during the eruptive diseases.

103. **After-History of Children with Inherited Syphilis.**—Vas reports the later history of infants with inherited syphilis given treatment at the clinic for children's diseases at Budapest, in charge of Bokay. Among the 106,407 child patients that passed through the policlinic during the years 1905-1909, 720 had congenital syphilis. Vas classifies this material under various headings, with the results of reexamination in later years when such was possible. The children were all breast-fed but they did not gain in weight as much as the infants free from this inherited taint, and two-thirds of those reexamined had recurrences of syphilitic manifestations sooner or later. In a third there were signs of rachitis. Scarcely any of the children began to walk before the twelfth to eighteenth month. Ten per cent. of the children were known to have had convulsions later, but only one case of epilepsy was found. The mental development of the children was satisfactory but a third suffered from habitual headache, and the patients of many complained that the children were extraordinarily nervous and naughty, and enuresis was comparatively common.

104. **Index for State of Nourishment.**—Neumann takes up a fold of the abdominal wall on a line with the umbilicus but to the left of it, the fold parallel to the axis of the body, taking up the fold as deep as possible. The thickness of the fold is an index of the amount of adipose tissue and is thus an instructive index of the child's state of nourishment, especially when compared with the height and weight. The diameter of the base of the fold in boys between 3 and 13 and in girls between 4 and 7 averages 5 mm.; it increases in girls to 7 mm. between 8 and 13; to 11 mm. between 11 and 13, and to 13 mm. between 14 and 17. The children of the well-to-do frequently show much higher averages than the above.

### Medizinische Klinik, Berlin

*April 21, VIII, No. 16, pp. 639-678*

105 *Bronchiolitis and Bronchopneumonia in Young Children. E. Feer.
106 Prophylaxis and Treatment of General Paralysis. (Bedingungen für die Entstehung der progressiven Paralyse.) A. Pilcz.
107 Chemical and Mechanical Factors in Pregnancy Predisposing to Cholelithiasis. (Bedeutung der Schwangerschaft für die Entstehung der Gallensteinkrankheit.) K. Grube.

108 Behavior of Bromin Salts in the Organism. (Zur Frage des Verhaltens der Bromsalze im Organismus.) W. Wolff and O. Opp.
109 Intravenous Salvarsan in Syphilis. E. E. H. Goldbach. Commenced in No. 15.
110 Diagnosis of Typhoid from Blood Findings. (Bedeutung der Verminderung des Fibrins, der mangelhaften Retractilität des Blutgerinnsels und der Abnahme der Blutplättchen in der Diagnose des Typhus abdominalis.) O. Steiger.

*April 28, No. 17, pp. 679-722 and Supplement*

111 Physical Measures in Cardiovascular Disease. (Die physikalische Behandlung der Herz- und Gefässkrankheiten.) L. Brieger.
112 Salvarsan in Scarlet Fever. (Ueber die Beeinflussung des Scharlaches durch intravenöse Salvarsaninjektionen.) R. Lenzmann.
113 *New Points of View in Treatment of Suspicious Intestinal Tumors. (Neue Gesichtspunkte in der Behandlung suspekter Darmtumoren.) A. Brosch.
114 Ethyl Chlorid for Blocking the Mandibular Nerve. (Ueber Leitsungsanästhesie des Nervus mandibularis mittels Kälte—Chloräthyl.) A. Neumann-Kneucker.
115 Experimental Self-Fertilization. (Sexualia aus dem Tierreiche.) V. Franz.
116 Alcohol and Metabolism. (Die Beteiligung des Aethyl- und des Methylalkohols am tierischen Stoffwechsel und die Ursache der Giftigkeit des Methylalkohols.) W. Voltz.
117 *Vertigo. Its Pathology and Treatment. S. Laache.

105. **Bronchopneumonia in Young Children.**—Feer comments on the peculiar prevalence and dangers of bronchopneumonia in children under 2, especially when the child is inclined to rachitis or digestive disturbances. The younger the child the graver the prognosis, in contrast to croupous pneumonia which, he states, scarcely ever terminates fatally. Prophylaxis is particularly important, and there is hardly any other disease which can be warded off by proper hygiene so certainly as severe bronchiolitis and bronchopneumonia in young children. If whooping-cough and measles can be avoided until after the child is 3 years old and over, this is a great gain in the prophylaxis. He warns that pneumonia is unusually contagious for children with measles. The measles seems to enhance the susceptibility to diphtheria and tuberculosis and also for grippal affections and especially grippal pneumonia. Every person with influenza or even a mere "cold" should keep away from the young children in the family or institution. Feer insists on isolating away from young children every case of influenza in a hospital with as much care as the cases of measles and whooping-cough. Coryza in an infant should never be regarded lightly and if pneumonia develops the infant must be taken to a hospital unless it can be well tended at home. Two rooms should be given up to it, changing several times a day from one to the other, while one is being aired and heated and the air moistened by hanging up wet sheets or boiling water in the room. The child's position in bed with shoulders raised should be frequently changed. In mild cases a warm bath twice a day, rubbing the arms and legs well, is soothing; in the severer cases the bath water must be heated from 37 to 40 or 41 C. by pouring in more hot water, rubbing the limbs and keeping the child from six to ten minutes in the bath. The cough loosens up and the child sleeps quietly afterward. The hot bath draws the blood to the surface. Steam from boiling water generally serves to keep the cough loose, but if an expectorant is necessary he gives 10 drops three times a day of a mixture of equal parts of anisated solution of ammonia and fluid extract of senega āā 10 gm., given in sweetened water. Heart tonics are more often needed than expectorants, and he prefers for infants 5 gm. from three to five times a day of a 0.5 per cent. solution of caffein sodio-benzoate, doubling the dose for children of 2 to 4. Camphorated oil in subcutaneous injection can be given from two to six times a day at need. In severe cases some of these tonic measures should precede each bath or mustard pack. Other measures that may prove useful are inhalation of oxygen or atropin to relieve asthmatic bronchitis; potassium iodid, and, when rachitis impedes recovery, phosphorus-cod liver oil may aid the cure.

113. **New Points of View for Treatment of Cancer of the Intestines.**—Among the significant data recently recorded which open up new horizons, Brosch mentions (1) Stoeber and Wacker's successful experimental production with indol and skatol of atypical epithelial outgrowths which simulated cancer in every particular; (2) the demonstration of the lipoid-dissolving action of the substances used, and the deduction that chemical influences are factors in malignant disease. This harmonizes with the results of Loeb's research on experimental parthogenesis. (3) Greischer's demonstration that defective local circulation favors atypical proliferation o epithelium, and hyperemia checks the growth of cancer. (4 The results of Werner's research showing that an alkalin medium has also an unfavorable action on cancer growth. (5 Theilhaber's demonstration that cicatricial tissue and chroni inflammation, the result of trauma and the processes of reproduction—all these have a tendency to favor the developmen of cancer. These facts explain why cancer in the intestine i almost invariably limited to the large intestine with it alkaline reaction and why it locates at points where the ci culation is less active and the bends favor stagnation of feces The metabolic processes and circulation become less activ with age, explaining the prevalence of cancer in the elderly waste products pile up in the organism. Analysis of old case of bowel cancer has shown that there was always a histor of digestive and local disturbances, some more or less chroni local derangement of the bowel functioning. This was particularly evident in the case of an army officer of 32. Th cancer encircled a spot in the wall of the sigmoid flexure whe an old pointed scrap of bone had lodged and stuck into th mucosa. Investigating the cases closer, one can almost invar ably learn of some old bowel or digestive disturbance on two to six years before. Brosch warns against oil enemas a the oleic acid split off keeps up an acid medium in the bowe On the basis of the above conclusions, he treated a man of 4 suffering from an inoperable cancer at the sigmoid flexur the diagnosis confirmed by palpation and roentgenoscopic fin ings and the patient's aspect. Treatment was begun to kee the diseased bowel at rest by daily enemas of water, applying local hyperemia to the region and keeping the segment intestine involved bathed in an alkaline medium by giving retention enema at night of a 5 or 10 per cent. solution sodium bicarbonate. Last but not least, he aimed to promot the metabolism in general, to keep the bowels cleared out an thus prevent further decay and absorption in the intestin These latter conditions were met by his method of "subaqu internal baths," cleansing and inducing local hyperemia. (Th technic is not described.) Under a three months' course measures to fulfil these four conditions, the regional lymp nodes subsided to normal size and the cancer shrank to third of its former size. The patient is now in appare clinical health and feels so well that he declines to have th contemplated operation performed.

117. **Vertigo and Seasickness.**—Laache says that the unde lying cause of vertigo is generally in the eye or ear. Remov of a polyp or syringing out impacted cerumen in the ear oft puts an end to the tormenting dizziness. In one case an offic suffered constantly from vertigo until the cause was traced chemicals in the wall paper. In other cases the trouble w due to digestive disturbances, a tendency to overwork, obesity, to undernourishment—each case requires individu treatment. Laache states that in the uncontrollable vomiti of pregnancy, the women are often able to retain a glass milk if it is given to them warm, early in the morning, befo they have lifted their head from the pillow and the milk fed to them without their lifting their heads. Alcohol quinin is often useful for vertigo, as also tonics. Laache h sometimes found valerian effectual, alone or combined wi quinin. In conclusion he discusses seasickness, citing vario methods of prophylaxis and treatment that have been p posed. The best of all, he says, is to go on board in a tranq state of mind and with a rested body, after a light meal shore with which a little wine was taken but scarcely a other fluids. Making close connection between the railr and boat is unwise. The railroad traveling may predisp to seasickness. The bowels should be well evacuated bef going on board, and the digestion generally should be in g order before undertaking a voyage. The cabin should selected in the middle of the ship, near its transverse a the point where the rolling of the vessel is felt least. Rec ing on deck in a sheltered place is useful for several reaso one being the avoidance of seeing others in the throes of s sickness.

### Monatsschrift für Kinderheilkunde, Leipsic

*X, No. 12, pp. 649-682*

18 Variations in the Amount of Breast Milk and Its Connection with the Fat Content. (Zur Physiologie der Milchsekretion. II.) H. Helbich.
19 Skin Reaction in Serum Sickness. (Zur Frage der Kutanreaktion.) F. Bauer.
20 Tuberculosis in Infants. (Zur Klinik der Säuglingstuberkulose.) Eichelberg.
21 *Advantages of Transverse Tracheotomy. (Vorteile des queren Luftröhrenschnittes bei Kindern und das Tracheotomieren auf liegender Intubationskanülle.) H. Keiner.
22 Serotherapy of Scarlet Fever. (Behandlung des Scharlachs mit Scharlachstreptokokkenserum.) X. Lewkowicz.

121. **Transverse Tracheotomy.**—Keiner lauds the superior lvantages of a transverse incision over a tube in the throat the routine technic for tracheotomy. The funtioning of e air passages is interfered with less than with a lengthwise cision, while it is safer and the scar left is much less parent. He makes a practice of tracheotomizing in every se of descending membranous croup especially when it is mplicated with measles. In one of the seven children he s treated by transverse tracheotomy, severe diphtheria had vollen the uvula until it had completely closed the entrance the throat. After the transverse incision has healed, it rms merely an inward fold in the skin of the neck.

### Münchener medizinische Wochenschrift

*April 16, LIX, No. 16, pp. 849-904*

3 Experimental Leprosy. (Durch Leprabazillen gesetzte Veränderungen beim Tiere.) H. Much.
4 *Operative Treatment of Post-Partum Hemorrhage. (Zur operativen Behandlung der Post-partum-Blutungen.) E. Kehrer.
5 Essential Elements of Pituitary Extract. (Das Pituitrin und seine wirksamen Bestandteile.) H. Fühner.
6 "Morphin-Free Pantopon." (Ueber morphinfreies Pantopon und die Wirkung der Nebenalkaloide des Opiums beim Menschen.) H. Winternitz.
7 Salvarsan in Rat-Bite Sickness. (Salvarsantherapie der Rattenbisskrankheit in Japan.) S. Hata.
8 *Operative Treatment of Typhoid Bacillus Carriers. (Zur Behandlung der Typhusbazillenträger.) A. Dehler.
9 *Differential Diagnosis of Bladder Calculus and Enlarged Prostate. (Prostatahypertrophie und Blasenstein.) P. Janssen.
Technic for Obtaining Large Amounts of Blood in Animal Experimentation. (Zur Technik der Gewinnung grösserer Blutmengen im Tierversuch.) A. Zahn.
1 *Differential Diagnosis and Treatment of Methyl-Alcohol Poisoning. R. Foerster.
2 Scleroderma. (Kasuistische und Therapeutisches zur Sklerodermie.) W. Kölle.
Management of Febrile Abortion. (Können wir bei der Behandlung des fieberhaften Aborts eine "bakteriologische Indikation" anerkennen?) A. Hamm.
Treatment of Anthrax. (Zur Behandlung des äusseren Milzbrandes.) E. Gräf.
Intraperitoneal Application of Camphorated Oil. (Zur Frage der Intraperitonealen Kampferölanwendung.) O. Hoehne.
Uremia an Acidosis. (Die Urämie eine Säurevergiftung?) C. Porges and A. Leimdörfer.
Roentgenoscopy of Gastric Spasm. (Röntgenologische Erfahrungen über Magenspasmen.) E. Stierlin. Commenced in No. 15.
*Non-Operative Treatment of Hemorrhoids. (Ueber die extraanale Behandlung der Hämorrhoiden.) S. Kofmann.

24. **Treatment of Post-Partum Hemorrhage.**—Kehrer phasizes the fact that when the uterus is in a state of al atony it is absolutely refractory to all measures. If it ponds to any measures it is merely in a hypotonic conion. In the latter, any vigorous oxytocic has an effectual ion, but with total atony there is no use wasting time on measures, not even packing the uterus with gauze, which ely stretches the flabby walls without stimulating them in least to a contraction. The patient is doomed unless the d-pressure drops so low that no more blood can be pumped the uterine arteries, or unless the source of the hemorrhage emoved. He warns against the practice of saline infusion re the operation, as this merely aggravates the tendency hemorrhage. The infusion should follow immediately r the source of the hemorrhage has been removed. describes a technic which he thinks has a future the treatment of dangerous post-partum hemorrhage n total atony. General anesthesia is scarcely neces- as the operation is so rapid and simple, and patient's sensibility is deadened by the losses of blood. pelvis is raised a little and the abdomen painted with n. The flabby uterus is then drawn out through a short itudinal abdominal incision and the arteries in the isthare compressed by the assistant's fingers, while a stout double silk thread is passed from below upward through the fascia, parietal peritoneum near the lower end of the incision, the upper part of the wall of the cervix, then up through the parietal peritoneum and fascia near the upper end of the incision. This is done on both sides and the ligature thus includes the side wall of the cervix, the uterine vessels and the round and other ligaments, thus tying off at one stroke all the vessels reaching the internal genitals from each side. The whole procedure takes but three minutes. As soon as the source of the hemorrhage is thus shut off, salt solution is infused and the laparotomy wound then sutured. In the one case in which he had opportunity to apply this technic, the saline infusion had preceded the operation and this turned the scale against a favorable outcome.

128. **Operative Treatment of Typhoid Bacillus-Carriers.**—Dehler reported in 1907 his successful cholecystostomy on two chronic typhoid bacillus-carriers in the insane asylum in his charge. The women have been in good physical health since. The operation was followed by prolonged drainage and sterilizing local injections. It would have been more logical to remove the gall-bladder, he thinks, as the bacilli are probably confined to the bile apparatus and intestines in these carriers. Necropsy of one recently showed pure cultures of typhoid bacilli in the gall-bladder and bile ducts, with a few in the intestines, while the spleen and kidney were sterile. Since his last publication on the subject, Dehler has operated in two more cases of the kind. One patient was a woman of 64 with occasional diarrhea and typhoid bacilli in the stools. She developed suddenly acute empyema of the gall-bladder, which was drained for a time until it healed, and since then no more typhoid bacilli have been found. His fourth patient was a young woman with cholecystitis developing about a year after typhoid fever and typhoid bacilli were found anew in the stools. The bile passages were drained continuously for five weeks, since which time the patient has been in good health and apparently free from typhoid bacilli.

129. **Differential Diagnosis of Bladder Calculi and Enlarged Prostate.**—In the first case reported a man of 73 had been long in the care of a urologist taking treatment for the assumed hypertrophy of the prostate which his symptoms suggested. The prostate was slightly enlarged, the bladder too irritable to permit local examination. The patient was prepared for an operation on the prostate, but as he went under the anesthetic it was found possible to run a cannula into the bladder and an impact against a calculus was heard. Instead of the prostatectomy the bladder was opened and five calculi removed, curing the patient of all his previous symptoms. In another case of the kind some bladder calculi long escaped discovery and a partial prostatectomy was done without relief. Roentgenoscopy in these cases would have cleared up the diagnosis at once but it was not applied. Janssen discusses the symptoms, emphasizing their great similarity in both conditions. Even the localized pain with jarring and at the end of micturition, which is characteristic of vesical calculus, may be induced by secondary inflammation with simple hypertrophy of the prostate. The history of the case and subjective symptoms are thus of little use for differentiation and cystoscopy and roentgenoscopy are not always accessible. The main point in diagnosis is not the palpation findings in the prostate, but absolute exclusion of calculi; for this the bladder sound is most useful although small stones and those concealed in recesses may escape discovery by it, even when the pelvis is raised and lowered to mobilize the concrement. Röntgenoscopy alone permits the exact diagnosis, and Janssen urges that it should never be omitted in examining for the cause of a disturbance in micturition, regardless of whether the prostate is enlarged or not. Only when the *x*-ray excludes urolithiasis are we justified in ascribing the symptoms to the prostate alone. The bowels must be emptied for a day before the roentgenoscopy; in a recent case a roentgenogram showed an apparently unmistakable vesical calculus, but under a laxative the supposed calculus was expelled as a lump of feces. In another instructive case there had long been bladder disturbances but micturition had not been interfered with. A number of small calculi were discovered and removed, and

complete retention followed at once. The slightly enlarged prostate proved responsible and it was removed. It had a certain valve action, causing the retention; the weight of the calculi apparently had dragged on this part of the prostate, impeding the valvular action. As soon as the stones were removed, this valve began to act, closing the outlet completely. The connection between vesical calculi and hypertrophy of the prostate is more than casual; each is liable to induce or aggravate the other condition by pressure, obstruction, congestion, etc.

131. **Methyl-Alcohol Poisoning.**—Foerster reports some cases in which the symptoms suggested methyl-alcohol poisoning but were explained later by other factors, arteriosclerosis, etc. He states that out-of-door air, sweating and profuse diuresis aid in expelling the poison so that the dancers at a wedding suffered less from the ill effects of methyl-alcohol poisoning than the persons who sat still or were already drunk from other liquor. These experiences suggest the importance in treatment of sweat baths, copious drinking, diuretics, active exercise and deep breathing in well ventilated rooms, supplemented by copious saline infusion in the abdominal wall—which has an especial diuretic action—venesection and possibly transfusion. Not much can be hoped from these measures for elimination of the poison after the nerve centers are already seriously affected by it. On suspicion of methyl-alcohol poisoning, institutional care at once is imperative; putting the patient to bed in the home is dangerous. The interval is generally long enough before symptoms develop to permit successful treatment of the above kind, but it is extremely important to differentiate the poisoning from attacks due to arteriosclerosis; the measures required for the poisoning are directly injurious in case of arteriosclerosis.

138. **Non-Operative Treatment of Hemorrhoids.**—Kofmann greets Boas' method of artificially inducing extra-anal incarceration of hemorrhoids (described in The Journal March 9, p. 742), as a very promising improvement over operative measures. He states that he has been applying this principle systematically in treatment for some years, urging patients to refrain from restoring the nodules to the bowel, and has found this an efficient and convenient method of shriveling up the nodules, some of his patients having been thus freed from disturbances for many years up to fifteen. The only measures he applies are opiates to relieve the tenesmus and local dressings of aluminum acetate to relieve the pains which are considerable at first; after two days they become insignificant. He has observed many cases in which abrupt operative measures, depriving the patients at one stroke of this mode of relief for congestion in the portal region, were followed by apoplexy, vascular defects, etc., which he thinks had some connection with the sudden suspension of the hemorrhoidal hemorrhages. (See "Vacuum Suction Apparatus" in Queries and Minor Notes Department in The Journal, May 18, p. 1527.)

### St. Petersburg medizinische Zeitschrift

*April 14, XXXVII, No. 7, pp. 99-118*

139 Electric Skin-Reflex Stimulation of Salivary Glands in Dogs. (Starke faradische Hautreizung als bedingter Erreger der Speicheldrüsenarbeit bei Hunden.) M. Jerofejewa.
140 Neurorecurrences After Salvarsan in Syphilis. (Ueber "Neurorezdive" nach Salvarsan.) E. Schwarz.
141 Pathology of Metabolism of Nuclein. (Die Pathologie des Nukleinstoffwechsels—Gicht, Uratsteindiathese.) R. Schütz.

### Wiener klinische Wochenschrift, Vienna

*April 25, XXV, No. 17, pp. 615-650*

142 Behavior of Sarcoma Cells in Respect to Animal and Human Serum. V. (Verhalten tierischen Sarkomzellen gegenüber tierischem und menschlichem Serum.) R. Kraus and K. Ishiwara.
143 *Cystic Degeneration of the Ovaries as Cause of Genital Hemorrhage. (Kleinzystische Degeneration der Ovarien als wahrscheinliche Ursache unstillbarer Genitalblutungen.) A. Pölzl.
144 *Differential Diagnosis of Pain in the Leg. (Differentialdiagnose der Schmerzen im Bein.) S. Erben.
145 The Plague at Vienna in 1679. (Pestjustiz.) J. Fischer.

143. **Cystic Degeneration of the Ovaries as Cause of Uterine Hemorrhage.**—Pölzl reports four cases in young women, nulliparæ and free from any history of inflammatory disease of the genitals and of constitutional taint, except possibly acquired syphilis and an infantile uterus in one case. In eac case severe hemorrhage occurred early, in some with the firs menstruation, and the pathologic hemorrhages returned a irregular intervals, menstruation being weak or absent in th interim. The hemorrhages came on without the premonitor symptoms of menstruation, and the regeneration of the bloo did not proceed as after ordinary hemorrhages. In each cas both ovaries were found in cystic degeneration. A cure possible in such cases only by removal of both ovaries. In th one case, in which this was done, no symptoms from lack ovarian functioning followed, and the patient recuperated to remarkable extent, the general health being very muc improved.

144. **Differentiation of Pains in the Leg.**—Erben discusse the signs and symptoms of affections that may involve th leg and urges that physicians should not be too ready wit the diagnosis of sciatica. The influence of abdominal strainir should be investigated; when on coughing there is a twinge pain along the course of the sciatic nerve, its root probab is irritated. Pains in the leg which are the consequences processes in the pelvis are generally aggravated by abdomin straining, which is not the case with spinal affections, coxit and neurasthenic or hysteric pains, flat-foot, etc. The knee generally cooler with sciatica, and the sensitiveness of t sciatic nerve at any attempt at stretching is revealed by t Lasègue, Feuerstein and Bonnet signs. Tapping the bo causes more pain with rheumatic and gouty affections th with sciatica. The pains in the leg with osteomalacia general are preceded by pains in the sacral region and back, and t muscles and nerves are not so tender on pressure as the bon themselves. If paresis accompanies the pains in the legs, th speaks against sciatica. Circumscribed syphilitic periosti seldom has the pain localized as with sciatica, while it generally most severe at night and the tibia is usually t site. Tabetic pains seldom run along a straight line.

### Zeitschrift für Urologie, Berlin

*April, VI, No. 4, pp. 257-336*

146 *Paraffin as Vehicle for Continuous Medication of M Urethra. (Eine Dauerinjektion für die männliche Ha röhre.) P. Asch.
147 Elimination of Salt in the Kidneys Under Theocin. ( Kochsalzausscheidung der Nieren mit bes. Bezug auf Theocin natrium aceticum.) J. Sellei.
148 Massage Rinsing of Anterior Urethra. (Instrument Behandlung der vorderen Harnröhre mit Spülmassage.) Wossidlo.
149 Granular Concrements in Prostatic Secretion. (Befund n senhafter Körnchenkugeln im Prostatasekret.) B. Goldb
150 *Constantly Negative Roentgenoscopy with Pure Uric-A Calculi. (Notiz zur Röntgendiagnose der Harnsteine.) Seelig.

146. **Paraffin for Treatment of Urethritis.**—Asch uses paraffin mixture which liquefies at 104 F., and injects 5 or c.c. through a warmed syringe into the urethra and closes outlet with the fingers for five minutes. By the end of time the paraffin has hardened sufficiently so that it will run out, while it distends the walls of the urethra and ex a soothing action on the tissues and can be left undistur for twelve hours. He injects beforehand a little local a thetic to prevent muscular contraction as the paraffin injected. The patient drinks as little as possible just be and during the application of the paraffin; the best time the procedure is late in the afternoon so he can keep q afterward. The bowels should be well emptied also beforeh A few drops of ichthyol or other disinfectant might be a to the paraffin, but as a rule Asch prefers merely a mixtur several paraffins with various melting points so that the keeps at the consistency of a salve at body temperature. is the mixture used by Lipowski to prevent absorption in intestines in treatment of chronic constipation. It acts in urethra by smoothing out the folds in the mucous lining thus permitting the parts to heal, Asch explains.

150. **Roentgenoscopy of Uric-Acid Calculi.**—Seelig's ex ence confirms Telemann's statements in regard to the to negative findings on roentgenoscopy of urinary calculi they consist of uric-acid alone. In four cases reported cystoscope showed from four to forty stones in the bla and they were easily removed by crushing and rinsing

nt the roentgenoscopic findings had been constantly negative, nd chemical examination showed that they were pure uric-cid calculi. He thinks it very probable that such stones in e kidney have often escaped detection. They can be rendered sible by supplying artificially some medium, such as oxygen, hich modifies the conditions for absorption of the Roentgen ys. For the bladder this is readily feasible and relatively ee from danger, but whether this can be said of filling the idney pelvis with oxygen is open to question.

### Zentralblatt für Chirurgie, Leipsic

*April 20, XXXIX, No. 16, pp. 529-568*

51 Technic for Incision in Cholelithiasis. (Ueber die Schnittführung bei Operationen an den Gallenwegen.) F. König.
52 Wedge Excision of Body of Uterus to Correct Prolapse. (Die "Flügelung" des Uterus als Radikaloperation des Vorfalls.) H. Hans.

### Zentralblatt für Gynäkologie, Leipsic

*April 20, XXXVII, No. 16, pp. 489-528*

53 *Importance of Psychoneurotic Symptoms for Gynecology. (Psychoneurotische Symptome ausserhalb der Genitalsphäre.) M. Walthard. (Psychoneurotische Genitalsymptome.) M. Walthard.
4 Attempted Criminal Abortion in Absence of Pregnancy. (Tentamen abortus provocandi deficiente graviditate.) W. Sigwart.
5 *Perforation of the Uterus. (Zur Kasuistik der Uterusperforationen.) J. Halban.
6 Deposits of Glycogen in Human Placenta. K. Flesch.
7 *Improved Radical Operation for Cancer of Vagina. (Ein auf perinealem Wege mit der Entfernung en bloc des ganzen Genitalapparates und Rektums erfolgreich operierter Fall von Scheidenkrebs.) A. Paunz.

*April 27, No. 17, pp. 529-560*

8 Action of Roentgen Rays on Anatomic Structure of Human Uterus and Ovaries. R. Meyer.
9 *Early Symptom of Extra-Uterine Pregnancy. (Frühsymptom der Extra-uterin-Gravidität.) G. Bertolini.

153. **Psychoneurotic Symptoms from Gynecologic Stand-int.**—Walthard's research has demonstrated to his satisfacon that psychoneuroses in connection with menstruation, egnancy and the puerperium are liable to occur regardless whether the genital organs are sound or diseased. He has amined the records of the neurologists Dubois and Schnyder Berne and found that among their patients exhibiting all ids of psychoneurotic disturbances, the genital organs were rmal in all but 10 per cent. In his own practice he found iong sixty-five patients complaining of abdominal pain, but th normal urogenital and digestive organs, that 49 per cent. d hot flashes; 50 per cent. abnormal chilliness; 61 per cent. alpitations;" 50 per cent. dizziness; 64 per cent. morbid ad; 58 per cent. insomnia; 52 per cent. sudden sweating, l 58 per cent. depression—all these regardless of the patient's . A nervous cough, pruritus and other functional disturbes were frequent—all showing, he declares, that the above nptoms which are generally ascribed to the artificial or ural menopause have nothing directly to do with the ital organs and hence are not a necessary consequence of loss of genital functioning. The trouble is an overexcitable vous system, and patients in this category should never submitted to any gynecologic operation unless it is urgently essary. Harmless gynecologic affections should be corrected lusively by medical measures. This will reduce to the imum the number of women complaining of reduced earning acity from psychoneurotic symptoms following an anatomly successful gynecologic operation. He discusses further localization of psychoneurotic symptoms in sound genital ans, expatiating on the importance of recognizing their ctional character and hence of abstaining from any ecologic local measures. He keeps the patient in bed to ld up the fatigued body and strengthens it with active vements. With these simple general means it is possible cure without any local measures psychoneurotic genital ptoms, such as chronic spasm of the musculature of the ic outlet causing vaginismus, spasm of the anus or bladder, of the oblique or rectus muscles, algias and hyperesthesias, also hypersecretion and many spasms and atony of involuntary muscles. Patients with these symptoms are le to go from one doctor to another, taking one method of tment after another, and have operation after operation , all without relief, and finally they may end in an insane asylum or in suicide. In his experience fully 5 per cent. of all applicants in the gynecologic clinic belong to this category, applying for relief from psychoneurotic genital symptoms, and in private practice the proportion is much larger. It is thus imperative for gynecologists to practice psychotherapy. The number of operations and local courses of treatment will be much reduced, but the number of women cured will be far larger.

155. **Perforation of the Uterus.**—Halban declares on the basis of his experience in seven cases that when the perforation was the work of an instrument like a forceps, a laparotomy is necessary, as one never knows how much harm has been done in the abdominal cavity. In two of his cases the operator had no suspicion that the intestine had been seized and injured by his instrument. All the patients recovered in the five cases in which the laparotomy followed soon after the perforation. The intestine is more apt to slide out of the way when the perforation was done with a pointed instrument or a curet, so that conservative treatment here is justified under close supervision to detect the first signs of internal hemorrhage or peritonitis. This was the principle followed in one case until fever and pain the fourth hour called for immediate abdominal hysterectomy. In two of his cases, on the other hand, the intestine was not injured, and yet fatal peritonitis developed notwithstanding the good prognosis at first. Such experiences as this incline one to a more radical management of the cases in dubious conditions. He thinks that probably both of these patients might have been saved if the uterus had been removed at once on discovery of the perforation. Hysterectomy is indicated the more urgently if there is any doubt as to the asepsis of the preceding operation.

157. **Vaginal Cancer.**—Paunz reports the successful removal of a cancer in the vagina by taking out in a single mass the entire genital apparatus and rectum, the patient being dismissed in good condition after four weeks with merely a linear scar running from the urethra to the new anus in the sacral region. She was a xi-para of 51, with a suspicious vaginal discharge for four or five months. The operation was done under spinal anesthesia and the patient was allowed to get up the next day. The bowels were kept from moving for eight days. Paunz has found two similar cases on record but the technic was more complicated and primary healing was out of the question, while his removal of the whole mass in one piece, through the perineum, was an aseptic operation with loss of scarcely any blood, and there was no possibility of infection from the vagina or rectum.

159. **Early Sign of Extra-Uterine Pregnancy.**—Bertolini says that he has frequently had his attention called in the clinic to the sign described by Solowij (mentioned in these columns March 9, 1912, p. 744). He explains the doughy resistance developing in the pouch of Douglas as the result of small accumulations of blood, hence its early diagnostic importance. In one of the three typical cases which he reports, acetonuria came on with the resistance in the pouch of Douglas; it was not present before. There seems to be some causal connection between the hemorrhage and the acetonuria.

### Zentralblatt für innere Medizin, Leipsic

*April 20, XXXIII, No. 16, pp. 365-396*

160 *Acute Dilatation of the Stomach. (Zur Klinik der akuten Magenerweiterung.) Urrutia.

*April 27, No. 17, pp. 397-420*

161 Polycythemia. (Zur Kenntnis der Vaquez-Osler'schen Erkrankung.) R. v. Jaksch.

160. **Acute Dilatation of the Stomach.**—Urrutia reports three cases encountered in 1911; the diagnosis was made correctly at once and two of the patients recovered. In the sixty similar cases on record the diagnosis had been correct in only thirteen. The clinical picture includes enormous distention of the stomach, profuse vomiting in most cases, although one of his three patients did not vomit, great thirst, clammy sweat; the pulse is soft and depressible, accelerated and sometimes irregular, while there is little if any fever, or there may be subnormal temperature. The condition generally suggests ileus but one of his patients passed flatus from the first day. The abdomen is usually distended, without peristaltic move-

ments, although one of his patients developed after a few days symptoms of partial stenosis with splashing sounds and peristaltic waves in the duodenum. In his cases systematically repeated lavage of the stomach and nothing allowed by the mouth, not even a drop of water, restored two of the patients, but the other, a boy of 12, died the eighth day after a plastic operation on the pylorus which had been followed by acute dilatation, refractory to all measures. The dilatation in the first case came on the day after the patient, a robust man of 52, had taken a purgative for some slight stomach derangement. The two others were postoperative cases and both had old stenosis of the pylorus with hypertrophy of the stomach musculature. In one the stomach walls became temporarily paralyzed, but there was no evidence of paralysis in the other, the stomach musculature and duodenum evidently working strenuously to overcome the partial arteriomesenteric obstruction. No benefit was derived from change to the ventral decubitus or side, or from a gastro--enterostomy. In the two other cases daily lavage and rinsing out of the stomach cured without necessity for other measures. There was no indication of air having been swallowed in his cases, which Mathieu regards as a causal factor.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*April 18, XXXIII, No. 47, pp. 489-496*

162 Incarcerated Hernia of the Bladder. (Cistocele crurale extraperitoneale strozzato.) G. Giovannetti.

*April 21, No. 48, pp. 497-512*

163 General Anesthesia. (La narcosi.) F. Bottazzi.

164 Organotherapy of Nervous Disease. (Contributo casistico alla organoterapia delle nevrosi mediante un preparato non contenente principii albuminoidei.) C. Fontana.

*April 23, No. 49, pp. 513-520*

165 Pain in Appendix Region During Acute Infectious Diseases. (Dolori appendicolari nel decorso di malattie infettive acute.) J. Illuminati.

### Riforma Medica, Naples

*April 20, XXVIII, No. 16, pp. 421-448*

166 Experimental Vascular Connection Between the Ovaries. (Sulla produzione di connessioni vasali fra ovaio ed ovaio.) R. Lettieri.

167 Patent Duct of Botalli. (Sopra un caso di "morbo azzurro" da probabile persistenza del dotto arterioso di Botalli.) A. D. Piane.

### Brazil-Medico, Rio de Janeiro

*April 8, XXVI, No. 14, pp. 133-142*

168 Treatment of Acute Articular Rheumatism by Salicylic Ions. (Estudo clinico-experimental sobre o tratamento do rheumatismo articular agudo pela ionisacão salicylica.) J. C. F. Pires. Commenced in No. 13.

### Semana Medica, Buenos Aires

*March 28, XIX, No. 13, pp. 605-648*

169 Salvarsan in Syphilis. (La avariosis y el 606.) A. A. Alsina.

170 Signs of Organic Hemiplegia. (Los signos nuevos de la hemiplegia organica.) P. B. Aquino.

171 Synthetic Biology. (Los recientes progresos de la plasmogenia—La biologia sintetica y las germinaciones de los alcaloides y de los colores de anilina. La vida y los crecimientos osmoticos.) V. Delfino.

### Hospitalstidende, Copenhagen

*April 12, LV, No. 15, pp. 421-444*

172 Preventive Silver Nitrate Treatment of Umbilical Cord. (Om præventiv Lapisbehandling af Navlesnorsstumpen og Navlesaaret hos nyfødte.) F. Teilmann.

*April 17, No. 16, pp. 445-468*

173 The Pirquet Tuberculin Skin Reaction. (Undersøgelser over Pirquets Reaktion.) H. Petersen. Commenced in No. 15.

*April 24, No: 17, pp. 469-492*

174 Normal Position of the Stomach. (Nogle Betragtninger over Ventriklens Leje.) O. Chievitz.

175 Modified Technic for Wassermann Reaction. (Om den Hermann-Perutzke Syfilisreaktion.) S. A. Gammeltoft.

### Norsk Magazin for Lægevidenskaben, Christiania

*May, LXXIII, No. 5, pp. 617-808*

176 *Eosinophilia as Result of Presence of Animal, Never Vegetable, Parasites. (Aarsaken til Eosinofili.) B. Ebbell.

177 *Relics of Inflammation in Vicinity, Explanation of Assumed "Chronic Appendicitis." (Om kronisk peritonit respektive pericolit og deres forhold til den "kroniske appendicit.") J. Roll.

178 *Sodium Bicarbonate in Diabetes. (Om nogen virkninger av store doser bicarb. natr. ved diabetes mellitus.) O. Hanssen.

179 Temperature and Respiratory Crises in Case of Tabes. (Temperaturkriser og respirationskriser ved tabes dorsalis.) W. Holland.

180 Fatal Hemorrhage. (Om forblødning.) L. S. Petersen.

176. **Causes of Eosinophilia.**—Ebbell reports extensiv research on various acute and chronic infections, the finding apparently indicating the law that vegetable parasites have n influence on the eosinophils except possibly a destructiv action on them in common with other leukocytes. On th other hand, animal parasites seem to have an invariabl eosinophil-producing and attracting action. This law applie also to different substances derived from the animal kingdo serums, organ extracts, absorbed hemorrhagic effusions an certain drugs. Substances of vegetable origin have none o this attracting action on the eosinophils. He found tha scarlet fever, asthma, chorea, acute articular rheumatis leukemia and pseudoleukemia seem to be accompanied b eosinophilia, and he thinks that this can be accepted as pro that animal parasites are involved in their etiology. T deduction follows that drugs known to act on animal parasit should be given in treatment. He suggests from this theore ical standpoint that salvarsan is indicated in scarlet feve It is only in the diseases of animal-parasite origin, he remark that we have true specifics, like the salicylates in articul rheumatism, arsenic in chorea and multiple sarcomatosis a quinin in malaria. Not a single specific of the kind has y been found for any bacterial disease; the latter are traceab to the vegetable kingdom, and substances belonging to th kingdom seem to have no attraction for the eosinophils. T local eosinophilia after a bacterial process has run its cour he ascribes to local destruction of blood-corpuscles.

177. **"Chronic Appendicitis."**—Roll gives the details of elev cases in which the symptoms were those commonly explain as due to chronic appendicitis, but the trouble proved to relics of inflammation of the tissues in the vicinity wi adhesions at different points. The adhesions may form shee attached to the cecum and appendix, or in the neighborho of the hepatocolic ligament, spreading thence in various dir tions. He is convinced that these adhesions may develop fr mechanical causes alone, when the ascending colon is unusua short. The peristaltic movements drag on the short col until the weakest attachment yields, with resulting downw displacement of the parts. With stout muscular walls t intestine may be held in place for a time, but if the abdomi wall grows flabby or the muscles relax from fatigue, intestine, suspended by its adhesions, drags on the periton entailing symptoms interpreted variously as nervous dyspep or neurasthenia; the bowel functions become irregular, when the feces are passing the points of internal derangem nausea, colic or other pain may be felt, possibly incapacitat the patient although the anatomic lesions are in real minimal. A moveable kidney may aggravate the conditi Bed rest and small frequent meals will relieve conditions, disturbances recur when the patient returns to work. T is an aid in differential diagnosis; an actual cure is gener possible from operative measures alone.

178. **Sodium Bicarbonate in Diabetes.**—Hanssen gives details of six cases, supplementary to two he has previo published, with special research on the weight, albumin and coma in diabetics given large doses of sodium bicarbon Three of the six patients had convulsions follow the inject One patient was a man of 27 and the coma subsided u the influence of the alkaline solution given by the mouth by intravenous injection. It returned again two months l and no influence was apparent at this time, the patient cumbing from arrest of the respiration immediately after infusion. In all the other cases death occurred immedia or four and ten hours later. Hanssen adds that his mat warns that large doses of sodium bicarbonate are not from danger. He gave in one case 64 gm. of sodium bicar ate in 1.6 liters of water and 90 gm. by the mouth. woman took 240 gm. by the mouth in ten doses at half- intervals, with 10.6 liters of water. Another patient given by intravenous injection 39 gm. of sodium bicarbo in 1.3 liters of water and later 60 gm. in 1.5 liters.

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# THE BEST MEANS OF COMBATING INFANT MORTALITY*

ABRAHAM JACOBI, M.D.
President of the American Medical Association
NEW YORK

My principal duty and intense pleasure is to tender my thanks to the House of Delegates which selected me for the highest honor in the gift of the medical profession of America, and to my colleagues of all the fifty states who were good enough to approve of its choice. Nor am I under less obligation for their attendance on this occasion to such citizens, men and women, as by their presence here exhibit their interest in things medical and socio-political.

My everlasting gratitude is due for the mode in which this great honor was conferred on me. Being duly aware of the small measure of my merits, I was overjoyed to have reason to believe that I owed my election to my lack of efforts to secure it. My democratic training and the gentlemanly nature of thirty-five thousand members of the American Medical Association, like the principled citizens of all parties, resent electioneering importunities and abhor the humiliation and demoralization caused by gesticulating and shouting candidates for office and honor. I have the confidence that if there be in this or any other cultured assembly anybody looking for the highest office for the sake of power and preferment only, he will be deservedly disappointed. Whoever *sets out* to be the first, let him be the last. There is only one thing that is and must forever remain first—that is the medical profession of America, as represented in this American Medical Association, and its object, which in all its aims is only one and indivisible. That one and inseparable object is to promote the art and science of medicine, to unite into one compact organization the medical profession of the United States for the purpose of fostering the growth and the diffusion of medical knowledge, of promoting friendly intercourse among American physicians, of safeguarding the material interests of the medical profession, of elevating the tandard of medical education, of securing the enactment and enforcement of just medical laws, of enlightening and directing public opinion in regard to the broad problems of hygiene, and of representing to the world the practical accomplishments of scientific medicine.

With all this, my professional friends are conversant. want to impress it, however, on our guests, lay friends oth present and absent, for I want them to understand rom the very wording of the constitution of the American Medical Association that their interests and ours re closely related.

In order to be powerful and influential, you must not only be wise but numerous. In last year's official report you were told that it was not prudent to increase our number. In fact, you are 35,000, and the largest medical association of the world. But please remember that yours is also the largest country of the world. There are 100,000 medical men besides us, with the same rights to enter and the same duties to perform. We have been told that reasons of finance are among those which should restrict our number. I appeal to you and to those 100,000 outside. A big bank account appeals to our treasury, but glittering gold never saved a country nor a soul. If you have money, it is yours to spend as you have made it. See to it that your House of Delegates spends it in increasing, and consolidating, and strengthening your Association. Our colleagues in the vast country want to be invited; then they will come in. They must learn what we are, and where their interests are—and the interests of the public—from better sources than the hordes of irregular manufacturers and the "freedomers" whose bitter attacks convey what knowledge many millions are permitted to have of the American Medical Association. Let the people understand the meaning of the American Medical Association and its doctors through *our* doings, and not through the scurrilous lies of our and the people's enemies. My hope is for an annual increase of thousands of members. Multiply and be fertile. Stand still awhile, and you invite decline.

It is by vast numbers only that our profession will ever attain its legitimate influence in politics and in society, and such beneficent power as Socrates, Descartes, Kant and Gladstone claimed for it. The proclamation of a great principle may impress many philosophic minds, but its realization demands the labor of the enlightened democratic masses. That is why from this exalted position of mine I beg to contribute a share to the discussion of a subject which has enjoyed an important place in the best brains and the warmest hearts of our enlightened and philanthropic era. I allude to the great mortality of the infant, and the numerous efforts to combat it. You are acquainted with them all. Many fair results have been accomplished; to add to them, is my ambition. For infants must not be born merely to be sick, or to die.

The Committee for the Reduction of Infant Mortality of the New York Milk Committee has made an arrangement with the Russell Sage Foundation which will furnish a nurse who will look after a thousand pregnant women, with a view to enable them to bear infants with *improved resistance*. The mother will be provided for in case she is overworked. Which one of the poor is not overworked?

According to the Milk Committee, and other authorities, 17 per cent. of infant deaths are caused by congenital troubles. One-third of all of them occur before the first month has passed. Two great remedies are recommended. One is that no midwife be allowed to handle any of these cases; the other is that after confinement rest be provided for the mothers, and that the children be referred to milk stations. There is no worthier organization than that committee. What it sets out to do, it performs. It cannot help being restricted to charity so long as one-half of us is condemned to ask and take it, and the other obliged to give and teach. The latter is probably the most valuable performance of the committee. As its activities, like those of its kind all over the country, are meant to be thoroughly altruistic, it is entitled both to praise and to criticism. I hope it will appreciate the former and make use of the latter.

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*President's address before the American Medical Association, t the Sixty-Third Annual Session, at Atlantic City, June, 1912.

Look at that program: first, no midwife for any of the thousand mothers. You ask, "but who?" Second, the Milk Station for the child because the charitable people want rest provided for the mothers, *at the expense of the baby*. If that be a good program for one thousand women and one thousand babies, if that be the best that can be invented or discovered for the one thousand lucky enough to fall into the hands of charity, what is to be done with, or for, or against those millions beyond the reach of the Sage Foundation? But you suggest, these one thousand mothers and babies are to serve as object-lessons only, to be imitated by the millions. The least, then, we must hope and work for, is that the millions of women to be confined and the millions of babies to be born now and in the future, should participate in the same benefaction which is promised a few. The universal object is to save and raise babies. My program is different, inasmuch as it suggests additions and changes.

If 17 per cent. of infant deaths are caused by congenital troubles, study these congenital troubles and obviate them. The baby's life and pathology begin nine months before its birth.

If one-third occur in the first month, study and combat that first month, and the indications arriving during and after labor.

Your dealings are not with children but with infants; not with infants only but with the new-born that is just terminating its embryonal and fetal evolution and expects to be treated like a new-born human animal and not like a calf.

No midwife is to handle the case; indeed no midwife *will* handle any of your cases, for you have none, with rare exceptions. It is proper attendance, however, which society owes to the woman and the newly-born, as a duty to them and to itself. They are valuable assets, both of them. Unless *that* be granted, no discussion is competent.

In one of the programs to relieve the coming child and the struggling mother, I read the demands of absolute rest for at least four weeks before and six to eight weeks after confinement; nursing and feeding, both gratuitous when required; and hospitals for the illegitimate and—when needed—the legitimate confinements.

By the Milk Committee, satisfactory *rest* is wanted for the mother. That means that she did not have it in time, before or after the baby came. If rest means a long rest in bed, and milk station and no breast-feeding, you deprive her of her most important woman's privilege and office in life after child-bearing, and of the facility of getting well radically and physiologically. For without nursing the breast is liable to become atrophic and the uterus subinvolved. And the infant? Well, the infant, to give "rest" to the mother, is deposited on the altar of a milk station.

I shall be as brief as possible, for I do not believe that the speaker should have all the fun at the expense of his audience. On the other hand, I want to say my own things in my own way—perhaps taught by Jonathan Swift, who preferred to express his opinions "for the amelioration of his hearers, more than for their entertainment."

What the *world* wants is healthy babies. What the *baby* wants is full health and weight; that means a competent mother, sufficiently fed to have a quiet night, free from excessive labor through the day, exempt from a local curable disease that may interfere with the development of the child within her or undermine her well-being, her nursing qualities, and future pelvic and general health. What the *mother* wants is what she has a right to expect, as a reward for the service she renders to mankind in the shape of a healthy child: a place as healthy as the best hospital without disrupting the family. Modern society is built up on the family, the crude teachings of anarchical and a few early socialistic doctrines notwithstanding. No woman will consent to being taken to a hospital unless desperate need compels her to go. To tell a woman she may die unless she go is a cruel sentence. Society is beginning to appreciate that it owes human beings a human dwelling-place, with air enough to breathe in. If you build houses unfit to breathe in, you steal air which is common property. What *society* wants is men and women citizens. But in order to be able to rely on their cooperative functions, it must see to it that in its book of ethics the term of charity is supplanted by responsibility. It is useless to call that socialism or communism. It is the substratum of every religion and every humanistic philosophy. I like to avoid the term socialism and its alleged dangers, but only by abolishing the social causes engendering them.

Poets have told mankind that once, in the best olden times, the world was a garden, and they want it to become so again; statesmen—not politicians—have exerted themselves to disseminate prosperity and affluence; great physicians have looked for means to ward off disease and prolong an enjoyable life; jurists have endeavored to make the globe habitable by locking up or killing criminals, or the hopeless and dangerous insane. They all deal with those who are alive and, justly or wrongly, in possession of the surface of the earth. We are expected to deal with the present only, and to fight the evils which seem to be uncontrollable now and in the near future. Is there no way to prevent those who are born into this world from becoming sickly both physically and mentally? It seems almost impossible as long as the riches provided by this world are accessible to a part of the living only. The resources for prevention or cure are inaccessible to many—sometimes even to a majority. That is why it has become an indispensable suggestion that only a certain number of babies should be born into the world. As long as not infrequently even the well-to-do limit the number of their offspring, the advice to the poor—or those to whom the raising of a large family is worse than merely difficult—to limit the number of children, even the healthy ones, is perhaps more than merely excusable.

I often learn that an American family has had ten children, but only three or four survived. Before the dead ones succumbed they were a source of expense poverty and morbidity to the few survivors. For the interest of the latter and the health of the community at large, they had better not have been born.

Theoretically and practically the addition of unhealthy, sickly, sick and contagious children is a misfortune to the newcomer, to his parents, and to society. Therefore a clean bill of health should precede matrimony. The clergymen who refuse to marry couples without it are good citizens, and the health departments are bound to see to it that contagious diseases, mainly sexual diseases, should be reported, watched, and cured. Nor is this all: Hereditary influences propagate epilepsy, idiocy, cretinism. Such persons must not be permitted to propagate their ailments.

Now we build asylums for the diseased, neuropathics, and drunkards; nurseries and schools for epileptics, cretins, and idiots; sanatoriums for incipient tuberculosis, and refuges—still too few—for the dying consumptives, withal conscious of the fact that our only hope of finally exterminating tuberculosis lies in the perfect but comfortable isolation of hopelessly advanced cases. Surely we try to cure and to prevent. Do we not begin at the wrong end? Consumptives, and epileptics, and semi-idiots are permitted to propagate their own curse, both what is called legitimately and illegitimately. Human society should have pity on itself and its future. The propagation of its degenerate, and imbecile, and criminal should be prevented. We have no positive laws yet for the syphilitic and gonorrheic who ruin a woman's life, deteriorate her offspring—if she have any—and impair the human race. We have come to this: that half of us are obliged to watch, and nurse, and support the other half, many of whom should never have been born. In morals and in money, the degenerate are an expensive detriment. The only protection for the nation, for mankind, is to assure a healthy, uncontaminated progeny. Strict laws are required to accomplish that; such laws as will be hated by the epileptic, the consumptive, the syphilitic, and the vicious. No law ever suited the degenerates against whom it was passed, and it is unfortunate that while disease and incompetency and vice are to a high degree hereditary and contagious, moral health and virtue are not so to the same degree. Now those for whom the responsibility of the state does not exist are exactly those who are most entitled to it—the newly born.

Altogether, babies have a strenuous time of it, not only after birth. Heredity, degeneracy or incompetency is often caused by social influences. Financial temptations or necessity make women select not the strong and healthy men, but the old and rich. Their children are having less and less vigorous offspring. Rich and profligate boys spend their sexual powers on prostitutes and save little for possible babies. The lack of children in American families is not always due to voluntary abstinence. Thus the future of the American population has to rely on the offspring of the immigrants, and the American type of the next century will not be much influenced by those whose ancestors came on the Mayflower. Modern industry reduces the vigor and vitality of men, and woman and child labor exhausts the mothers and fathers of the future and present generations. Millions of men are prevented from contracting a marriage by pecuniary want and the impossibility of satisfying their sexual hunger except with prostitutes. That is true not only with regard to factory hands, clerks, and employees generally, but to the picked men of the people. Army and navy, the millions of soldiers and marines of all the nations of the globe, whom we are told by our self-styled leaders to imitate, withdraw the vigorous men from natural modes of living and labor and propagation, and prevent them from marrying in time; and wars, the cynosures of our coarse politicians who take the place that should be filled by statesmen, kill and cripple and deteriorate the best muscle of the land and tempt them into perdition. Only the "weaklings" are left—and their offspring! It is sad to contemplate the short-sightedness of our loud-mouthed leaders and their heelers.

The history of the newly born is pictured on their bodies. Pinard weighed numerous new-born babies. Those born in poverty were 10 per cent. less in weight than the others. Many were premature, their mothers injured and sick afterward, and without milk. Of that class, from three to four times as many die when at home as when in a well-regulated and well-fed hospital. Their subinvolved uteri and parametritides are very common occurrences and are the sources of lifelong invalidism and treatment. Those few are fortunate who need not complain like the woman healed by Jesus, who had suffered all her life from her illness and from the physicians. Those are not so fortunate who are treated according to the last magazines' academic discussions demanding an early day for getting up. A woman of the million, permitted or ordered out of bed to work, is the pivot of her poor household or her small farm or shop, or the live part of her lifeless factory machine. She is not like one of your first class paying hospital appendicitis patients who may be ordered out of bed for a half hour or a few hours daily, and will not be harmed thereby. She will continue to convalesce when she returns home. But the woman of the middle class or the poor who is told or permitted to rise early from an appendical wound, a uterine wound, or after confinement will add to her endometritis, her phlegmon, and her adhesions. All that is why even apparently simple questions of medicine will never be answered without the consideration of social questions, and medicine must more and more become the guide in the solving of social problems.

A decided physical inferiority at birth is a common occurrence. Ballantyne experienced in the Fulham Infirmary as high a percentage as 21.9. They are called unfit, when born of overworked, underfed, and neglected women. Their number is much smaller and very trifling when their mothers, when poor, are looked after long before the uterine life is terminated or when circumstances, financial or sanitary, are more favorable.

Many premature, feeble, thin babies of unpromising weight may be saved when there is ample care, such as a midwife will more readily give than a doctor. If that be absent, the baby's life is endangered. Is salvation worth while? Who can tell, unless you try? Kant, Goethe, Helmholtz were puny waifs, whose lives were despaired of. But they have furnished elements of culture to the world of which we might have been deprived if they had been without the midwife's care and close attention. Licetus is said to have been 5½ inches long. He died when 80 years old. He wrote eighty books, not many of them poor. That is an achievement, though not always pardonable, or even laudable. There are more men 80 years old, but they are not all guilty of writing eighty books.

Hard labor up to confinement interferes with the life or the health of the fetus and the new-born. The least that can be done for the mother is a reduction of working hours during pregnancy, and protracted rest after confinement. The women's worst occupation is that with metals, mainly lead. Their percentage of premature births and miscarriages was 53.6; while those with other work furnished another sufficiently formidable number, viz., 17.2. Lead, mercury, phosphorus, copper, iodin, anilin, and nicotin have been found in the amniotic liquor and in the fetal organism.[1] The indication is clear; less work, less hours, no directly unsanitary occupation, several months' absolute rest after confinement. The living result will be hardier and heavier, and more resistant babies.[2]

When the baby is born, it wants many things: among others air and food, mostly food. Maternal milk is the only safe nutriment for the little stranger. Its quality is not much influenced by emotions, cares, worries; occasionally, only, by medicines taken by the mother, or rarely by her average food. Its quality is only temporarily altered by menstruation, and never causes a change that justifies the interposition of artificial feeding. The daily quantity is rarely less than a quart. Maternal affection, the wish to nurse, the act of suckling increases the quantity. There is no such thing as absolute absence of milk secretion. Essential alterations in the articles consumed by the nursing woman are not demanded. As her appetite is mostly increased, she is entitled to so much more than her average consumption as is required by the one or two pounds needed by her baby. She may eat and drink what she digests and was used to; she may perform her duties, attend to her labors — even some factory work — and fill her time as her station in life suggests. There is no reason why she should not spend time in shopping, concerts, theaters, lectures and parties, except the dog parties reminding you of 1790 — even suffrage parades — provided she will not forget that she has a baby at home to welcome and feed. The checking of babies, with or without baby carriages, by department stores, is a convenient innovation, which improves the chances of babies, women and merchants alike. Elections are no longer so exciting, dangerous, or murderous as they were in our large cities as late as twenty or thirty years ago — so there is no objection to woman suffrage, whether it be considered a plaything, a civic duty, or a disease. Even so, there is no danger, for infectious diseases in the mother are no contra-indication to nursing, unless it be a small-pox case in an antivaccinationist; for not injurious bacteria but beneficent antibodies pass into the milk and improve the baby's power of resistance. All of these considerations prove the dangerous tendency of those of our colleagues who in their mistaken subserviency to the ignorant suggestions of fashionable and lazy ladyships fall in with their and the dairymen's teaching that cows are their proper God-sent substitutes. These accommodating friends of ours are, through short-sighted complacency, enemies of the race.

The mother's milk has certain protective properties not possessed by any artificial food or the milk of another animal. Experiments have proved that the latter may propagate the artificial immunity toward certain vegetable poisons—the ricin and abrin; and a wet-nurse may immunize her nursling by being herself immunized through diphtheria antitoxin. So the mother who ever was thoroughly infected with scarlatina or measles will, at least for the time she is nursing her baby, protect the latter against those infections.[3] The infected milk of an animal will not have that effect; immunity is secured only by the milk of the same—that is, the human animal — which proves that we are superior to our animal brethren and sisters; unfortunately, only so long as we are young. Many of us when we lose our infancy lose our superiority.

The attentive doctor and the diligent midwife know that our women, poor and rich, suffer from no organic mammary degeneration. Large and small breasts can be educated into competent milkers. They can be roused into action after days and weeks of comparative inactivity, and into renewed efficiency after a recess of one or more weeks. It is quite well known, what I alluded to, that the very suckling of the baby is the best educator of the breast. That is why for the hundreds of thousands of mothers, the doctor should be the oracle; the midwife of the people, with her future education and her diligence, the trainer. Both should remember, or rather, learn, that a better milk-supply is guaranteed by not improperly and untimely straining the breasts' function. You do not milk a cow every two hours. A healthy new-born baby should never have the breast more than once every three hours; after the third month, he must get along with five meals in twenty-four hours, and he will turn out a baby worth having.

Milk contains substances organic chemistry never discovered or measured. They are the *ferments* which circulate in the blood. Some aid in the digestion of albumin; others, of fat and starch. Besides, there are defenders in it of the circulating blood; the *alexins* (Hans Buchner) destroy bacteria; agglutinins immobilize bacteria by bunching them; antitoxins formed in the infected vigorous animal destroy the poisonous toxins of the bacteria. When they are not sufficient—for instance, in bad cases of diphtheria—we inject antitoxins formed in the blood-serum of another animal—for instance, of horses. Any mother that ever had a mild or bad case of diphtheria — or, for that matter, certain other infectious blood diseases—accumulates some antitoxins in her blood and tissues, and in her future milk, and thus protects both it and her nursling. It is possible that so long as the infant is at the breast it is for that very reason less liable to take diphtheria. The fact is that few babies of the first half year become diphtheritic. That is the period of nursing at its mother's breast — its mother's or another human female's, not, however, that of another animal. It is not chemistry alone, but also biology, which distinguishes the milk of their organic producers. Old Doctor Heim was told by a so-called "noble" mother: "I keep an ass for my baby. Ass's milk is as good for my baby as my own would be, is it not?" "Yes, yes," said the old man, "just as good for young asses."

In Berlin half of the babies were breast-fed in 1890; in 1900, only one-third of them. At the same time, another German town, Barmen, nursed four-fifths of its babies — during one year, 99 per cent. Of 575 starving and neglected women in a Berlin institution, 83.3 per cent. could nurse their infants; why? they were better fed than before, and gave up only when the Moloch of industry reclaimed them as victims. After these poor babies had enjoyed the privileges of some of the rich — viz., health and life — they were sacrificed again on the altar of anti-social circumstances. For during the first year of life, of 1,000 breast-fed babies seventy have died; of the artificially fed, 270 up to 430. They have been counted by the statisticians, by the parents and by the undertakers.

Wittingly or unwittingly, surely not meaning it as a grotesque joke, the Nestlé Food Company has a picture on the cover of their circular. It represents a woman with immense wings—perhaps meaning an angel—flying off with two babies to unknown parts.

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[1] Bluhm: In Weyl's Manual of Hygiene, vol viii.

[2] Fürth, Henriette: Die Mutterschats-Versicherung, 1911.

[3] Fifty years ago I could refer only to anatomic reasons which secured the very young against diphtheria

The mortality of babies below 1 year has been found—not estimated—to be, for the exclusively breast-fed, 6.98 per cent.; for those brought up on a mixture of breast-milk and artificial food, 9.87; for those fed artificially, 19.75. That means that somebody or something is to be held responsible for the deaths of thirteen babies who should live in good health and with good prospects. Babies turned over to milk stations, because their mothers are told to "rest" may easily belong to that class. It is true, not every baby can be nursed, but the exceptions are scarce. One was born of a mother who died of sepsis carried in part by a dirty midwife or by an infected or ignorant doctor. That is true, statistically, even now that other doctors boast of their asepsis. My own past life does not class me among those others. So I may plead guilty, and no one has a right to blame me for exaggerations. I am, or have been, in the same boat with some of you. Of the five hundred tracheotomies I performed before the Listerian era, of a thousand I assisted in, of thousands of scarlatina, measles, erysipelas during epidemics, and even hospital gangrene during war times—too many occurred while soap and water existed without being used at the proper time and in the proper places. We did not know better, but you do. Every case of death of sepsis in the mother should burn hell into the conscience of whoever permits it nowadays; every case of death from lack of breast-milk should cause a trial for homicide against a doctor or midwife, or mother. For the latter, it is true, there are, if not excuses, many explanations. Some mothers must get up after three days to do washing and scrubbing, and do it without a sufficient quantity of food—starving women make no milk—must make a scanty living in the factory, or in a small business; others go to afternoon teas and bridge parties, or have been taught by their fashionable doctors who agree with them in their suggestions that modern science has proved that a woman's udder may be replaced by a cow's bosom, that a milk laboratory's clerk will furnish printed schedules for the modification or alteration or substitution of food adapted for every month of an orderly Fifth Avenue infant.

But after all, truth will crop out. There is rarely a woman who cannot nurse her infant.

Ignorance can be learned from and taught by doctors, by midwives, by nurses, but ripe wisdom also. As half of our babies, in all countries, are born under the supervision of midwives, it is these who, when their education will no longer be so hopelessly neglected as in our country, in their more intimate contact with the people can exert the widest influence. They will best overcome the prejudice which derives from the well-clad people the notion that breast-feeding is no longer fashionable; they will prepare the nipples, teach cleanliness and antisepsis such as they have been taught in the schools of the—I hope—near future. Edith Peiper reports an increase within five years of from 55.7 to 72.5 per cent. of women who gave exclusively breast-milk to their babies in a public institution.

In a large midwifery school of Germany (Stuttgart), the percentage of women who nursed their babies increased from year to year under proper treatment and teaching. Of one hundred women, only 22 to 25 per cent. gave their babies breast-milk to the exclusion of other foods before 1884. Exclusive breast-milk feeding was furnished by 41.1 per cent. in 1884; 61.4 in 1887; 84.3 in 1888; 100, in 1902; 99.5 in 1903. All of these women were poor or in very moderate circumstances, but they were looked after and fed before confinement and after. It takes missionary work to accomplish results of that nature.

In our country, it is calves that are looked after by our government. The babies have no votes yet. They will wait.

I must give you a few more figures, though I may bore you. But I have more sympathy with the world's babies than even with you. I want every incredulous Thomas to leave this place convinced that every baby has not only the right to suck a mother, but also the facility.

Dietrichs reports the mortality statistics of 628 infants of the poorest married women of Cologne. Of 100 children born alive, three of those who were nursed for nine months or more, died before the end of their first year; of those nursed from three to nine months, twelve; less than three months, thirty-five; of those who were fed artificially, forty-seven. Forty-seven dead out of 100 born alive, in one year.

Perhaps a report by Prinzing is equally convincing in connection with the mortality of other than intestinal diseases. During the years 1895 and 1896, the mortality of Berlin babies under one year, when breast-fed, was 7.09; when fed artificially, 38.6. Of 1,000 babies, congenital debility killed 14 of the breast-fed; 43.6 of those raised artificially. Of 1,000 babies:

| | Breast-Fed | Artificially-Fed * |
|---|---|---|
| Gastro-enteritis killed | 12.2 | 171.0 |
| Atrophy and marasmus | 2.0 | 24.0 |
| Convulsions | 11.16 | 42.0 |
| Bronchitis and pneumonia | 5.6 | 39.6 |
| Pertussis and diphtheria | 8.3 | 19.3 |
| Other diseases | 17.2 | 46.4 |

* Alfred von Liudheim, saluti juventutis, 1908.

The illegitimate infants fared much better than the legitimate ones. That sounds paradoxical, but the former, when controlled by the authorities, were obliged to nurse their babies; the latter were the babies of the mothers who returned to domestic and factory work, and were exposed to neglect and early and improper artificial feeding, mostly by strangers. Among living infants of the second year, the proportion is reversed, for obvious reasons. The lessons to be derived from these facts are intelligible. A social improvement of the mothers, but that only, will add to the chances of the infant population.

Bock found that of infants who died of intestinal diseases, 61.4 per cent. were fed on flours; 24.3 per cent. on cow's milk; 15.8 per cent. on a mixture of breast-milk and cow's milk, and 1.4 per cent. on breast-milk.

During the siege of Paris (1870-71) the women were compelled to nurse their own babes, on account of the absence of cow's milk. Infant mortality under a year fell from 33 to 7 per cent. During the cotton crisis of 1860 there was a famine. Men and women starved, and on account of no money for artificial food, the women nursed their babies. One-half of their mortality disappeared. In the poor forest districts of the Westerwald the bottle-fed babies had a mortality of 20 per cent.; the breast-fed babies, one of 8 per cent.

In the *Berliner klinische Wochenschrift* (No. 28, 1911), Professor Franz publishes the report of the gynecologic divisions of the Charité. One hundred per cent. of his puerperal women nursed their babies. Dr. Kahn accomplished mostly the same results.

It is true that private practice does not reach the same number. Among the well-to-do, with better surroundings, better food, more rest, but greater indolence, less sense of responsibility, more money to throw away and more accommodating doctors to amuse them, and with more money with which to buy inferior food, the percentage of nursing women is smaller. Their daughters will know better, provided the doctors — we and our successors — will teach them.

G. Dufort reports on conditions prevalent in four districts of Belgium. Women objected to nursing, with a mortality of from 153 to 252 per one thousand, in the first year. Then the government and a private organization took measures to improve the percentage of breast-feeding women. Not all governments mix up with such things. Some are not on the job, some are on the slump. This percentage increased in certain localities where it was lowest, within two years, from 4.3 per cent. to 17.02. That increase was due to the midwives who were taught by premiums, by the practitioners and by clergymen. You see doctors and priests are still good for something. In other districts the percentage of breast-feeding was 56.6 per cent. in 1907; in the first half of 1908, 57.1 per cent.; in the second half of 1909, it was 74.12 per cent. That means an increase obtained by the country midwives in two years of 17.6 per cent. More, there were midwives who could report 94.9 per cent. in the first half of 1908, and at the end of 1909, 100 per cent.

The same midwives made it their business to extend the duration of breast-feeding. In 1907, there were fifty-seven babies who did not receive the breast through their first half year exclusively; this number was reduced to forty-eight at the end of 1909. Of the infants who were kept at the breast exclusively through six months, 64.7 per cent. extended this time to nine months; 75.4 per cent. in 1909. The author again and again refers to the powerful influence the midwives — after having been instructed — exerted among the population — the women and the babies.[4]

In 1900, the German Empire lost 426,485 infants under a year old. That means 27.5 per cent. of those born alive. Of these, 61,340 are reported to have died of congenital debility. What is this debility? How did it occur? Something has caused it during embryonic and fetal life. A disease of the embryo or fetus. Infection through the placenta; starvation of the mother by poverty; overwork in a factory; poisoning by a chemical; prolonged labor; unattended labor; unskilled attendance, and some of the other causes I am going to mention.

Whatever among these influences can be avoided or cured saves infant life. It is our duty to look for the causes of debility and death in order to escape from them. We have spent more care on the health and efficiency of the cow and her milk than of the mother and her milk. No doubt the efforts to improve the chemistry and physics of cow's milk, and the beneficent activity of medical and lay milk commissions have borne fruit, and the safeguarding of milk by sterilization, pasteurization and modification has saved lives, but we must look for a higher percentage of salvation. That can be reached, for even the average mortality of a single, mostly poor, country—Norway—has reached as low a standard as 8 per cent. under one year. Wherever financial circumstances are more favorable that should not be the lowest percentage.

What, after all, is a midwife, whose presence at or attendance on a confinement case must be shunned? An editorial of the *Boston Medical and Surgical Journal*,[5] that cautious and elegant magazine, gives the following definition:

> The midwife may be defined as a person attempting to practice obstetrics without complete or even adequate medical education. The tolerance of such persons is an anomaly in an enlightened civilization. The midwife is a relic of medievalism, unhappily extant in the Old World, but whose persistence in our own community should not be encouraged by any form of recognition.

Meanwhile, Holland, Belgium, France, Italy, require a two years' course of schooling for their midwives; Norway, Sweden and Denmark, one year. Germany has had its midwifery schools for more than a century. Many countries subsidize their midwives, who live and practice in sparsely settled districts. Great Britain[6] established in 1902 its Central Midwives Board, to supervise and control midwives for the specified purpose of preventing the death of women in childbirth, infant mortality, blindness, and physical degeneration.

There are in England and Wales 17,790 trained and untrained midwives—too many yet of the latter class. The British Empire's 108 midwifery schools—including four in the East Indies and one in Hong Kong—have not yet afforded sufficient facilities. But the *British Medical Journal* emphasizes the fact that even in the old type of midwives there is a great improvement in cleanliness and obedience to rules, one of which is the calling in of medical aid in cases with a purulent discharge.

And we? Fifty per cent. of all the births in the United States are attended by non-medical women—in New York, 42; Buffalo, 50; St. Louis, 75; Chicago, 86. The patients so attended are negroes, aliens, and natives born of aliens; that means one-half of our population; that means those who during the disappearance—voluntary, wanton or not—of the original stock and by additional immigration and multiplication will form what within two generations will be the type of the two hundred millions of Americans then living. And where are our midwives? Where are the 108 schools which little Great Britain deems—on account of their scant number—insufficient for her urgent needs? Where are the American safeguards of our fetuses and new-born? When our experienced and far-seeing president of Bellevue and Allied Hospitals established a small school of midwifery, he was applauded for his exceptional foresight and altruism. We think nowadays that the ocean is only a short bridge; but the experiences of Europe, established on a solid and constant foundation, do not travel on it. That is the way of indolence by which we negligently murder our forests, lay dry our river beds, cause our freshets, and kill or cripple our newly born. I wonder in which other country we could be expected to accept what I lately read, that people cannot receive obstetrical service under the midwife, "no matter how well trained for her vocation;"—I ask why not?—or agree with a well-meaning author who sympathetically cries out: "Professors are teaching midwives, so medical students are deprived of their professors' time;" or throw up our hands when Stokel tells us that it is "a curious fact that even among people of refinement the older and dirtier the midwife, the greater seemed the confidence placed in her ability and judgment." That is as sound, perhaps, as when the great English opsonin scientist publicly arraigns habitual bathing for its dangerous effect in admitting microbes through the clean skin—a desirable bedfellow he!—or when Knott[7] tells us that "Lady Lawson, who died at the age of 116, never practiced ablution of any kind, or hardly in any degree, because, as she alleged, those persons who washed themselves were always taking cold or laying the foundation of some dreadful disorder," or the occasional preference given to an old doctor not though but because he is habitually intoxicated. There is still another line of mistaken altruism: Fenwick fears lest a midwife, scantily trained, compete with a physician. I should say, if she succeeds, it serves him right unless he owns a superior training. A pretty good doctor will not do for you or your wives or cases, any more than a pretty good egg for your breakfast.

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[4] Dr. A. Balestre and Dr. M. d'Oelsnitz (Bericht. über den III Internationalen Congress für Säuglingsfürsorge Berlin, Sept. 11-15, 1911, p. 789) express their satisfaction with the results of the Infant Protective Society of Nice, which was founded twenty-five years previously, mainly for the encouragement of maternal breast-feeding.

[5] Feb. 23, 1911.

[6] Brit. Med. Jour., Dec. 17, 1910.

Is there anybody here who remembers that when fifty years ago the question of the licensing of midwives was brought up before the Medical Society of the County of New York, it was voted down with all con except one? Ask our New York doctors at present. We know better now, and feel better about it. For we feel like citizens at present. We have also been told that all countries have found "the practice of midwives unsatisfactory." The fact is, however, that the other countries pretend to know their own business, and constantly add to the facilities and education of midwives as we do those of doctors. Some assert also that the attendant on a midwifery case must either be a trained obstetrician or a subordinate "like our excellent trained obstetrical nurse." "The obstetricians are the final authority to set the standard. They alone can properly educate the medical profession, the legislators, and the public." Who educated *them*, if you please, if not the professional schools, and they themselves as best they could afterwards? The midwives are not even mentioned as worthy to be educated. Do our obstetricians demand all the obstetric practice? I am prepared to bid a hearty welcome to the evening-dress obstetrician—who charges $200 or $300 or $500 a job—to the confinement where the man earns ten or fifteen dollars a week, or the woman thirty-seven cents a dozen, and the children nothing.

In spite of English complaints concerning the insufficiency of midwifery attendance, the reports are very promising. In 1910 there were 321 midwives in Liverpool, 198 in Birmingham, 159 in Manchester. In Liverpool, the average number of cases per midwife was seventy—one had 500 cases. Of all the births attended to there were by midwives in Liverpool, 71.9 per cent.; in Birmingham, 63.2 per cent.; in Manchester, 57.2 per cent. Still-births attended by midwives were 391 in Liverpool, 212 in Birmingham, 279 in Manchester. Their honest discipline is exhibited in the following figures: Medical assistance was called by 1,015 midwives in Liverpool, by 674 in Birmingham, and 2,279 in Manchester. The indications for such calls, under the universal rules, are high temperatures, abortion, laceration, illness of the patient, imperfect removal of the placenta, pallidness, convulsions, large varicose veins, sores on genitalia, malposition, trauma, hemorrhage, venereal diseases.

This very day the system under which they work with us is an absolute lack of system, slovenly and shiftless—no instruction is offered, no examination demanded, no supervision enforced, and the babies swell the universal mortality.

What is it that a midwife should be taught? Common sense and the experience of other countries should tell us, for we have none—I mean experience. We are only told that she is dirty, ignorant, untrained, superstitious, septic, the cause of invalidism, degeneracy and blindness. That is a list of statements exhibiting more temper than knowledge. For, indeed, in thirty-three of the fifty states and territories there is no law restraining the practice of midwifery or what is so called. In three there is no restriction whatsoever. In thirteen there is no provision for training, but there are, curiously enough, laws requiring examination and licensure. What is it, after all, that every one of our states—indeed, after a while, the federal government—should demand on the part of a midwife who is to be the obstetric guide of fifty millions of Americans? In my opinion, she must have as moral a character as you expect in a male or female student of medicine or man generally—and, for that matter, of any American outside a penitentiary; a good common school education without Latin and Greek; a fair health so as to endure the hard work she means to undergo in future; a reputation for love of work and conscientiousness; and such knowledge of popular physiology and anatomy as the program of our future midwifery schools will designate. What they must surely teach, like the English schools, are four topics—the *care of expectant women, the conduct of normal labor, the care of babies immediately after birth, the simple principles in an urgent case of artificial feeding*—and the diagnosis of abnormalities, so as to advise the calling in of medical skill. As there are many, I shall spend a few minutes on the consideration of some of them.

The fact is, that of one hundred deaths under a year, 2.2 occur by injuries during birth, ten on the first day of life, twenty-five during the first two weeks, thirty-four during the first four weeks. Most of them should be saved through perfected knowledge and art, more skilful attendance than half our population enjoys, and greater acquaintance with the dangers of the newly born. You notice that a large number die from other than the usual causes, viz., indigestion.

A calamity never prevented by one of us, possibly by an attentive and painstaking nurse or midwife, is death by suffocation.

There were in England and Wales during ten years, 10,009 *overlain* infants; in 1900, 1,774. In Liverpool, out of 960 inquests, there were 143 on babies that had died of suffocation from the same causes, by accident or malice; in London in 1900, 615; in 1901, 511; in 1902, 588. In London, they had annually 8,000 official inquests, one out of fourteen of which were on overlain infants. A serious complication of labor is *asphyxia*. It may be caused by the mother or by the fetus. Disorders of placental circulation, mostly toward the end of labor, early loss of amniotic fluid, respiratory and cardiac disorders, disruption of the placenta, compression of the cord and cerebral pressure can mostly be prevented or moderated by appropriate aid. Asphyxiated babies may die, however, within an hour, or the first few days. Those who do not so die are apt to be worse off. They are very liable to become paralytic, idiotic or epileptic. Little shares that opinion, the contrary assertions of others notwithstanding, that a large percentage of cases of spastic encephalitis ("Little's disease") is produced by congenital asphyxia. Hundreds of times, both in obstetric and in pediatric practice, have I, when looking for etiologic factors, received the uniform answer that the baby did not cry for some time after birth, and that

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7. Med. Rec., New York, Dec. 3, 1910.

the attendant had to work over it minutes, or even hours. Asphyxia must not be tolerated. A few moments' delay adds to the danger which may be averted by knowledge and skill. Losing a baby is a loss and bereavement; crippling it for life is worse. Accidents of the kind can be avoided by much less than the profound knowledge of medical experts, few of whom will ever deign to attend a mere case of common confinement. The statement on a certificate that the new-born is a stillbirth means a statistical fact, not an explanation, still less an excuse.

*Atelectasis* is more apt to be relieved, and death from it more readily prevented, by a midwife than by one of us, no matter by what it is caused. Soft cartilages in the premature, feeble muscles, defective nerve centers and lungs, but mainly hepatization, early pleural effusion, struma and compression of the brain are the usual causes. Frequent changes of position, warm and cold baths, shaking, forced inspiration, occasional closure of mouth and nose—so as to fill the medulla oblongata with an extra momentary dose of irritating carbon dioxid—an interrupted momentary Faraday stimulation and all the procedures demanded in asphyxia are advisable in atelectasis. A midwife should and can master all or most of these measures, as well as a doctor. The former is more efficient because she mostly uses more diligence and will spend more time than most of us.

The observing obstetrician or pediatrist or midwife has an opportunity to notice all sorts of microbic infections, such as tetanus, hemorrhages and the intense forms of syphilis. Its worst form is the pemphigus of the soles of the feet, which must be recognized within a few days. The midwife is the readiest to make the diagnosis, and to recognize the necessity of treatment. That does not mean *her* treatment, just as little as she will undertake the treatment of melena, sclerema, jaundice, sepsis, dermatoses, erysipelas, traumata or umbilical defects or diseases.

Some of the septic diseases of the newly born for the cure of which the doctor is always too late, or incompetent, are those which go by the name of Buhl, of Winckel, etc. They develop before any symptom is perceptible. The poisons which cause them are probably multiple and connected with the rapid metabolism occurring during, and immediately after labor. Many cases look like acute atrophy of the liver, or pernicious vomiting; or the main symptom is fatty degeneration, or hemorrhage, or intense jaundice. Overdoses of chloroform in predisposed women have been accused. Intense asphyxia I have seen coupled with, or causing it. There are many such cases which can be prevented by appropriate and instant aid, such as I plead for. Many, I believe, will be cured by vaccine therapy, provided it can be employed in time. That is possible only when the indication for it is suggested, or only suspected by a person who is on the spot and better taught than a common neighbor or nurse.

The *mouth* of the newly born is exposed to injury resulting from the antediluvian tendency of not leaving well enough alone. The habit of washing and rubbing the oral cavity of the newly born, even by clean fingers and rags, hurts the very thin mucous membrane covering the posterior part of the alveoli, and the punctated epithelial accumulations on both sides of the raphe. Doctors and nurses and midwives who do not know how to omit interference are dangerous. For the forcible removal of the epithelium leads to invasion of cocci and bacilli, and the mycelium of *thrush*. The latter, though easily cured by a strong solution of borax in glycerin, need not occur in the baby's mouth, for its habitat in the vagina of the mother is quite accessible, both in a private home and in obstetrical wards and in foundling institutions. A consecutive invasion of the stomach and intestines, of blood-vessels and lymph ducts, even of the kidneys and nerve-centers, may easily be avoided by a person who has been taught to prevent and to cure.

Constipation of the newly born should be recognized by the midwife. What I described nearly half a century ago as *congenital constipation* is the result of an excessive length of the sigmoid flexure. When its continuance for one or two days suggests it, enemata should empty the bowels. Unless that be done, moderate and later on serious costiveness is an accompaniment of the dilatation of the descending colon, and auto-intoxication. "Hirschsprung's disease" is rarely a fully developed congenital dilatation. If a midwife be too alert she is capable of preventing an operative interference. I was one of the alert midwives. None of my cases ever terminated on an operative table.

*Ophthalmia* is the source, not only of blindness, but of death through general septicopyemia under the general symptoms of multiple abscesses and arthritis. A series of cases I, like others, have observed, of vulvovaginitis, endometritis and peritonitis. That endometritis is always of long duration, may for anatomic reasons relapse indefinitely for many months and years, and often gives rise to contagious dissemination in families, in hospital and asylum wards, by careless nurses and by gregarious bathing.

*Uric acid infarction* of the baby is a frequent occurrence of the second day until the end of the first week. It is rarely observed by the doctor (if any was employed) who sees the new mother perhaps once a day, if at all. Thus in this respect the well-to-do mother is worse off than the poor who is seen by a midwife whose visits are more frequent and more extended.

The tissues of the newly born contain more water than those of the adult; the difference amounts to 10 per cent. *Loss of water* is badly tolerated, while large quantities are eliminated at once through the lungs, kidneys and skin, and some through the intestines. Without a proper supply, the tissues deteriorate and the physiologic equilibrium is lost. That was always so—the newly born is conservative—and was considered normal. The baby had to be satisfied with reading in every text-book—even in the old ones from which some new ones are compiled—that he has to please the attending oracles by giving up 10 or 20 per cent. of his weight within a week or two. However, as the mother has but little milk during the first days, the least the baby should have a right to expect is water — at least teleology ordains it so — the more so as the first mammary secretion means colostrum, which contains three or four times as much protein as the milk of later weeks — that means 3 or 4 per cent. That is mainly so — even still more so — when the baby is premature and endowed with less vitality than when born at full term. Neither you nor I shall undertake to change that, but the danger connected with it requires correction, and if artificial feeding be resorted to at all the food should be amply diluted. There is another reason for so doing. Uric acid sediments and renal stones are comparatively frequent in small infants. They are caused by the uric acid infarctions which, as a speedy result of the rapidly changing metabolism, are found in the diapers on and after the second day of life. Besides forming gravel and calculi, they give rise to occasional attacks of colic, to small hemorrhages and frequent cases of nephritis, with, or mostly without, pyelitis. Neither I nor my pupils and friends have seen so many stones and inflammations since, for the last forty years, we made it our rule to feed the newly born on plenty of water. It is also demanded for the purpose of rendering he chemical and physical condition of cow's milk casein more digestible. As long as a human baby is not permitted to live on its mother, that fact is important to onsider. Artificial feeding during the first days and weeks should furnish more than 75 or 85 per cent. of water, which is normal even for the adult. Altogether, ur infants and children are not supplied with water in ufficient quantity at any time. In our era of equality or all sexes and colors, we should recognize the rights of ll ages.

When you are hungry, you want to eat; when hirsty, you drink. The baby wants its equal rights. But no matter whether it is hungry or thirsty, it is ondemned to receive the same food to quench both its unger and its thirst. When it cries with hunger, it ustly receives food from the bottle or breast; when it ries with thirst, it is given the same food from the same ottle—not mere water. I have often felt like presenting bill to the legislature or to the professional philanthro-ist, enforcing, when father, mother and physician are hirsty, beefsteak and potatoes. I wonder how they ould like that. A German pediatrist improves the method of giving water by giving the new-born tea and accharin. What tea is, I do not know; what saccharin s, we do know. It is found to be a poison. That hould, however, not have been the reason why our magnanimous Agriculture and Treasury Departments wice postponed the execution of the law which forbids s indiscriminate sale by the manufacturers of foods.

Midwives are more fortunate than we doctors. They eed not know so much as a few taskmasters ask of hem—for instance, two German professors, Salge and iegert, who are so interested in the babies as to insist n midwives being examined on the intricate problems f metabolism. I fear, after having been a midwife xty years ago and since, I could not pass to-day. Then, hey need not know all the mixtures and mathematical ormulas concocted by twenty of my pediatrist friends, ach one of whom is sure that the other nineteen are uite wrong. Nor need they be acquainted with the fty artificial foods which were recommended by the *eutsche medizinische Wochenschrift* a short time ago, nd again rejected—all of them—in the very same year.

The teaching of midwives is not so difficult as part our profession imagines it to be. We are defective urselves, for there is a fact which seems to be agreed n by our college teachers, viz., that our young doctors re incompetent to conduct a normal or abnormal labor. s that is so, we, the practitioners, should try to learn me lessons by theory but more by practice. Their competence is the result of the insufficiency of our edical school instruction, which is acknowledged to ave been scanty in spite of our four years' medical urses. The schools furnish neither systematic obstet-ians nor competent general practitioners. I shall not hard on them, however, for I was a teacher myself. hat is why the number of septic infections and of still-rths is liable to be large in their practice. If that cur in the green tree—viz., among the men and women th medical diplomas—what can we expect from the tutored?

We speak against midwives and their detrimental doings, and their unreliability. Teach them their duties, which are not many; furnish beside instruction—which even for a hundred thousand physicians is scanty or none—so that they will learn the manual care of labor; let them be taught not to use medicines, not to operate, not to try even to remedy, as a rule, wrong fetal positions; teach them the use of soap and water, and antiseptics; enforce by law and custom the frequent change of their own clothing; forbid the simultaneous attendance on two or more cases; see that the midwife does not attend a labor case as long as in her family or immediate neighborhood there is a case of contagious disease, and she will cause or disseminate no puerperal sepsis. She must be examined and licensed and protected, like you and me.

Registration alone, however, will not do. Nor will our complaints do. Our responsibility does not cease when we decline it. Our duty does not end by sending and collecting a bill for an individual medical service. A death not prevented, a life not saved, is a blot on our escutcheon. The people want more. We are not yet—as the British government proposes—official state employees of the people. If there were not an excess of individualism among us, the attempt to force socialistic coercion on the profession of England would not have been made. Not yet.

Less than a year ago, the New York Academy of Medicine passed, among others, the following resolution:

> Whereas, some of the results of obstetrical malpractice are unnecessary blindness, mental and physical degeneracy, and death of infants, and unnecessary suffering, invalidism, and death of mothers; and whereas both doctors and nurses in this country are given instruction in the treatment and care of child-bearing women and new-born infants, there is no existing provision for the adequate training of women who take into their keeping the lives and future well-being of this large number of both mothers and infants, be it resolved that the Section of Obstetrics and Gynecology of the New York Academy of Medicine recommends that measures be taken in this state to secure state legislation which shall provide for the training, registration, licensure, supervision, regulation, and control of women engaged in the practice of midwifery.

It is useless to attempt a comparison of a midwife with a medical man. They must be considered individually. The ignorant doctor in obstetric work is the inferior of a well-informed midwife, and *vice versa*. I remember only two cases of sudden death caused by atmospheric air entering a large uterine vein—in both instances resulting from the nozzle of a fountain syringe introduced into the uterus before the air had all been expelled. In both cases it was a medical colleague that did it. That does not prove that we doctors do not know how to clean a uterus without pumping air into a vein—but I know of no midwife that could have done worse. Still, ignorance, like sinfulness, makes all mankind kin. The greater number of annual labor cases in the United States—more than a million—are attended by midwives. As long as these cases are uncomplicated, the presence of a bright trained woman should be, and is, welcome. She must have learned to distinguish the position of the fetus, and know when to call a doctor; how to do, in his absence, a version in cases of emergency; how to attend the eyes; hemorrhages depending on incomplete uterine contraction or from injuries—one of which is tearing off of the placenta—and how to recognize eclampsia, inversion of the uterus, the presence of a mechanical obstacle like fibroma or a contracted pelvis.

She must know how to deal with asphyxia. More than anything, she must have been taught to appreciate two things: first, how to keep absolutely clean—that means to disinfect herself and her hands; second—and therein lies a secret of success—not to leave the woman. That is more than you or I do, or usually did.

The results of midwife practice do not always compare unfavorably with those of our professional brethren: Of 116 cases of ophthalmia neonatorum which were treated in the Massachusetts Eye and Ear Infirmary in one year, 114 were in infants attended by physicians, and two by midwives. Of thirty-three cases treated in the New York Eye and Ear Infirmary in one winter, twenty-two occurred in the practice of physicians, and eleven in that of midwives. Of the eleven midwives, three had used nitrate of silver; of the twenty-two doctors, only one. According to these reports, if it were wise and proper to generalize, the doctors should be replaced by midwives.

In a period of years, 1905-10, the City of Manchester, England, has the following to say about puerperal fevers, and recoveries and deaths following them, in the practice of midwives and of doctors. In the practice of midwives there were 219 cases of puerperal fever, with forty-one deaths; in the practice of doctors, 275 with eighty deaths; in the cases attended by midwives *and* doctor, 100, with twenty-six deaths.

Nor are midwives' cases, those reported in 1910, inferior in results — forty-five puerperal fevers were treated at home, with a mortality of ten = 22.2 per cent.; in Monsell Hospital, sixty-six cases with sixteen deaths = 24.2 per cent.; in other institutions, twenty cases with five deaths = 25 per cent.

The absence of skilled assistance from a confinement is one of the causes, not only of death, but of what is still worse, of degeneracy of the new-born. How many, nobody can tell. But it is worth while to reduce the number of 60,000 weak-minded or mental degenerates with which we are credited in the state of New York alone. The statement on a birth certificate that the new-born is a still-birth means a fact, not an explanation, still less an excuse. Many of them could be avoided if the women of the United States were protected against ignorance and indolence. When I was in active obstetric practice fifty years ago, I met in the tenement-house population many a case, which should have been saved if any bystander had known enough to afford manual assistance, such as that of a well-informed midwife. That, however, is only a part of the possible mishaps. What proper assistance may prevent is a vast number of paralytic, spastic, idiotic, semi-idiotic or epileptic conditions, mostly during infancy and childhood. How many? I do not know. But I have seen hundreds personally. Questions were as follows: How was that baby born? Did it take long? How long? Was it an instrumental case? Did the baby cry immediately? Was anybody present to help you? Did it take the doctor, who was called in, long, a minute, ten minutes, or one-half of an hour to make the baby cry? The answer gives the history of asphyxia, which—and that is my point—could have been prevented, or relieved, at once by a midwife. I hope there are many general practitioners here, such as I am or have been. They know how much they would have wished to be present on the spot, or to have a midwife to attend when they did not care to attend or could not do so. How many cases might have been carried to a safe end, when a little aid would have prevented intracranial hemorrhage caused either by direct lesion o thrombosis, can be surmised only when you remembe the many patients with meningeal hemorrhage or inflam mation who die within a week.

Now, my friends, you have been kind to me an patient, as hundreds of times before. That is why shall now finish in a minute with a few conclusions fo those who with me are convinced that healthy wome and living vigorous infants are the best possessions this nation. They will not be conquered with treasur and cannon and corpses of countless men; they need co servation only. What I want is that a pregnant woma should be in a condition to carry her fetus to its legit mate end in health and vigor, and be able to nurse h infant. Every text-book talks to us of the inability women to do so, and indicates formulas and tradesho and factories from which to graduate toothless you Americans. One hundred per cent. of our women, ho ever, can be made to nurse, even the "flower and fashio of the land. From two to three times as many babi will live when breast-fed compared with the number those whom they complacently try to raise on artifici foods. By breast-feeding you will save 100,000 babi that now die or become invalids, from no other cause b unnatural feeding.

Dangers which now attend the process of parturiti for more than one-half of the women of this count must be modified, relieved or removed by the presen of a person instructed to conduct a normal labor an when needed, to call timely aid. We want, for the ben fit of the women who need midwives, 200 midwife schools after English or German pattern. Let no leg lature of any state pass without a bill or law to sa guard the newcomers and their mothers.

A town without an amply supply of good doctors a midwives and a village without one or two compete and responsible and licensed midwives, are like a ter ment house without a fire-escape or a *Titanic* witho life-boats.

19 East Forty-Seventh Street.

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# NOTES ON THE TREATMENT OF ANKYLOTOMA ANEMIA (UNCINARIASIS, HOOKWORM DISEASE) WITH THYMOL

CAMILLO BOZZOLO, M.D.
Director of the Medical Clinic of the Royal University; Senator the Realm
TURIN, ITALY

Some interesting articles recently published in T JOURNAL[1] and the excellent publication of the memb of the former Porto Rico Anemia Commission[2] h induced me, after a lapse of more than thirty years, return to the argument of this remedy adopted by for the first time, in 1879, in the treatment of bri maker's anemia, a disease which I ascertained to be to ankylostomiasis, and which gave me the means studying this form of anemia, described by me in all details by the name of "ankylostoma anemia," in or to distinguish it from simple "ankylostomiasis."[3]

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[1] Schultz, W. H.: Remedies for Animal Parasites: A Stud the Relative Efficiency and Danger of Thymol as Compared Certain Other Remedies for Hookworm Disease, THE JOUR A. M. A., Sept. 30, 1911, p. 1102. Endicott, E. E.: Hookw Infection in the Deep Gold Mines of California, ibid, p. 1106.

[2] Uncinariasis—Hookworm Disease—in Porto Rico, a Me and Economic Problem, Washington, Government Printing Offic

[3] Bozzolo: L'Anchilostomiasi e l'anemia che ne consegui Anchilostomoanemia, Gior. Internaz. del. Sc. Med., Naples, 1879.

This brief communication does not permit me to enter nto details concerning my method of treatment and its vide diffusion, nor of its superiority over other methods n connection with the hookworm of America — *Necator mericanus* Stiles — a parasite exceedingly obstinate of xpulsion and much more so, as has been proved in Italy, specially by Monti and Siccardi, than the hookworm of Dubini.

These particulars, which are at the present day better known in America, perhaps, than in Europe will, for the greater part, be found by the reader in the interesting ublication of the commission for the study of the Porto-Rican anemia. It is worthy of note that this commission effected no less than 4,474 cures of uncinariasis in Porto Rico with thymol, and that Dr. Baerman at the great International Exposition of Hygiene, held at Dresden in 1911, demonstrated how 47,000 patients were ured with this same remedy.

These and many other facts and publications clearly demonstrate the immeasurable advantages to humanity derived from the application of such a simple, easy reatment—a treatment which costs little, and is sure and harmless, conquering and exterminating a disease of almost world-wide diffusion, terrible in its effects which are such, as we learn from the celebrated explorer, H. H. Johnston, in the tropical and subtropical regions, for example, as to prevent their development, not only by the work of the white man, but also by the colored aces.

Having employed this remedy continuously throughout the past thirty years, and not as a cure for ankylostoma only, I cannot but consider as somewhat exaggerated the fears expressed by the greater part of those who, while admitting the utility and great superiority of thymol in comparison with other drugs, regard its after-effects as likely to be poisonous, and see danger in the administration of the remedy in large doses or in the contemporaneous administration of some alcoholic beverage, and who advise the substitution of small and epeated doses for maximum ones. Indeed, in the several cases under my care during the time in which workers on the cutting of the St. Gothard tunnel, suffering from ankylostoma anemia, flocked to Turin, 12 gm. of thymol were given in twelve hours, 2 gm. every two hours, always well enveloped in capsules, and no serious disturbance was ever noted, either by me or my colleague, Dr. Medoni of Laveno—where a tunnel was then being cut—who increased the dose to 15 gm.

Graziadei, writing of his work in the clinic then under my direction, says:

> The tolerance of thyminic acid is so complete in certain cases s to render it possible to increase the dose, without danger, to 2 gm.; in fact, one patient who by mistake took 24 gm. of hymol during the night suffered no other more serious disturbance than moderate diarrhea with emission of hookworms. nother patient, 60 years of age, suffering from ankylostoma-anemia and heart disease with very irregular pulse, in one day ook 14 gm. of thymol without wrapping it in capsules; nevertheless, save for burning sensations in the mouth and throat, e suffered no other serious after-effects, and the pulse remained most in the same state as at first. And that thymol has no injurious action on the heart, nor on any of the bodily functions, was demonstrated in this clinic by Fiori, in a series of vestigations made to determine the action of the drug on the rculation.

In one solitary case throughout my long experience, a woman, it is possible that thymol, administered in rge doses, proved fatal; as a matter of fact, at the st-mortem examination of this woman there were traces of marked enteritis, which had, perhaps, been the cause of death. This occurred many years ago and I cannot recall the details of the case. Possibly the fears expressed by those who adopted thymol among populations in which the disease is marked and extensive and attacks children, old men and women who have long been anemic, have their foundation in the unsatisfactory results obtained from the treatment in the case of a person too weak to support an energetic course of treatment for which their limited powers of resistance are inadequate.

These conditions are rarely seen in men of middle age with vigorous constitutions, such as are—for the most part—our sick workmen suffering from this type of helminthiasis.

Furthermore, before having met with ankylostoma anemia—that is before the year 1878—I had already used thymol in diabetes with satisfactory results on the glucose in the urine (glycosuria) and with no serious after-effects.[4] In these cases, however, the doses were restricted to 3 gm. daily.

Graziadei, in 1882, following my advice, resumed the treatment of ankylostoma anemia with doses of 2, 3 and 4 gm. of thymol per day continued over a length of time; and in spite of the small number of hookworms expelled, considerable improvement in health resulted. In view of the fact that so few worms were found in the stools and of the length of time necessary for the cure, he considered this method impracticable and that of maximum dosage far preferable.

The apparent contradiction between the small number of parasites found in the feces and the convalescence of the patient caused Graziadei to argue that the amelioration was due to the improved conditions of the stomach and intestines, favored by the antifermenting properties of thymol, which had already been adopted by Lewin and others against fermentation of the stomach with dilatation.

I now believe that an explanation of the fact is to be sought elsewhere and that it may be discovered, in the interesting observation made by the Porto Rico Anemia Commission, that certain persons who had been treated with the antihelminthic, even when examination of the feces showed it free from eggs, remained anemic if the antihelminthic treatment was discontinued, while the hemoglobin content increased rapidly when fresh doses of thymol were administered. To explain this fact it must be remembered that the absence of ova in the feces is due either to the inability of the female parasites still existent in the intestines, but affected by the poisonous action of the antihelminthic, to renew the eggs, or to the fact that all female worms have been expelled and a few male parasites only remain in the intestines, which theory would justify the opinion of those who state that the females are the first hookworms to be expelled immediately after the administration of the antihelminthic, these being most readily affected by the action of the poison. By the continuation, therefore, of the treatment, even in small and repeated doses, the few parasites which remain, male or female, are little by little killed. Even if the worms were not destroyed in a mass —as is the case when large quantities of thymol are given at one time (*therapia sterilisans magna*) so as to obtain the expulsion of several hundred ankylostomas in one or few excretions — they are affected little by little by the poison and gradually detach themselves from the mucosa and, dead, can even be digested by the intestines and pass slowly through them with their contents, since small and repeated doses of the antihelminthic are not followed each time by a purge to hasten the peristaltic motion of the intestines. It is therefore easy to understand why, in the case mentioned by Graziadei, few hookworms were found in the stools, and yet at the same time the patient's health improved, since the worms expelled were for the most part destroyed by the intestinal digestive operations and therefore traced with difficulty in the rough examination of the feces. This is also the reason why it seemed to me that my first experiments with thymol—in 1879—had failed.

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[4] Virtù nuove di un rimedio nuovo, Gaz. Osp., Milano, 1882, No. 2.

Without, therefore, exaggerating the fear of the indirect drawbacks of thymol in the treatment of hookworm disease, which in Turin has been widely employed in other diseases as well, it may be advisable to administer it in smaller doses (*therapia sterilisans fractionata*) than those originally proposed by me in cases of weak persons who have been suffering for a long time, and when the treatment cannot be carried out under direct supervision.

In the case of persistent enteric catarrh it is further advisable, whenever possible, to precede the treatment with a dry diet, administration of tannic preparations, etc.

It now only remains for me to add a word in regard to the dangers of alcoholic beverages administered in connection with thymol. According to the original method suggested by me, after having ascertained the existence of eggs in the stools and when special circumstances—complications, etc.—did not stand in the way, 12 gm. of thymol were administered to adults, divided into two equal parts of 6 gm. each, well enveloped in capsules (to prevent insupportable burning sensations on the membranes of the mouth and throat) to be taken at two-hour intervals. After each pill a small glassful of strong wine or some alcoholic mixture was given in order to facilitate the solution of part of the drug. Now, with the exception, perhaps, of one or two, authors express their doubts as to the advisability of giving or permitting the patient to drink alcoholic mixtures, precisely with the object of preventing the solution of the drug, which solution renders a too abundant absorption possible, with danger of severe poisoning. There is no doubt that this is a reasonable precaution and worthy of attention, and I personally, in view of such considerations, for some time let myself be influenced by this opinion. While it is certain, however, that poisoning did not occur in any of the patients treated by me with my original method, no other phenomenon than giddiness, tipsiness and sleepiness presenting itself, although the urine was dark in color and gave the reaction of thymol treated with nitric acid and the reaction of phenol with ferric chlorid (in the case mentioned, of the woman who died, the alcoholic mixture had not been administered, it seemed to me that the action of the drug on the ankylostoma was less complete than in the past, so that the treatment had to be repeated oftener).

I do not insist on this point; I would merely remark that the ankylostomas occupy the duodenum, and it was in view of this consideration that I held the dissolving of part of the drug in the stomach to be advisable. As a matter of fact, the liquid part of the contents of the stomach, immediately passing the pylorus, comes into contact with the parasite more effectively than it would if entering the intestines in a solid form.

For this reason I consider the suggestion of Guiart, always to make use of thymol in a fine powder, worthy of attention, and better still the method adopted by the Porto Rico Anemia Commission, of thoroughly mixing the powdered thymol with powdered sugar. It is evident that prepared in this manner the small grains o powder can more easily come into contact with th worms, even if hidden and protected by the folds of th duodenal mucosa. I would also suggest the mixture o finely powdered thymol with creta preparata (precipitated carbonate of chalk), which preparation I adop with satisfactory results in the administration of tannigen and tannalbin, the action of which without suc precaution is less energetic, reaching the intestines i lumps and by this means rendering less equal and eas their contact with the whole surface of the mucosa whic is therefore less influenced by the remedy. It will b understood from this that thymol reaching the duodenum, where the parasites are lodged, in a dissolve state penetrates all the twists and turns of the mucos and works more surely on its dangerous visitors.

Further experience of this method of administratio will prove whether or not, on account of the possibl drawbacks of the absorption of a too abundant quantit of thymol, a less certain and prompt result of the trea ment is to be preferred.

20 Via Magenta.

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# TREATMENT OF TETANUS WITH MAGNESIUM SULPHATE, WITH REPORT OF THREE CASES *

GEORGE PARKER, Ph.B., M.D.

PEORIA, ILL.

In 1905, Meltzer and Auer proved by experiment work that paralysis of the whole body could be induce by magnesium salts. They showed that the conductivi of nerve-trunks could be interrupted by the local applic tion of a solution of magnesium salts and that a more less complete block for afferent and efferent impuls occurred. This work suggested the use of magnesiu sulphate for tetanus.

As death in tetanus is due in at least half of the cas to asthenia produced by excessive muscular action a inability to take food, and in most of the remaining cas to asphyxia during a convulsion, the value of this expe mental work by Meltzer as applied to tetanus can readily seen. There have been reported in the literatu twenty-four cases in which magnesium sulphate has be used by subarachnoid injection, and four in which it h been used subcutaneously. In the subarachnoid cas thirteen patients recovered and eleven died. In the su cutaneous cases, all four patients recovered.

The first case I wish to report occurred in the pract of Dr. W. T. Trewyn, of Peoria, with whom I saw t patient.

Case 1.—A boy, aged 11, run over by wagon, sustainin lacerated wound of ankle. Incubation seven days. Fi symptom, trismus, opisthotonos and marked rigidity of muscles. Spasms very frequent. Fifteen hundred units antitoxin given. Patient removed to hospital. Eight dra of 25 per cent. magnesium sulphate solution given subcuta ously. Patient relaxed greatly in half an hour. Tris and rigidity of back muscles persisted. Injections contin every two hours. Spasms gradually fewer in number farther apart. Injections continued for one week, onc day, after spasms ceased. Recovery complete. No toxic eff from the magnesium.

Case 2.—This case was referred to me by Dr. Fink of Gr Valley. Baby girl, M. F., aged 20 months, breast-fed, w negative family history, had had no previous illness ex acute intestinal indigestion during the first summer. T s no history of injury. Five days before onset of symptoms, y had urticaria and scratched herself often. It was sum- r time and she was playing in the yard and sitting on ground. The first symptom noticed was stiffness of jaws d back, soon followed by spasms. Baby was brought to spital some twenty-four hours after onset of symptoms. amination showed a well-nourished child of good color. e was intensely rigid, the back muscles being mostly affected, that opisthotonos was marked. The arms and legs were affected and trismus well developed. The teeth could ly be separated one-half centimeter. There was a risus donicus. Pupils were equal and reacted to light; reflexes atly exaggerated. Careful scrutiny of all parts of the ly showed no atrium of infection. The scalp, hands and t, vulva, buccal and nasal cavities were inspected with cial care. No urticarial lesions nor scratch-marks result- therefrom were present. The mentality was perfectly clear. lse was 156; temperature 101.6, respiration 54.

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* Read at the Thirty-Eighth Annual Meeting of the North tral Illinois Medical Association, at Dixon, Ill., Dec. 5 and 6, 1

During examination the baby had two severe spasms. She ame cyanosed during these, pupils dilated and respiration ctically ceased. The child had twelve spasms during the t twelve hours. In order to neutralize any toxin in the tem not already combined with the motor ganglions, I e 1,500 units of antitetanic serum and repeated it every r hours for three doses. This had absolutely no effect on symptoms. At the end of twelve hours, the first mag- ium sulphate injection was given. Four drams of a steril- d 25 per cent. solution of chemically pure magnesium sul- te were given into the abdominal wall. A few whiffs of oroform were given, which, however, did not prevent a sm. One-half hour afterward the arms and legs were pletely relaxed and reflexes abolished. The opisthotonos l disappeared but the back muscles were rigid. The jaws ld be opened so that nourishment was given. There was effect on respiration or pulse, and no bronchorrhea. The ient was much more comfortable.

At the end of six hours the injection was repeated, the y having had a spasm one hour previously. At this time nal puncture was done and a clear fluid obtained. Stained cimens showed no bacteria. Cultures negative. The leuko- e-count was 15,000; 80 per cent. polymorphonuclear.

During the next seven days she was given from two to four ections a day, depending on the relaxation and recurrence spasms. The injections were continued once a day for r days after the last spasm occurred. The pulse during time varied from 130 to 168; respiration 36 to 56; tem- ature 101.4 to 104.8, rectal. Urine was voided and con ied a small amount of albumin but no casts. Bowels ved every day, semi-solid; no mucus or curds. Liquid rishment was taken rather freely during the relaxed periods. patient improved rapidly after the spasms ceased. The k muscles were the last to lose their rigidity. After one ection she had a slight bronchorrhea which was controlled atropin. I could notice no depressing effect on pulse or piration. Chloral and sodium bromid were used per rectum quiet restlessness and produce sleep.

ASE 3:—Referred to me by Dr. A. I. McClay, of Delavan. nale, aged 44. Crushing injury of toe due to horse step- g on foot in barn lot. Patient bare-footed at time. Wound sed.

en days afterward stiffness of jaws, neck muscles, back abdomen. Patient brought to hospital and examination wed trismus rather marked, but teeth could be opened one- f inch. Cervical, dorsal, lumbar and abdominal muscles d. Reflexes exaggerated. Three thousand units antitoxin n. Wound cleansed and opened up in usual manner. The t morning 10 drams of 25 per cent. magnesium sulphate tion given subcutaneously. Marked improvement. Same unt given next day and also the third day. Unnecessary ive more, as patient improved rapidly.

here are some dangers in the use of magnesium sul- te, as it has been shown that it often produces toxic cts, chief among which are depression of respiratory cardiac centers. Bronchorrhea has also been men- ed, and occurred in one of my cases.

t has recently been proved, by Joseph and Meltzer of Rockefeller Institute, that physostigmin antagonizes toxic respiratory depression sometimes caused by gnesium. It does this by stimulating the respiratory ter and the nerve-endings of the pneumogastric ves within the lungs. It also antagonizes the depres- g action of the magnesium ion on the nerve-endings of the respiratory *muscles*. It is well to bear this in mind when using magnesium, as it may be the means of saving life.

The dosage recommended for intraspinal injection is 1 c.c. of a 25 per cent. solution for every 20 pounds of body-weight. The dosage used in the above cases was much larger and no ill-effects were observed.

Two of these cases were acute and severe, not fulminant, but belonging to the class from which one would expect a high mortality. The prompt relaxation resulting after the injections certainly shows that magnesium is of value in the treatment of tetanus. It has no specific action, but by quieting the excessive muscular action it permits the patient to obtain more rest and to take food and thus tides him over while he is manufacturing his own antitoxin.

101 North University Street.

# A DIAGNOSTIC TENDER SPOT IN PULMONARY TUBERCULOSIS

STEVENS T. HARRIS, M.D., M.R.C., U. S. ARMY
HIGHLANDS, N. C.

It is well known that one of the effects of pulmonary tuberculosis is the production of a degenerative change in the musculature of the body, and that this effect is especially marked in the muscles of the upper part of the thorax. This degeneration is comparatively plainly indicated on the affected side. The physical change is shown especially by atrophy of the scapular muscles. We also have marked hyperirritability, fibrillation being one of the proofs of this condition. I can add that in addition to these signs, we have what appears to be a hypersensitive or painful spot. Very likely this spot is a manifestation of the degenerative changes referred to. It may be due to a reflex from the pneumogastric nerve through the spinal accessory nerve supplying the trapezius, or the third and fourth cervical nerves supplying the levator anguli scapulæ, as all these nerves either have common origins, or are connected by anastomosis.

This spot is located immediately above the tip of the superior angle of the scapula at the insertion of the levator anguli scapulæ. The trapezius muscle also covers it.

It may be found by palpating the tip of the superior angle of the scapula with the finger and riding over it with more or less inward pressure. It is best to palpate both sides at the same time, exerting the same degree of pressure, but not enough to produce pain in a normal individual. The pain may be quite severe, causing the patient to object or wince, or it may differ only in degree from that on the opposite side. Ordinary myalgia and neuritis, as well as rheumatism, must be excluded.

By this method I have never failed to pick out the affected lung, or the more diseased lung if both are involved, and in bilateral cases have frequently been able to state the strong probability of both lungs being diseased. This method is original, and I believe it will prove to be a diagnostic aid.

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**Scientific Methods.**—The student of medicine, and sometimes his teacher, often forget that the old methods of examining a patient, conducted by the more or less unaided senses, including that very necessary sense, common sense, are just as much scientific methods as examination by the most elaborate chemical or physical methods.—Ernest S. Reynolds, in *British Medical Journal*.

# SOME RECENT CONTRIBUTIONS BY THE U. S. PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE TO PREVENTIVE MEDICINE*

JOHN F. ANDERSON, M.D.
Director Hygienic Laboratory, U. S. P. H. and M.-H. Service
WASHINGTON, D. C.

The object of my paper is to set forth some of the recent contributions made by the U. S. Public Health Service to our knowledge of the cause and control of communicable diseases. The great Pasteur in a prophetic moment declared that "it is in the power of man to cause all parasitic diseases to disappear from the world." While his prophecy, in the glow of his epoch-making discoveries, may have seemed to him possible of early and perhaps easy fulfilment, we now know in the light of our greater knowledge of this class of diseases that the fulfilment still lies a long way into the future. Nevertheless, there have been made, in recent years, great advances in our knowledge of the cause, means of transmission and control of communicable diseases, and I shall set forth as briefly as possible in what manner the Public Health Service has helped in this advance.

Recent contributions by the Public Health Service to preventive medicine have been along two main lines: first, research work in the laboratories of the Service, and second, the application of new as well as older methods in the control of certain diseases. The two lines, however, at times necessarily merge.

### MEASURES FOR THE CONTROL OF CHOLERA

In the application of preventive methods to the control of communicable diseases, the work done by the service during the past year to prevent the entrance of cholera into the United States stands out as one of the most important accomplishments of recent years. Cholera had existed in southern and western Russia for several years, but appeared in Italy only late in the summer and fall of 1910, and with the onset of winter the disease decreased markedly in that kingdom. In the spring of 1911, however, the infected area in Italy became wider and the number of cases greatly increased, so that it became necessary for the federal government to adopt unusual measures to prevent the entrance of cholera into the United States. The Secretary of the Treasury, on recommendation of the surgeon-general of the Public Health and Marine-Hospital Service, has authority, under existing laws, to require federal, state or municipal quarantines to enforce such special measures as in his opinion are necessary to prevent the introduction of epidemic diseases into the United States.

The measures instituted during the past summer for this purpose may be considered under three general heads:

1. *Quarantine Measures Enforced at Foreign Ports.*—These consisted in the enforcement, by officers of the service at foreign infected ports, of a detention of all steerage passengers for five days before embarkation from cholera-infected places and the observation of those detained during that time. The disinfection of baggage was required and the bringing of foodstuffs by immigrants was prohibited. The Italian government put into effect, for a time, in addition to the measures enforced by the United States officers, the examination of detained immigrants to detect cholera bacillus-carriers, and by this measure alone forty-one carriers were discovered and prevented from sailing from Italian ports.

2. *Quarantine Measures Enforced During the Voyag* —These consisted in the enforcement of the measur provided for in the United States quarantine regulatio in regard to ships from infected ports.

3. *Measures Enforced at Ports of Arrival in t United States.*—These included, in addition to tho procedures already provided for in the quarantine reg lations; the adoption and enforcement of certain speci measures. July 19, 1911, the following amendment the national quarantine regulations was issued by t Secretary of the Treasury on recommendation of t Surgeon-General of the Public Health and Marine-H pital Service:

> All steerage passengers arriving at ports in the Unit States from ports or places infected with cholera shall be su jected to bacteriologic examination and shall not be admit to entry until it has been determined by said examination th they are not cholera bacillus-carriers.

Under authority of the United States quarantine la officers were detailed as inspectors at the local quara tines at New York, Boston and Providence to see th this measure was immediately put into effect, these po being the only ones having direct Italian immigrati

In addition, two officers from the Hygienic Laborat especially trained in the bacteriologic diagnosis cholera were sent to the New York quarantine to aid t local authorities in the large number of bacteriolo examinations made necessary by the adoption of amendment to the regulations just referred to, and officer was also on duty at Boston and Providence the same purpose.

Another measure of importance was the adoption the immigration destination-notification system. T measure provided that, when immigrants arrive United States ports from cholera-infected places, health officers at the places of destination should be s notification cards informing them that immigrants fr such-and-such places arriving on such-and-such ships *en route* to their cities. In this way the local hea officers may have oversight of immigrants from infec ports during, at least, the incubation period.

In cooperation with state and local health authorit about 34,000 specimens of bowel discharges from p sengers and crews from cholera-infected ports w examined bacteriologically to detect cases of cholera cholera bacillus-carriers. As a result, at the New Y quarantine, the cholera vibro was isolated from twe eight persons sick with the disease, and twenty-se healthy persons were found to be discharging the cho vibrio in their feces. These latter could not have b discovered except by the laboratory examination requ by the amendment of July 19, 1911, to the quaran regulations. Seven cases of cholera were detected other places by the same methods. There can be doubt but that the adoption of this measure alone the federal health service saved the people of the Un States from the loss of life and expense attendant serious epidemic of cholera. So far as known, the a cholera measures of the past summer were the extensive ever undertaken, based on the scientific kn edge of the dissemination of the disease by carriers on the principle that after a person liable to co infection has been shown by laboratory examinatio be free from infection there should be no bar to entrance to the country. This great work was ca on quietly and without publicity, and to-day the cou does not know of the danger that threatened it cholera during the past summer, and from which it saved by the Public Health Service.

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* Read by invitation on Clinic Day at the annual meeting of the American Medical Association, Atlantic City, June 3, 1912.

### SUPPRESSION OF BUBONIC PLAGUE

The measures adopted by the service in the suppres-ion of bubonic plague in San Francisco have conclu-ively shown that it is possible to eradicate this disease ven when it has obtained a foothold in a large city. No lague, either in human beings or in rats, has been found n San Francisco since 1908. Work inaugurated under Dr. Blue to establish a plague-free zone to protect the ay cities has made such progress that the disease has een eradicated from four counties, the area of squirrel nfection defined, the possible routes of infection to astern states determined and guarded against, and a onstant warfare against rodents continued.

In connection with the field work against plague, a arge amount of research work on the disease has been made in the plague laboratories. During the past four ears 1,171,721 rodents have been examined to detect lague infection. A plague-like disease of rodents easily onfused with plague by persons inexperienced in the iagnosis of the latter disease has been found, its cause iscovered and the susceptibility of certain of the lower nimals to plague determined.

In these laboratories many important observations have een made on the diseases of rodents in their relation o man, and in them the first cases of rat leprosy in the nited States were discovered and the rat-leprosy bacil-us grown for the first time on artificial mediums.

### WORK ON TYPHOID, PELLAGRA, ETC.

The work of the Public Health Service on typhoid ithin the last several years, including a prolonged and ntensive study of the disease in the District of Columbia, nvestigations of numerous outbreaks in towns and cities, nd studies of rural typhoid in different sections of the ountry, has contributed materially to the knowledge of e epidemiology of the disease. This work has been one at the request of state and local health authorities nder the provision of law authorizing the investigation, y the Hygienic Laboratory, of matters pertaining to the ublic health, and under the quarantine law of 1893, to revent the spread of contagious diseases from one state another. While many of the requests received for sistance have been granted, it has not been possible on count of the lack of men and money to respond to all. he published reports of this work have been given xtensive circulation and have served as a stimulus and guide to local health authorities generally to conduct vestigations of their typhoid problems.

In almost every locality where such studies have been ade the measures recommended have resulted in a arked decrease of the prevalence of typhoid. The sults have been most striking in the campaign against phoid in North Yakima, Wash., inaugurated under the rection of an officer of the Public Health Service in e summer of 1911, where there was a reduction in the te of prevalence of the disease of about 90 per cent. he work in Yakima county, described in Public Health ulletin No. 51, marks a signal triumph of sanitation d may be expected to have a far-reaching effect.

Conditions like those which were responsible for the gh typhoid-rate in North Yakima may be found, with riations, quite generally throughout the United States, d therefore, the simple and practicable sanitary meas-es recommended and carried out in North Yakima ve a wide range of applicability. If similar successful easures were instituted throughout the United States regard to this one disease, over 30,000 lives might be ved and over 350,000 cases of illness prevented.

The service has been making systematic studies of pellagra. These studies have consisted of epidemiologic investigations, which are believed to be the first made in this country, and the clinical and laboratory study of cases of the disease admitted to Service hospitals for study. Attempts have been made to produce the disease in monkeys and other animals by feeding experiments and by inoculation with blood and tissues from cases of the disease. An effort is also being made to collect accurate statistics of the prevalence, distribution and mortality of this disease, which has become one of the big public health problems of the country and which is not a reportable disease except in four states.

In cooperation with the Bureau of Mines the Public Health Service has been making a study of the sanitary condition of mines and of the cause and prevalence of certain diseases among miners. In connection with these investigations advantage has been taken of the opportunity to educate the mine-owners, the miners and their families in regard to health conservation.

Clinical and laboratory investigations of leprosy have been made in the leprosy research hospital maintained by the service for that purpose in Molokai. The work of Clegg in growing the leprosy bacillus has been confirmed, and Clegg himself is now one of the workers in the service laboratory.

During the past fiscal year service officers made physical examinations of 1,093,809 aliens to determine their freedom from communicable diseases and their physical and mental fitness for entrance into the United States and its dependencies. Out of a total of 27,412 aliens rejected, 344 were certified as suffering from idiocy, epilepsy or insanity. The medical examinations of arriving aliens made by officers of the Public Health Service constitute the second line of defense maintained at our borders by federal and local quarantine against communicable diseases, and are an important additional safeguard.

### STUDIES OF MEASLES, TYPHUS, BRILL'S DISEASE, ETC.

A portion of the research work of the plague and leprosy laboratories has already been referred to, and it now remains to mention some recent studies made at the Hygienic Laboratory.

In the past year, studies were made on measles, as a result of which we have our first definite knowledge as to the susceptibility of the monkey to infection with measles. It was shown that the virus of the disease is present in the blood at least some hours before the eruption appears and for about thirty-six hours after. The behavior of the virus to various physical and other influences was tested. Experiments made to determine whether the scales were infectious justified the opinion that the desquamating epidermis in measles did not of itself carry the virus of the disease. It was conclusively demonstrated that the infective agent of measles was contained in the nasal and buccal secretions during at least the first forty-eight hours of the eruptive period; and in no instance were the secretions, collected at a later period, found to be infective.

Based on this work it probably will be possible for the quarantine in measles to be reduced from the usual period of twenty-one days to not more than fourteen days, and this one fact is of such evident practical importance that even lay members of health organizations can appreciate its value.

The importance of studies on measles is forcibly shown by the fact that, according to the census reports for 1910, measles stood next to diphtheria among the infectious diseases as a cause of death among children. The studies on measles have already been reported in detail elsewhere, and it is therefore not necessary to refer to them further.

The study of typhus fever was begun by the laboratory two years ago in Mexico City but was interrupted before completion by the dangerous illness of Dr. Goldberger, who contracted the disease while engaged in the work. Before this occurred, however, it was shown for the first time that the lower monkeys were susceptible to the disease, that one attack of the disease in these animals conferred immunity to a subsequent attack and that the epidemiologic evidence pointed to the correctness of Nicolle's observation on the part played by the body louse in the transmission of the disease.

In connection with an investigation of the nature of an infectious disease of unknown origin, first reported and described by Dr. Nathan E. Brill, of New York, the studies on typhus were resumed in the fall of 1911. It was shown that, contrary to previous reports by others, monkeys were susceptible to infection by inoculation with blood from cases of the disease described by Brill and that one attack of the disease in the monkey conferred a definite immunity to subsequent infection with virus of the same strain. By a series of cross-immunity experiments it was found that monkeys recovered from infection with the New York disease, sometimes known as "Brill's disease," were immune to infection with Mexican typhus, and that monkeys which had recovered from Mexican typhus were immune to infection with the New York virus.

The conclusion was drawn from these cross-immunity tests that the disease described by Brill and others as existing in New York City was identical with the typhus fever of Mexico, and, inasmuch as the New York strain is undoubtedly of European origin, that the typhus of Mexico and the typhus of Europe are identical.

Further work on the disease has confirmed the work of others as to the rôle of the body louse in the transmission of typhus. In addition, it has been shown for the first time that the head louse can also transmit the disease. The studies on typhus are being continued and some of the results will be presented at this meeting.

As a result of this work, we now know that typhus of a mild type has been present in New York City for a number of years, and there is good reason to believe that the same is true of other large American cities. The recognition of these comparatively mild forms of typhus gives us for the first time a rational explanation of what Osler has characterized as a "remarkable feature" of typhus, namely, the occurrence of a few cases at long intervals of time from any other outbreaks, and any known foci of the disease. In other words, these mild forms constitute the missing epidemiologic link between so-called sporadic cases and outbreaks. This work, proving that typhus fever is present and has existed for years, unrecognized as such, in the United States, is one of the most important recent developments in preventive medicine. It opens up a fruitful field, the cultivation of which devolves primarily on the medical profession and local health authorities. The recognition and reporting of cases is an essential factor in the control of the disease, and great credit is due the physician who first recognized the disease and differentiated it from typhoid and continued to study and report it for thirteen years.

### SUPERVISION OVER VIRUSES, SERUMS, ETC.

Under the authority of an act of Congress approved July 1, 1902, the supervision maintained by the Public Health Service over the propagation and interstate sale of viruses, serums, etc., has been continued and extended No biologic product of this kind that is manufacture in one state may be sold in another except by firm licensed by the Secretary of the Treasury. License establishments are inspected annually, and their products are examined in the Hygienic Laboratory from tim to time for purity and potency. When the law wa passed there were no official standards for any of thes products, but as a result of research in the Hygieni Laboratory standards have been established for diphtheria and tetanus antitoxin. All vaccine is now require to be glycerinated, the sale of the old dry lymph-point prohibited, and each lot of virus tested to ensure it freedom from pathogenic organisms.

Systematic studies have been made and are being continued to determine the relation of vaccine virus to thos unfortunate cases of tetanus that sometimes follow vaccination. Thousands of samples of vaccine have bee examined for tetanus without, however, finding eith the organism or its toxin. The work of the service i safeguarding the manufacture of biologic products ha been a contribution of fundamental importance to th control of certain communicable diseases.

During the past eighteen months the subject of di infectants has received much attention in the Hygien Laboratory. There is probably no way in which great fraud is practiced on public health authorities than the exploiting and sale to them of so-called disinfectan by certain persons. Many of the claims made for the products by the manufacturers of some commercial di infectants are almost wholly without justification a are of a most misleading nature; and the use of su preparations may explain in some instances the failu of terminal disinfection.

For these and other reasons, a great deal of study h been given to the question of the standardization liquid disinfectants; and a method for their standar ization has been devised. Using this method, fifty-fo commercial disinfectants, purchased on the open mark have been examined in the laboratory and the results the examination, together with the names and princip claims of each preparation, have been published. It w found that the claims made for many of the prepa tions were grossly exaggerated, while others have be found to have a higher efficiency in proportion to c than many of the standard disinfectants.

As showing a beginning appreciation of the pub health importance of such work it is not out of pl to state that the Council on Pharmacy and Chemis of the American Medical Association has appointe committee to consider the question of standardization disinfectants and has asked the cooperation of Hygienic Laboratory.

### OTHER CONTRIBUTIONS TO PREVENTIVE MEDICINE

Time will not permit me to refer in detail to ot recent contributions of the Public Health Service to p ventive medicine, such as the standardization of dru especially digitalis, ergot and thyroid preparations. a result of the work done in the Hygienic Laborat on drugs certain firms have been led to make import improvements in their products.

The study of embalming fluids and methods of p paring dead bodies for interstate shipment, begun the request of the National Funeral Directors Embalmers Association, has been of great value.

The disposal of sewage, with particular reference rural communities, and the invention of a sanitary p for such communities will undoubtedly have an im tant effect in reducing intestinal diseases in such localities.

Laboratory and field studies on hookworm disease and other intestinal infections have been made at the marine hospital at Wilmington, N. C., and other places, and these have resulted in bringing out facts of importance in regard to the prevention and treatment of these diseases.

Statistical studies of rabies have given the most definite knowledge as yet available concerning the prevalence of this disease in the United States. The preparation of a comprehensive bulletin on rabies has done much to stimulate interest in the subject and to direct intelligent suppressive measures. Cooperative work on rabies suppression, by preparing and distributing free of expense to state boards of health and others during the last four years antirabic virus for the treatment of over 3,000 persons, has been an important contribution to our efforts for the control of this frightful disease.

In Bulletin No. 41, the revised edition of which is known as Bulletin No. 56, has been published the most complete discussion that has ever been made on milk in its various phases as it relates to the public health. This publication has been accepted as of such an authoritative nature that it is frequently referred to as "the milk producers' manual."

Field and laboratory studies of poliomyelitis, cerebrospinal meningitis, spotted fever, the relation of interstate and international waters to the spread of typhoid fever, and a number of other important problems have received a great deal of attention and have an important public health bearing.

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# THE RÔLE OF INJURY IN THE PRODUCTION OF A CHICKEN SARCOMA BY A FILTERABLE AGENT *

PEYTON ROUS,* M.D., JAMES B. MURPHY, M.D., AND W. H. TYTLER, M.D.

NEW YORK

The tumor produced by the injection of a Berkefeld filtrate of our transmissible chicken-sarcoma is first noticed as a minute nodule at some point in the track of the injecting needle;[1] and only a small proportion of the fowls injected develop the growth. On the other hand, when the causative agent has been introduced in the form of dried and powdered tumor-tissue, suspended in Ringer's solution, the sarcoma appears as a more or less diffuse mass at the site of injection; and it is found in many of the fowls. These facts have led us to suppose that the filterable causative agent requires for its action a cell-derangement or proliferation, such as the needle-prick or the presence of dried tissue induces. Experiment shows that this is indeed the case.

A number of susceptible fowls were injected, in one "breast" with a large quantity of active filtrate, in the other with an equal quantity of filtrate to which was added a little sterile, washed, diatomaceous earth. Podwyssozki[2] has shown that diatomaceous earth by its mechanical action produces in guinea-pigs a reactive proliferation of the connective-tissue elements; and our controls prove this to be true in chickens as well. The chickens injected with the Berkefeld filtrate were examined every week. Many of them developed a growth where both filtrate and diatomaceous earth had been injected, and in a lesser number a tumor also resulted from the filtrate alone. But in the one instance the tumor regularly arose as a diffuse mass, owing, as examination showed, to a simultaneous proliferation from many foci; whereas in the other it slowly appeared as a discrete, small nodule in the needle-track.

The effect of the filterable agent when injected into the blood-stream was now taken up. It was found that when a large quantity of an active Berkefeld filtrate, free of foreign particles, was injected into the circulation, a tumor seldom resulted (four cases among seventeen). The sarcoma arose more frequently when a little diatomaceous earth had been added to the filtrate, seven out of twenty fowls then developing a growth. Apart from these figures, the site of the tumors arising after the injection of filtrate free of foreign particles demonstrates the importance of cell-derangement. In three cases the growth had its primary seat in a functioning ovary, where injury and proliferation are of daily occurrence. In the fourth the growth was primary in the liver.. Because of the general results, we feel that some focal derangement must have been present in this organ.

The factor of injury will not suffice of itself to explain the sarcoma's striking lack of infectivity under ordinary circumstances. During the past three years we have kept at one time or another in relatively close quarters, over 1,200 chickens, many of them with the sarcoma. To some the fresh, sarcomatous tissue has been fed, and many must have been contaminated with the dried tissue, in which, as we have found, the causative agent will remain active for over seven months. Trauma and other types of injury have been frequent among these chickens, yet not one has developed the sarcoma except when directly inoculated. Furthermore, judging from our recent examination of many "spontaneous" tumors the growth is not naturally endemic among fowls.

The nature of the other factors conditioning the tumor's origin has not yet been determined. It is evident that they are both local and general. Even with the agent in its present active form, and with the factor of injury supplied, many of the fowls injected with a large amount of filtrate fail to develop a growth. When the sarcoma follows an intravenous injection it is seldom primarily multiple, despite the numerous injuries everywhere caused by the infusorial earth. To reach the wing vein for injection we make an incision, thus producing an injury in which the tumor-producing agent might well be expected to localize; yet if the injecting needle is flushed with salt solution before being withdrawn, and the vein is tied off, the occurrence of a growth at this site is practically ruled out. Our experiments to determine the precise stage of tissue injury or proliferation which favors the occurrence of a tumor have not given clear-cut results.

The conditions determining the incidence of the chicken sarcoma have considerable interest in view of its close resemblance to some malignant mammalian tumors, not only as regards growth and general behavior, but also in its obvious lack of infectivity under ordinary circumstances. This last feature is accounted for in the case of the chicken tumor by the factors on which depends the action of the growth's filterable cause. That injury should be a determining factor is noteworthy in view of its importance as a contributory cause of mammalian sarcomas, including those of human beings.

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* An article somewhat introductory to this one appeared in THE JOURNAL, June 1, 1912.

* From the Laboratories of the Rockefeller Institute for Medical Research.

[1] Jour. Exper. Med., 1911, xiii, 397.

[2] Podwyssozki, W.: Beitr. z. path. Anat., 1910, xlvii, 270.

# INHALER FOR GAS-OXYGEN, GAS-OXYGEN-ETHER, GAS-ETHER, ETHER OR CHLOROFORM

JOSEPH Y. PORTER, JR., M.D.
KEY WEST, FLA.

## DESCRIPTION OF APPARATUS

The inhaler consists of two parts, a mixer and a combined face-piece and valve-holder.

The mixer consists of a box (6), of shape as shown in Figures 1 and 2, and on cross-section, square. This box has on it a drip-cup (2) with a controller (1), for either ether or chloroform. On one side of 6 and near top is a rheostat (26) for controlling current admitted to the heater inside (heater to be described later). On the lower part of 6 is a thermometer for showing exact degree of temperature within 6. At bottom of 6 is a drain-cock (7) for draining away excess of anesthetic.

In Figure 2, which is seen to be a section of 6 on a plane perpendicular to plane of bottom, 6 is seen to be divided into an upper and lower chamber (6′ and 6″) by an electric heater (21). In the upper chamber (6′) is seen the splash-plate (20) supported by 20′ and 20″. A flat view of splash-plate is seen in Figure 7. This splash-plate is below and directly in line with the drip-cup (2). The electric heater (21) is made of wire, porcelain-covered, as shown in Figure 8; it is connected to the rheostat (not shown in drawings) and the rheostat is connected with ordinary house current at binding posts *P* and *P* (Fig. 1). The controller (*C*) regulates the current flowing through the coil and in that way controls the heat generated. This heater is covered on top and bottom with fine-mesh copper wire gauze. In this upper chamber is the opening of the tube (4).

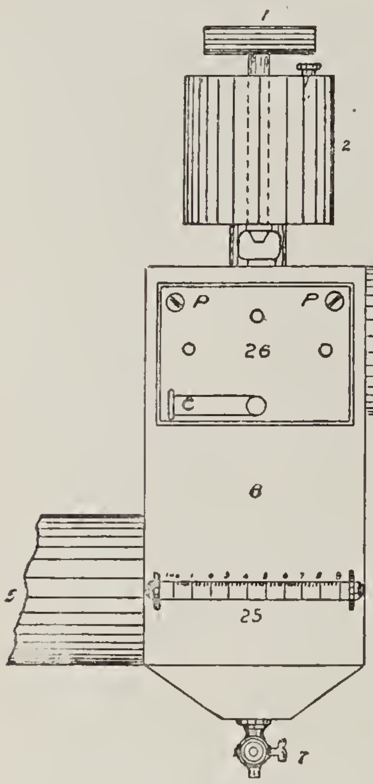

Fig. 1.—Side view of mixer, showing rheostat and thermometer.

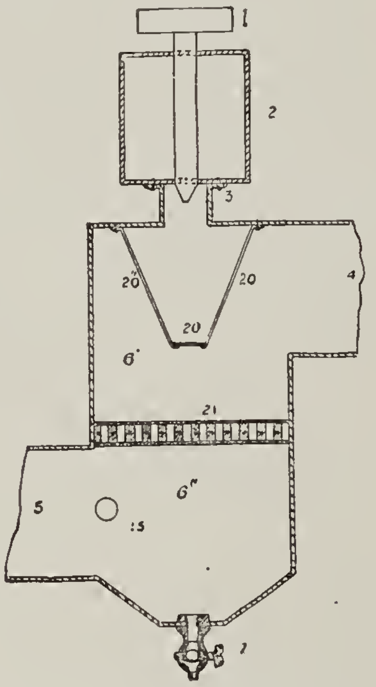

Fig. 2.—Section of mixer, plane perpendicular to plane of bottom.

In the lower chamber (6″) is seen the opening of the tube (5) and the cross-section of the thermometer (25), the bulb extending across the chamber in line with 5. At the bottom of this chamber is seen the drain-cock (7).

The valve-holder (10) (shown in Figures 3 to 6) is shown to be composed of an inner casing (10″) and an outer casing (10′). The inner casing which rotates within the outer casing (it being a ground joint between them) has three openings, one leading into the face-piece, one covered with Valve 16 and Opening 18. Valve 16 opens inward and is attached to and rotates with inner casing.

The outer casing (10′) has four openings, one each leading into Tubes 8, 9 and 12, and one leading into face-piece. Valve 17 guards the opening of 9 into the outer casing, is attached to outer casing and stationary, and opens outward into Tube (9). The rotation of the inner within the outer casing is controlled by Lever 11. In the Position B, the valves are in position as shown in Figures 4 and 5. In Position A, inner casing has been rotated one-quarter turn, bringing Opening 18 opposite Tube 12. In that position outer casing covers Valve 16, and inner casing covers Valve 17, neither valve then working. When lever is in Position R, the inner casing is still rotated one-quarter turn further, bringing Opening 18 opposite Tube 8, and the Valves 16 and 17 opposed to each other; in this case, also, neither valve works.

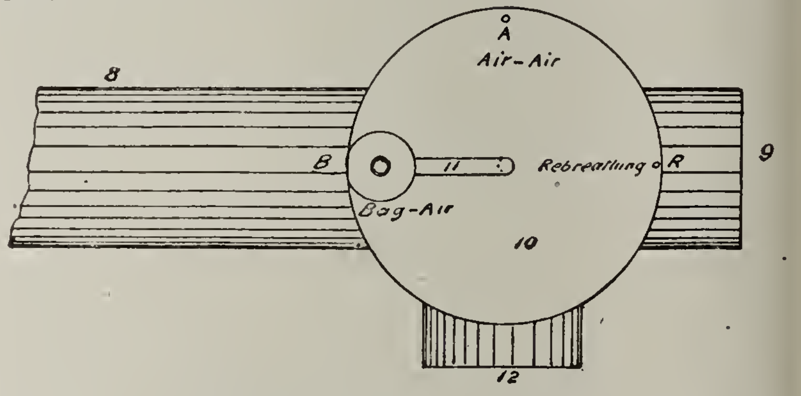

Fig. 3.—Top view of valve-holder.

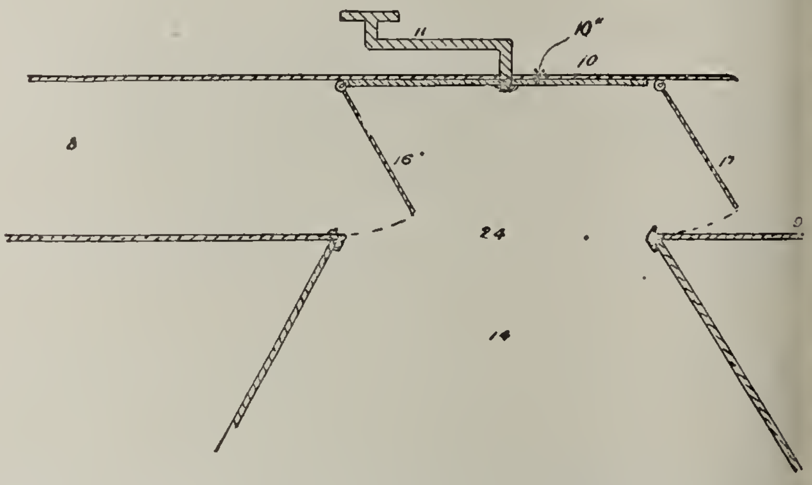

Fig. 4.—Section through valve-holder and face-piece, plane perpendicular to plane of bottom.

The face-piece (14) is joined to the valve-holder (10) by a joint that allows rotation of 14 on 10 or *vice versa*. At the bottom of 14 is the pneumatic cushion (15).

## ADMINISTRATION

*Gas-Oxygen.*—The lever of the valve-holder is put on Mark A and the face-piece adjusted to patient's face; if the mask cannot be adjusted so as to be reasonably air-tight, a turn or two of a thin rubber bandage is taken over Point 15 and adjoining skin. A gas-bag of about 10 liters' capacity is attached to Tube 4 of mixer; this bag at end has a double cock, with tubes leading from each cock to compressed tanks of oxygen and gas. The controller (*C*) of the rheostat is placed so that temperature of inner chamber is about 100 F. A wire covered flexible rubber tube connects Tube 5 of mixer with Tube 8 of valve-holder and face-piece.

As it is now, the patient breathes air in and out through Tube 12 of valve-holder. The gas-bag is now filled with gas to which a little oxygen is added, and the lever (11) placed in Position B. With each inspiration the patient draws warmed gas from mixer and through Valve 16 of valve-holder; at each expiration Valve 16 closes and Valve 17 opens, breath being discharged in open air through Tube 9. The bag is allowed to be emptied in this manner, when all the air in lungs and passages will now be replaced with gas-oxygen; the bag is then refilled with the same mixture of gases, and the Lever 11 put in Position R; the patient now rebreathes in gas-bag, which is allowed to continue for four to five minutes, when Lever 11 is again placed on Position B and the bag allowed to be emptied. The bag is then refilled and rebreathing allowed for another five minutes, and so on. If desired, ether may be allowed to drip from Drip-Cup 2 (hitting splash-plate, drop being finely subdivided), and the patient then rebreathes a mixture of gas-oxygen-ether, or the gas-bag may be removed and the patient receive ether and air. In the latter case the Lever 11 is placed in Position B. This will constitute the "open method" of giving ether.

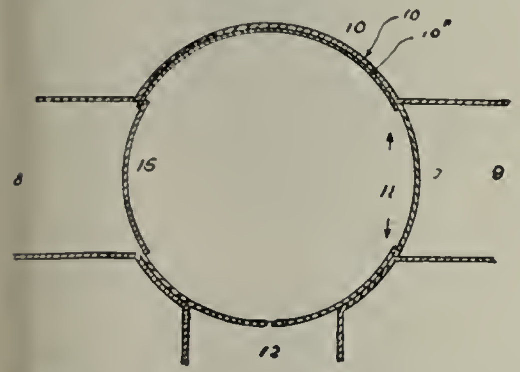

Fig. 5.—Section through valve-holder, plane parallel to bottom of holder.

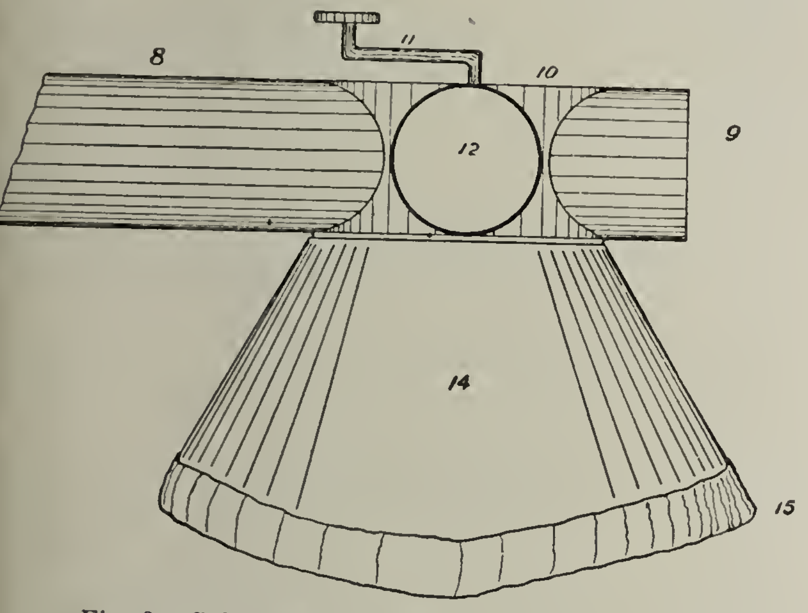

Fig. 6.—Side view of valve-holder and face-piece.

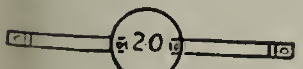

Fig. 7.—Top view of splash-plate.

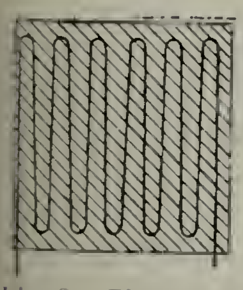

Fig. 8.—Plan of electric heater.

*Chloroform.*—With the face-mask adjusted loosely to the patient's face, and the lever placed in Position B, chloroform may be allowed to drip from Drip-Cup 2. With each inspiration, patient receives a fresh amount of air and chloroform vapor, heated, and at expiration discharges same in air through Tube 9.

Throughout all these operations, by watching the thermometer on mixer, the temperature within the tube, and therefore what patient is breathing, can be regulated; the chilled gases are warmed and the liability of postanesthesia pneumonia be averted. It is not absolutely necessary to have the electric heater in the apparatus, the heater being omitted just leaving the two fine mesh wire gauzes; the apparatus in rebreathing will get warm, and in that way heat each new charge of gases, especially as the temperature of the body tends to rise.

# AURICULAR FIBRILLATION

JAMES D. HEARD, M.D.
Professor of Medicine, University of Pittsburgh
PITTSBURGH

In any disorder of the heart, the chief diagnostic and prognostic considerations as well as the more important therapeutic indications are based on the state of the myocardium. In many instances, the recognition of the pathologic process present is difficult, if not impossible, and the observer must be content with a tentative diagnosis based on a classification which is itself unsatisfactory and indefinite. The recently acquired exact knowledge in regard to the condition known as fibrillation of the auricle stands, however, in bright relief against this background of obscurity, and the general recognition by the profession of this affection is greatly to be desired.

In order that the nature of auricular fibrillation may be made clear, it may be well to give a brief summary of the facts generally accepted as to the mechanism of the normal heart-beat. This beat is believed to originate at a node near the junction of the superior vena cava with the auricle. From this point, contraction travels over the walls of the auricle, and an impulse is transmitted to the ventricle originating a contraction in the latter structure. The route of the impulse is through a bundle of junctional tissue which is known as the auriculoventricular bundle (bundle of His). Interference with the conductivity of the bundle may result in a prolongation of the interval between the contraction of the auricle and that of the ventricle, or in an occasional or constant inability of the impulse to reach the lower chamber. As a result of this latter condition, we may have contractions of the ventricle in response only to certain contractions of the auricle. This is known as partial block; in complete block, no impulses are transmitted, and the ventricle assumes a slower rate of its own which has no relation with that of the auricle.

Much of the present-day knowledge as to the sequence of events in the cardiac cycle has been derived through the use of the electrocardiograph and the polygraph. These instruments record graphically the movements of the auricles and of the ventricles. The appreciation of the character of the phenomena which we know to be due to auricular fibrillation has come through the use of these mechanical aids to diagnosis. Briefly stated, the electrocardiograph records on a continuous roll of sensitized photographic paper the movements induced in a string galvanometer by electric currents generated by the contraction of the chambers of the heart itself. Curves are produced which are the result of auricular and ventricular contractions respectively; these curves, moreover, can be readily differentiated by one skilled in their interpretation. In the use of the polygraph, simultaneous tracings are taken, usually from the external jugular vein, and from a selected artery, as for example, the radial. Resulting waves are registered by a moving needle or pen.

The venous record so obtained is an index to events occurring within the auricle; the arterial tracing gives information as to the character and rhythm of the coordinate contraction of the ventricle, and furnishes data for the identification of the various waves of the venous tracing. In the normal or so-called auricular type of venous pulse, there are typically three waves present. The first of these is due to the contraction of the auricle; it is, therefore, termed the *a* wave. The second wave is synchronous with the carotid pulsation and is termed the *c* wave. The third is due to events occurring within the ventricle and is therefore known as the *v* wave. A full discussion of the manner in which information obtained through the study of electric and polygraphic curves was utilized in demonstrating the origin of the completely irregular pulse, the pulsus irregularis perpetuus of Hering, is given in the lecture by Thomas Lewis.[1] That author's investigations therein described mark an epoch in the progress of medicine, and through them we are now in full possession of the facts in regard to a manifestation which has been for a long time observed, but never hitherto understood. We now know that the "mitralized" pulse and the frequently attending phenomena of circulatory break-down are due to fibrillation of the auricle. This knowledge is regarded by Mackenzie as the most important gained thus far in regard to the functional pathology of the heart. Thereby, a hitherto unknown clinical entity is now made readily demonstrable, and its recognition enables us to venture a sane prognosis in a type of cases which has been hitherto most puzzling. Furthermore, we are equipped with data which, properly utilized, furnish indications for the institution of a plan of treatment which frequently results in a prompt and most striking improvement in the clinical condition—an improvement which may go so far as to restore a patient from an apparently hopeless state of decompensation to one in which he may resume his position as a useful member of society.

Fibrillation of the auricle is a condition in which the auricles no longer contract coordinately, but remain constantly in a position of diastole. Individual groups of fibers are, however, in ceaseless activity, and as a result frequent but disorderly impulses are transmitted to the ventricle. This chamber responds by contracting with an absolute disregard of rhythm, with no relation between the length or height of the resulting individual arterial pulse-waves. The appearance of the fibrillating auricle has been well described by Lewis,[1] as follows:

> When you compare the appearance of coordinately contracting and fibrillating auricles, you may draw parallels between this chamber and a surface of water disturbed on the one hand by great billows, and on the other by a downpour of rain. In the normally beating heart, the regular waves of contraction give rise to regular beats of the ventricle; in fibrillation, haphazard impulses issue from the auricular turmoil, and stimulate the ventricle. Thus the irregular beating of the ventricle is produced. But that is not the point to be emphasized . . . The point to lay stress on is that the visible signs in the heart are distinctly and easily recognizable.

The fact has been noted that the *a* wave in the venous tracing is due to auricular contraction. A definite curve *P* in the electrocardiogram is produced by the same phenomenon. That the presystolic murmur in mitral stenosis is produced at the mitral valve by a final impetus given to the entering blood by auricular systole is a fact which has been generally accepted by clinicians. Now, in auricular fibrillation, the auricle no longer contracts as a whole, but remains in a position of diastole. Therefore, the phenomena of *a* wave, *P* wave and presystolic murmur of mitral stenosis must be absent in auricular fibrillation, and their absence will, therefore, serve as an important point in the diagnosis of the affection. This diagnosis is rendered still more certain if there be present small oscillations on the venous tracing which occur during the period of ventricular diastole, or if like irregularities appear on the electrocardiogram. These little waves are produced directly by the fibrillating wall of the auricle, and are best shown when the rate of the heart is slow. They are known as *f* waves.

### PATHOLOGIC PHYSIOLOGY

When the auricle is in a state of fibrillation the heart loses in efficiency, a condition due to the resultant rapid and disorderly contraction of the ventricle. The size of the heart is usually somewhat increased. Unless proper treatment is instituted, gradual exhaustion of the ventricle is the common result. A disturbance of conductivity, if previously present, is exaggerated by the strain on the conducting tissues, and partial or complete block may ensue. The occasional cases of slow heart in connection with auricular fibrillation are usually due to this cause. With the onset of block the clinical condition of the patient may improve.

### ETIOLOGY

Auricular fibrillation may be induced experimentally by electrical stimulation of the auricle. As a matter of fact, the first recognition of the nature of the condition in man was made possible to Lewis by his noting the identity of the electrocardiographic curves recorded by electrically induced fibrillating auricles in dogs, with like curves produced by auricles in patients showing the perpetually irregular pulse.

As a clinical entity, the condition is brought about by myocardial affections—notably the postfebrile infectious heart of the rheumatic group, diphtheria, pneumonia and the like—but it is caused also by other affections of the heart-muscle such as the fibroid heart. In these cases overstrain is apt to be a predisposing cause. The use of drugs of the digitalis group may also bring about auricular fibrillation in hearts which are predisposed to that condition.

### PATHOLOGIC ANATOMY

Organic changes in the body of the auricle are factors which seem to be essential to the occurrence of auricular fibrillation. Fibrotic processes have frequently been described, and these may be particularly dense in the region of the pace-maker, as in a case recently studied by G. Draper, of the Rockefeller Institute.[2] The pathologic histology of the condition requires further investigation.

### FREQUENCY AND SYMPTOMS.

We may accept Mackenzie's estimation that from 60 to 70 per cent. of all cases of heart failure are directly traceable to auricular fibrillation or are aggravated by it.

When compensation is maintained, there may be no subjective symptoms during a more or less prolonged period of time. The patient may go about his ordinary vocation with comfort, there being, perhaps, only an occasional annoying heart throb. As a rule, however a limitation of the field of effort is early manifested This condition may or may not have been preceded by attacks of tachycardia. The patient now becomes breathless on exertion, and gradually or suddenly, as the heart performs its work less adequately, all of the symptoms of decompensation are made manifest.

The signs and symptoms at this stage are those familiar to all whose practice brings them into contact with patients suffering with broken compensation. In marked instances there is orthopnea, cyanosis, dropsy and such evidence of venous engorgement as attacks of breathlessness, hemoptysis, pain in right hypochondrium and albuminuria. The pulse is usually rapid, there is utter disorder of rhythm, and the beats are of constantly varying force. Direct examination of the heart at this stage develops the ordinary evidence of hypertrophy and dilatation. The apex is displaced downward and to the left, and the area of dulness is increased. The impulses follow one another in a disorderly manner. The presystolic murmur of mitral stenosis is never present (Mackenzie). If a polygraphic examination is made, the venous pulse is shown to be of the ventricular type, and small *f* waves due to the fibrillating auricle may appear on the tracing, providing the pulse-rate be not too rapid. An electrocardiogram would show (Lewis): (1) the absence of a normal auricular contraction; (2) the presence of a type of ventricular beat which would indicate its origin in an impulse received from the auricle; (3) the special *f* oscillations; (4) constancy of the picture from patient to patient, in respect to the first three points.[1]

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[1] Lewis, Thomas A.: The Evidences of Auricular Fibrillation Historically Considered, Brit. Med. Jour., Jan. 13, 1912.

[2] Draper, George: Pulsus Irregularis Perpetuus with Fibrosis of the Sinus Node, Heart, iii, No. 1.

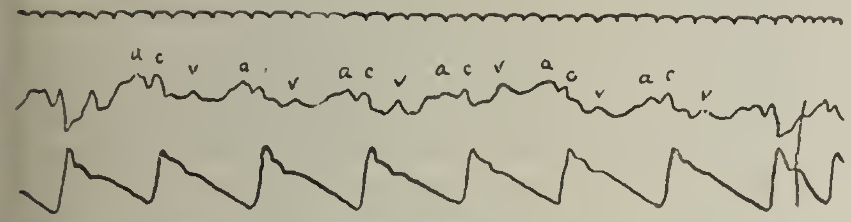

Fig. 1.—Polygraphic tracing showing normal or auricular type of venous pulse. A regular succession of *a* waves appear in the jugular (upper) tracing. Radial pulse shows no abnormality as to rhythm.

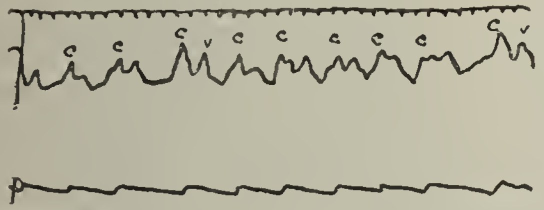

Fig. 2.—Tracing from R. H., a patient with auricular fibrillation as a result of fibroid heart. *A* waves are absent, and there is an irregular radial pulse. Partial decompensation. At times the heart would pass into temporary block, with resulting syncopal attacks and convulsive seizures.

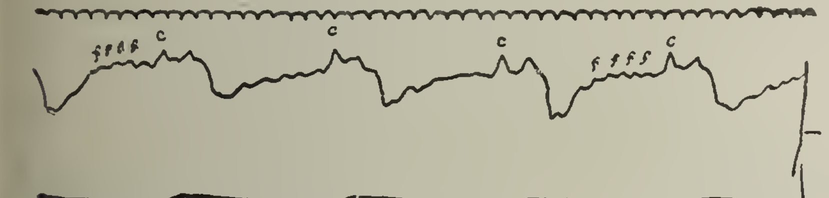

Fig. 3.—Tracing from same patient after onset of permanent block. The *a* waves are still absent, the rate has dropped to 28 and *f* waves have appeared in the jugular. The ventricle has now assumed a regular rhythm of its own. With the onset of the new rate, compensation was regained and the patient resumed his occupation without further subjective evidence of disturbed circulation.

PROGNOSIS

The affection may be transient or permanent. One attack predisposes to another. If transient, recovery may depend on the removal of the exciting cause, as was illustrated in a case observed by me in which auricular fibrillation developed during a streptococcus infection. If permanent, the prognosis depends on the rate of the pulse and the response of the heart to medication and to effort. The condition is not necessarily incompatible with long life.

Where decompensation is marked, proper medication and rest may still restore the patient to an ability to carry on life on a somewhat lower plane than formerly. In cases with a slow pulse, the outlook is more favorable than in those with a rapid pulse, and the prognostic value of treatment depends in great measure on its ability to lower the rate.

The personality of the attending physician is a marked factor in the prognosis, as success in treatment may depend on his ability to enforce on the patient that mode of life which enables the latter to live within his reserve force. There are cases, however, in which treatment fails to control th condition, and the patient dies as the result of more or less gradual failure of the circulation and general exhaustion. In yet other instances sudden death may occur.

TREATMENT

There is one sovereign remedy for the disease, and that is digitalis. This drug acts mainly by lessening conductivity, thereby culling out certain impulses which would otherwise stimulate the ventricle to ineffectual contraction. As a result, the rate is diminished, the ventricle gains in tone and the circulation may again become adequate. The resulting improvement in the patient's condition may appear miraculous. In these rare instances of auricular fibrillation in which the pulse is regular, digitalis usually fails. It is contraindicated in the cases accompanied by partial block. I have had my best results in the treatment of the condition by somewhat closely following the method of administration of digitalis as evolved by Mackenzie. This method will be found fully set forth in that author's recent communications on the subject.[3]

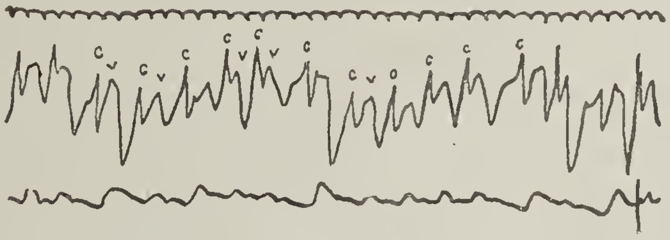

Fig. 4.—Polygraphic tracing from Mrs. H., aged 70, with a history of repeated attacks of rheumatism. Pulsus irregularis perpetuus. Ventricular form of venous pulse.

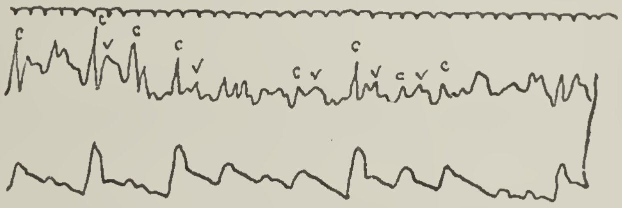

Fig. 5.—Polygraphic tracing from Mrs. T. G., aged 37, after the administration of digitalis. The patient was admitted to St. Francis Hospital with mitral stenosis and insufficiency, as evidenced by a loud presystolic murmur accompanied by thrill, an apical systolic murmur with transmission to the left and a markedly accentuated pulmonic second sound. There was present marked cardiac dilatation with decompensation. The pulse was regular as to rhythm. After the administration of digitalis the pulse became exceedingly irregular, the presystolic murmur disappeared and the venous tracing assumed the ventricular form.

206 Liberty National Bank Building.

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[3] Mackenzie, James: Digitalis. Heart, ii, No. 4; Auricular Fibrillation, Brit. Med. Jour., Oct. 14 and 21, 1911.

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**Flies and Infection.**—Where infectious material, as in open privies, exists in a community with exposed food-supplies, together with an abundance of flies, active measures against this insect are a public health necessity. The house-fly may be practically eliminated from municipalities by the proper construction of horse stables with especial reference to water-tight, well-drained floors and the prompt removal of manure, the rendering fly-proof of surface privies and the abolition of garbage dumps. The burying of infectious material, if fly-blown, at any practical depth will not prevent either the maturing of the contained larvæ or the dissemination of infection by the flies hatched therefrom. Trapping, especially early in each fly season, is a practical auxiliary measure.—Terry in *Am. Jour. Public Health*, January, 1912.

## SUCCESSFUL TREATMENT OF GONORRHEAL CHORIOIDITIS BY VACCINES

George W. Vandegrift, A.M., M.D., New York

Instructor in Ophthalmology, Cornell University Medical College; Assistant Surgeon, New York Eye and Ear Infirmary

As far as I am able to ascertain, no case of gonorrheal chorioiditis has been reported in the ophthalmic literature for the last ten years. Metastatic iritis and conjuctivitis of gonorrheal origin have been reported by Posey,[1] Shumway[2] and others, and the possibility that the chorioid might become affected metastatically from the urethra as a sequel to arthritis has been suggested by DeSchweinitz.[3]

The etiology of the case I report is established firmly, not only by the therapeutic test but also by a positive complement fixation test. The clinical picture displayed was that of a localized chorio-retinitis attended by a severe hyalitis.

*Patient.*—A clerk, single, aged 35, referred by Dr. Charles E. Panoff of Brooklyn, consulted me Dec. 16, 1911, because the vision of the right eye had been failing for two months. The vision of the right eye was found to be 10/200; of the left eye 20/20. Externally both eyes were normal. Ophthalmologic examination showed the left eye normal. In the right eye the vitreous was heavily clouded with large and small floating opacities. The nerve-head could be distinguished too faintly for examination. After the vitreous cleared it was found normal. In the lower nasal peripheral aspect of the chorioid and retina, about two nerve-head lengths away from the papilla, a yellowish mass could be seen projecting into the vitreous. This mass appeared to be as wide as the nerve-head and its sides disappeared into the hazy vitreous.

*Physical Examination.*—The thoracic and abdominal organs were normal; also the nasopharyngeal tract and sinuses. Urinary examination showed normal kidneys, and there was no increase of indican. The patient's family history was negative; and the von Pirquet test was negative. He denied syphilis and the complement fixation test for lues was negative. He had never had rheumatism nor any acute infectious disease except three attacks of gonorrheal urethritis, the first of which was ten years previously lasting two months, the second six years ago and the last one year ago. At the time I first saw the patient he was under the care of Dr. Panoff for chronic prostatitis.

Before any general medication was begun the patient was referred to Dr. Hans J. Schwartz for a complement fixation test for gonorrheal infection.[4] This was strongly positive.

*Treatment and Course.*—Dr. Panoff's report of his examinations of the prostate and of injections of vaccines follows:

Dec. 9, 1911, expression of prostate showed great numbers of gonococci and staphylococci.

December 11 and 15, same.

December 22, injection of 0.25 c.c. mixed vaccines (Parke, Davis & Co.) equaling 100 million gonococci and 125 million staphylococci (*S.-albus, aureus* and *citreus*).

December 26, injection of 0.75 c.c.

December 29, injection of 1 c.c.

Jan. 2, 1912, injection 2 c.c.; massage examination negative.

January 9, massage examination showed no gonococci, few staphylococci.

January 16, prostate small and soft; no gonococci, no staphylococci.

January 20, massage negative.

January 26, injection 1 c.c.; massage negative.

February 1, injection 1 c.c.; massage negative.

February 9, massage negative.

April 15, complement fixation test slightly positive. This is no doubt a disappearing reaction from the vaccines administered January 26 and February 1.

May 15, complement fixation test negative.

The patient received local treatment of atropin in the affected eye but no general treatment other than that outlined above. About the middle of January the haze in the vitreous began slowly to clear and about the same time the exudate in the vitreous began to subside. Improvement continued until about April 1, when the vision was 20/20, the exudate completely absorbed leaving a white atrophic patch. A very few floating opacities still remained. At no time was any other structure of the eye inflamed nor was the other eye affected.

The gonorrheal origin of this case is undoubted. It is closely related to those of metastatic iritis and conjunctivitis reported by others. Many of these, however, were the sequel of arthritis which the case I report was not.

147 East Eighteenth Street.

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[1] Posey: Ann. Ophth., January, 1907.

[2] Shumway: Ann. Ophth., April, 1910.

[3] DeSchweinitz: Ann. Ophth., October, 1906.

[4] Schwartz and McNeil: Am. Jour. Med. Sc., May, 1911.

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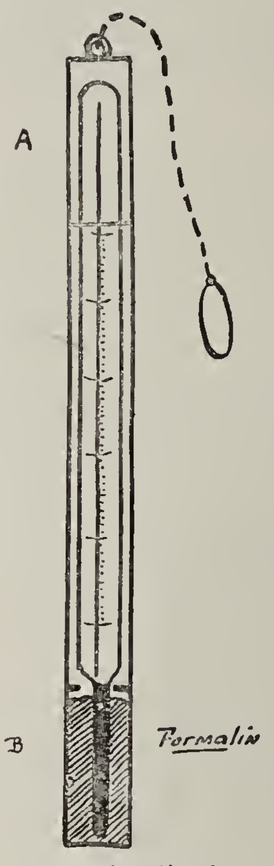
## AN ANTISEPTIC THERMOMETER CASE

Edmund L. Gros, M.D., Paris, France

Physician to the American Hospital

After having studied the question systematically, Beasley, in a recent article,[1] suggests, as the most practical disinfectant for thermometers, the Pharmacopeial formaldehyd solution (liquor formaldehydi), which, as is well known, is a 40 per cent. solution of formaldehyd in alcohol.

For many years I have been accustomed to place a small cotton plug in the cap of my thermometer case, into which I poured, every week or two, a sufficient quantity of formaldehyd solution to saturate the cotton. Even after the lapse of two weeks the odor of formaldehyd is strong. Any ordinary thermometer case may be used for this purpose if the cap fits securely. All that is necessary is to wash the thermometer after use in running water and soap and to insert it in its case with the stem in contact with the cotton. My case is of metal (see illustration) with a screw-top *A* and a screw-bottom *B*. In the cavity *B* loose cotton is placed on which the formaldehyd solution is poured every week. The stem of the thermometer rests on this and the vapors of formaldehyd fill the case and sterilize every part of the thermometer.



An antiseptic thermometer case.

23 Avenue du Bois de Boulogne.

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[1] Beasley, Edward A.: The Journal A. M. A., Oct. 21, 1911, p. 1357.

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## UNILATERAL CERVICAL ADENITIS*

Hilbert F. Day, Ph.B., M.D., Boston

The following case is reported because it is one of unilateral tuberculous infection of the tonsils with extreme reaction in the glands of the neck, which entirely subsided after removal of the point of entrance for the tuberculous infection without any change in the mode of living of the patient or subsequent treatment with tuberculin.

*Patient.*—On March 6, 1911, I was called to see Mrs. A. M., 38 years old, who said that lumps had first made their appearance on her neck three months previously. At first they had grown rather slowly, but recently the enlargement had been rapid.

*Examination.*—The patient was a somewhat emaciated woman who gave no history of recent illness. Lungs showed good resonance and respiration throughout. Heart area and action were normal. Abdomen was negative. There was nothing remarkable on the extremities. On the right side of the neck extending down from the parotid gland to beneath the clavicle on the anterior aspect of the neck were numerous hard, not tender and non-fluctuating swellings, varying in size from a rather deep node the size of a golf-ball to one about the size of a sparrow's egg at the level of the clavicle. There were no inflammatory symptoms. The examination of the mouth and throat showed the right tonsil to be considerably enlarged, extending toward the median line nearly to the uvula, with an inflammatory appearance. Some of the crypts in it were filled with a whitish material. The left side of the patient's neck and her left tonsil were apparently normal. No glands were palpably enlarged on that side.

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* From the Clinic of the Boston Dispensary.

*Treatment and Course.*—The diagnosis did not appear clear and in my mind lay between sarcomatous or tuberculous infection of the tonsil with secondary cervical adenitis, and I decided that the tonsils should be removed and examined. Dr. William E. Chenery, of Boston, operated on March 30, 1911; and enucleated the patient's tonsils, also removing slightly hypertrophied adenoids. Dr. Louis Hoag examined the specimens and reported tuberculosis of the right tonsil. The patient's fauces healed rapidly and the glands in her neck gradually subsided. When seen by me one year after operation her throat was clear and an examination of her neck showed only one or two glands which could be palpated, and these were no larger than cherry-pits, hard and not tender.

657 Boylston Street.

## A SIMPLE DEVICE FOR COLLECTING URINE FROM FEMALE INFANTS

FRANK VAN DER BOGERT, M.D., SCHENECTADY, N. Y.

Feeling that anything which will render the collection of urine from infants more simple might encourage more frequent analyses by the general practitioner, I am led to describe a method for use in girl babies which has been exceedingly simple and satisfactory to me. The scheme was first brought to my notice by the father of a patient, a baby about 1 year old, whose urine on analysis showed much pus.

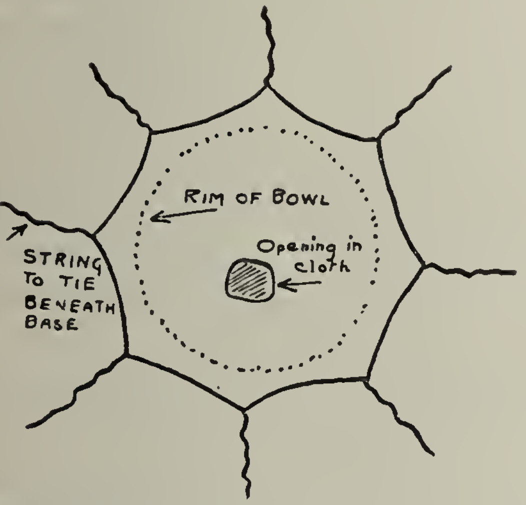

Diagram of cloth stretched over earthenware wash-bowl used for collecting urine from female infants.

After endeavoring to obtain a specimen by the usual simple methods, without success, the father tried the following: A firm cloth was drawn and tied tightly like a drum-head over the rim of an ordinary white earthenware wash-bowl. The baby, lying on this fairly comfortable affair, with diaper removed and clothing properly arranged, urinated on the cloth diaphragm, the urine dropping into the clean basin below. This arrangement had the disadvantage of filtering the urine and was, for this reason, no better than the method of placing absorbent cotton in the diaper, the cotton or filtering-cloth holding in its meshes such important elements as pus-cells. An opening, however, with a diameter of about 3 inches, placed eccentrically in the "drum-head" directly under the vulvæ, allows the urine to escape directly into the bowl, unfiltered.

Specimens thus collected must of necessity be somewhat contaminated, but with reasonable care, I think, no more so than those obtained by the various infant urinals, nor those by the test-tube method, or by the method of Lawrence of Boston, with the test-tube and rubber-glove finger, and these latter have the additional disadvantage of being more difficult of application. Catheterization is the only possible way of obtaining a sterile specimen.

The principal objection to the method suggested is the possibility of contamination by an accompanying stool, but this can, I believe, be disregarded except in severe diarrheal disorders, since another specimen can be so readily secured.

111 Union Street.

## EPILEPSY (?) AND A REFRACTION*

JESSE S. WYLER, M.D., CINCINNATI

A case of supposed epilepsy was referred to me Oct. 29, 1909, for an ocular examination, by Dr. D. I. Wolfstein, of this city. The patient was a young man of 23, fairly well developed and nourished. He was accompanied to my office by his mother, who gave me the following history: Up to about a year and a half previously the boy had regularly attended to his work which was that of a skilled mechanic for a railroad company. Without warning one day he fell down unconscious and was brought home in a dazed condition. Following the attack, he seemed perfectly normal. These onsets followed more frequently until they appeared from three to four times daily. The young man was unable to work and was growing despondent. A premonitory cry was mentioned by the mother as the first sign of the approaching attack, and the condition during the seizure was that of a tonic convulsion; the duration from fifteen minutes to a half hour. No history of injury or previous ill health. It was also noticed that close application of the eyes, as in filing at his work or reading in the evening, had a tendency to produce the attacks.

I .instilled scopolamin 0.2 per cent., three drops. Retinoscopy:

$$\text{R. E.} + 1.0\,\underset{+\,0.5}{\overline{\qquad\quad}} \qquad \text{L. E.} + 1.25\,\underset{+\,0.75}{\overline{\qquad\quad}}$$

The ocular media were clear, the disk normal, veins slightly dilated, but not tortuous. Vertical muscles were normal with the following correction:

$$\text{R. E.} + 1.0 \text{ sph.} \overset{\frown}{\smile} + 0.5 \text{ c. } 90^{06}/_{4}$$
$$\text{L. E.} + 1.0 \text{ sph.} \overset{\frown}{\smile} + 0.25 \text{ c. } 105^{06}/_{4}$$

Esophoria 4°. The above correction, with + 0.5 D subtracted, was ordered for constant use and little hope extended that relief would be given from this measure.

One week later, the patient presented himself, feeling better; he liked the glasses and had had no attack since wearing them. Four months elapsed before I saw him again, he was still free from the former trouble. One year after this he complained that eyes drew a little; no attacks. He had gained about 20 pounds. I increased refraction + 0.25 Sph. Patient has now gone two and a half years without an attack of any kind and contemplates matrimony.

I offer no explanation, but merely present the facts as I found them. Cases of this nature were reported by Stevens as far back as 1876, but results were disproved by investigation of the New York Neurological Society. Inasmuch as neither Dr. Wolfstein nor I ever witnessed one of these seizures, we cannot positively assert that it was a case of epilepsy. At any rate, though I cannot speak of this case as cured epilepsy, still the refraction stopped the fits regardless of their etiologic factors.

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* Read at the Cincinnati Academy of Medicine, April 23, 1912.

**Exaggeration in Writing of Medical Advances.**—There are among public sanitarians, particularly among those who occupy positions in municipalities, a large number of highly cultivated and scientific men, and in the majority of such instances the charge of exaggerating the importance and effect of their work cannot be sustained against them. The very difficulty of carrying into execution the simplest principles of their science teaches them a demeanor of conservatism and humility. But to the dilettante or amateur in hygiene nothing is impossible in sanitary science. No human plague exists which cannot be scientifically eradicated if only the rules which they propose are followed. . . . The truth is that the many problems relating to public health and hygiene can only be solved a little better in each generation as the science on which they are founded develops, and a clean confession of the limitations of our knowledge can only be productive of good. The public naturally loses confidence in medical science when annually for a given calamity a new remedy is proposed, hailed first as a panacea but soon dropped for something else. All our remedies to lessen the mortality of infants, from mathematical feeding to pasteurization, have been heralded as panaceas instead of as mere experiments to be carried out on the body instead of on the guinea-pig.—W. M. Barton in *Washington Med. Ann.*

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SATURDAY, JUNE 8, 1912

## THE ANAEROBIC BACTERIOLOGY OF APPENDICITIS

The causation of appendicitis and of the consecutive peritonitis still constitutes a field for hypothesis and active investigation. It has been asserted recently that appendicitis is the result of a kind of intestinal occlusion and also that it is of hematogenous origin. The inapplicability of the first view to most cases of appendicitis becomes apparent when we consider the essentially active nature of the process, which is infective and inflammatory. And the kind of bacteria commonly found in appendicitis would seem to preclude the idea that it is of hematogenous nature, except possibly in the most exceptional instances. This conclusion would seem to be fully justified from the results about to be presented briefly of one of the very latest and most thorough studies of the bacteriology of appendicitis, namely, that of Heyde.[1]

In this study anaerobic methods were employed and it is the emphasis placed on the anaerobic bacteria that gives to this work its chief value. Heyde finds that these bacteria play a predominating rôle in appendical and consecutive peritoneal infection. Their source is the intestinal contents, and the finer mechanisms of acquirement of virulence and of invasion of the tissues are still obscure, although much that is interesting and suggestive might be advanced by way of speculation. The outstanding fact is that in the beginning of the process and at the margins of the advancing peritonitis the bacteria present may be altogether or at least predominatingly anaerobic in character. It is inadvisable to go into details; the bacteria concerned are the gas bacillus (*B. welchii*), fusiform bacilli, and other anaerobes including the anaerobic streptococcus, but this order does not indicate the order of the frequency of their occurrence or their importance. It seems that some at least of these bacteria have the power to cause a direct necrosis with decomposition—gangrene—of the appendix.

Acute appendicitis is associated usually and early with a peritoneal exudate, which by some is claimed to be sterile in the first stages; but Heyde finds that anaerobes may be present. To regard the exudate as sterile in the early stage consequently is unwarranted, because anaerobes rapidly pass through the walls of the appendix. As the peritonitis spreads, the recent exudate contains a relatively small number of bacteria, while in the older exudate the number is greater, anaerobes as a rule being in excess, however, of the aerobes. It is said that the anaerobic infection develops on the basis of the aerobic, but this cannot be the case, because anaerobes are present in predominating numbers in the earliest stages and at the periphery of the peritonitis. It is also stated that the anaerobes are of no real importance, because early removal of the appendix results in recovery. This objection is without force, however, because by removal of the appendix the source of the bacteria is removed as well as their opportunity to grow in virulence.

In order to determine definitely the relation between the different kinds of anaerobes and different forms of appendicitis and peritonitis the investigation of still more series of cases is necessary. Previous investigations indicate that the results which would be obtained by different workers might differ considerably. Such differences might depend on the methods used, on the different stages of the process at which the examinations would be made, and also no doubt largely on the circumstance that the bacterial flora of the intestines depends on the nature of the food. Differences in the diet would be expected to cause differences in the bacterial content, and hence differences in the bacteriology of appendicitis. It is quite possible that the occasional apparent contagiousness of appendicitis and its occurrence in families may rest on peculiarities in the diet.

Enough has been said to show that an accurate understanding of appendicitis is not possible without due consideration of the anaerobic bacteria. Indeed, it seems that in these bacteria we must seek for the source of the severe intoxication from which the patients with appendicitis suffer and in the study of the anaerobes must be sought also a better knowledge of the peritoneal inflammation arising from the appendix. That the continuation of the investigation of appendicitis along the lines followed by Heyde and other students of the anaerobic bacteria eventually may influence our treatment and our prognosis can hardly be doubted.

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[1] Heyde: Beitr. z. klin. Chir., 1911, xlvii, 1.

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## MOSQUITO EXTERMINATION

Mosquitoes can be — indeed, are being — eliminated from human experience in the United States. The "Jersey mosquito" is not the exclusive property of that commonwealth alone; it breeds in the salt-water marshes all the way from Massachusetts to Florida, wherever a fresh-water stream dilutes the ocean saltiness sufficiently to attract the mosquito. Mosquitoes of the salt-marsh group (chiefly *Culex salinarius, Ochlerotatus sollicitans* and *O. cantator*) are not disease-breeding, however, though more intensely annoying than others. The *Anopheles*, which spreads malaria, and the *Stegomyia*, which conveys yellow fever, propagate in fresh water, in stagnant pools, even in standing water in houses. The greater number of species seldom travel more than a few hundred yards from their breeding-places and, away from salt marshes, most places are locally infested; these facts place the problem of mosquito extermination quarely before the individual householder and the community immediately interested.

Most mosquitoes — certainly those of the anopheles tribe, in which the female of the species is far more leadly than the male — are active only after dark. To id a house of them, one must fumigate with pyrethrum owder or some other substance that will make a dense moke, taking care that no mosquitoes are allowed to urk in remote places to which the fumes have not access. pound of pyrethrum is necessary for every thousand ubic feet of interior space. Screens, unless absolutely ight, with a mesh of twenty to the inch, are useless gainst mosquitoes.

The only means whereby mosquitoes can be permaently prevented is the destruction of their breeding-laces, which may be anywhere that water can accumuate and stand for ten days or more. It is very well to rain marshes, ponds, fountains and wet places in lawns nd gardens; but extermination will not be thorough nd effective unless one realizes that no body of water an be too small for a mosquito nursery. Myriads may reed in puddles by the roadside; in little-used horse-roughs; in chicken-pans in poultry-yards; in water-cups tanding on the frames of grindstones; in water that ccumulates in furrows in gardens or fields, especially in layey soil; in water-pitchers in unused guest-rooms; in ases in which water has not frequently been changed; discarded tin cans in back yards; in sewer catch-basins —in fact, in any place where half a pint of water is llowed to stand.[1] Since mosquitoes breed only in standng water, to eliminate them it is necessary simply to nd and to drain or to oil all the possible breeding-laces.[2]

The city of Hartsville, S. C., little as to size, but big in nterprise, has for several years past annually employed easures which other communities may well emulate. s health board first distributed to all householders rculars pointing out the dangers of mosquitoes and commending screens and constant supervision of prems to prevent breeding. Then the council surveyed the tire city, drained low places where rain-water accumuted and made weekly inspections of all premises and tches in town, putting kerosene regularly on any water at could not be drained or emptied (an ounce of kerone for each 15 square feet of water surface). Most the breeding-places were found in back yards. Dr. . Egleston, the health commissioner, reports that alaria, though very prevalent a decade ago, is now a practically negligible disease. The inhabitants of Hartsville, it is said, now sit on their unscreened porches in the evenings with no discomfort from mosquitoes. If every community in the country would follow the example of Hartsville, the mosquito problem would soon cease to vex us.

## THE CONDITION OF THE BLOOD DURING RESIDENCE IN THE TROPICS

Since January, 1909, the U. S. Army Board for the Study of Tropical Diseases as They Exist in the Philippines has made extensive observations to determine whether Americans of the blond type suffered more than the brunettes from the deleterious influences attributed to tropical climate and to discover whether or not the wearing of orange-red underclothing, which obstructs the passage of the actinic rays of the solar spectrum, was of any benefit to white soldiers serving in the Archipelago.[1] In the course of this work many data were collected bearing on some special features of the physiologic activity of white men living in the Philippines. Fragments of these laborious and useful investigations (which further attest the scientific spirit that has from the very start actuated our medical colleagues detailed to meet the hygienic situations in the Far East) have lately been presented, bearing on blood conditions observed among healthy American soldiers and Filipino members of the Philippine Scouts and constabulary in our insular possessions[2]. It was found that the blood-pressure of Americans residing in the Philippines differs little if at all from the average at home. Usually the lowest readings were obtained in the first three months of tropical residence, but there was no progressive tendency for the pressure average to rise or fall with increased length of residence. The pressure was lower during the hottest part of the year, but the difference was very slight. A well-marked tendency for blood-pressure to rise with increasing age was apparent in both races. Complexion type or special types of clothing to counteract the actinic rays of the sun were without appreciable influence. The pulse-rate of active Filipinos and Americans living in the islands averaged a few beats above the usual standard of 72 per minute.

The observations on the red blood-corpuscles and the hemoglobin content are particularly interesting. There was a time when so-called "tropical anemia" was supposed to be caused by climate alone. Major Chamberlain points out that most of the conditions formerly so designated are in reality instances of secondary anemia due to infections with various parasites, notably plasmodia and uncinaria. The new statistics of the

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[1] Stockbridge, F. P.: How to Get Rid of Mosquitoes, World's rk, May, 1912.

[2] An excellent discussion of the mosquito problem, including ection from bites, smudges and fumigants, abolition of breedplaces, etc., is "Remedies and Preventives Against Mosquitoes;" L. O. Howard (Farmers' Bulletin 444, U. S. Dept. Agric.).

[1] Cf. Complexion and Health in the Tropics, THE JOURNAL A. M. A., June 1, 1912, p. 1688.

[2] Chamberlain, W. P.: A Study of the Systolic Blood-Pressure and Pulse-Rate of Healthy Adult Males in the Philippines, Philippine Jour. Sc., Sec. B, 1911, vi, 467; The Red Blood-Corpuscles and the Hemoglobin of Healthy Adult American Males Residing in the Philippines, ibid., p. 483.

Army Board are valuable because the number of men observed—over 700—is so large that the element of chance is eliminated. After twenty months of Philippine service healthy American soldiers living near the sea level and averaging 26 years of age show:

1. A red-cell count averaging 5,200,000 per cubic millimeter, and rarely falling below 4,500,000.

2. A hemoglobin reading averaging 89.6 per cent, and rarely falling below 85 per cent.

3. A color index averaging 0.86 or 0.87.

Such a red-cell count, Dr. Chamberlain concludes, "does not differ from the normal at present recognized for healthy young men in the temperate zone. The hemoglobin percentage and the color index are probably a little low, but not sufficiently so to indicate a definite anemia. The pallor not infrequently met with among apparently healthy persons in the tropics we believe to be due as a rule to superficial ischemia and not to a deficiency in the total quantity, or in any particular constituent, of the blood."

## QUACKERY ABROAD

Quackery flourishes the world over. European countries, where on account of strong paternal governments many things are managed well, are not free from this pest. Quacks thrive in England, Germany and other countries of Europe, but benighted Russia seems to keep them in leash better than most other countries. As far back as 1788, laws were provided in Russia protecting the people from all forms of irregular practice, and such laws have continued to hold a restraining hand on quackery down to the present time. By the application of a well-known modern political method, however, a "joker," which affords a loophole for a certain amount of irregular practice, has been inserted into some of the laws regulating the practice of medicine. Still, the number of quacks in Russia who do business on a large scale is small.

In Germany during the early part of the nineteenth century, laws against quackery were stringent and effective, but curiously enough, at the instance of the medical society of Berlin in 1869, the regulations against irregular practice were much relaxed and the result was a tremendous development of quackery in Germany. Berthenson[1] says that in 1869 the number of quacks in Berlin was twenty-eight. In twenty-four years the number was over a thousand and the whole number practicing in Prussia was over five thousand. In certain districts the number of irregulars outnumbered the qualified practitioners, two to one. In 1906 it was estimated that the number of quacks in Prussia was 10,000 and the scope of their practice had become unlimited. The unqualified practitioners are regularly organized and have schools and institutions providing a four months' course for quacks; there are over 80 societies for study in "nature healing" with a tota membership of 112,000. There are over fifty periodical with millions of circulation. The quacks come largel from the uneducated class, and it is said that over 5 per cent. of the female irregulars have been domesti servants. This condition has led to efforts to amend th laws in such a way as to limit the practice of thes people to the minor ills. This has led to strongly organ ized opposition, similar to the League for Medical Free dom in our country, and, as in the case of our own Con gress, the opposition has found support in the Reichsta This feeling was shown by the chilly reception whic the first reading of the proposed legislation received i that body, the same reason being ascribed as her namely, that the measure would create a "medic trust."

The forces of graft and unrighteousness are peculia to no country or clime, and they have their champio in the high places and the low. Until the people them selves are better educated concerning the danger an iniquity of quackery, they must be protected from t forces that prey. The popular understanding of the matters is becoming better every day, and, aided proper laws, the time will come, perhaps, when quacke will be unprofitable.

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[1] St. Petersburger med. Wchnschr., 1911, No. 9; Brit. Med. Jour., May 11, 1912.

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# Current Comment

## PRESIDENT JACOBI'S ADVICE FOR THE PRESERV TION OF INFANT LIFE

Like all that Dr. Jacobi writes, his presidenti address is interesting. In this case, however, there an added attraction because of the somewhat unco ventional treatment of the subject. Sociologic facts a usually far behind medical ideals, and the prospect their immediate betterment is not always favorab This is strikingly shown in the address. If, as I Jacobi says, half the births in this country are attend only by midwives (86 per cent. in Chicago), the abo tion of the midwife is not likely to be a very sudd consummation, nor is it practically desirable, taking i consideration the welfare of the entire people. The v majority of births are naturally among the poo classes, including those foreign-born residents amo whom it is customary to depend on the midwife in lab Where we fail is in not sufficiently recognizing necessity of the midwife and in not having her prope trained. European countries are far ahead of us in t respect. Germany has had her midwifery schools more than a century; but in this country how many there and how long have they existed? As Dr. Jac says, "We think nowadays that the ocean is only a sh bridge; but the experiences of Europe, established o solid and constant foundation, do not travel on it." least some of them do not, and we have to confess it our shame. If we would teach the midwives their du as laid down by Dr. Jacobi, we would probably lear consider them useful auxiliaries and a benefit to humanity. The midwife question is, as he says, one of the simple questions of medicine that cannot be considered without the consideration of social questions also. It is the same with the question of rest for the mother. If we demand rest for the mother, what shall we do to provide it for the overtasked housewife or the working woman who has to be the family provider? We are still a long way from our ideals, and it will do us no harm to recognize this fact. Every one will, we think, agree with Dr. Jacobi's statement of the superiority of maternal nursing over any artificial method. Some may, however, be not quite so optimistic as he as to its universal practicability. The illustration he gives, however, of the siege of Paris, when, owing to most unfavorable conditions, maternal nursing was the only recourse and was attended with a great reduction of infant mortality, is a very striking evidence of the possibilities. Too many babies are deprived of a large proportion of their chances of life by neglect to nurse them on the part of mothers who are capable of doing so. Perhaps as a profession we have not insisted enough on this point. Physicians are sometimes accused of losing touch with the practical relations of life, and of prescribing what would theoretically be good for the patient without regard to his ability to obtain it. Dr. Jacobi's address, with its sharp insistence on practicality, should be a wholesome tonic for any tendency to forget that medicine should be the servant of every-day life.

### BOILED MILK IN INFANT-FEEDING

Some recent experiments in the feeding of infants would seem to indicate that our previous ideas in regard to the unsuitability of boiled milk may have to be modified. In a report to the Local Government Board (England), Dr. Janet E. Lane-Claypon[1] sets forth the results of interesting experiments, chiefly by Germans, showing that breast-feeding is best for the young of all mammals, especially during the early weeks of life, as of course was known. It was found by Thiemich that human infants as well as other young animals throve best on the milk of their own species, but that boiling of the milk, either human or other, made practically no difference. It was thought that when the boiled milk of a foreign species was fed to infants, owing to the difference in the composition of the milk, the boiling would have a more appreciable effect. This, however, was found likewise not to be the case. This is also the observation of Finkelstein. The observations of Dr. Lane-Claypon are founded on the records of Ballin in Berlin among the children of the working class, one series being breast-fed and the other on the milk from the municipal dairies which contained 3 per cent. of fat and 20,000 to 30,000 bacteria per cubic centimeter. This is milk of high purity and is produced and handled by scientific methods. It was found that the breast-fed children did not have so great a physiologic drop in weight immediately after birth as did those artificially fed on boiled cow's milk, and the weight curve steadily increased. In those fed on boiled cow's milk, the drop in weight in the early days was very considerable, but by the end of the two hundred and thirtieth day, the difference was no longer present and no difference was to be noted down to the end of the first year, except possibly a slight variation in favor of the boiled milk. An examination at the end of twelve months did not show any greater percentage of rickets in the babies fed on boiled milk than in the breast-fed infants. As pointed out by Dr. Lane-Claypon, however, these conclusions in regard to boiled milk may not be applicable to the whole population, since the results may have been influenced somewhat by the good medical care or supervision given the infants. The findings are interesting, however, in view of the previous conclusions as to the rôle of boiled milk in producing constipation or other digestive disturbances and rickets. They are important also as indicating that boiling may, without impairing the nutritive value of the milk, be substituted for pasteurization, which, unless carefully and properly done, does not destroy all deleterious bacteria and spores. In the light of these experiments, it would appear that boiled milk would be preferable to pasteurized.

### A STATE FAMILY BIBLE

Kentucky is one of the southern states which has recently adopted a modern law for the registration of vital statistics. Put into force a little over a year ago, it has been on trial. As usual, it encountered opposition. Some people were unable to see why births and deaths should be recorded; others did not like to go to the trouble to make out an orderly record of these occurrences. Because physicians and medical organizations led the way in securing this needed legislation, it was, of course, regarded as something for the benefit of physicians rather than for the public good. Shakespeare asked—and so have many philosophers since his time—"What's in a name?" and the wisest of these inquirers have recognized the importance of naming a thing properly, if it is to stand well in the public eye. Evidently this fact is recognized in Kentucky. The leading editorial in the May 1 issue of the *Kentucky Medical Journal,* under the heading "Name the Babies," discusses some of the difficulties encountered in putting the new law into effect. In this connection, the editor philosophically refers to the State Bureau of Vital Statistics as "Kentucky's Big Family Bible." A happier name could not well be devised. When the people of Kentucky understand that the object of birth registration is to record the name and date of arrival of each little citizen of Kentucky, so that its legal identity may be established, and that the state is simply exercising the same care that leads a father to inscribe each birth in the family Bible, public support of the measure will be increased and assured.

### SHOULD THE STATE PAY THE PHYSICIAN?

That the state should pay the physician, though a socialistic doctrine, is the belief of the editor of the Cuban *Revista de Medicina y Cirugia.* He says that the health of the people is the supreme asset of a country, and that those whose services are devoted to maintaining it at its highest point should be recompensed by the public when the individual patient is unable to do this. In Cuba, the editor declares, the public health has been so improved by the measures adopted by the sanitary authorities that the physicians have less and less to do and are consequently passing through a serious economic crisis. All of these measures are socialistic, he says, including the establishment of hospitals, day nurseries, milk stations, etc. Thus socialism is accomplishing a bloodless revolution. Gradually, almost without realizing it, the most advanced civilized nations are progressing toward socialism, and in medicine, more than in any other profession, he notes this socialistic evolution. He believes that professional services should never be rendered gratis, but that if an individual too poor to pay receives the benefit of such services the state is under obligation to pay for them. All of which may be true in theory.

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[1] Reports to the Local Government Board on Public Health and Medical Subjects, new series, No. 63.

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### THE ASSOCIATION IN SESSION AT ATLANTIC CITY

The American Medical Association is holding its sixty-third annual session this week at Atlantic City, N. J. As we go to press, telegraphic advice is received that the meeting is an enthusiastic one, well attended, and that it is favored by delightful weather. The House of Delegates met on Monday so as to get a considerable portion of work done before the commencement of the scientific proceedings on Tuesday. A report of the first meeting of the House of Delegates is given in this issue, commencing on page 1783 and including the reports of the Secretary, the Board of Trustees, etc. The report will be continued in The Journal next week. On Tuesday morning at 10:30 the scientific proceedings of the session opened with the General Meeting. At this meeting President-Elect Jacobi was installed in office and became President Jacobi. The splendid address which he delivered is published in this issue. Governor Wilson was one of those who welcomed the Association to Atlantic City, and he was given a great ovation by the audience. The attendance at the general meeting was unusually large. President Jacobi was warmly received by the House of Delegates when he took the chair of that body. Tuesday afternoon the various sections held their opening sessions, and there seemed to be an unusual spirit of interest in their work. There are fourteen sections this year, each with a good program. On Monday a series of clinics was held on the Steel Pier, in accordance with the program published in The Journal, May 4. One of the papers read, that by Dr. John F. Anderson, Washington, D. C., of the U. S. P. H. & M.-H. Service, appears in this issue of The Journal. The registration on Tuesday was about the same as three years ago, which means a large meeting. Further details will appear next week.

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**The State Board of Health.**—The Board of Health is the only state department which is charged with the grave duty of safeguarding the public health. That this department should be maintained under a law which permits it to be buffeted about at the caprice of party demand or to meet the exigencies of party obligations is fundamentally wrong. Furthermore, such a condition of affairs stands as a positive menace, rendering possible, if not actually inviting, the very dangers which the department was established to prevent.

# Medical News

## ARKANSAS

**New Officers.**—Clark County Medical Association at Arkadelphia, May 9: president, Dr. E. K. Williams; secretary, Dr. C. A. Evans.——Pope County Medical Society at Russellville, May 4: president, Dr. C. R. Teeter, Pottsville; secretary-treasurer, Dr. D. J. B. Ferguson, Russellville.——Howard County Medical Society at Nashville, May 3: president, Dr. T. F. Alford, Murfreesboro; secretary-treasurer, Dr. E. C. Dilvey, Nashville.——Yell County Medical Society at Ola: president, Dr. C. B. Linzy, Plainview; secretary-treasurer, Dr. J. R. Linzy, Dardanelle.——Tenth Councilor District Medical Society at Springdale: president, Dr. D. R. Dorente, Fort Smith; secretary, Dr. J. A. Fergus, Rogers.——Miller County Medical Society at Texarkana: president, Dr. J. A. Lightfoot; secretary, Dr. L. J. Kosminsky.

**Medical Corps Officers Named.**—In the reorganizing of the Medical Corps, N. G., Arkansas, the following appointments are announced: Colonel, James C. Minor, surgeon-general; majors, Leonard R. Ellis, first regiment; William F. Bakersville, third regiment; William H. Abington, second regiment; staff captains, Abner H. Cook, executive officer; Signurd Ekdahl, medical supply officer; captains, Jasper E. Pringle, third regiment; Samuel E. Miller, first regiment; Robert Cowger, second regiment; Austin R. Hedrick, third regiment; Martin J. Barlow, first regiment; Joseph A. Robertson, second regiment; lieutenants, William R. Brewer, first regiment; B. F. Junkind, second regiment. The following officers were named on the reserve list: Major Clint P. Meriwether; captains, Estik D. Holland, Eli B. Bledsoe and W. H. Laird.

## ILLINOIS

### Chicago

**Hospital Benefit Performance.**—The third annual benefit performance given under the auspices of the Jewish Consumptives' Relief Society of Chicago, May 26, at the Colonial theater, netted over $3,000, of which more than $2,000 was derive from the sale of seats and $1,000 from the program returns

**Personal.**—Drs. Stephen R. Pietrowicz and Gustavus M Blech have been appointed members of the consulting staff o the County Hospital. Dr. Pietrowicz is superintendent of th Dunning Insane Asylum and Dr. Blech is director of the Re Cross Field Corps.——Dr. and Mrs. Frederick Cleveland Te and family, together with a party of friends, sailed for Europ May 25.

## INDIANA

**New Officers.**—Eighth District Medical Society at Anderso May 9: president, Dr. M. A. Austin; secretary-treasurer, D Fred M. Ruby, Union City.——Ninth Councilor District Medical Society, Frankfort, May 16: president, Dr. W. R. Moffitt secretary-treasurer, Dr. Dinsmore, Hunter's Springs.

**Personal.**—Dr. J. L. Freeland. superintendent of the India apolis City Hospital since 1907, has resigned, to take effe July 15. Dr. John W. Sluss, professor of surgery at t Indiana University School of Medicine, is the choice of t members of the board of health to be his successor.

**Health Officers Meet.**—The Indiana Health Officers' Schoo at its annual session held at the Denison Hotel, Indianapol was addressed by Dr. W. C. Rucker, assistant surgeon-gener of the United States Public Health and Marine-Hospital Ser ice. The Owen bill was endorsed by resolution and the fo lowing legislative committee was appointed: Dr. Simon Young, Valparaiso, chairman; Dr. M. J. Compton, Evansvil and Dr. Hugh Cowing, Muncie.

**Hospital Notes.**—The new St. Vincent Hospital at Indiana olis, erected at a cost of more than one-half million dolla and the new south wing of the Methodist Hospital have be completed and soon will be occupied.——Work will soon begun on the new ward for the Indianapolis City Hospital.— Plans are being prepared for the State Hospital to be erect near the Indianapolis City Hospital.——Articles of incorpo tion have been taken out by Dr. C. F. Voyles for a private h pital to cost $10,000.

## KENTUCKY

**Dairy Cattle Retested.**—The health officer of Louisville h ordered the retesting of all dairy cattle which furnish m to the city.

**Personal.**—Dr. A. P. Taylor, Lexington, had a narr escape from death May 25, when his automobile turned o and pinned him underneath it. He was rendered unconscious, but his injuries were not very serious.

**New State Veterinarian.**—Robert Graham, Lexington, has been elected state veterinarian under the State Board of Health, vice Dr. F. T. Eisenman, Louisville, resigned. Dr. Eisenman will continue to serve under the State Board in Jefferson County in connection with the Fiscal Court and the Health Department of Louisville.

**Hospital Contract Let.**—The contract for the erection of the new Waverly Hill Hospital for the care of advanced cases of tuberculosis, has been awarded for $22,000. The building is to be two stories in height, of concrete, brick and stucco construction, will be situated on a spur of the hill, southwest of the present building, and will accommodate forty-eight patients.

**Notification and Placarding of Communicable Diseases.**—The Council of Louisville has passed an ordinance requiring physicians to report in writing to the Health Department all patients suffering from diphtheria, diphtheritic croup, scarlet fever, small-pox, varioloid or cerebrospinal meningitis, and providing for the posting of warning placards on premises where communicable diseases exist.

**New Officers.**—Graves County Medical Society, at Mayfield: president, Dr. John G. Puryear; secretary-treasurer, Dr. Richard Keys, both of Mayfield.——Eagle Valley Medical Society, at Carrollton, May 23: president, Dr. C. H. Duvall, Warsaw; secretary-treasurer, Dr. J. W. Botts, Owenton.——Southwestern Kentucky Medical Association, at Paducah, May 21-22: president, Dr. Clyde E. Purcell, Paducah; secretary, Dr. C. P. Burnett, Paducah.

## MARYLAND

**Personal.**—Dr. John Raymond Downes, Preston, has been appointed health officer of Caroline County.——Drs. Curtis F. Burnham, Baltimore, and V. M. Reichard, Fairplay, were appointed members of the board of managers of the Maryland State Tuberculosis Sanatorium.

**New Hospital for Insane.**—Plans for the establishment of the Eastern Shore Hospital for the Insane, authorized by the last legislature, have been commenced. The institution will be located in Dorchester County and Dr. Charles J. Carey, first assistant physician at the Springfield State Hospital for the Insane, Sykesville, is to be superintendent.

**County Hospital Opened.**—The new Washington County Hospital, Hagerstown, was formally opened May 14. The building, formerly the Kee-Mar College and erected about sixty years ago, has been remodeled. It stands in the center of an eleven-acre campus and the property costs with improvements about $75,000. The association also owns 76 acres in he northern part of Hagerstown, for which it paid $37,000.

### Baltimore

**Endowment Fund for University.**—Dr. J. Randolph Winslow eports that the pathologic endowment fund of the University of Maryland collected by him up to May 1 amounts to 9,895.50.

**Zone of Quiet Established.**—By authority of an ordinance passed by the city council last winter, street signs are to be rected at hospital zones established by the health commissioner, each sign to bear the notice "Hospital Zone, Unnecessary Noises Prohibited."

**Gift to Hospital.**—The South Baltimore Eye, Ear, Nose and Throat Charity Hospital has received a gift of $10,000 toward he $50,000 building planned for it. It is the only hospital n the southern section, and was opened eleven years ago by Drs. James Bordley, Jr., and H. E. Peterman.

**Personal.**—Dr. John Turner has been appointed physician to he new Gunpowder Dam Construction Camp.——A party of altimore physicians, including Drs. Cushing and Finney, will eave for Europe, June 11.——Drs. William Geraghty and William J. Driscoll have received appointments to the staff of St. oseph's Hospital.

**Physician Gives Dinner.**—Dr. Howard A. Kelly gave a dinner at the Belvedere Hotel, May 25, to about sixty persons, o promote the spirit of cooperation among magistrates of e city and city officials dealing with social conditions." mong those present were the governor, members of the upreme bench, police board and liquor license board, judges the people's court, police magistrates and representatives the city charities.

**Commencements.**—The Baltimore Medical College held its mmencement, Tuesday, June 4, with twenty-six graduates. —The Maryland Medical College had eighty-two graduates at its commencement, June 3.——At its commencement, June 1, the University of Maryland conferred the honorary degree of M.D. on Prof. R. Dorsey Coale, dean of the department of medicine. Dr. Coale was the first graduate of Johns Hopkins, receiving the Ph.D. from that college.

## MASSACHUSETTS

**New Medical Library.**—The Lawrence General Hospital has established the Frank B. Flanders Medical Library. This was made possible by the gift of Mrs. Flanders, which included the valuable library of the late Dr. Frank B. Flanders, who was a member of the hospital staff for thirty years, its secretary for fifteen years and for twelve years the senior surgeon of the hospital.

**New Officers.**—North Essex District Medical Society, at Lawrence: president, Dr. W. H. Merrill; secretary-treasurer, Dr. J. Forrest Burnham, both of Lawrence. Resolutions were adopted favoring the Owen Bill providing for national health service and a certified milk committee was also appointed.——Bristol South District Medical Society, in Fall River, May 9: president, Dr. Michael Kelly; secretary-treasurer, Dr. A. J. Abbe, both of Fall River.

**Hospital Notes.**—The State Board of Health has requested Attleboro to make provision for the establishment and maintenance of a hospital for the care of contagious diseases in accordance with the new state law.——The trustees of the Springfield Hospital are making plans for the future of the institution, which will eventually call for a hospital with 1,200 beds and many special buildings. A memorial building to the late Dr. Frederick W. Chapin will be the first of the buildings to be erected. This is to cost $75,000, of which $57,000 is already available.

## MISSOURI

**Hospital Reopened.**—The Levering Hospital, Hannibal, which was seriously damaged by fire, February 13, was reopened for patients May 1. The damage done by the fire is not entirely repaired, but more patients will be received as the work is carried on toward completion.

**Antituberculosis Work.**—At the annual meeting of the Buchanan County Society for the Relief and Prevention of Tuberculosis, held in St. Joseph, May 14, Dr. O. B. Gibhart was reelected secretary, Dr. J. K. Graham was elected director, and Dr. T. A. Shipley was elected director, vice Dr. D. G. Moberly, deceased.

**New Officers.**—Fourteenth District Medical Association (Saline, Lafayette and Cooper counties) organized at Marshall, May 10: president, Dr. C. T. Ryland, Lexington; secretary-treasurer, Dr. John R. Hall, Napton.——Southeast Missouri Medical Association, at Farmington, May 9: president, Dr. W. S. Hutton, Farmington; recording secretary, Dr. F. L. Finley, Anniston.——Southwest Missouri Medical Association, at Springfield, May 10: president, Dr. T. A. Coffelt; secretary, Dr. H. S. Hill (reelected), both of Springfield.

## MONTANA

**Personal.**—Dr. Herbert F. Judd, formerly resident physician at Hunter's Hot Springs, has been appointed medical director at Corwin Hot Springs.——Dr. A. A. Dodge, Great Falls, has been appointed surgeon for the camps of the Moccasin Branch of the Great Northern Railroad extension.

**New Section Organized.**—The eye and ear specialists in attendance at the meeting of the Montana State Medical Association organized a section on ophthalmology and otolaryngology and elected Dr. John A. Donovan, Butte, chairman, and Dr. Charles F. Jump, Bozeman, secretary.

**New Officers.**—Lewis and Clark County Medical Association, at Helena: president, Dr. Rudolph Horsky; secretary-treasurer, Dr. B. V. McCabe, both of Helena.——Cascade County Medical Society, at Great Falls, May 7: president, Dr. J. H. Irwin; secretary-treasurer, Dr. P. F. Kearney, both of Great Falls.

## NEW JERSEY

**Field Hospital Organized.**—In order to conform to the standards of the regular establishment, Major Harold D. Corbusier, formerly of the medical corps of the army, has organized a field hospital for the national guard of the state.

**New Officers.**—Warren County Medical Society, at Belvidere, May 7: president, Dr. Frank S. Gordon, Blairstown; secretary, Dr. William J. Burd, Belvidere.——Salem County Medical Society, at Salem: president, Dr. William T. Hilliard; secretary-treasurer, Dr. Henry Chavanne, both of Salem.——Mercer

County Medical Society at Trenton, May 14: president, Dr. Chas. H. Holcomb; secretary, Dr. Frank G. Scammell.——Sussex County Medical Society, at Newton, May 14: Dr. Edward A. Ayers, Branchville; secretary, Dr. F. G. Wilber, Franklin. The following were made members of the Milk Commission: chairman, Dr. Edward A. Ayers, Branchville, and Drs. H. D. von Gassbeck, Sussex, Charles M. Dunning, Franklin Furnace, and J. G. Coleman, Hamburg.

## NEW YORK

**New Hospital at Prattsburg.**—The Misses Nora L. and Julia D. Trant, graduates of the Buffalo Hospital Training School for Nurses, have opened a private hospital in Prattsburg.

**Tuberculosis Hospital in Auburn.**—The Sunny Crest Tuberculosis Hospital has been opened by the city of Auburn, and Dr. Alfred F. Hodgman has been appointed physician in charge.

**Camp Sites Selected.**—The Dunkirk Tuberculosis Committee has selected the Gross Farm on Roberts road, as the site for the proposed tuberculosis camp. It is planned to treat all Dunkirk patients free of charge and to make a nominal charge for out-of-town patients.

**Militia Medical School.**—Peekskill camp is to be used as a school for medical officers, June 22 to 29. Majors Albert E. Truby, Louis T. Hess and Henry H. Rutherford and Capt. James M. Phalen, Medical Corps, U. S. A., have been detailed by the war department as instructors.

**Hospital to Be Opened.**—A certificate has been filed permitting Drs. William L. Wallace, Herbert O. Brust and Carl E. Muench to conduct a hospital in Syracuse under the name of the Crouse-Irving Hospital. The building has cost about $125,000 and has sixty private rooms in addition to the operating rooms, offices, etc.

**Faculty Appointments.**—At the meeting of the faculty of Albany Medical College, May 10, the announcement was made of the appointment of Prof. Henry Berstein, at present director of Bender Laboratory, as professor of pathology and bacteriology, vice Prof. Thomas Ordway, resigned, and Prof. R. W. Keeton of the University of Illinois as adjunct instructor in experimental physiology and physiologic chemistry.

**Plan to Deport Alien Insane.**—A conference was held on May 24 between the representatives of New York steamship lines and state insane hospitals, which, it is believed, will result in the deportation of 2,000 insane aliens during the coming year. The steamship companies have agreed to take the aliens at ordinary steerage rates to be paid by the state, so long as they are notified of the insane person's condition beforehand and are assured that the alien has no dangerous mania. There are at present 14,000 foreign-born insane in the hospitals of New York, and it is estimated that the deportation of even 2,000 will represent a saving of $7,000,000 to the state.

### New York City

**Pure Water for City.**—New York City is to have a pure water-supply at last. An appropriation of $8,690,000 has been made for the installation of a filtration plant in Jerome Park in the Bronx.

**Death-Rate Down.**—For the fifteenth consecutive week the death-rate has remained below that of 1911. There has been a decrease in the death-rate from 16.27 to 14.75 for the week ending May 19. For the first twenty weeks of this year the rate has averaged 15.68, as against 17.04 for the corresponding period of last year.

**Hospital for Fordham College Opposed.**—An application for permission to erect and operate a hospital in connection with Fordham Medical College has met with opposition because of the proximity of such an institution to the Fordham Hospital, which is a city institution. The advisability of granting the application is under the advisement of the commissioners.

**Public Baths Menace Health.**—The approval of the health department has been withheld in respect to five sites selected by the Commissioner of Public Works for public baths. A conference between these two city departments will be held for the purpose of discussing the subject, and if baths are permitted along the Hudson a more than usually close watch will be kept on them for gathering data on which to base future decisions as to the safety of such baths.

**Pellagra Commission Starts South.**—The Post-Graduate Hospital Commission for the study of pellagra under the direction of the Division of Tropical Medicine, left New York City on May 27 for Spartanburg, S. C. The personnel of the commission consists of Capt. Joseph F. Siler, Medical Corps, U. S. A.; Dr. Phillip E. Garrison, Passed Assistant Surgeon, U. S. N., and Dr. Ward J. McNeal, assistant director, Department of Laboratories of the New York Post-Graduate Medical School and Hospital. The expedition will study especially the causes of the disease, while curative methods will be studied in the hospital in this city at the same time.

**Personal.**—Dr. A. L. Wolbarst has returned from a brief trip to Paris, Frankfurt and London.——The summer home of Dr. P. Carr at Bayville, L. I., was destroyed by fire on May 19, the loss being estimated at $50,000.——Dr. Harriet W. Hale, superintendent of the Public Baths and Comfort Stations, in Brooklyn, has been appointed to represent New York at the International Conference on Public Baths to be held in Scheveningen, Holland, in August.——Among those who sailed for Europe, May 25, are Dr. John L. Adams, Dr. Emily Lewi Dr. and Mrs. W. H. Davis, Dr. and Mrs. J. J. Asch and Dr and Mrs. John H. Huddleston.——Dr. Winfield Scott Schley and Dr. and Mrs. Warren Coleman have sailed for Europe.

**The Health Department and Infant Paralysis.**—The healt department has prepared a circular for physicians and the public asking cooperation in the campaign to stamp out infan paralysis. The department says that the disease has sprea because of careless handling and insists on a minimum quarantine of four weeks, the exclusion of other children in th same family from school, and the disinfection of bedding an clothing by formaldehyd. The preparation of the serum ha been transferred from the Rockefeller Institute to the board o health. The death-rate for infantile paralysis in 1911 in thi city was 0.44 per 10,000 population, while in the epidemics o 1872 and 1905 the rates were 8.07 and 6.32, respectively.

**Resuscitation After Electric Shock.**—The Commission o Resuscitation After Electric Shock, organized on the initia tive of the National Electric Light Association, and having fo its purpose the study of electric shock and the preparatio of rules for first aid in causes of electric accident, has th results of its work ready for presentation to the public. Ther is a simple chart to be posted in all factories and electric shop and a more detailed set of rules embodied in a sixteen-pag booklet to be carried in the pocket of the electrician. Thes represent the commission's findings on the question of pr ducing artificial respiration in emergency cases. The commission will later publish a report on mechanical means of pr ducing artificial respiration and the insufflation method adv cated by Dr. Meltzer will also be passed on by the commissio

**Antivivisectionists May Be Sued for Libel.**—With the characteristic venom and disregard for facts, the Vivisecti Investigation League has made itself responsible for t startling statement that Dr. Hideyo Noguchi of the Rock feller Institute for Medical Research had inoculated 146 pe sons of pure blood with the poison of syphilis. The charg made were based on a paper written by Dr. Noguchi a published in the *Journal of Experimental Medicine*, Decembe 1911. Attorney Whitman and President Lindsay of the So ety for the Prevention of Cruelty to Children have investigat the charges of the antivivisectionists, and their report cha acterizes these charges as "the most mendacious and malicio of slanders that has appeared in the long catalogue of misre resentations for which the antivivisectionists are responsibl It has been reported that possibly several suits for libel agai prominent members of the Vivisection Investigation Leag may grow out of the matter.

## NORTH CAROLINA

**Cornerstone Laid.**—The cornerstone of the first permane building of the North Carolina State Institution for t Feeble-Minded, Kinston, was laid with impressive ceremoni May 8. Temporary quarters have been arranged and it expected to open the institution in a short time, accepti about 35 per cent. of the 400 whose applications are on for admission.

**Sanatorium Progress.**—Work is progressing rapidly on H. F. Long's new sanatorium, which is being built at Stat ville. The building is expected to be ready for occupa before the first of September.——Dr. Charles T. Harper had plans made for an enlargement of the Wilmingt Sanatorium, which will double the capacity of the institut so that it will accommodate thirty-five patients.——Dr. a Mrs. Claude L. Pridgen, Kinston, in charge of the free d pensaries for the treatment of hookworm disease, have ope a dispensary in the courthouse of Raleigh. Dispensaries h previously been opened at Apex, Wendell, Wake Forest Fuquay Springs.

## OHIO

**Hospital Dedicated.**—Dedicatory exercises of the N Samaritan Hospital, Ashland, were held May 28. The hospi plan and construction were described by the architect, Mr. Frank L. Packard, the presentation address was made by Hon. Peter S. Grosscup and the building was accepted by John C. Stupp. An address on "Purpose of the Hospital and Its Benefits to the Community," was made by Dr. William Niles Wishard, Indianapolis.

**New Youngstown Hospitals.**—The campaign for raising $100,000 for St. Elizabeth's Hospital, Youngstown, ended successfully April 24, and on April 30 a gratification meeting and banquet was held in the Auditorium.——At a meeting of the board of trustees of the Youngstown City Hospital, April 29, action was taken which will result in the building of extensive additions and which will increase the capacity of the institution by probably 100 beds. The proposed enlargement takes into consideration the utilization of the proceeds of the bequest of the late Miss Sally Tod for the erection of an isolation pavilion. The addition to the hospital is to be known as the "Tod Annex" and will cost about $75,000. To the east of this wing is to be erected a two-story operating pavilion.

## PENNSYLVANIA

**Contagious Hospital for Lehigh.**—The commissioners of Lehigh County have planned a contagious hospital for the ounty, which will be modern and sanitary and have a capacity or twenty-five patients.

**Pittsburgh Neurologic Society.**—A number of physicians of Pittsburgh, who are interested in the study of nervous diseases, have organized the Pittsburgh Neurologic Society and plan to hold five meetings each year. The following officers have been elected: president, Dr. Samuel Ayres; secretary, Dr. E. E. Mayer.

### Philadelphia

**Jefferson Elects Two New Professors.**—At the meeting of he trustees of Jefferson Medical College, May 30, Dr. William l. Sweet was elected clinical professor of ophthalmology and Dr. H. R. Loux, professor of genito-urinary surgery.

**Women Physicians Appeal.**—The Alumnæ Association of the Woman's Medical College has appealed to Mayor Blankenburg o aid in providing housing accommodations for women resi-ent physicians at the Philadelphia General Hospital. Five raduates of the college passed the civil service examination or interns, one passing second, but all were refused because here was no adequate housing accommodation.

**University Hospital Convalescent Home.**—May 31 Mrs. eorge H. McFadden presented Hillsdale Farm, near West hester, to the Social Service Department of the University ospital as a home for convalescent women. The house has een remodeled and finished for the comfort of the patients nd six women at a time will be transferred from the Univer-ty Hospital to the farm to remain until fully recuperated.

**Abington Hospital Managers Elected.**—Although the work or the hospital at Abington on the Old York Road has only gun, two entertainments have been given which netted the stitution more than $600. The hospital is to be known as he Abington General Hospital and the women who were strumental in organizing the charity have formed a board lady managers and elected officers and committees.

**Women's Medical College Commencement.**—The sixtieth nnual commencement of the Women's Medical College was ld Wednesday, May 29, at the Academy of Music. Dr. mes J. Walsh, dean and professor of nervous diseases and the history of medicine at Fordham University, delivered e address and Mary E. Mumford, president of the Board of rporators, conferred the degrees on the thirty graduates.

**Widener Home Endowed.**—An endowment fund of $4,000,000 arranged that it will ultimately reach $5,000,000, was per-nently settled on the Widener Memorial School for Crippled ildren, by its founder, Peter A. B. Widener, May 20. The ws of the state do not permit any charity to hold property oducing an income of more than $30,000 a year, without ecial order of the court. The order of the court granting ch permission to the Widener Home was signed May 20 by dge Wiltbank.

**Jewish Hospital Meeting.**—The forty-seventh annual meet-g of the Jewish Hospital Association was held May 26. The port of the president, William B. Hackenburg, showed that 13 patients had been treated by the hospital during the ar, and that the cost per patient daily was $1.765. The port of the treasurer showed receipts of $126,971.53 and dis-rsements of $127,405.84. The hospital received $39,000 from Federation of Jewish Charities and the investment account mprises $513,975.27.

**Whooping-Cough and Typhoid Spread.**—Whooping-cough in a virulent form is prevalent throughout the city, 123 new cases having been reported to the board of health for the week ending May 25. The sudden increase in the number of cases of typhoid has caused the bureau of health to make a special investigation of the Twenty-Second ward, in which seventeen new cases of the disease have occurred since May 17. Special attention will be given to the Pennsylvania Institution for the Deaf and Dumb, in which there are seventeen cases of the fever, seven having been reported during the present week.

**Commencements.**—Governor Phillips L. Goldsborough, of Maryland, will be the orator at the one hundred and fifty-sixth commencement exercises of the University of Pennsylvania at the Metropolitan Opera House, June 19.——The commencement exercises of the Medico-Chirurgical College were held in the Academy of Music, June 7, and Dr. Lewis S. McMurtry, professor of abdominal surgery in the University of Louisville, Kentucky, delivered the address. For a week prior to the graduating exercises, clinics were held daily for members of the American Medical Association on their way to Atlantic City.

**Baby-Saving Show.**—The Baby-Saving Show, held in Horticultural Hall from May 18 until May 26, has been largely attended. According to official figures made public May 24, more than 50,000 people had visited the exhibition up to that time and on that date 13,000 persons visited the show and more babies than before were checked, 450 having been put in charge of a Philadelphia General Hospital nurse supervising the rest-room nursery. On May 26 the show was moved to Third and Catherine Streets; from there it goes to the Boys' Club in Kensington; then to the factory district of Germantown.

**Red Bank Sanitarium Opens.**—The Philadelphia Sanitarium opens its summer work for children at Red Bank, six miles down the Delaware, June 8. The two river sanitarium boats, *Elizabeth Monroe Smith* and *John F. Smith*, will start their hourly trips to continue all summer. Last year they carried 104,465 passengers in sixty-five days. Tickets are distributed free to poor children and to their mothers. A resident physician and two nurses, the local medical staff, examine all who go to the grounds and those needing medical treatment remain as long as necessary. On the grounds, besides merry-go-rounds, swings, etc., there are two large concrete bathing pools, one for boys and one for girls.

**Personal.**—Dr. George W. Norris has been appointed visiting physician to the Pennsylvania Hospital to succeed Dr. James Tyson, resigned, and Dr. Arthur Newlin to succeed Dr. Arthur V. Meigs, deceased.——Dr. William H. F. Addison sailed for Europe, May 24.——Dr. David Reisman was the guest of honor of the Alumni Association of the Detroit Medical School, May 20.——Dr. John G. Clark was the guest of honor at a luncheon given by the Ohio Alumni Association of the University of Pennsylvania at Dayton, May 8.——Dr. Jacob P. Schaeffer, a graduate of the University of Pennsylvania Medical Department in 1907 and resident physician at the University Hospital following his graduation, has been appointed professor of anatomy at Yale Medical School.——Dr. David L. Edsall, formerly of the faculty of the Medical School of the University of Pennsylvania and until recently at Washington University, St. Louis, has been appointed professor of clinical medicine at Harvard University.——Dr. Joseph S. Neff, director of the department of health and charities, had the honorary degree of doctor of public health conferred on him by Jefferson Medical College at the annual commencement.——Dr. A. J. Downes is in the St. Joseph Hospital suffering from general convulsions, caused by a fall from a second story window, May 24.——Provost Edgar F Smith celebrated his fifty-sixth birthday, May 25.

## TENNESSEE

**Personal.**—Dr. R. Q. Lillard, Lebanon, secretary of the State Board of Health, has been placed in charge of the relief work of the state in the flooded districts, cooperating with the army, municipal and county authorities.——Dr. Robert Patterson, Cumberland Gap, who was seriously ill, is reported to be convalescing.

**Publicity Campaign.**—The State Board of Health has sent letters to the various newspapers of the state asking for space in their columns for a strenuous canvass against the maladies that endanger the welfare of the community, and especially typhoid fever, dysentery, malaria, the mosquito and the house fly.

## TEXAS

**Memphis Hospital Alumni Held Banquet.**—The Texas Alumni of Memphis Hospital Medical College held a banquet in Waco, May 8, and elected the following officers: president, Dr. R. J. Alexander, Waco; vice-presidents, Drs. J. M. O'Farrell, Richmond; T. P. Weaver, De Leon, and C. E. Davis, Linden; and secretary, Dr. C. H. Harris, Ft. Worth.

**Laboratory Under Construction.**—Work has commenced on the construction of the state laboratory for the manufacture of antitoxin and serums at Austin. Dr. Henry Hartman, state bacteriologist, states that the department will be obliged to work on a small scale at present, owing to the limited appropriation, but hopes that the next legislature will be sufficiently generous to place this department on a satisfactory working basis.

## VIRGINIA

**Changes in the University College of Medicine.**—Dr. Jacob Michaux, one of the original members of the faculty, resigned the chair of obstetrics and was made professor emeritus of obstetrics. Dr. Paulus A. Irving, who has moved to Farmville, Va., was made emeritus professor of pediatrics. Dr. John F. Winn, formerly professor of clinical obstetrics, was elected professor of obstetrics, and Dr. Virginius Harrison associate professor of the same branch. Dr. Francis W. Upshur was chosen professor of materia medica and therapeutics, and Dr. C. Howard Lewis was made professor of pharmacology and also associate professor of physiology, these two physicians dividing the chair which was formerly held by Dr. Virginius Harrison. Dr. E. C. L. Miller was elected professor of bacteriology and physiologic chemistry.

## GENERAL

**Medal Awarded Harvard Chemist.**—The second Willard Gibbs medal, founded by William A. Converse, Chicago, for distinction attained in chemistry, was awarded to Prof. Theodore W. Richards of Harvard University, by the Chicago section of the American Chemical Society, at a dinner held on May 17.

**Connecticut Valley Physicians Hold Meeting.**—The annual meeting of the Connecticut River Valley Medical Association was held in Bellows Falls, Vt., May 8, and the following officers were elected: president, Dr. A. L. Miner, Bellows Falls; vice-president, Dr. W. P. Craig, Walpole, N. H., and secretary-treasurer, Dr. J. S. Hill, Bellows Falls, Vt.

**Tennessee Alumni Meet.**—At the annual meeting of the Alumni Association of the Medical Department of the University of Tennessee, May 7, the following officers were elected: president, Dr. H. T. Brooks, Nashville; vice-presidents, Drs. Emil Withers, Memphis; M. D. Davis, Chattanooga, and G. H. Newton, Chicago; corresponding secretary, Dr. O. S. Swarr, Memphis; recording secretary, Dr. W. M. Moses, Uvalda, Ga., and treasurer, Dr. G. Gartly, Memphis.

**Virginia and District Physicians Meet.**—At the annual meeting of the Medical Society of Northern Virginia and the District of Columbia held in Leesburg, Va., May 15, the following officers were elected: president, Dr. Philip S. Roy, Washington, D. C.; vice-presidents, Drs. M. G. Douglas, Warrenton, Va., and John A. Gibson, Leesburg, Va.; recording secretary, Dr. Arthur G. Coumbe, Vienna, Va.; corresponding secretary, Dr. J. D. Rogers, Washington, D. C., and treasurer, Dr. W. I. Robey, Herndon, Va. The next meeting will be held in Washington, D. C., November 20.

**American Pediatric Society Elects Officers.**—At the annual meeting of this society, held in Hot Springs, Va., May 29-31, the following officers were elected: president, Dr. John Lovett Morse, Boston; vice-president, Dr. John Ruhräh, Baltimore; secretary, Dr. Samuel S. Adams, Washington, D. C.; treasurer, Dr. Charles Hunter Dunn, Boston; recorder and editor, Dr. L. E. LaFétra, New York; member of council, Dr. Thomas Morgan Rotch, Boston; representative of the society on the committee on arrangements for the meeting of the congress in 1913, Dr. Samuel S. Adams, Washington. Place of meeting Washington, D. C.

## FOREIGN

**Deaths Abroad.**—F. Zachrisson, M.D., privat-docent of surgery at the university of Upsala and long editor of the *Upsala Läkareförenings Förhandlingar*, died recently of leukemia, aged 43. The first symptoms had been noticed in 1910, but great improvement for over a year followed a course of Roentgen-ray exposures. Then the symptoms returned and proved fatal in seven months. Zachrisson's scientific works include a number published in Sweden and Germany on general and spinal anesthesia, tuberculin reactions, acute anemia, etc.——H. Ström, professor of surgery at the University of Christiania, for twenty years an authority on cholelithiasis, died finally of that disease.

**A New Journal for Chemotherapy.**—Few branches of medicine have experienced a development as sudden, intensive and effective as the new domain of chemotherapy associated so closely with the name and efforts of Paul Ehrlich. With mushroom-like growth, new principles in therapy and new procedures in diagnosis have arisen, commanding attention in every land where modern scientific medicine exerts its beneficent influence. The literature which the new work and its exploitation has inspired in a period counted better by months than years, now reaches enormous proportions. This has led to the establishment of a new journal intended for laboratory investigator and practitioner alike. With the title of *Zeitschrift fü Chemotherapie und verwandte Gebiete* (Verlag von Geor Thieme, Leipsic), the new publication is edited under th supervision of P. Ehrlich, F. Kraus and A. v. Wassermann—names which themselves serve to give it an immediate prestig in the field of immunotherapy and diagnosis. It is planned t publish original articles at indefinite intervals, while th review feature, forming a continuation of the *Folia Serologic* will appear regularly. The first number of 200 pages i devoted to salvarsan (606) therapy, and includes elaborat reports from Germany, Great Britain, France, Italy, Russia an the United States. The American review is by Dr. John A Fordyce of New York.

## CANADA

**Canadian Medical Association.**—The forty-fifth annual meeting of the Canadian Medical Association will be held a Edmonton, Alta., August 10 to 14. The first day, Saturda will be devoted to business. The scientific program will begi on Monday. At the conclusion of the meeting there will l excursions to the famous Yellow Head Pass and to Calgar While it was at first thought that one day of the meetir should be spent in Calgary, that idea has been since abandone A visit to Calgary may precede or follow the meeting Edmonton. Everything goes to show that a splendid progra of papers will be ready and the proverbial hospitality of tl West is already shown in the numerous arrangements alrea made for the amusement and the comfort of the visito Railway rates will be single fare plus 25 cents for the retu trip on the standard convention certificate plan from all poin in Canda. Summer tourist rates will be in effect for a trip the coast and for return by one of the United States routes.

## LONDON LETTER

*(From Our Regular Correspondent)*

LONDON, May 18, 1912.

### The Woman Physician in India

As in Japan and China, no factor has been more power in India in impressing on the native mind the value of weste culture than the benefits to be derived from European medici None has done so much to reconcile the people to Brit rule, which, whatever its defects, must receive great cre for extending freely to the natives the benefits of Europe medicine. For more than fifty years a State Medical Serv has given medical relief for the necessitous poor. Hospit and dispensaries have been provided all over the count There are nearly 3,000 medical centers under the direction the physicians of the Indian Army. These hospitals are, course, at the service of women, but in consequence of nat customs only the lowest class of women take advantage them. The high-caste purdah, or veiled woman, would rat face death than do so and all Indian women, whatever tl caste, instinctively shrink from men physicians. The n sionaries recognized the need for women physicians and 1885 Lady Dufferin, the wife of the viceroy, opened a hosp at Delhi for women and children, which was started by Society for the Propagation of the Gospel. It would difficult to exaggerate the importance of the work done this hospital. From a very small beginning it has becom magnificent modern hospital with three resident women p sicians and a large staff of native nurses under the Eng ward sisters. Under the auspices of the missionary socie there are hospitals in different parts of India officered by wo physicians, who now number over 200. Their sphere is lim to the lower caste natives. About twenty-five years ago L Dufferin initiated a charitable organization to provide me aid for the purdah or high-caste woman. Under it excel work has been done. Native and Eurasian women have trained in medical work at the medical schools. But it found impossible to reserve the Dufferin hospitals for purdah women entirely. One reason was that a sufficient number of women physicians could not be obtained; men had to be introduced. A high-caste woman will not go to a hospital if a man is allowed to enter the wards as inspector or surgeon and many of these women, notwithstanding their caste, are too poor to pay for medical attendance outside. It is felt that the only remedy for the inadequate conditions of medical work among Indian women will be the establishment of women's medical service under the government, managed entirely by women physicians.

### Effect of the National Insurance Act on the British Medical Association

The effect of the national insurance act in welding together the previously disunited medical profession (which many believed was impossible to unite), and in causing an unprecedented accession to the ranks of the British Medical Association has been referred to in previous letters to The Journal. According to the annual report of the council, the membership of the association rose, during 1911, from 22,448 to 25,301, an increase of 2,853 as compared with 1,043 in 1910. In respect to finance, a considerable increase has occurred in expenditure. In organizing to resist the insurance act, $40,000 has been spent, which brings the total expenditure for 1911 up to $337,000. A national insurance defense fund was subscribed by the profession and amounted to $32,000, but for which there would have been a deficit of about this amount in the funds for the year.

### Memorial to the Late Lord Lister

Steps have been taken by the Royal Society in association with the Royal College of Surgeons to form a committee which will issue an appeal to form a memorial to the late Lord Lister.

### Change in the Treatment of Rabies at the Indian Pasteur Institutes

At a meeting of the central committee of the Association of the Pasteur Institute of Southern India, Surg.-Gen. W. B. Bannerman of the Indian Medical Service stated that at a conference of medical officers held to consider the treatment of rabies in India, the possibility of using brain substance, sterilized by heat or chemicals, was discussed. Some experments made by Sir David Semple and published by the government seemed to hold out hopes in this direction. The conference therefore had experiments carried out at some of its aboratories and as a result the rabies virus killed by phenol (carbolic acid) is now used. The virus is obtained in the usual way from the brains and medullas of rabbits which have died from the exalted virus called by Pasteur "fixed virus," and used by Pasteur institutes throughout the world. Pasteur advised the use of virus attenuated by drying for a certain number of days, and this was the method first used in India. As the number of patients increased it was found impossible o continue this method owing to the large number of rabbits equired and the labor involved in preparing the virus. Then method devised by the late Dr. Hogyes, director of the large Pasteur Institute at Budapest, was used and proved to be as afe as the original method.

The method now used is a modification of that devised by Hogyes. Whereas he used fresh brain or medulla made into n emulsion with sterilized saline solution, the same emulsion s now used but acted on by phenol and kept at blood-heat for wenty-four hours. It has the advantage that it can be kept or some days without deterioration or danger of contamination. It is hoped that it may be possible to send out this henolized virus to selected centers where patients can be reated.

## PARIS LETTER

*(From Our Regular Correspondent)*

Paris, May 17, 1912.

### The Transfusion of Blood

Drs. Guillot and Dehelly, of Havre, presented before the Société de Chirurgie, at one of its last meetings, two reports n cases of obstinate hemorrhage, due in one case to a uterine broma, in the other to gastric cancer. Transfusion stopped he hemorrhages in both cases, and in the first, hysterectomy ffected a cure. In the second, the patient was able to endure gastro-enterostomy, but she died a few days later from the ncer.

Dr. Delbet, professor of clinical surgery in the Faculté de médecine de Paris, who had charge of the report, remarked hat, in these two cases, the seat of the hemorrhage was inaccessible and that it might be questioned whether the persistence of oozing blood was not due to the condition of the walls and to lesions of the surrounding tissues. Transfusion, then, would act primarily as a hemostatic. Apart from this function, it can be questioned whether this method has any advantages in profuse hemorrhages and whether it is preferable to intravenous injections of physiologic salt solutions. Experiments on animals show that, in profuse hemorrhages, when the arteries are empty, the veins are still engorged with blood; an injection of a physiologic solution of sodium chlorid restores the circulation of this stagnant blood in exsanguinated and apparently dead animals. It is unnecessary to resort to a method as complex as the transfusion of blood. The saline injection is preferable in shock, in which the transfusion may become even dangerous in causing hemorrhages if the patient has not already lost blood. The results obtained from transfusion in toxemia, cancer, leukemia and pernicious anemia are equally unfavorable. Transfusion can be used advantageously in carbon-dioxid poisoning, provided, however, that operation begins before the heart has stopped beating.

Dr. Tuffier, *agrégé* professor in the Faculté de médecine de Paris, on the basis of several cases of direct transfusion of blood done in his service (the first of these attempts was made by Dr. Carrel), thinks that the method presents considerable difficulty: there are precautions to take before the transfusion (examination of the blood-serum of the receptor and of the donor), but these take time, which is not always available; it is necessary to strip the artery for a considerable length and, if necessary, to dissect it free, tying off collaterals, for it is very difficult to operate in the space which separates the forearms of the two subjects; on the other hand, it is rather difficult to determine the quantity of blood given by the donor, for there is no way of measuring flow in a given space of time. Tuffier believes, moreover, that the observations published up to date should be submitted to a very severe criticism. American surgeons, who have made many transfusions, have employed this method in a wide range of different cases; Tuffier considers that the indications for its use are, on the contrary, very limited and that injections of physiologic sodium chlorid should be used whenever they are sufficient.

### The Impunity of a Charlatan

For several months, a certain Macaura, who pompously styles himself "Dr. Gerald J. Macaura, M.D., F.R.S.A., ancien membre de la Commission royale d'hygiène à Londres," has been attracting a large number of patients by advertisements in all the daily papers exploiting his apparatus called "Pulsoconn," which is said to cure not only rheumatism, gout, sciatic neuralgia, but also locomotor ataxia, paralysis and deafness! In short, "in ninety-nine cases out of a hundred, cure is certain . . . no sick person, however serious his disease, can afford to dispense with Pulsoconn." [For a somewhat detailed exposé of this faker see the editorial "Macaura Comes Back," The Journal A. M. A., Aug. 5, 1911, p. 485.—Ed.]

### Personal

On May 14, the Académie de médecine elected Dr. Jalaguier, *agrégé* professor of the Faculté de médecine de Paris and surgeon of the hospitals, as a member in the section of surgical pathology in place of the late Professor Lannelongue. Dr. Jalaguier is at present surgeon of the hôpital des Enfants-Assistés. His works are principally on infantile surgical pathology and several successful innovations in this domain are due to him, especially operations for hare-lip, club-foot and coxalgia, and an antiseptic operation for repairing the alæ nasi.

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, May 10, 1912.

### Personal

Professor von Bauer, director of the first medical clinic at Munich, died May 9 at the age of 66. He published a large number of articles on physiology and therapeutics, particularly in the field of deranged metabolism and diseases of the blood vessels. He was a son-in-law of the noted clinician v. Ziemssen of Munich.

### Housing Conditions in Berlin

The Berlin local Krankenkasse for merchants' employees has just published the eleventh report (1911) on housing conditions of its members. The homes of 12,975 members of the Kasse, who were incapacitated by sickness were investigated; of these, 6,457 lived in buildings fronting on the street; 6,518 in the rear; 779 lived in rooms in which the floor space amounted only at the most to 10 square meters, which was, however, decreased by the necessary furniture; 43 of them moreover had no windows; 2,694 patients were found in rooms of which the height did not correspond to the minimum height, 2.8 meters (9 feet), which is required by the Berlin building code. The amount of air space of which at least 20 cubic meters are required for a healthy person was below this standard in the case of 5,421 patients; in 1,421 cases it did not amount to 10 cubic meters, and for 158 patients it was not even five. In one dwelling room and a kitchen the patient lived together with three persons in 765 cases; with four persons in 420; with five in 178; with six in 83, and with seven and over in 62 instances. The sleeping room was shared with three persons of the same family by 1,576 patients; with four by 624; with five by 263; with six by 103, and with seven and over by 66; 1,100 patients had to share their bed with others. In this group 116 were pulmonary invalids, in which case the danger of infection is much the greater. Of the 1,407 pulmonary invalids only 266 slept in a room by themselves. The conditions are better for patients renting furnished sleeping rooms. More than half of all the pulmonary invalids of this class had a room for themselves day and night. Forty-nine pulmonary patients on the other hand lived in a room without any heating facilities; altogether 328 patients were found in the same pitiable situation; 626 patients were found in rooms heated only with the cooking stove; 165 patients were found in damp rooms. Although in general a slight improvement in the housing conditions can be shown as compared with the previous year, notwithstanding the unfavorable showing of the statistics, yet even this cannot be said with regard to the water-closet conditions. Half of the patients have to leave their apartments to use the closet, and the number of those using the same closet is also disproportionately high. A further interesting finding is that something over one-third of all the patients were born in Berlin; among these the relative frequency of diseases of the lungs exceeds that among those who have come to the city to live.

## VIENNA LETTER

*(From Our Regular Correspondent)*

Vienna, May 10, 1912.

### A Collection of Reconstructions of Skulls of Celebrated Persons

At one of the last meetings of the Vienna Medical Society, Professor Tandler, the anatomist, explained his idea of establishing a collection of reconstructions of skulls of eminent persons. He had worked out a method based on experiments to be described hereafter, which enabled him to obtain a perfect reconstruction of the skull and the brain of living persons. His work is based on *x*-ray photographs. By this means he got a stereoscopic picture of a head of a baby, 2 months old, and had it reconstructed in wax. The reconstructed head and the natural head corresponded and by protracted studies he was enabled to find out the exact relationship between the soft tissues and the bones of the skull. But this method permits also of reconstruction of the contents of the skull, the brain. The method was worked at for seven years, until at present one may say the method is perfect. Professor Tandler could thus have the skull of Beethoven and of Haydn, the famous musicians, reconstructed after their death-masks. In the course of studies the heads of persons belonging to different races and nations were worked at and the result is so far uniform that the constant relationship between bone and soft tissue has manifested itself here also. Professor Tandler asks the cooperation of his confrères in obtaining the necessary funds and cooperation for the difficult and expensive work. The collection of models of skulls and brains would be the more useful, as only in rare instances is the skull or brain of an eminently gifted person scientifically examined. The relation of certain conditions to skull and brain formation could be ascertained in due time by such studies, which can now be conducted during the life-time of the person to be examined.

### Investigation Into Infant Mortality in Vienna

In a paper read before the annual meeting of the Austrian Society for Protection of Children and the Care of Youth, Dr. Moll pointed out the remarkable fact, that, especially in those districts which are inhabited by the wealthier classes, infant mortality has gone up considerably within the last few years. This startling statement, proved by official figures, set in motion an investigation by the Vienna board of health *(Stadtphysikat)*. All medical officers of public health in Vienna have been requested by the board of health to answer the following questions: 1. Is the increased infant mortality confined to certain classes or occupations, and if so, which are these? 2. Are certain streets known in which infant mortality is especially high? 3. Is the outdoor occupation of wome increasing, and does this occasion neglect of the duties o mothers which accounts for the above-mentioned conditions? 4. Is medical aid less frequently sought than it was formerly? 5. Is there any noticeable connection between conditions o housing and infant mortality? 6. What are the condition and frequency of boarding out of infants? 7. Is there any decrease of suckling observed among mothers? 8. How ca conditions promoting infant mortality be best combated? Dr. Moll's statement has caused wide-spread consternation among the sanitary authorities, although the lecture himself has emphasized the necessity of using statistica data with utmost caution. Especially the great fluctuation of the population, which here is chiefly centrifugal, mus be kept in mind; for in several hitherto wealthy districts the quality of the population has changed greatly by the emigra tion of the wealthy families into garden suburbs. But ther is no doubt that the majority of the population has change its own food and that of its babies, and the change has bee for the worse. Also lodgings have become less healthful of late for with the increasing rents the rooms have become smaller the system of subletting has grown and more people live no in the same space than ten years ago. The fall in the numbe of births is a constant fact, to be seen in all civilized countries And, as Dr. Bohm states, if economic conditions preven people from producing children, all care must be taken t enable them to rear healthfully such children as they do pro duce. Therefore, the Austrian Society for the Protection o Children, founded to celebrate the emperor's jubilee, ha interested itself in the subject, and the results of its scientifi endeavors will be awaited by all medical men with grea interest.

## Marriages

Samuel C. Halley, M.D., Fort Collins, Colo., to Miss France G. Hopkins, Grainfield, Kan., at Grainfield, May 21.

William F. Dey, M.D., to Mrs. Marion B. Perry, both LaGrange, Ill., at Kenosha, Wis., May 23.

Carl J. Hoffman, M.D., Woodland, Wash., to Miss Eth M. Guerding, at Astoria, Wash., May 16.

Glenmore Ford Clark, M.D., U. S. Navy, to Miss Josephi Gould, at Philadelphia, May 21.

J. H. Hart, M.D., McDaniels, Ky., to Miss Pearl May, We ster, Ky., at Webster, May 17.

Donald MacDuffie, M.D., Olean, N. Y., to Miss Beatri Diamond, at Albany, May 22.

J. A. Toole, M.D., to Mrs. M. L. Zealy, both of Birmingha Ala., at Fairview, May 16.

Ellis Kirk Kerr, M.D., to Miss Dorothy Charlton, at O Park, Ill., May 25.

M. S. Marcy, M.D., to Miss Leora Cullom, both of Peori Ill., May 21.

## Deaths

**Alden B. Farnham, M.D.** Bellevue Hospital Medical Colle New York, 1875; of Citronelle, Ala.; a one-time member the staff of the Charity and Maternity hospitals; assista surgeon in the Eye and Ear Infirmary in New York; hea officer of New Rochelle from 1880 to 1883; a resident of M waukee, Wis., for five years, during which time he was tr tee, secretary and treasurer of the Milwaukee Emergency H pital, president of the Milwaukee Medical Society and sec tary of the Bartlett Clinical Club; died at his home, May aged 68.

**Edwin Clarence Howard, M.D.** Harvard Medical College, B ton, 1869; a well-known colored physician of Philadelp one of the original members of the Douglas Hospital st and one of the founders of the Mercy Hospital; a member the Philadelphia County Medical Society; died after a long ness at his home in Philadelphia, May 10, aged 66.

**Frank E. Palmer, M.D.** Cleveland University of Medicine Surgery, 1877; of Albion, Mich.; former mayor of that ci president of the Commercial Savings Bank, which position held at the time of his death; died at his home, May 9, fr Bright's disease, aged 64.

**Edward A. Donelan, M.D.** Medical College of Ohio, University of Cincinnati, 1852; of St. Joseph, Mo.; a member of the legislature from Andrew County in 1851-1852, and from Buchanan County for five terms; a member of the board of managers of the State Hospital at Fulton for one term; served as county physician for two terms, after which he was appointed city physician; one of the founders of the College of Physicians and Surgeons in St. Joseph; died at the home of his niece, May 10, from cerebral hemorrhage, aged 88.

**Richard L. Sykes, M.D.** New York University Medical College, 1866; of Columbus, Miss.; at one time a member of the medical staff of Blackwell Island, and of the surgical corps; died at his home, May 6, shortly after an operation, aged 72.

**Chester Rowell, M.D.** Cooper Medical College, San Francisco, 1870; of Fresno, Cal.; a member of the Medical Society of the State of California; chief owner and former editor of the Fresno *Republican;* died at Los Angeles, May 23; aged 68.

**James T. Burdick, M.D.** Worcester Medical College, Mass., 1853; for nearly fifty years a practitioner of Brooklyn; a surgeon in the 147th New York Volunteers during the Civil War; died at his home in Brooklyn, May 19, aged 80.

**Edgar Reed Hawley, M.D.** College of Physicians and Surgeons, Chicago, 1892; medical director of the Illinois Life Insurance Company for twelve years; died in the Chicago Hospital, May 26, from pneumonia, aged 48.

**James A. Mannon, M.D.** College of Physicians and Surgeons, Chicago, 1894; of Sherrard, Ill.; for eighteen years the leading physician of Sherrard; died suddenly at Excelsior Springs, Mo., May 12, of heart trouble, aged 64.

**Charles Andrew Kessinger, M.D.** Medical College of Ohio, University of Cincinnati, 1876; of Martinsville, Ind.; for four years surgeon at the Ohio penitentiary, at Columbus; died at his home, from paralysis, aged 58.

**S. O. Anthony** (license, Louisiana, 1903); of Pineville, La.; a member of the Louisiana State Medical Society; a prominent physician of Alexandria; was run over and killed by a log train near Pineville, May 20.

**John W. Johnston, M.D.** Albany Medical College, 1866; for forty-eight years a practitioner of Blair county; president of the First National Bank of Claysburg, Pa.; died in that city, May 8, aged 69.

**William Bennett Pierson, M.D.** College of Physicians and Surgeons, New York, 1852; of Brooklyn, N. Y.; died suddenly at his summer home, at Huntington, L. I., May 10, aged 86.

**Moses Chess, Jr., M.D.** Western Pennsylvania Medical College, Pittsburgh, 1899; of Tucson, Ariz.; died at his home, May 14, from pulmonary tuberculosis, aged 35.

**LeRoy S. Groves, M.D.** Medical College of Ohio, University of Cincinnati, 1859; died at his home in Creston, Iowa, May 5, from old age and organic diseases, aged 80.

**John W. Coverston** (license, Ind., 1897), of Franklin, Ind.; died at the home of his daughter, in Waupaca, Wis., May 17, from cerebral hemorrhage, aged 72.

**Hubert Townsend Foote, M.D.** Eclectic Medical College of the City of New York, 1881; died at the Park Avenue Hotel, New York City, May 18, aged 53.

**James Faithful Aris, M.D.** University of Michigan, Ann Arbor, 1866; for forty years a practitioner of Toledo, Ohio; died at his home, May 9, aged 67.

**Arthur A. Roberts, M.D.** Pulte Medical College, 1897; died at his home in Wellsburg, W. Va., May 17, from enlargement of the heart, aged 38.

**Luther Clarke Cox, M.D.** Yale University, Medical Department, 1856; of San Francisco; died at his home, May 10, from pyonephritis, aged 76.

**James Gilmore Thompson, M.D.** Hahnemann Medical College, Philadelphia, 1872; died at his home in New Brighton, Pa., May 17, aged 52.

**Ephraim Hopkins, M.D.** University of Maryland, School of Medicine, Baltimore, 1859; died at his home in Darlington, Md., aged 75.

**William M. Hightower** (license, Arkansas, 1903); died at his home in Grapevine, Ark., April 27, from senile debility, aged 79.

**Hiram LeRoy Fuller, M.D.** McGill University, Montreal, 1870; died at his home in Sweetsburg, Que., recently, aged 72.

**George W. Lyle, M.D.** Eclectic Medical Institute, Cincinnati, 1860; died at his home in Scio, Ohio, April 29.

**Henry M. Marvin, M.D.** Rush Medical College, 1870; of Coloma, Mich.; died May 3, aged 80.

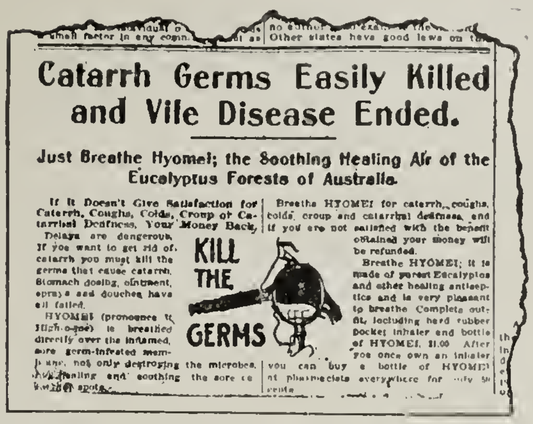
# The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

## SOME MISCELLANEOUS FRAUDS

### HYOMEI

Hyomei is "guaranteed to cure catarrh, coughs, asthma, colds, croup and sore throat." It is also said to cure "all breathing troubles including early consumption." Hyomei is an oily liquid, a few drops of which are applied to a piece of gauze and the gauze placed in a hard rubber "inhaler" which is sold with the nostrum. To "cure" diseases of the nasal cavity one end of the inhaler is applied to the nostril; to "cure" diseases of the throat and lungs the other end of the inhaler is placed in the mouth. The chemists of the British Medical Association analyzed this humbug and reported that it had essentially the following composition:



Catarrh Germs Easily Killed and Vile Disease Ended.

Just Breathe Hyomei; the Soothing Healing Air of the Eucalyptus Forests of Australia.

If It Doesn't Give Satisfaction for Catarrh, Coughs, Colds, Croup or Catarrhal Deafness, Your Money Back.

Delays are dangerous. If you want to get rid of catarrh you must kill the germs that cause catarrh. Stomach dosing, ointment, sprays and douches have all failed.

HYOMEI (pronounce it High-o-me) is breathed directly over the inflamed, sore germ-infested membrane, not only destroying the microbes, but healing and soothing the sore or inflamed spots.

Breathe HYOMEI for catarrh, coughs, colds, croup and catarrhal deafness, and if you are not satisfied with the benefit obtained your money will be refunded.

Breathe HYOMEI; it is made of purest Eucalyptus and other healing antiseptics and is very pleasant to breathe. Complete outfit, including hard rubber pocket inhaler and bottle of HYOMEI, $1.00. After you once own an inhaler you can buy a bottle of HYOMEI at pharmacists everywhere for only 50 cents.

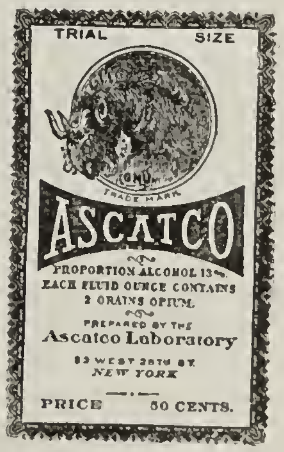
Fig. 1.—Photographic reproduction (reduced) of one of the stock advertisements of Hyomei.

| | |
|---|---|
| Oil of eucalyptus | 80 per cent. |
| Alcohol | 10 per cent. |
| Liquid paraffin | 10 per cent. |

There was also a trace, apparently, of creosote in the mixture. Of course, this mixture never cured anything, unless it was impecuniosity in its exploiter.

### ASCATCO

Ascatco is sold as an asthma cure. The company selling it used to go under the name of the Austrian Laboratory, New York City, and the stuff itself was sold as an Austrian product. It is not an Austrian product. It used to be advertised by means of advertisements that were made to imitate cable news and telegraphic reports. The cablegrams were, of course, sheer fakes. The company now is known as the Ascatco Laboratory and the advertising matter carefully omits the previous claims of Ascatco being an Austrian product. Its composition seems to be changing. When analyzed by the chemists employed by *Collier's*, it was found to be "a strong solution of arsenious oxid." An analysis by the Kansas state chemists practically confirmed the earlier findings. In a bulletin issued by the United States Department of Agriculture entitled "Habit-Forming Agents," Ascatco is described as an "opium-arsenic preparation." A cursory examination made in the Association's laboratory, disclosed the fact that the stuff contained benzoic acid apparently in combination with potassium; this, of course, in addition to the opium it contained. Ascatco also contains 13 per cent. of alcohol. The amount of opium in this "Austrian prescription" is gradually diminishing. Two or three years ago the labels declared the presence of 3.42 grains of opium to



TRIAL SIZE

ASCATCO

PROPORTION ALCOHOL 13%.
EACH FLUID OUNCE CONTAINS
2 GRAINS OPIUM.
PREPARED BY THE
Ascatco Laboratory
52 WEST 28TH ST.
NEW YORK

PRICE 50 CENTS.

Fig. 2.—One of the later labels around a package of Ascatco.

the ounce, later the presence of but two grains to the ounce was admitted while some of the specimens recently purchased give a still smaller opium content. The claims made for Ascatco that it "is non-injurious to the system," that it "leaves no after ill-effects," and further, that it "acts only on the respiratory organs," are three clear cut and unequivocal falsehoods. In fact, Ascatco is one of the most impudent frauds of its class.

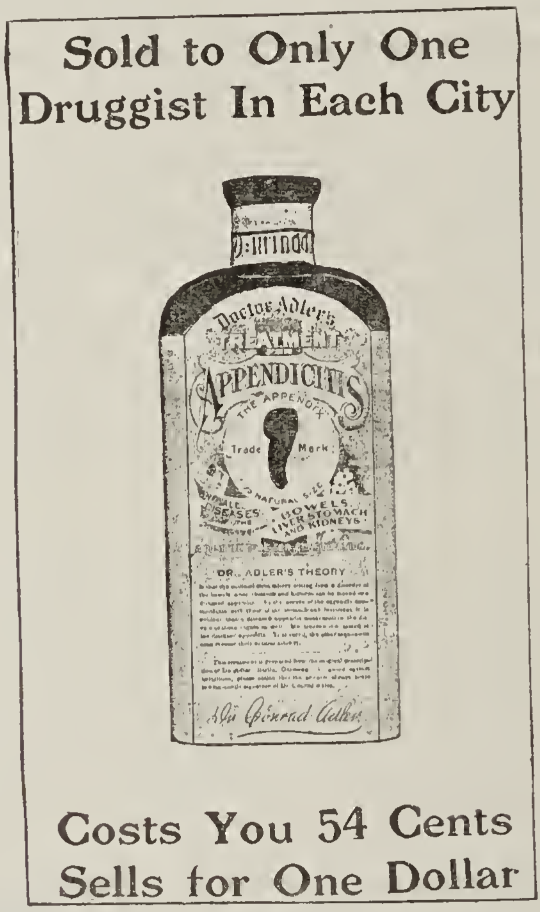
### ADLERIKA

Adlerika is an "appendicitis cure" sold by the Adlerika Company of St. Paul, Minn. It is sold, apparently, not as a mail-order proposition, but through such druggists as are not above entering into this sort of a scheme to defraud their customers. The company in a leaflet that it sends around to druggists frankly admits that it is not the people who *have* appendicitis that may be expected to buy of this worthless and potentially dangerous fraud, but those who *think* they have it. To quote:

> "You have nothing on your shelf to take the place of Dr. Adler's Treatment and can sell nothing to the man who has appendicitis, nor to the vast multitude who THINK they have or are going to have this dreaded disease."
>
> "Fully 75 per cent. of all cough and kidney remedies are bought by people who THINK they have consumption or some serious kidney ailment . . . and not by people who actually have them."
>
> "The sale for it [Adlerika] is as unlimited as the sale for cough and kidney medicines."

Analyzed by the state chemists of North Dakota, Adlerika was reported to contain:

| | |
|---|---|
| Epsom salts | large amount. |
| Aloes | large amount. |
| Salicylic acid | considerable. |
| Alcohol | trace. |


Sold to Only One Druggist In Each City

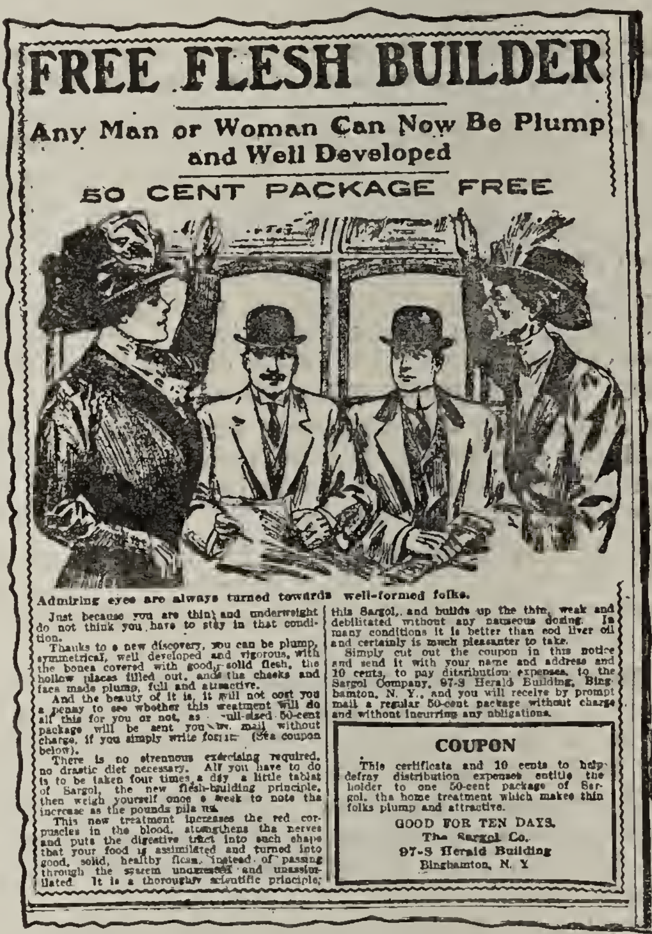
Costs You 54 Cents Sells for One Dollar

Fig. 3.—Adlerika is sold through the instrumentality of local druggists. Circulars are sent around to druggists in country towns telling of the profits that can be made by selling Adlerika to the victims of appendicitis and, more important yet, "to the vast multitude who THINK they have or are going to have this dread disease." Here we reproduce the front page of one of the folders sent to druggists who are offered a chance "to get in on the ground floor."

Of course, a purging preparation, such as this, not only will not cure appendicitis, but may in some cases kill the patient suffering from that disease.

### SARGOL

Next to the widely-advertised nostrums on the market for the cure of obesity, there are probably no bigger humbugs extant than the preparations sold as "flesh builders." Some of the latter class of fakes are alleged to be local in their action—to build up the bust but to have no effect on the rest of the body. Still others, of which Sargol is one, are sold as general "flesh builders." Sargol, which if we believe the advertisements, "makes puny, peevish people plump and popular," is sold by the Sargol Co., of Binghamton, N. Y., a concern which is said to be owned by Wylie B. Jones, an advertising man, and Oliver C. Kingsley. The stuff is advertised on both sides of the Atlantic and was recently analyzed by the chemists of the British Medical Association who reported that they found the Sargol tablets "to contain lecithin, hypophosphites of calcium, sodium and potassium, zinc phosphid, sugar, albumin and insoluble protein with talc, kaolin or some mineral matter, evidently added as an excipient." The amounts actually reported found were:


FREE FLESH BUILDER

Any Man or Woman Can Now Be Plump and Well Developed

50 CENT PACKAGE FREE

Admiring eyes are always turned towards well-formed folks.

Just because you are thin and underweight do not think you have to stay in that condition.

Thanks to a new discovery, you can be plump, symmetrical, well developed and vigorous, with the bones covered with good, solid flesh, the hollow places filled out, and the cheeks and face made plump, full and attractive.

And the beauty of it is, it will not cost you a penny to see whether this treatment will do all this for you or not, as a full-sized 50-cent package will be sent you by mail without charge, if you simply write for it. (See coupon below).

There is no strenuous exercising required, no drastic diet necessary. All you have to do is to be taken four times a day a little tablet of Sargol, the new flesh-building principle, then weigh yourself once a week to note the increase as the pounds pile up.

This new treatment increases the red corpuscles in the blood, strengthens the nerves and puts the digestive tract into such shape that your food is assimilated and turned into good, solid, healthy flesh, instead of passing through the system unabsorbed and unassimilated. It is a thoroughly scientific principle, this Sargol, and builds up the thin, weak and debilitated without any nauseous dosing. In many conditions it is better than cod liver oil and certainly is much pleasanter to take.

Simply cut out the coupon in this notice and send it with your name and address and 10 cents, to pay distribution expenses, to the Sargol Company, 97-S Herald Building, Binghamton, N. Y., and you will receive by prompt mail a regular 50-cent package without charge and without incurring any obligations.

COUPON

This certificate and 10 cents to help defray distribution expenses entitle the holder to one 50-cent package of Sargol, the home treatment which makes thin folks plump and attractive.

GOOD FOR TEN DAYS.
The Sargol Co.
97-S Herald Building
Binghamton, N. Y.

Fig. 4.—This is an advertisement of Sargol which its venders claim "makes puny, peevish people plump and popular." Apparently the advertisement is intended to convey the idea that if a woman has to hang onto a strap in a street-car because all the seats are filled with men, she will derive great satisfaction from an otherwise uncomfortable position if she has previously taken Sargol and thus become "plump and popular."

| | |
|---|---|
| Sugar | 18.0 per cent. |
| Insoluble protein (coagulated albumin?) | 10.8 per cent. |
| Sodium and potassium hypophosphites.. | 7.7 per cent. |
| Albumin (soluble) | 4.2 per cent. |
| Lecithin | 1.9 per cent. |
| Zinc phosphid | 0.7 per cent. |
| Talc, kaolin, moisture, etc. | |

The British chemists estimated that the cost of the materials for thirty of these worthless tablets was about 2½ cents; they are sold for $1.00.

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**The Fate of Medical Case-Books.**—The possible fate of old case-books after their owner's death is, indeed, too seldom borne in mind by medical men. The hard-worked general practitioner, it is true, often has time for little more than a brief record even of unusual cases, but many consultants keep full notes of every private patient, and the disposal of such elaborate case-histories should not be left to the whim of an executor. The death of a popular physician, whose practice has for many years brought him into close touch with the secrets and the troubles of well-known people, may place in lay hands a shelf full of case-books of the greatest interest and scientific value, which, if allowed to drift about, might cause infinite pain. In such instances clear directions for the destruction or the sealing-up for a number of years of all professional documents would relieve executors of an embarrassing responsibility.—*Lancet*, London.

# Correspondence

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## VIENNA

Vienna, April 16, 1912.

*To the Editor:*—Vienna always impresses the returning American as something fixed and unchanging. Men may come and go, but the old landmarks rarely alter. I saw the other day a picture of the Allgemeines Krankenhaus made in 1790, from one of the north windows of what is now the laboratory of the Fuchs eye clinic. This view is little different from what it is to-day. Every building in the first *Hof* is the same as now, even to the arrangement of minor details, such as windows and chimneys. Outside the Krankenhaus, however, the green fields of 1790 are now built up solid. But Chicago in much less than this time has changed from an Indian hunting-ground to a city one-fifth larger than the Vienna of to-day.

Osler, coming back here in 1908, after an absence of thirty years, found the hospital no different, the Alser Strasse the same old dusty highway where he had his residence, and, walking up Schlösselgasse, he took dinner in his former place at the Riedhof. The waiters, however, were different.

Frank Billings, coming back in 1899, twenty-five years after student days, could locate for us all his old haunts; but in the pathologic laboratory where he worked only the oldest *Diener*, the famous Theodore, was there to greet him back.

After a mere three years' absence I see slight changes. The old barracks for the Hungarian Regiment at the foot of the Alser Strasse and opposite the Landesgericht are now being torn down to be replaced by the new home of the Austro-Hungarian bank. This land has become too valuable because of its central location longer to house soldiers.

The three new clinics, those of von Noorden, Pirquet and Chiari, which were well under way in 1909, are now occupied. There was no fuss and red tape about moving into them, such as kept the two gynecologic clinics unoccupied for nearly two years after they were completed. These new clinics are all built and equipped on the same munificent scale as the gynecologic clinics, and fulfil nobly our hospital ideas of to-day. One wonders whether, after another century has passed, they will look as antiquated to our posterity as the old hospital of 1790 does to us now.

Wagner's neurologic clinic has been moved into the old Irrenhaus quarters on the new hospital grounds, where he now has beds for 300 patients. The space in the old hospital made vacant by moving out these six clinics has already been taken up by the overflow from the other clinics, or has been turned into laboratories, operating-rooms, and the like. Von Noorden's old wards in the eighth *Hof* have been turned into a fourth medical clinic for Chvostek. His appointment strengthens the neurologic faculty, which was weakened when Strümpell deserted Vienna for Leipsic. The faculty in internal medicine is now very strong, with von Noorden, Neusser, Ortner, Chvostek, Kovacs, Wagner, Schloesinger, Pal and Frisch. These men combined have over a thousand beds for internal medicine and neurology under the roof of the one hospital. The dead of the hospital, without exception, go to the autopsy tables at Weichselbaum's institute. These clinics are all open to Americans, who may work there as externs or take the courses offered. The same opportunities that were taken advantage of by Billings, Osler, Kelly, Preble, Sippy, Spiller and many others of our leaders are still there, and in an even larger measure than in the past, owing to the recent increase in material.

Neusser, since his operation by Hochenegg last autumn, has been recuperating at his country home. It is not known when he will return to his clinic. Kovacs has been giving the student examinations for him, and his former assistant, Tuerk, is to lecture for him during the present summer semester. The absence of Neusser makes a noticeable gap here in internal medicine, because his clinic was much frequented by Americans for the sake of his famous talks on differential diagnosis. Kovacs is, in consequence, more popular than ever. He is still making the same hair-raising diagnoses that cause the American students to regard him as the eighth wonder. A recent one verified by autopsy was "obliteration of the left side of the pericardium (concretio partialis) and inflammatory effusion on the right side," a part of a very complicated picture, including also bilateral pleurisy with effusion, chronic peritonitis and miliary tuberculosis of the kidneys. One usually has to wait six to nine months at present before one's turn comes to get a place in Kovacs' course.

Clairmont is giving no more courses in surgery. He is too busy with private work and research. Haberer, Eiselsberg's second assistant, has been called to Innsbruck to take Schloffer's old clinic. Many think Clairmont should have had the preference.

Rudolph Schmidt, best known to Americans as Neusser's former assistant, and for his monographs on "Pain Phenomena" and "Abdominal Tumors," has also gone to Innsbruck to take the clinic left vacant by Ortner on coming to Vienna.

Hans Lorenz, formerly with Hochenegg, now has a small clinic of his own at one of the outlying hospitals in Vienna, where all Americans receive a cordial welcome.

The surgical department has not yet been favored with a clinic on the new hospital grounds; but Eiselsberg has been promised that the next building which goes up there shall be his. When the necessary funds will be available it is at present difficult to say.

Urbantschitsch's ear clinic has been moved into the eighth *Hof*, where it occupies some of the place made vacant by the gynecologic clinics. He has now about sixty beds. His material is so abundant that one can see one to three new cases of intracranial complications daily. Barany is no longer on active duty at the clinic. He is pursuing his nystagmus investigations, however, with the same relentless persistency as formerly. He seems to have proved, as has long been suspected, that the cerebellar hemispheres control the movements of the homolateral halves of the body. He has also been able to localize an arm and a leg center in the cerebellar hemispheres, and in a number of cases has been able to differentiate lesions of the hemispheres from those of the vermis.

There is a good deal of brain surgery being done here at present, especially at the Eiselsberg clinic; but the results so far have been rather disappointing. Eiselsberg, in his first hundred cases of brain tumor, recently reported, has had only four complete and permanent cures. One sees nearly every week at the autopsy table two or three cases of brain tumor or abscess, some operated on and many not. Hirsch has been having remarkable success with his hypophysis cases, twenty-five cases to date and only three deaths—none of them from infection. But no one else has managed to achieve with it the success that he has. Chiari still sticks to the original Schloffer method, and Eiselsberg uses a modification of it, going into the nose below the frontal sinus instead of through it.

Arthur Schueller is doing Hirsch's *x*-ray work. He also does the *x*-ray work of the head for the Allgemeines Krankenhaus. He is very adept at diagnosing the size, direction of growth and character of the hypophyseal tumors, and also the anatomic variations in the sella and nasal sinuses, points of importance at the operation.

Holzknecht, the chief of the *x*-ray division, is now devoting a great deal of attention to stomach and intestinal work. His "Atlas" on this subject is to appear shortly. Holzknecht's assistant, Zollschan, is coming to America this fall to deliver some lectures in New York and Philadelphia before anthropologic societies. He is the author of a book on this subject which has been much read abroad. The Vienna school of *x*-ray is generally conceded the palm at present throughout Europe for its work in diagnosis. Its advancement in this field is something which at once strikes the American student very forcibly as much ahead of our work at home. Many of the young Americans here, both surgeons and internists, are devoting much attention to it, Elliott and Straus, of Chicago, and Sears, of Portland, among others.

One doesn't hear much inquiry from the members of the Viennese profession or from physicians elsewhere in Europe, for that matter, concerning postgraduate opportunities for study for the foreigner in America; but many *do* ask about the opportunities for practice. When they find out, however, that we have already nearly three times the number of physicians in proportion to our population that Austria and Germany have, most of them are disappointed. They also find it hard to believe that we actually admit them to practice in our country on the same basis as our own graduates, and even allow them to take examinations in their own language, and they find it still more queer that we erect no tariff wall against their household belongings, instruments and professional apparatus, on which our own returning doctors pay high duty. The graduate of an American school must put in five years' study in Austria, and then take an examination extending over some months, always in the German language, before he may practice there, and 40 per cent. of his net income thereafter becomes the property of the state. That our returning professional brothers do not make more clamor against this unequal treatment may be due to the fact that the average American citizen returning to our shores is so glad to get back to the land of pancakes, beefsteak and real newspapers, that he feels it to be cheap at any price and makes no complaint.

Roger T. Vaughan, M.D., Chicago.

## What Constitutes the Management of Normal Labor?

*To the Editor:*—In The Journal (January 27, p. 274) is an article entitled "The Management of Normal Labor." In this paper, so many statements are made which do not coincide in technic with the generally accepted teaching of our modern schools, that the Section of Obstetrics of the Jackson County Medical Society desires to register a criticism of some of the errors which are in evidence, many of which have been noted singly, as witness the following correspondence already printed in The Journal: February 10, p. 428; February 24, p. 576; March 2, p. 649, and March 22, p. 880.

It seems the most encouraging indication of the present attitude of the profession toward this subject which, for all time, has been the most important but the least understood and most abused branch of our art, that such a storm of protest has been aroused, especially from the country practitioners for whose benefit the article was ostensibly written. At this point, it may not be amiss to state that in an experience of twenty-five years, of which twenty have been partially occupied as a teacher of obstetrics, I have been brought into more or less intimate contact with former students and am convinced that the better type of country doctor is not inferior, in any degree, to his brother whose lot is cast in the city and that, being to such a degree dependent on his own devices, he, after leaving the medical school, is, by careful observation of his cases, in many instances, more resourceful and better equipped to meet intelligently the emergencies which beset an obstetric practice. Hence, when *ex cathedra* rules which are neither scientific nor sane are laid down for his guidance in a patronizing benevolence, he naturally rebels.

At our recent meeting, our former secretary, Dr. Wilhelm, introduced a resolution, which was adopted, to the effect that we register a protest to this article, on behalf of the city obstetrician and the general practitioner doing a country practice.

It is conceded that the article has many good points; and these will be accepted as stated by the writer and endorsed. It is not in a spirit of captious criticism but simply to try te help in this campaign of education in obstetrics, that we make this report.

The section referred to a committee the work of analysis and comment on the article in question and it will be understood our criticism applies only to the suggestions in the paper of which we do not approve.

In the first place, routine vaginal examinations are a menace to the parturient woman, and in some clinics in Germany, it is said, digital examination is forbidden with the result of great decrease in morbidity and no increase in fetal fatality, dependence being placed on external manipulation and observation.

The advice to lubricate the fingers and introduce them, ungloved, into the vagina is bad. Few examinations should be made. When necessary to make an internal examination, it should be with careful preparation of the arms and hands, the donning of a clean (if not sterile) gown and the wearing of gloves. Gowns and gloves are not prohibitively expensive and should be a part of the equipment of every practitioner who does any obstetric practice.

The advice to puncture the membranes is usually unnecessary as this is the ordinary sequel to complete dilatation; and one of the sources of disaster in normal labor, as well as in cases of dystocia, is premature rupture. In the right occipitoposterior position, the sine qua non is the preservation of the membranes until rotation can take place.

The anointing of the perineum is a doubtful expedient. If it has any virtue, the risks of colon bacillus infection, from the smearing of the field, would at once offset the possible benefit of the emollient.

In regard to the management of the third stage of labor, the pulling of the cord is to be condemned under all circumstances, as tending to discourage the physiologic expulsion—a folded placenta with the fetal side out; such interference also incites that tragedy of obstetrics, inversion of the uterus.

The suggestion that, in any normal case, the hand be inserted into the vagina and the placenta pulled down is preposterous. More than any other point to be criticized is the direction that the hand and arm be introduced into the uterus after a half or three quarters of an hour and the placenta forcibly detached! There can be conceived no normal labor in which such a reckless attempt would be justified and, if such method were to be tolerated, it must inevitably increase the maternal mortality.

The technic of Dr. Tweedy, master of the Rotunda Hospital at Dublin, is to be endorsed as not only an admirable expedient but a procedure based on sound scientific reasoning. Tweedy says the placenta is separated by a retroplacental hematoma which is formed in the space between the maternal surface of the placenta and the uterine wall. Indiscreet or hasty efforts by the original Credé manipulations tend to dislodge the clot and thus to interfere with the efforts of Nature to separate the placenta in a physiologic manner. Tweedy recommends, after the cord is severed, the use of a hemostat placed on the cord about 2 inches out of the vulva. When the placenta is dislodged and passes out of the uterus into the vagina, this movement will be noted by the change in the relative position of the hemostat. The fundus should then be grasped by the hand applied with the palmar surface next the fingers extended and the placenta gently expressed.

In 1820, Charles D. Meigs warned the obstetric professio to beware of meddlesome midwifery. He said the hand introduced into the uterus was the greatest menace to which th lying-in woman is exposed.

In the light of our knowledge to-day, it is unbelievable tha any man in any but a library practice of obstetrics would b guilty of such heresy as the treatment recommended in th paragraph on the management of the third stage of labor i the paper under discussion.

George Clark Mosher, Kansas City, Mo.
Chairman of the Section of Obstetrics of the Jackson Count
(Mo.) Medical Society.

## University of Pennsylvania Medical Department

*To the Editor:*—Permit me to call your attention to a error in the item entitled, "Changes in the University Medic Department," referring to the School of Medicine of t University of Pennsylvania (The Journal, May 25, p. 1610 The statement as printed indicates that there has been amalgamation of the University Hospital and the John Musser Department of Medical Research with Dr. Alfr Stengel as directing head. This is not precisely the situatio The department of medicine and the department of resear medicine have arranged to cooperate in teaching and resear and to have joint assistants engaged in both lines of work the wards of the hospital and in the laboratories of t research medical department. The chair of research medici has its own head, entirely independent of the chair of me icine. Dr. Richard M. Pearce, Jr., is the professor of resear medicine, in complete charge of the department of resear medicine, and Dr. Alfred Stengel is the professor of medicine, in charge of the instruction in medicine in the school and in the hospital of the University of Pennsylvania.

A. J. Smith, Philadelphia, Dean.

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### Procuring Blood for the Wassermann Test

*To the Editor:*—Having seen recently several more or less complicated methods suggested for procuring blood from the veins, for the Wassermann or other tests, we thought perhaps the profession at large was not familiar with the utility of a hypodermic syringe for this purpose. For two years we have used an ordinary clean sterile glass hypodermic syringe with a 24-gauge needle. A tourniquet is placed around the upper arm so as to distend well the veins; the region of the elbow is scrubbed with tincture of green soap; then with 95 per cent. alcohol: the patient is requested to grip his hand which distends further the blood-vessels and renders it easy to insert the needle into the vein. By withdrawing the piston the barrel of the syringe fills with blood. The tourniquet is loosened, the needle removed and the small puncture sealed with a drop of collodion. The blood, when squirted into a small clean sterile bottle and corked, is ready for transportation. The simplicity of this method commends it, as does also the fact it is an easy matter to secure and boil a small bottle and a glass hypodermic syringe, or a larger one if more blood is desired.

Drs. Ballenger and Elder, Atlanta, Ga.

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# Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### VACCINE AND SERUM TREATMENT OF PNEUMONIA

*To the Editor:*—Please refer me to some available statistics on the vaccine and serum treatment of pneumonia.

G. A. Warren, Black Rock, Ark.

Answer.—Below is a list of references on vaccine and serum treatment of pneumonia, obtained from the literature for the last five years. J. M. Anders ("Practice of Medicine") states that he has collected reports of 535 cases treated by serum therapy, sixty-one cases treated with diphtheritic serum and 474 with pneumococcus serum, with eighty-five deaths, a mortality of 18.3 per cent. The results obtained by different observers are variable and fail to carry conviction. Much the same opinion is expressed by other recent authors of textbooks. The vaccine treatment seems to be more encouraging, although still in an experimental stage. According to the general principles of vaccine treatment, the use of vaccine should be more successful in cases of delayed resolution, chronic pneumonia, etc. Vaccines have, however, been used in acute cases, but if used in this way should be given in small doses.

Crux: The Serum Treatment of Pneumonia, *Deutsch. med. Wchnschr.*, April 16, 1908.

May: Römer's Pneumococcus Serum in Croupous Pneumonia, *München. med. Wchnschr.*, Oct. 6, 1908.

May: Action of Römer's Antipneumococcus Serum in Croupous Pneumonia, with Special Regard to the Leukocytes, *München. med. Wchnschr.*, Oct. 13, 1908.

Monte, A.: Treatment of Pneumonia with Antipneumococcus Serum, *Arch. f. Kinderheil.*, xlix, Nos. 1-2.

Batten, G. B.: Double Pneumonia with Childbirth; Pulmonary Infarcts; Injection of Vaccine of Mixed Pneumococcus; Recovery, *Lancet*, May 22, 1909; abstr. in The Journal, June 19, 1909, p. 2025.

Harris, A. B.: Therapeutic Value of Pneumococcus Vaccine in Pneumonia, *Brit. Med. Jour.*, June 26, 1909; abstr. in The Journal, July 24, 1909, p. 327.

Willcox, W. H.: Treatment of Pneumonia by Inoculation, *Brit. Med. Jour.*, Oct. 9, 1909; abstr. in The Journal, Nov. 6, 1909, p. 1599.

Leary, T.: Vaccine Treatment of Lobar Pneumonia, *Boston Med. and Surg. Jour.*, Nov. 11, 1909; abstr. in The Journal, Nov. 27, 1909, p. 1860.

Bruning, H.: Negative Results of Serotherapy of Pneumonia in Children, *Deutsch. med. Wchnschr.*, Oct. 21, 1909.

Craig, H. A.: Pneumonia in the Aged, Treated with Pneumococcus Vaccine; Recovery, *Med. Rec.*, Feb. 12, 1910; abstr. in The Journal, Feb. 26, 1910, p. 738

Stewart, F. E.: Use of Vaccines in Treatment of Pneumonia, *Am. Med.*, April, 1910; abstr in The Journal, May 28, 1910, p. 1824.

Ager, L. C.: Unresolved Pneumonia in a Child Treated by Mixed Vaccines, *Long Island Med. Jour.*, October, 1910.

Sill, E. M.: Serotherapy of Pneumonia in Infants and Young Children, *Med. Rec.*, April 22, 1911; abstr. in The Journal, May 13, 1911, p. 1422.

### AN ALLEGED CANCER-CURE (COLLOID OF COPPER) AND ITS PROMOTER (GAUBE DU GERS)

*To the Editor:*—I would like to get some information on a cancer cure advocated by Dr. Hube Dugers, a Paris physician, who claims to cure cancer with a preparation called "colloid of copper." I have never heard of the drug before and do not know whether there is such a drug or whether it is a preparation in the Cargose Compound class. The man who asked me about it showed me a clipping from a newspaper, and, while I did not know anything about it, I thought you might give some light on the subject.

R. W. Markley, M.D., Rockford, Ill.

Answer.—The newspapers, about March 9, published the cabled account to which our correspondent refers, but the fact that neither our European medical exchanges nor our Paris correspondent has mentioned the claims made by Dr. du Gers for his "colloid of copper" speaks against its scientific importance. Only one French medical journal has mentioned it, so far as we have seen, and this merely quoted the statement without comment. His name—which is Gaube du Gers, but has been mutilated in transmission—is given in the medical directory of France (Annuaire Médical), but without the usual date of graduation.

### ANTIFORMIN METHOD OF EXAMINATION FOR TUBERCLE BACILLI

*To the Editor:*—1. What is antiformin and how is it prepared? 2. How is it used?

C. A.

Answer.—1. Antiformin is a strongly alkaline solution of sodium hypochlorite, the preparation of which is described in New and Nonofficial Remedies, 1912, p. 30.

2. The collected expectoration of a number of hours is treated with an equal volume of a 20 to 30 per cent. solution of antiformin. On gentle agitation of the mixture the tenacious mucoid material will dissolve and all the bacteria, except those belonging to the acid-fast group, will be destroyed. The material is centrifugalized and the sediment is spread on slides, dried in the air, fixed by heat or by immersion for several minutes in a 2 to 3 per thousand solution of mercuric chlorid, washed off and stained as usual.

### FORMALDEHYD DISINFECTION

*To the Editor:*—1. Does the Chicago Board of Health use formaldehyd fumigation for infectious and contagious diseases, especially small-pox? 2. How much should be used per thousand cubic feet of air-space and how long a time must a room be shut up?

L. B.

Answer.—The following, extracted from the "Circular of Information," is the method of formaldehyd disinfection used by the Chicago Department of Health:

"The room to be disinfected is sealed and prepared as usual for sulphur disinfection, by pasting strips of paper over cracks of doors and windows. All its surfaces are exposed as much as possible; closet doors are opened and their contents, together with the contents of drawers, are removed, scattered about and the drawers left open; mattresses are set on end; pillows, bedding, clothing, etc., are suspended from lines stretched across the room or spread out on chairs and other objects so as to expose all sides; books are opened and the leaves spread —in short, the room and its contents are so disposed as to secure free access of the gas to all parts as fully as possible.

For every 1,000 cubic feet of space in the room, suspend, by one edge, an ordinary bed-sheet (2 by 2½ yards) from a line stretched across the middle of the room. Properly sprinkled this will carry, without dripping, 8 ounces of liquor formaldehydi—the 40 per cent. solution of formaldehyd gas—which is sufficient to disinfect 1,000 cubic feet of space. As many sheets as necessary are used hung at equal distances apart. The ordinary rather coarse cotton sheet should be used in order to secure rapid evaporation. The house should remain sealed not less than eight hours.

"A rosehead sprinkler used by florists can be used for sprinkling the sheets.

"After the disinfection soak all sheets, pillow slips, towels and other washable articles in the sick-room, in the strong disinfectant and remove them while wet to the laundry, to be boiled at least thirty minutes. Sprinkle thoroughly all the surfaces of pillows and of the mattresses with the strong disinfectant and then carry into the open air, to be exposed to sunshine for at least six hours—frequently turning the articles. Mattresses and pillows should be burned or sterilized by heat if soiled by discharges from the patient. Consult the physician on this point."

### LIQUID ANTISEPTIC SOAP

*To the Editor:*—Please give me a formula for a good liquid antiseptic soap, which does not contain formaldehyd, for general use.

S. S.

Answer.—The following formula, which is an adaptation from the British Pharmaceutical Codex, was tried in the Association Laboratory and appears to make a satisfactory preparation:

Take of

| | gm. or c.c. | | |
|---|---|---|---|
| Oleic acid | 35 | | f.℥ j |
| Alcohol | 15 | or | f.℥ ss |
| Potassium hydroxid | 7 | | ʒ ij |
| Water | 7 | | f.ʒ ij |

Mix the oleic acid and the alcohol and add a few drops of phenolphthalein solution. Dissolve the potassium hydroxid in the water and add the solution in small portions to the oleic acid-alcohol mixture, shaking until a faint pink color is produced. Allow the neutralized product to cool and add five drops of oil of lavender and ether enough to make 100 c.c. (fl.℥iij).

### VON PIRQUET TEST

*To the Editor:*—What is the von Pirquet's test for tuberculosis, how is it applied and what are the indications as to a positive reaction?

B. P.

Answer.—The cutaneous tuberculin test, sometimes also called the Von Pirquet method, is applied by placing 2 drops of Old Tuberculin, diluted with 1 part or a 5 per cent. solution of phenol (carbolic acid) in glycerin and 2 parts of physiologic salt solution, on the skin and by scarifying the skin through it, preferably by the use of a special punch or needle which introduces some of the preparation beneath the epidermis. The surface of the skin is then covered with cotton wool, the covering being allowed to remain for five minutes.

In a tuberculous subject a papule forms, averaging 10 mm. in diameter, which may occasionally be succeeded by a vesicle. The reaction is at its height in from twenty-four to forty-eight hours. The color, at first a bright red, gradually fades, leaving a pigmented spot which is likely to disappear in children within five or six days, but may persist in adults for weeks.

The reaction is specific for tuberculosis, but does not distinguish between active and latent forms of the disease. In children it indicates a tuberculous process which is usually active, but in adults it gives positive results in nearly all cases, even with persons who appear to be in perfect health, but who, in consequence of the wide prevalence of tuberculosis in infancy, carry with them remnants of a quiescent or healed tuberculous focus. The latter condition is rarely of clinical importance; hence the von Pirquet reaction is of relatively little value for the diagnosis of active tuberculosis in the adult. See article on the test in The Journal, Jan. 21, 1911, p. 181.

### THE PROBLEM OF A PURE WATER-SUPPLY

*To the Editor:*—Our city is considering the question of how to secure pure drinking-water. Is it better to try to filter our poor and contaminated lake water or to pipe spring water into town for a distance of 2¼ miles? The lake is shallow and when windy is very muddy. In the summer the water has a strong, foul odor; for two years it has been dead and stale; the outlet dry. Our sewer empties into the lake, after passing through a septic tank and filter beds, but a great deal of the sewage is not changed. Can a filter be put in that will purify, clarify and sterilize the water perfectly?

Is it practical and feasible to use aluminum sulphate to throw down lime by making a hydrate which precipitates to the bottom? Can this be done successfully in a large filtering system for city use? And will this process destroy bacteria? Some think it advisable to use spring-water for domestic use and lake-water for all other industrial use.

N. B.

Answer.—It is always better to use pure drinking-water when it is obtainable, rather than attempt to purify water from a highly contaminated source. Nevertheless, a properly constructed and carefully managed purification plant will render even a highly objectionable water entirely safe. The danger in the latter procedure arises from the possibility of accident from negligence or ignorance. In general, it is better to eliminate the chance for such accidents as far as possible. Filters have proved a marked success in such places as Albany, Philadelphia, Pittsburgh and Cincinnati in this country. In dealing with a very turbid water, precipitation by aluminum sulphate has been found advantageous. A double system of water-supply has many disadvantages; some people are sure to use the contaminated supply for drinking purposes. An excellent discussion of the whole water question with a view to American conditions is given in Allen Hazen's "Clean Water and How to Get It," published by John Wiley & Son, New York.

## Medical Economics

This Department Embodies the Subjects of Postgraduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

### POSTGRADUATE COURSE FOR COUNTY SOCIETIES

#### Tenth Month—Fourth Weekly Meeting

#### Albuminuria

ETIOLOGY

1. Lesions of urinary organs, acute and chronic nephritis, renal degenerations and tumors, suppuration in pelvis, ureter and bladder, toxemias, scarlet fever and gout.
2. Slight or undemonstrable lesions. (a) Functional, physiological, after eating, exertion, violent emotions, bath. (b) Cyclic, age, associated conditions. (c) Febrile. (d) Hemic changes, purpura, syphilis, leukemia, etc. (e) Neurotic. (f) Orthostatic.[1]

PROGNOSIS

Bearing of cause, age, arterial tension, casts, general condition, influence of digestion.

#### Chronic Interstitial Nephritis[2]

SYMPTOMS

Gradual insidious onset. Development of uremic symptoms, dyspnea, loss of flesh.

Urinary System: Urine, quantity, specific gravity, albumin, casts, blood-cells.

Circulatory System: Physical examination, cardiac hypertrophy, high tension pulse.[3] Freezing point of blood. Symptoms of broken compensation later.

Respiratory System: Epistaxis, edema of larynx, hydrothorax, dyspnea, cardiac or uremic, nocturnal. Bronchitis and edema of lungs.

Gastro-intestinal disorders.

Nervous System: Headache, drowsiness, stupor, convulsions. Meningitis and apoplexy, "shifting paralyses," "dead finger."

Special Senses: Retinitis, amblyopia, amaurosis. Tinnitus, deafness, vertigo.

TREATMENT[4]

#### Nephritic Colic

DIAGNOSIS

Onset of pain, character, radiation, tenderness. General symptoms. Duration and terminations. Differentiate from biliary colic, intestinal colic, appendicitis.

TREATMENT

Heat, locally, internally, baths. Posture. Physiologic and therapeutic effects of morphia, chloroform.

#### Monthly Meeting

Differential Diagnosis of Coma.

Early Diagnosis and Treatment of Chronic Nephritis.

Relation of Nephritis and Cardiovascular Disease.

[This Ends the Course for this Season.]

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[1] Progressive Medicine, December, 1909.

[2] Emerson: Archives of Internal Medicine, June, 1908.

[3] Janeway: Am. Jour. Med. Sciences, January, 1907. Elliott Am. Jour. Med. Sciences, May, 1910.

[4] Progressive Medicine, December, 1904. Tyson: New Yor Medical Journal, Feb. 3, 1906.

Journal Announcements, Knocks and Boosts, Books Received an changes in the Public Service will be found in the advertising sec tion, commencing on the second page following reading matter.

# Medicolegal

### A Privileged Communication

*(Hays vs. Hays (Ind.), 97 N. E. R. 198)*

The Appellate Court of Indiana, Division No. 1, holds an objection was properly sustained to a question asking a physician to state what conversation, if any, he had with a patient at his office, with reference to the compensation she was receiving as a clerk in the defendant's store. The suit was one brought by the administrator of the estate of the patient to recover a sum claimed to be due for services. The defendant called the physician as a witness. Before ruling on the objection to the question stated, the trial judge examined the witness, in the absence of the jury. He testified that the patient usually came to his office every Sunday morning; that she had been his patient for about six months and at the time in question she was not well and came to his office for treatment; that she was consulting him as her physician; that he advised her to get away from the store and take a vacation; that she said she was not able to pay the expenses, to which witness answered that he did not see why; that she replied, "I don't get as much probably as you think I do;" that the witness then asked her how much she got; that he gave her some medicine and prescribed for her at the time the conversation took place; that he was instructing her about her health, and was advising her to go away; that he made the inquiry that he might know whether she could go or not, and that he made the inquiry of her as a patient. The court thinks that the inadmissibility of the question asked the physician was, under the circumstances, shown by the plain reading of the Indiana statute which provides that physicians shall not be competent witnesses "as to matter communicated to them as such by patients, in the course of their professional business, or advice given in such cases." Besides, the decisions of the Supreme Court of the state have given the act a broader meaning than its language imports, the prohibition having been held to include, not only communications and advice, but all information acquired by the physician while treating or attending the patient in his professional capacity.

### Results and Opinions of Experts Thereon in Actions for Malpractice

*(Sawyer vs. Berthold (Minn.), 134 N. W. R. 120)*

The Supreme Court of Minnesota affirms a judgment for $2,000 damages for the alleged negligent and unskilful treatment of a fracture of the plaintiff's wrist. She was a woman 46 years of age, who fell on the stairs at her home, sustaining a Colles' fracture of the tip of the radius and the ligaments n the wrist joint. The defendant, a physician and surgeon, was immediately called. He diagnosed the case correctly, and reated the injured wrist by the application of splints and bandages. About six weeks after the accident he determined hat a union had taken place, removed the splints and bandages, and ceased treating the plaintiff. At the time of he trial the hand was in an abnormal, deformed position, he plaintiff having little or no use of the hand or fingers, nd continuing to suffer pain. The result, whether of the racture, or of the defendant's treatment, was admittedly bad.

The evidence to show that the defendant's treatment was nskilful or negligent was the testimony of experts, based holly on the result, and evidence of an admission by the defendant that it was a bad job and he had made a mis-ike. One expert witness for the plaintiff testified in sub-tance that such a deformity following a fracture of the rist such as the plaintiff sustained would generally indicate mproper treatment, though he qualified this by the statement hat there are some cases in which such a result cannot be voided. An expert witness for the defendant, while testify-g that the treatment was proper, said substantially that if, hen the bandages were removed, the hand was in the same sition as it was at the trial, there was something wrong, d it would not be good treatment for the attending physician to quit the case. He also testified that, if the hand had been properly set, it ought to have been practically straight at the end of six weeks. The court holds that, while, on the entire evidence, a verdict for the defendant would have been justified, the case was one for the jury to decide, and that the verdict was not so against the weight of the evidence that it ought to be interfered with after the trial court had approved it; nor on the ground of excessive damages.

It is undoubtedly correct, the court says, that negligence of a physician or surgeon cannot be inferred from a poor result alone. There must be evidence from expert witnesses tending to show improper or unskilful treatment, in order to sustain a charge of malpractice against the physician. But this is not saying that an expert witness may not base his opinion that the treatment was improper wholly on the result, or that a court or jury cannot base its decision on such an opinion. Without the assistance of expert evidence, it is entirely logical and correct to say that the result furnishes no evidence of negligent treatment; but there doubtless are cases where evidence of a poor result alone would convince an expert that the treatment must have been improper, and in such cases the court can see no reason for excluding the opinion based on such evidence, or in refusing to give weight to such opinion. The court does not draw the inference of negligence from the result but from the evidence of the experts. Therefore, the opinion of the plaintiff's expert was properly received in evidence, and, with the evidence of the admission by the defendant, made a prima facie case, and the trial court properly refused to dismiss at the close of the plaintiff's case.

# Society Proceedings

### COMING MEETINGS

Amer. Assn. of Genito-Urinary Surgeons, Philadelphia, June 7-8.
American Climatological Association, Hartford, Conn., June 10-12.
American Ophthalmological Society, Atlantic City, June 12-13.
American Otological Society, Atlantic City, June 10-11.
Maine Medical Association, Portland, June 12-13.
Massachusetts Medical Society, Boston, June 11-12.
Michigan State Medical Society, Muskegon, July 10-11.
New Jersey Medical Society, Spring Lake, June 11-13.
North Carolina Medical Society, Hendersonville, June 18-20.
Rhode Island Medical Society, Providence, June 12-13.
Washington, Idaho and Oregon associations, Portland, July 5-8.
West Virginia State Medical Association, Webster Springs, July 10-12.

## ASSOCIATION OF AMERICAN PHYSICIANS

*Twenty-Seventh Annual Meeting, held at Atlantic City, N. J., May 14-15, 1912*

The President, Dr. J. George Adami, Montreal, in the Chair

### Officers Elected

The following officers were elected for the ensuing year: President, Dr. L. F. Barker; vice-president, Dr. Simon Flexner; secretary, Dr. George M. Kober; recorder, Dr. S. Solis Cohen; treasurer, Dr. J. P. Crozer Griffith.

Washington was chosen as the place for the 1913 meeting.

### President's Address: Some Things the Association Could Do

**Dr. J. George Adami**, Montreal: I suggest that our association might take the initiative in a plan to have the government provide a building in Washington in which various national and international societies might hold their meetings, and in which their archives might be kept safely. The association might also provide a medal which could be bestowed, as occasion arises, on those who, in the opinion of our body, have made some advance of the first order in medicine. Also, for the same object an annual lectureship could be founded as a means of honoring those who make notable advances in our science.

### Clinical Study of the Effects of Sleep and Rest on Blood-Pressure

**Drs. Harlow Brooks and John Carroll**, New York: Numerous physiologic researches on man and the lower animals have shown that there is a marked fall of blood-pressure during sleep. In our experiments we found that the night pressure, taken in groups of night sleepers, was almost invariably lower than the day pressure in the same individual, but that, conversely in night workers and day workers the finding was reversed. Neither very high nor very low pressures were included. The pressure was found to vary from 6⅔ mm. to 44.8 mm. lower during sleeping than during waking hours. The slightest drop in pressure took place in those whose usual pressure was lowest. The maximum fall took place about two hours after sleep began. Still greater variations occur under exceptional circumstances or in neurotic individuals, classes excluded from this study. Attempts to secure even a temporarily lower twenty-four hour pressure by prolonging or deepening the sleep were apparently without avail; nor was the degree or persistence of the drop increased by artificial means, as by large dosage of bromid or chloral. It may be said that attempts at lowering blood-pressure are perhaps as harmful as they are futile.

### DISCUSSION

Dr. Theodore C. Janeway, New York: Fall in systolic blood-pressure is not at all synonymous with fall in the mean blood-pressure. The excessive fall in the high-pressure cases obtained during sleep I think about corresponds to the fall in mean pressure, and is largely due to the diminished size of the pulse-wave at the periphery during sleep. While Dr. Brooks does not feel that he has seen marked effects from rest, I feel quite sure that I could produce a number of charts to show the surprising effects from simple rest. To what extent the element of physical rest can be separated from the sleep element is questionable. The element of mental rest is, I think, a rather important one in the sleep question—not merely freedom from excitement, but freedom from actual mental tension. I think Dr. Brooks is too pessimistic about the therapeutic application. It suggests that one of our most important duties is to secure not merely sleep, but normal, rhythmic sleep at the proper time as a means of safeguarding the heart.

Dr. Joseph L. Miller, Chicago: Mental rest is quite as important as sleep. We must bear in mind that individuals with high blood-pressure show extreme variations from day to day, and if the patient's pressure is taken over months, perhaps daily, or two or three times a week, we are surprised to find, without any apparent cause, that such an individual may show variations of pressure of 40, 60 and sometimes 100. I am under the impression that high pressure may at times be traced to some worry or something which we are not able to learn from the patient.

Dr. W. S. Thayer, Baltimore: I also have seen striking reduction of the blood-pressure in association with simple and continued rest in bed. Several years ago a man consulted a colleague because of severe headache. There were evidences of chronic nephritis with a blood-pressure of about 220 mm. Under vigorous treatment with nitrites the patient became anuric and comatose. Return of the urinary secretion and recovery from the uremia occurred in association with a rise in the blood-pressure to a point between 190 and 200.

Dr. S. Solis Cohen, Philadelphia: In the vast majority of cases, carefully studied, high blood-pressure is not materially affected by prolonged rest in bed. Occasionally we find a patient who shows some marked defect, but usually the decline is small. On the other hand, we do find elevation of pressure in cases of exhaustion from rest. The point that has struck me in the course of these observations has been the sudden, and for the time inexplicable, changes of high degree in the course of a day.

Dr. Lewis A. Conner, New York: One of the most important clinical effects we see is the beneficial effect in cases of chronic hypertension of rest in bed.

## The Effect of Various Forms of Respiration

Dr. D. L. Edsall, St. Louis: If the rate is very rapid and the amplitude poor, the result may be poor, and *vice versa*. A slow deep breathing that is not labored may be more efficient and economical than the other forms of breathing. In studies made last winter with Benedict's respiration apparatus my friends and I assumed various types of breathing often seen clinically. In contrasting the very superficial, rapid form of breathing that one frequently sees in bad cardiac cases, pneumonia and other conditions of that kind with the very slow, but entirely unlabored, form of breathing, we always had a feeling that less had been accomplished by the very superficial type of breathing than by the very deep or normal type. We found by the record that ventilation was lowest with this type. Ventilation was always very much greater with the superficial form. When there is a struggling in respiration, the tendency is to increase the filling of the chest constantly and keep at a constant condition of partial inspiration. Thus morphin reduces effort, but it makes the respiration more efficient; respiration accomplishes its function better by quieting the irritability of the respiratory centers.

## The Study of Respired Air in a Case of Cyanosis without Dyspnea

Dr. C. F. Hoover, Cleveland: The patient was a man, 50 years old, who had chronic bronchitis and emphysema with moderate myocardial disease. There was pronounced cyanosis without dyspnea. The cyanosis was not dependent on any impairment of the mass movement of blood. The minute volume of respired air was eight liters per minute and poor in carbon dioxid, but relatively rich in oxygen. The alveolar air was rich in carbon dioxid and relatively poor in oxygen Further, experiments showed that in spite of an abundant tidal air, the ventilation of the pulmonary infundibula was impaired.

## Organic Matter in the Expired Breath, and Its Significance

Dr. M. J. Rosenau, Boston: We took condensed moisture from expired breath through a suitable, simple apparatus by means of cold condenser, taking care to filter the inspired breath so as to eliminate all protein matter of every kind This clear watery fluid was injected into guinea-pigs and produced no more inconvenience to guinea-pigs than so much sterile water would do. After letting the guinea-pigs rest few weeks and then injecting a second time with normal human blood-serum, part of them reacted definitely to anaphylaxis There is a substance in the condensed moisture from th expired breath capable of sensitizing guinea-pigs so that the will react to a second injection of normal human serum. I accordance with the usual interpretation, this means that thi organic matter is protein, is specific and is doubtless the sam as the albuminous matter in the blood. In other experiment I exposed a number of guinea-pigs in a room with dogs s that the expired protein matter in the breath of dogs woul be breathed in by the guinea-pigs. Testing these guinea-pig with serum, we found that some of them responded. That ma give us a cue for the way in which individuals sometime become senstized to horse-serum. We know that almost a these unfortunate cases have severe symptoms after the firs injection of horse-serum, but we have never known how the became sensitized.

## Studies in Experimental Pneumonia

Dr. David Riesman and Dr. John A. Kolmer, Philadelphia The pneumococcus is conceded to be the cause of pneumonia man, but the *experimentum crucis*, the reproduction of t same disease in animals, has not been made. We have repeat the experiments of Lamar and Meltzer in eleven dogs and ha succeeded in producing pneumonia in seven, the four failur being probably due to using a catheter with a lateral inste of a terminal opening. We are, however, not convinced th the process induced in the animals can be called lobar pne monia. It appears to us that in our cases at least we had deal with a confluent lobular bronchopneumonia. In endeavor to obtain some light on the crisis of pneumonia, injected rabbits subcutaneously with extract of normal lu in the stage of red hepatization and extract of lung in t stage of gray hepatization. Sixteen days later the anim were injected, this time intravenously with the same mater with which they had been sensitized. Those receiving t normal lung and red hepatized lung died in every instance anaphylactic shock, in five or six minutes. Those receivi extract of gray lung became ill, but recovered without exc tion within ten minutes. Though we have speculated on t interesting phenomenon, we have at present no theory to off but hope to continue the investigation.

### Experimental Studies on Pneumococcus Infection in Animals

DR. A. B. WADSWORTH, New York: Virulent pneumococci when studied in the test-tube, and as compared with many other bacterial species, are exceptionally insusceptible to both bacteriolysis and phagocytosis. Virulent pneumococci in the body tissues are also insusceptible to the action of most of the immune serums with which attempts have been made to cure the infection in both man and animals. Yet recovery takes place spontaneously in both animals and man. In order to determine why it is that the significance of pneumococcus immunity is so strikingly manifest in the recovery of man from lobar pneumonia, and the action of the blood serums of immunized animals on the pneumococcus so singularly inadequate in the test-tube and in the treatment of infection, the following series of experimental studies were undertaken. These comprise studies on the action of dead pneumococcus cultures on animal tissues, on the action of immune serums on the pneumococcus, on the action of elevated temperatures on the pneumococcus, on the action of hyperthermy on pneumococcus infection, and finally, studies on the action of immune serums on pneumococcus infection and of the mechanism of recovery from pneumococcus infection. In general, it was found that the dead pneumococcus cultures failed to incite disease processes comparable with those seen in active infection, but that an adaptive tissue reaction was incited which rendered the animal immune and gave rise to the well-known agglutinative, precipitative, lytic and opsonic activities in the blood-serum.

From the study of the action of immune sera on the pneumococcus under ordinary conditions, it was found that the insusceptibility of the pneumococcus to bacteriolysis and phagocytosis was due to the exceptional virulence, adaptation and growth of this organism. But in the tissues both lysis and phagocytosis took place and the activity of the pneumococcus was, therefore, inhibited or neutralized in some subtle manner. The thermal limits of pneumococcus growth were found to approximate very closely temperatures often attained by the pneumonia patient, and the bactericidal action of immune serums at these temperatures was greatly exalted. These significant results were further supported by those obtained in the study of the effect of hyperthermy on pneumococcus infection by which it was shown that, although the animal organism may be injured, the activity of the infectious agents may be inhibited markedly during the hyperthermy under certain conditions, the most important of which is the presence of an active protective mechanism in the tissues. Finally, it was found from the results of the study of the action of mmune serums on pneumococcus infection that the curative action of antibacterial and antitoxic serums obtained by the mmunization of animals with dead virulent pneumococcus cells and with culture filtrates free from bacterial cells is light, whereas serums obtained from animals immunized with irulent living cultures possessed marked curative action inducng crisis. In the mechanism of such recovery the neutralizaion of the products of the pneumococcus, whether toxins or ndotoxins, was found to be the dominant determining factor o which the destruction of the bacteria, whether extracellular y bacteriolysis or intracellular by phagocytosis, was incident.

DISCUSSION

DR. RUFUS I. COLE, New York: The use of this serum linically has not been of any value and we have tried to etermine on what this depends. We have found that one very uickly reaches the point where no amount of serum injected nto the animal will save him. The body must produce some lditional protective substance, some complementary substance, hich is necessary for the animal in addition to the serum. Ve feel that this is at least one of the reasons why such serum not effective, and our efforts in the future must be stimulated ward inducing the animal to produce these additional subances.

DR. S. J. MELTZER, New York: In immunizing against eumonia it is necessary to distinguish between the local action of the pneumonia, the reaction of its course in the ng and the toxemia of which the animal or human being is ck and dies.

*(To be continued)*

## ILLINOIS STATE MEDICAL SOCIETY

*Sixty-Second Annual Meeting, held at Springfield, May 21-23, 1912*

*(Concluded from page 1709)*

### Brill's Disease (Mild Typhus Fever)

DR. S. STROUSE, Chicago: If typhus fever is endemic in New York, especially among the immigrant classes, it is only logical to assume that the disease will be found in other localities, like Chicago, where both immigrants and lice may be said to abound. The important points in the clinical picture are: (1) short incubation period; (2) sudden onset; (3) chills, headache and apathy; (4) a fairly constant temperature, falling by crisis over night, on the eleventh day; (5) negative blood culture and Widal reaction, with leukocyte count of 9,400. It is highly probable that the disease seen in the United States will remain the mild type, and it is just as probable that it will be found in most large cities. Nevertheless, it must always be borne in mind that the transition of the disease from Brill's type to the Mexican type is not impossible. For these reasons clinicians and boards of health should be on the lookout for the malady.

### Duodenal Ulcer

DR. E. B. COOLEY, Danville: The typical duodenal ulcer pain comes on regularly, a long time after eating—three or four hours—also at night. Tar-colored stools are present without the accompanying vomiting of blood, and a constant pain to the right of the median line, which radiates to the sternum or the right flank. If the ulcer is located in the stomach, dyspeptic disturbances predominate, especially vomiting. In ulcer of the duodenum these disturbances and vomiting are rare. In ulcer of the stomach occult blood is found in the stomach contents and also in the stools. The relation of the pain to the taking of food plays a most important rôle in the differential diagnosis. The increase or decrease of the stomach secretions is not significant here, as hyperchlorhydria occurs not only in ulcer of the stomach, but in ulcer of the duodenum, and the alleged statement of Moynihan that recurring hyperchlorhydria is a medical term for a surgical condition is without foundation. The valid reasons for operation are recognized to be perforation, repeated intestinal hemorrhage, cicatricial stenosis of the duodenum, with or without gastric dilatation, failure to yield to medical treatment, and recurring cholecystitis.

DR. ROBERT S. MCCAUGHEY, Hoopeston: I wish to emphasize the necessity of repeated examinations for occult bleeding in all cases of digestive diseases. Innervation disturbances produce ulcer. Through resulting spasmodic or hypertonic contractures of the muscularis mucosæ, a local ischemia brings about a quantitative nutritional disturbance. The mycotic origin of some ulcers is established by clinical observation and animal experiment. It is considered a relatively infrequent factor. Devie and Chavet, Perry and Shaw together report 140 cases of ulcer of the duodenum in which twenty-four cases of Bright's disease occurred. Whether in these cases and in ulceration occurring in uremia, there are changes in the vessel walls, we do not know. Too little attention has been given to the condition of the vessels of the stomach and bowel.

### Bronchial (Egg) Asthma

DR. K. K. KOESSLER, CHICAGO: There exists a form of bronchial asthma which is undoubtedly due to a diathetic anaphylaxis towards hen's eggs. In most cases of bronchial asthma the causative factor lies in an allergic reactibility of the human individual. The multiplicity of asthmatogenous substances is explained by the multiplicity of anaphylotoxins.

### Orthostatic Albuminuria

DR. EVERETT J. BROWN, Decatur: A large number of the albuminurias of childhood and young adult life are harmless. Never condemn a patient to a regimen, either dietary or hygienic, of Bright's disease simply because he has an albuminuria. The morning urine of all albuminurics should be tested, especially if there is no high blood-pressure or other cardiovascular signs. Heller's test for albumin should be discarded, as it often fails to show albumin in the most dangerous form of nephritis.

### The Abdominal Crisis

Dr. Allen B. Kanavel, Chicago: In the early hours of an acute abdominal lesion, before a distinct pathologic diagnosis is possible, we may by certain symptoms and signs be able to recognize a condition as surgical rather than medical. To aid in lessening the mortality due to delayed diagnosis, it is urged that this group of symptoms and signs shall be recognized as a surgical entity to which the name "abdominal crisis" may be justly applied and under which diagnosis consultation may be called and operation performed when necessary. These remarks must not be construed as an advocacy of the dictum "operate when in doubt," but rather of the principle, "operate when there is no doubt."

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## AMERICAN ASSOCIATION OF MEDICAL MILK COMMISSIONS

*Sixth Annual Meeting, held in Louisville, April 30-May 1, 1912*

*(Concluded from page 1712)*

### The Relation of Bovine to Human Tuberculosis, and Its Pathogenicity for Man

Dr. Mazyck P. Ravenel, Madison, Wis.: Dr. Park, of New York, says that in the various hospitals of New York from 6.75 to 10 per cent. of the fatal cases of tuberculosis in children are of the bovine type. He further says that 300 children die in New York every year from bovine infection and that he has no reason to believe that other large cities of this country are not similarly situated in this respect. He says that of nine children who died of tuberculosis in the Foundling Hospital, five showed bovine and four human infection. Summarizing Dr. Park's and other statistics, we find that of 787 adults examined, 777 showed human infection and ten bovine infection; in children from 5 to 15 years of age, of 153 cases examined, thirty-six showed bovine and 117 human infection; in children from birth to 5 years of age, of 280 cases examined, sixty-five showed bovine and 216 human infection. Taking these figures as they stand, I do not see how any one can deny the danger of bovine tuberculosis in children.

Taking the last report of the British Royal Commission, we find that, of a total of 108 cases of tuberculosis investigated, eighty-four yielded human tubercle bacilli only, nineteen bovine tubercle bacilli only (a little less than 20 per cent.), and five both bovine and human tubercle bacilli. About 24 per cent. of all cases showed bovine tubercle bacilli. This report further shows that, although the bovine tubercle bacillus may be solely responsible for certain cases of pulmonary tuberculosis, and though it may be present with the human tubercle bacillus in the bronchial glands, it is evident from the data recorded that the majority of cases in which the bovine tubercle bacillus is the infective agent in the human being are cases of alimentary tuberculosis. Such are cases of cervical gland and primary abdominal tuberculosis. In the latter class of cases, at least, the tubercle bacillus has unquestionably been swallowed. Taking both classes of cases (cervical gland and abdominal) together, numbering thirty-eight, there are seventeen in which the bovine bacillus alone was found, nineteen in which the human bacillus alone was found, and two in which both were found. Taking the primary abdominal cases alone, it is seen that in sixteen out of twenty-nine the bovine bacillus was found; in fourteen of these it was the sole infective agent present.

#### DISCUSSION

Dr. Henry L. Coit, Newark: Dr. Park's last report, which Dr. Ravenel referred to, reads: "Taking all cases of tuberculosis in children which result in death, 10 per cent. are bovine and are due to milk; taking all cases of tuberculosis occurring in children, including non-fatal cases, such as glands, joints, bones, etc., which require surgical attention, from 20 to 30 per cent. are bovine and are due to milk."

Dr. John R. Williams, Rochester: I do not think we have any way of accurately determining the prevalence of bovine tuberculosis, simply because these cases are usually of the non-fatal type and we have no means of ascertaining the identity of the infection in a living child. Last summer in the Infants' Hospital in Rochester I examined thirty-three children admitted to the hospital for bowel trouble, with no suggestion of tuberculosis, and ten of these cases reacted to the von Pirquet test. Eight of these ten children had been fed on ordinary market milk. To me this is strongly suggestive that there is much greater danger than we comprehend in feeding children raw market milk.

Dr. Louis C. Agar, Brooklyn: I do not think Dr. Coit was correct in quoting Dr. Park to the effect that so large a percentage of cases was due to the bovine bacillus and, therefore, due to milk. That does not necessarily follow; the organisms may have been ingested with other foods.

While it may be true that 10 per cent. of the fatal cases of tuberculosis in children are of the bovine type, still we must remember that the number of deaths from tuberculosis in children form only a very small percentage of the total number of cases. While we have a large number of infections in children, most of the deaths are in adult life.

Dr. Mazyck P. Ravenel: As far as I know, the only way for a baby of less than 2 years of age to get bovine infection is by drinking milk. While cattle unquestionably cough out the germs just as man does, children of this age hardly tend the cattle.

### Municipal Milk Problems

Dr. J. R. Williams, Rochester, read a very instructive and entertaining paper, illustrated by lantern-slides, concerning the problems connected with the production and distribution of both market and certified milk.

### Bacteria Count of Milk Grown on Media of Different Reactions

Dr. Leon K. Baldauf, Louisville: The object of this investigation, undertaken at the suggestion of Dr. Henry E. Tuley, was to determine the most favorable temperature, 20 C. or 37 C., and the reaction most suitable for the growth of milk bacteria. The medium was a 1.5 per cent. agar, cleared with albumin and titrated against twentieth-normal sodium hydroxid, phenolphthalein being used as the indicator. Batches of neutral, 1 per cent. and 1.5 per cent. agar were prepared In all, fifty samples of milk from different dairies were examined. The following conclusions were reached:

1. If plates incubated at 37 C. are examined at the end o three days, when for many samples the maximum count i reached, we find 1 per cent. acid agar slightly the most suitable medium.

2. In some samples the maximum count is reached at th end of five days, and here, if an average is taken, we find larger number of colonies on 1.5 per cent. agar; the difference however, is slight.

3. On plates incubated at 20 C. the count increases rapidl from day to day until the fifth day is reached.

4. The count of all plates at the end of five days varie little if incubation is done at 37 C.; more so if incubation i done at 20 C., the average here being somewhat smaller.

#### DISCUSSION

Dr. Henry E. Tuley, Louisville: It seems to me this pap illustrates the fact that we should require uniformity of tec nic. If one commission counts at the end of forty-eight hour another at the end of four days and another at the end of fi days, the results are not going to be uniform. Our man recommends forty-eight hours as the proper time. Dr. Ba dauf's experiments have shown, however, that in mo instances the maximum count is reached in three days. Wh has been the practice of the Essex County Commission in th respect?

Dr. Henry L. Coit, Newark: I think it is forty-eight hou

### Certified Milk, Past, Present and Future

Ernest Kelly, Bureau of Animal Industry, Washingto In the past, in contests conducted by the Department of Ag lture, certified milk and cream have proved themselves to be r superior to the finest products of the market milk dairies. the side of the producer success is not so marked. Replies ceived to communications sent out to certified milk producers dicate that, as a self-supporting business, the movement is t yet on a satisfactory basis. This appears to be due to ) too many small dairies trying to produce certified milk; ) the fact that markets for certified milk have not been veloped as they should be; and (3) the fact that there ould be a more equitable system of distribution; some of e middlemen seem to charge exorbitant prices for dis- bution.

From the consumer's standpoint, the use of certified milk s accomplished much good wherever it has been possible to tain it. It is necessary for the greatest good that prices be pt within reasonable bounds, and this I believe can be done closer application of business principles, by the elimination much ornate and expensive equipment, by a more equitable stem of distribution, and by the expansion of the markets. y experience is that clean milk is not a question of white amel and polished brass so much as of common-sense and rnal vigilance.

### DISCUSSION

Mr. **Neill Roach**, Louisville: Did Mr. Kelly, in figuring e cost of distribution and the percentage the middleman eives, take into consideration whether the producer or the tributor furnished the bottles, whether the distributor took e entire output of the producer, etc.? Such things would ke a vast difference in the amount the middleman would ve to charge.

T. C. **McCleave**, Berkeley: The comparative bacterial unts of milk and cream as outlined by Mr. Kelly are of eat practical value. It has usually been considered that the eater portion of the bacteria contained in milk go over with cream. Mr. Kelly has shown that the average bacterial nt of milk was from 8,000 to 9,000, while that of cream was m 9,000 to 10,000. I think you will find that in the require- nts for certified milk and cream, while the bacterial count milk is required to be 10,000 or less, the producer is owed a count of 25,000 to 50,000 for cream. It would pear that we are making the requirements for cream too eral from a bacteriologic standpoint.

Mr. G. M. **Whittaker**, Milwaukee: Is not Mr. Kelly of the nion that if he had sent out an equal number of inquiries market milk producers in New England, the West and th, he would not have found an even greater number of ducers who claimed to be producing milk at no profit?

Mr. **Ernest Kelly**: I made the statement that local con- ions might vary the figures given a great deal. I think is probable that, if an equal number of inquiries had been t to market milk producers, an equal or greater number uld have said that the business was unprofitable, but I do believe the average market milk producer has any figures which to base his statements, such as the certified milk ducer has.

### ome Bacteriologic Problems in Certified Milk Production

r. P. G. **Heinemann**, Chicago: It seems to me that the e is ripe for a revision of contracts entered into between medical milk commissions and the dairies, and the crea- of a permanent board of control of the actions of milk missions. The terms of some contracts are too exacting certain respects. Consequently, expensive equipment with estment of large sums of money is encouraged. It has n demonstrated that milk equal to certified milk, so far as terial counts are concerned, can be produced in inexpensive s, but under prevailing methods of inspection, certified k cannot be produced in these barns. It seems advisable, refore, that this association elect a permanent body from ng its members, to investigate periodically the methods milk commissions, and to pass on the efficiency of experts loyed by the commissions. Only by employing *real* erts can certified milk be produced which is absolutely ve reproach.

## MEDICAL ASSOCIATION OF GEORGIA

*Sixty-Third Annual Session, held in Augusta, April 17-19, 1912*

*(Concluded from page 1710)*

### Cholecystitis as a Complication of Pellagra

Dr. **H. F. Harris**, Atlanta: We often find symptoms of nervous indigestion and a subacute catarrh, with coated tongue and foul breath in the early cases of pellagra, and there appears to be a relationship between this condition and catarrh of the gall-bladder. It is noteworthy that the catarrhal condition, unlike those encountered from other causes, seems in no way to be affected by washing the stomach out with nitrate of silver, alkaline and salt solutions, nor is the digestion benefited by these measures. The results would also indicate that hypochondria, which is always associated with digestive disturbances, and usually with a foul tongue, may be likewise due to catarrhal changes in the gall-bladder, whether the original condition producing it be a maize poisoning or some other. This would seem to open up a field for investigation for the surgeon and the pathologist as well as for the general clinician, and might lead to interesting and important developments. As to whether or not the operation of drainage is likely to result in cure in any considerable proportion of cases I cannot say, but it seems not impossible that this is still another field of medicine which is destined to be taken from the general practitioner by the surgeon.

### Psychoses Accompanying Pellagra

Dr. **E. M. Green**, Georgia State Sanitarium: The seventy-five cases on which this study is based were all admitted to the state sanatorium during the year 1911. The diagnosis was made from symptoms referable to the skin, mouth and intestinal tract. Cases of pellagra which developed subsequent to the patients' reception are not included. In considering the subject of psychoses accompanying pellagra it is necessary to decide, first, the question whether the two conditions, insanity and pellagra, appear in accidental association. Where a large number of cases is found the simultaneous appearance of pellagra and insanity in a previously normal individual—as occurred in eight cases of this series—or where after pellagra has existed for a few weeks or months, insanity is manifested, or where several attacks of pellagra have occurred, each one accompanied by an outbreak of insanity, from which the patient recovers as the physical disease disappears, the conclusion that pellagra must be the cause of the mental disorder is indisputable. Of the thirty-three cases in which the duration of both pellagra and insanity could be ascertained, it was found that the average duration of the former disease was six months and seventeen days before the appearance of the mental symptoms. Evidences of mental disorder accompany a large proportion of the cases of pellagra. In the seventy-five cases admitted during the past year, in which a diagnosis of "psychosis accompanying pellagra," the following types were noted: Infective-exhaustive, thirty-five cases; manic-depressive, eleven cases; dementia præcox, eleven cases; general paralysis, four cases; senile, four cases; involution melancholia, two cases; undetermined, eight cases. The infective-exhaustive type was the one most frequently encountered, forming 46.6 per cent. of the whole number. In the series of cases studied, associated with the symptoms of the psychoses simulated, are found additional ones which are foreign to the usual course of such cases, besides quite noticeable nervous symptoms which do not accompany these psychoses, and which we are justified in attributing to pellagra.

### DISCUSSION

Dr. **W. R. Houston**, Augusta: The diagnosis of pellagra is often very difficult, especially in those vague cases of neurasthenia, hysteria, and some of hypochondria. There are two facts about pellagra that deserve consideration; one is the seasonal recurrence and the other is that the disease is almost entirely confined to warm climates. These two facts seem to point to a protozoon as the cause of the disease.

Dr. **E. C. Thrash**, Atlanta: There is no doubt that pellagra will be rife in the country until a food commission is established which will carefully inspect maize products. Frequently a car-load of corn is shipped to a small town and the grain dealer, finding it moldy, ships it back to the owner, who does not destroy it, but dries it, converts it into meal, and ships it back to the same merchant who has refused it, so that a product not fit to feed stock is fed to human beings. It is very seldom that a load of moldy corn is destroyed. While I have performed very few autopsies on patients dead of pellagra, I have made careful microscopic examinations of some of the tissues. In one instance there was marked albuminous degeneration and cloudy swelling of the kidneys and the liver-cells. The same degenerative changes that occur in yellow atrophy were present in a mild form. The first change noted in the brain-cells was a cloudy swelling due to some toxic condition.

Dr. E. Bates Block, Atlanta: I have seen several cases of cholecystitis associated with pellagra, and have attributed it to the general mucous membrane involvement in pellagra. The majority of the cases I have seen have shown dementia, depressive insanity, or dementia præcox. The symptoms of pellagra, so far as the skin lesions are concerned, are of nerve distribution; they do not follow the line of the blood-vessels, or the motor or sensory nerves but follow the distribution of the sympathetic system. The effect of sunlight may be a factor, but not the chief factor, in the production of these eruptions, because they are seen on parts not exposed to the sunlight.

Dr. George C. Mizell, Atlanta: Pellagra has no climatic limitations; it has occurred in Buffalo, in South America, Brazil, Argentina, and other places. In the North there does seem to be a limit to the 70th parallel of latitude in July; in the South the 70th parallel for January. The situation as it exists in Georgia has made therapeutic agnostics of many of us, but I believe the disease can be cured. The fact that there is disturbance of the stomach and an inflammatory action of the gall-bladder is not evidence that the patient still has pellagra. These things become dependent on the pellagrous process. I have seen instances of cholecystitis in a number of cases of pellagra but there is no part of the body which it may not affect.

Dr. James N. Ellis, Atlanta: I have operated on two patients for cholecystitis without any suspicion that they had pellagra and subsequently I found the typical symptoms of the disease. The cases were unmistakably cases of chronic cholecystitis.

Dr. J. W. Palmer, Ailey: I would like to know, if you accept the damaged corn theory, how you can explain the disease in patients who have not eaten maize or corn.

Dr. H. F. Harris, Atlanta: For two years I have been going over the literature of pellagra published by the Italians and have found nothing that proves definitely and scientifically that corn and corn products are the cause of pellagra. On October 1, I fed six dogs on bad corn products and up to date two have died with symptoms very suggestive of pellagra. The other dogs are failing rapidly in the same way, and from their present appearance two will survive but a short time. I do not know what changes occurred in the cord. If I am able to find definite and characteristic changes in the spinal cord, it will be the first instance in which it has been really proved that bad corn produced pellagra. There was no doubt but that the changes that occurred in pellagra were permanent and were only secondarily influenced by medication of any sort In regard to cases of pellagra occurring where maize had been excluded, it is very difficult to state positively that any person has not partaken of corn products some time in the past. The best one can do is to give tonics and build the patient up, but relapses will occur. Neither drugs nor anything else have any specific action on the disease; the best Italian observers think there is no doubt of the truth of this statement. Possibly the disease may be caused by some of the products of distillation, as in Roumania the disease was caused by drinking corn whisky.

### Kidney Symptoms and Diagnosis

Dr. M. L. Boyd, Atlanta: Cystoscopy, like percussion and auscultation, is, in the hands of a suitable man, capable of the keenest development. Its limitations have as yet not been defined and new instruments are constantly being devised and new conditions discovered. Marked edema of the orifice indicates stone in the lower ureter, or acute tuberculous ureteritis No operation should be performed on a kidney without knowledge of the functional ability of the other kidney; the value o the functional test has increased considerably since the introduction of the phenolsulphonephthalein test. In cases of simpl hematuria this test helps us by showing the amount of destruction of the kidney and thereby assisting us to differentiat between a malignant destruction of the kidney and the bleeding from such conditions as renal varix. The conditions whic cause obstruction to the flow of urine from the kidneys ma be classified as (1) obstructions due to slightly movable kidney and to aberrant or abnormal bands of fascia or branches o the renal artery; (2) abnormally movable kidney causin severer symptoms; (3) stone in the pelvis or ureter; (4 tumors, ulcers, etc., of the ureter, kidney, kidney pelvis o bladder; (5) stricture of the ureter; (6) pressure on the urete by tumors, etc., and (7) urinary obstruction in the lowe tract. It is rather unusual for fairly well-marked partia obstruction to the flow of urine to exist very long without a infection occurring above the obstruction. Where the infectio is more or less acute we find infecting organisms and pus i the urine, an increase in the amount of pus, if some ha already been found, and fever of the septic type. Rigor an chills are common. There is a moderate increase in the numbe of white blood-corpuscles. Tenderness and muscular rigidit in the lower back and kidney region behind are noted, and t cystoscope usually shows a reddening and swelling about t ureteral orifice, with the ejection of cloudy urine. The infe tion in these cases nearly always becomes chronic. The infe tion nearly always affects both kidneys if the obstruction in the lower urinary tract.

### The Value of Ureteral Catheterization

Dr. W. F. Shallenberger, Atlanta: Cystoscopy and ureter catheterization with urine segregation together with the fun tional tests are the best and most reliable methods for accura kidney diagnosis and by these procedures we are enabled obtain perfectly dependable knowledge that could be gain in no other way. For diagnostic purposes the ureteral cathet is invaluable. Bacteriologic cultures can be made directly fro the kidney and the organism determined in cases of infectio The ureteral catheter is also useful in determining and locati strictures of the ureter, or impacted stones, and in making diagnosis of stone in the ureter or renal pelvis. One of t greatest advantages of the ureteral catheter is that it enabl us to make a differential determination of the functio activity of the kidneys. Numerous methods have been p posed and a large variety of drugs tried in search of an id means of accurately determining the functional activity of t kidney. Quite recently Geraghty and Rowntree, of Baltimo have tried out phenolsulphonephthalein, which seems answer all the requirements for an ideal drug for functio tests. It is easy of administration; it appears quickly in t urine, and is readily excreted by the kidneys. It is non-to even in large amounts, and the exact percentage put out a given time can be readily estimated by means of a colo meter. The ureteral catheter is useful in the treatment some conditions. In cases of pyelitis, lavage of the renal pel with dilute silver solutions or other solutions is easily acco plished and is very efficacious. The ureteral catheter is also aid in operative work.

#### DISCUSSION

Dr. J. R. B. Branch, Macon: Many patients go from phy cian to surgeon and from surgeon to physician complaining pain in the right side of the abdomen and there is no way making a positive diagnosis of the condition, except by the of ureteral catheterization. This, in addition to the use of cystoscope, is very important. I have seen a normal kid removed when it was the kidney on the opposite side t was at fault; if these cases are thoroughly worked out, s mistakes would not occur. In anchoring the kidney, it is v important that one should anchor it to the twelfth rib.

Dr. A. L. Fowler, Atlanta: I wish to speak of the appointments of *x*-ray work. I have worked in Paris and l en pictures showing stones which were not found at operaion. In using the injections of collargol, the pictures should be aken with the patient in the prone position. The phenolsulhonephthalein test is ideal for testing the functional activity f the kidneys. I use the blue test together with the urea test.

Dr. John S. Derr, Atlanta: I wish to confirm what Dr. hallenberger stated in regard to the advantage of the use of ollargol injections. A dilated ureter can be readily shown on he *x*-ray plate and the calices of the kidney are well brought ut.

Dr. M. L. Boyd, Atlanta: By the injection of collargol one an get some idea of the relation of the pelvis of the kidney o the kidney itself, and the distance should be measured from he middle line rather than from the spinous process. The henolsulphonephthalein test is very valuable and shows the ctual functional capacity of the kidneys.

Dr. W. F. Shallenberger, Atlanta: In one patient the idney pelvis held about 60 c.c. of fluid, and there was a goodized hydronephrosis. I suspended the kidney and three weeks ater found that the capacity of the pelvis had decreased from 0 c.c. to 35 c.c. This shows how an obstruction that causes hydronephrosis can be relieved and the hydronephrosis clear p as a result of operation. Without the use of phenolsulhonephthalein it is not possible to determine just what the idneys are doing.

### Two-Step Method of Enucleation of the Prostate

Dr. A. L. Fowler, Atlanta: It is the history of nearly all rostatics that the symptoms referable to the genito-urinary ract are of long standing, of gradually increasing urgency and f such severity as greatly to disturb the patient by day and ersistently to interrupt his sleep at night. A combination of uch factors undermines the nervous system. The physical xamination will disclose a prostate bulging into the rectum, ometimes only into the bladder; there will be residual urine, nd so forth. As a rule, the patient's vitality is too low to ermit of a prostatectomy. What does such a patient need? ree urinary drainage, absolute physiologic rest to the internal d external vesical sphincters, and the bladder and the buildg up of his exhausted vitality. This much-needed rest can be tained by a rapid suprapubic cystotomy. The edges of the cision into the bladder-wall are stitched to the muscular scia, and a two-way irrigating glass drainage-tube is inserted, e wound covered with gauze and a mound of gauze is built well under the arm of the glass drainage-tube to prevent it om gravitating to the vesical mucosa. The urine is siphoned f and studied. The bladder is irrigated twice daily with a t oxycyanid of mercury solution. These irrigations are connued until the bladder becomes clean. Soon the patient will in prime condition for the removal of the prostate through e original suprapubic opening. The advantages of this ethod are, free drainage, rest to the damaged organs, giving e patient two little shocks instead of one big one. This tter factor is of undoubted value in operating on men whose tality is below par.

DISCUSSION

Dr. E. C. Ballenger, Atlanta: If a large cannula is introced through the suprapubic region with the bladder disnded, the trocar withdrawn and the catheter left in place, ple drainage is secured. By this method there is no shock leakage about the wound. The condition of the kidneys proves when such drainage is provided. This operation is pecially valuable when the patient is much debilitated.

Dr. W. L. Champion, Atlanta: When the patient's vitality low it is hazardous to attempt to remove the prostate at operation. Personally, I believe that the suprapubic operan is better than the perineal.

Dr. W. B. Hardman, Commerce: I have seen the Mayos do is operation and they followed the method outlined by Dr. yd. They had catheter drainage and in all cases did the prapubic operation. The catheter was left in a number of ys with constant irrigations after the operation.

Dr. A. L. Fowler, Atlanta: A man can be trained to retain catheter; some of my patients have retained it for two onths at a time, but these bladders do not become as clean as do those which are drained suprapubically. When suprapubic drainage is employed, there should be absolute rest of both the internal and external sphincter muscles.

### The Treatment of Pulmonary Tuberculosis by Gas Compression of Lung

Dr. D. T. Harris, Highlands, N. C.: We have had thirty-four patients on whom this operation has been performed, and we operated on two of them after the nitrogen gas had been absorbed, one of them five months after the last filling. Nine of these cases were unilateral in whom a complete pneumothorax or compression was produced. The process was arrested in 100 per cent. of the cases. There were adhesions in two. There was an effusion in one case during the course of treatment and in another five months after discontinuing the treatment, following an attack of grip and pleurisy. The gas had entirely disappeared and the effusion could hardly be said to have had any connection with the treatment. There were five unilateral cases in which there was an incomplete pneumothorax. All of them had heavy adhesions. Ten of the cases were bilateral, and in nine of these the process was arrested. In four the process was arrested in both lungs, and in four the process on the unoperated side remained more or less the same. There was incomplete or no pneumothorax in ten of the bilateral cases, and there were adhesions in all of them. Five of them were remarkably benefited, even with the small collapsing that was produced. The process was arrested in 68.42 per cent. of uni-bilateral cases.

### The Present Status of Specifics in the Treatment of Tuberculosis

Dr. E. C. Thrash, Atlanta: My efforts now, with the help of Dr. A. H. Bunce, are being directed toward producing a polyvalent vaccine that will, to a degree, be a specific in mixed infections. We are now using the autogenous vaccines, in connection with tuberculin, with marked beneficial results. We know that the pyogenic organisms constantly found in tuberculous sputum are the pneumococcus, streptococcus, and all of the varieties of the staphylococcus, and that, as a rule, other organisms play but a little part in producing the complex commonly called consumption. We know that polyvalent vaccine made from these pyogenic organisms found in tuberculous processes will lessen the toxemia, decrease the amount of suppuration, increase the resistance, and improve the general condition of the sufferer, and used in connection with the tuberculin, will aid in its efficiency.

DISCUSSION

Dr. T. J. McArthur, Cordele: It was important that we make a diagnosis of tuberculosis early. There are few of us who have practiced for many years who cannot now remember cases of incipient tuberculosis that were unrecognized then. We must recognize our responsibilities in these cases. One should watch the pulse, the temperature and the weight.

Dr. L. C. Rouglin, Atlanta: Tuberculosis is not a disease for the specialists; it properly belongs to the general practitioner. The care of these patients by the general practitioner is the only possible solution for the reduction of the number of cases. The home treatment of the patient is the most successful when properly carried out. The percentage of cures resulting from home treatment is larger than the percentage of cures in sanatoriums or by specialists. Often, even in advanced cases, examination fails to reveal the presence in the sputum of the tubercle bacilli. The presence of the tubercle bacilli in the sputum is only confirmatory evidence of the presence of tuberculosis and does not make a positive diagnosis. Another important point in the diagnosis is the unilateral râles, especially after coughing.

Dr. Claude A. Smith, Atlanta: I wish to emphasize the point that when a physician makes a diagnosis of tuberculosis it is his duty to find out where the patient got it and how many of the friends and members of the patient's family were infected with the disease. This is particularly necessary among the negroes and the poorer whites. They should go back to natural habits and do what they can to raise the resisting powers of the individual. Open-air sleeping lessens the danger of contracting other communicable diseases. It is incumbent on every community to provide suitable buildings in which the negroes and poorer whites afflicted with tuberculosis can be cared for.

### Intestinal Resection in Strangulated Inguinal Hernia

Dr. W. W. Battey, Jr., Augusta: In operating I would lay stress on the following points: Divide the external ring before the sac is opened. Do not attempt to reduce contents of the sac before the sac is thoroughly irrigated with salt solution. Do not cut the fibers of the conjointed tendon in order to reduce contents of the sac. In cases in which resection is necessary, it is a wise plan to introduce a small drainage through one angle of the incision to accomplish a double purpose. First, we are likely to have an abscess due to the colon bacilli. Second, the stitch line in the bowel may become infected, involving the possibility of a fecal fistula which the tube or drainage will take care of. Personally, I prefer the lateral anastomosis in all cases in which it can be employed.

#### DISCUSSION

Dr. James N. Niles, Atlanta: As to the choice of an anesthetic in these cases, I believe that in oblique strangulated hernias cocain lessens the danger of the operation, is easily given and with very satisfactory results.

Dr. W. L. Cooke, Columbus: I use local anesthesia, except in children, when I prefer a general anesthetic.

Dr. J. R. B. Branch, Macon: I wish to emphasize the importance of early diagnosis in these cases; surgeons are very much discouraged in their work when patients are sent to them three or four days after the onset of symptoms. The physician tries calomel, then taxis, and finally sends the patient to a surgeon. This is not fair to the surgeon or to the patient. Lateral anastomosis is better and safer than the Murphy button. In judging of the vitality of a piece of intestine, if it is black or purplish, place it in hot water and wait to see whether or not it regains its color. A better method is to mark the location of the strangulation with a piece of tape, then place it back into the peritoneal cavity where it belongs and let it stay for a reasonable length of time; if the circulation is not restored, then go ahead and do what is necessary.

Dr. Floyd W. McRae, Atlanta: Taxis in such cases is dangerous and unsurgical. I do not like doing this operation under cocain anesthesia. Under general anesthesia one can go ahead and complete the work required, and more efficient work can be done, especially where one has to deal with an inflamed intestine. In these cases it is a question whether a lateral or an end-to-end anastomosis is the better procedure.

Dr. J. L. Campbell, Atlanta: In my opinion there is no greater danger from a general anesthetic than from a local one, especially when it is given by a careful man. I have had little experience with resection in these cases, but I believe that a lateral anastomosis gives better results and is by far the best method to employ.

Dr. E. C. Carledge, Atlanta: If a surgeon got these cases early he would employ taxis. I use taxis and depend on gravity to help put the bowel back where it belongs. In these cases one must decide quickly what is best for the patient. If the bowel cannot be reduced at once, a surgeon should be called.

Dr. S. T. Harris, Highlands: In many patients, taxis properly applied is worthy of a trial, but it requires one who is skilled in doing the work. If taxis is properly applied there should be little traumatism. In one case in which taxis had failed, the application of a tobacco poultice reduced the strangulation.

Dr. Edward G. Jones, Atlanta: The present-day intelligent treatment of hyperthyroidism is based on the assumption that a reduction in thyroid secretion is desirable. Medical treatment has been notoriously inefficient. A symptomless goiter appearing at puberty, for example, need not be operated on except for pressure symptoms, or for cosmetic reasons, or to remove a certain undoubted tendency toward hyperthyroidism later. It should at least be given a somewhat extended chance to disappear spontaneously or to be cured by less drastic measures than surgery. The argument that it can be removed without danger is true but is not always acceptable. A patient who has passed through a more or less typical history of hyperthyroidism, but who now exhibits typical myxedematous symptoms, but with relics of hyperthyroidism, not only is a bad immediate surgical risk, but also will not improve by any kind of operation unless it be required to relieve pressure symptoms. A woman who has a goiter with no past history of hyperthyroidism, but with present hypothyroid symptoms, will not be cured by operation. She will be injured unless all the actually functionating tissue be left.

### Intestinal Obstruction with Report of Experimental Work

Dr. J. L. Campbell, Atlanta: I have recently operated in fourteen cases of intestinal obstruction with two deaths. Experiments were made on nine dogs and one cat. In four the arteries and veins to 6 inches of the small intestines were ligated and the intestines returned to the abdominal cavity, the wound closed and dressed. When the dogs died, the pathology of the condition was carefully studied. Reports will follow later.

### Parsimony in Nutrition

Dr. George M. Niles, Atlanta: It is the custom of many medical men to put patients on dietaries without considering the caloric values contained therein; this is a common illustration of parsimony in nutrition. The appetite of healthy individuals will generally prove a reliable index to bodily needs, but in digestive disorders accompanied by malnutritio it is not enough for the physician to cut off offending article of food; he should also see that sufficient calories are bein furnished. I wish to sound a note of warning concerning th alcoholic proprietary foods on the market; a few years ago saw a genuine attack of delirium tremens complicate a cas of typhoid in which for two weeks the patient had been gener ously "supported" by a well-known and popular proprietar food. In this connection I wish to commend the thoroug and impartial work of the Council on Pharmacy and Chemistr of the American Medical Association, whose lucid reports hav done much to dispel the glamor thrown about some of thes alcoholic "supportives," and individually, I wish to speed th Council in its meritorious labors. Some of the most graph examples of parsimony in nutrition are exhibited in infant whose eager digestive organs are vainly attempting to glea sustenance from some of the infant-foods on the marke Another greatly overrated class of foods leading to parsimon in nutrition are the meat juices for which fabulous powe have been claimed. As to meat extracts, they are beyon parsimony—they are a delusion and a snare. There is a poi where economy ceases and parsimony begins, and there ce tainly can be no permanent healthy growth, nor can there maintained a normal "moving equilibrium" in the bodies individuals or nations, unless there is a liberal intake protein food, for, as Rubner declares "A large protein allo ance is the right of civilized man." It may confidently asserted that no physiologic nor mathematic legerdemain c ever hope to reduce materially the fixed demand for appro mately 120 gm. of protein daily for every active individual average weight.

### Clinical Manifestations of Uremia from a Diagnostic Standpoi

Dr. Ralston Lattimore, Savannah: A high blood-pressu when taken into consideration with other clinical sympto is valuable from a diagnostic and prognostic viewpoint. Y many people die of renal insufficiency and exhibit a normal a practically normal blood-pressure. In a word, the key the whole situation is not what passes through the kidne but what does not pass. It is not because the kidneys all some albumin to pass every day that there is danger, because the diseased kidneys do not allow the elements depuration to pass in proper quantity. They may accumul rapidly and the major symptoms of uremia appear, and slowly we have minor uremia.

# PROCEEDINGS OF THE ATLANTIC CITY SESSION

## MINUTES OF THE SIXTY-THIRD ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ATLANTIC CITY, N. J., JUNE 3-7, 1912

## *HOUSE OF DELEGATES*

### *First Meeting—Monday Morning, June 3*

The House of Delegates, the legislative body of the Association, meets on Monday, the day before the commencement of the scientific part of the session. The House met in the Traymore Solarium, and was called to order at 10:15 by President J. B. Murphy. He first called on the Committee on Credentials. The chairman of this committee, D. Chester Brown of Connecticut, presented a preliminary report, showing that at that time seventy-one delegates had registered. The secretary then called the roll and, a quorum being present, the business of the session was taken up. The minutes of the Los Angeles meeting were approved and reference committees were appointed.

President Murphy then addressed the House of Delegates. His address will appear in the next issue of THE JOURNAL. The regular reports followed. First that of the Secretary, then the report of the Board of Trustees, the report of the Judicial Council and that of the Council on Medical Education. These reports were before the House in the form of a bound pamphlet and they were referred to the appropriate reference committees. The morning session of the House then adjourned. The reports referred to were as follows:

### Report of the Secretary

*To the Members of the House of Delegates of the American Medical Association:*

For the year 1911-12, I submit the following report:

#### MEMBERSHIP

The membership of the American Medical Association on May 1, 1911, was 33,960. During the past year, 299 members have died, 1,301 have resigned, 500 have been dropped as not eligible, 987 have been dropped for non-payment of dues, and 64 have been removed from the rolls on account of being reported "not found," making a total of 3,151 names to be deducted from the membership list. There have been added 3,474 names to the membership roll, of which 2,353 were transferred from the subscription list. The membership of the American Medical Association on May 1, 1912, was 34,283, a net increase for the year of 323. The membership on May 1 of each of the last five years was as follows:

| | |
|---|---|
| 1908 | 31,343 |
| 1909 | 33,935 |
| 1910 | 34,176 |
| 1911 | 33,960 |
| 1912 | 34,282 |

#### MEMBERSHIP OF STATE ASSOCIATIONS

The membership of the various constituent state associations, according to the records in the Secretary's office, May 1, 1912, is shown in the accompanying table.

| Component Association of | No. Counties in State. | No. Component Societies in State Assn. | No. Counties in State Not Organized 1911 | No. Counties in State Not Organized 1912 | No. Physicians in State (3d Ed. Directory) | No. Members of State Association | No. A. M. A. Members in State | No. Subscribers to Journal in State.* |
|---|---|---|---|---|---|---|---|---|
| Alabama | 67 | 67 | .. | .. | 2,418 | 1,646 | 323 | 266 |
| Arizona | 14 | 8 | 6 | 6 | 247 | 128 | 98 | 62 |
| Arkansas | 75 | 62 | 9 | 11 | 2,596 | 954 | 340 | 215 |
| California | 58 | 36 | 21 | 21 | 4,767 | 2,232 | 1,662 | 943 |
| Colorado | 61 | 26 | 29 | 22 | 1,772 | 846 | 508 | 303 |
| Connecticut | 8 | 8 | .. | .. | 1,564 | 842 | 450 | 246 |
| Delaware | 3 | 3 | .. | .. | 246 | 105 | 50 | 35 |
| Dist. of Colum. | ... | ... | .. | .. | 1,350 | 580 | 282 | 239 |
| Florida | 47 | 26 | 22 | 21 | 974 | 329 | 175 | 180 |
| Georgia | 146 | 63 | 52 | 81 | 3,022 | 1,408 | 349 | 415 |
| Idaho | 26 | 4 | 10 | 10 | 420 | 103 | 75 | 106 |
| Illinois | 102 | 97 | 3 | 2 | 9,988 | 5,647 | 3,219 | 1,474 |
| Indiana | 92 | 85 | 4 | 6 | 4,984 | 2,146 | 1,071 | 544 |
| Iowa | 99 | 96 | 1 | 2 | 3,653 | 1,978 | 1,071 | 619 |
| Kansas | 105 | 69 | 17 | 22 | 2,688 | 1,358 | 638 | 387 |
| Kentucky | 119 | 113 | 6 | 5 | 3,601 | 2,090 | 628 | 303 |
| Louisiana | 60 | 40 | 18 | 18 | 1,930 | 1,002 | 385 | 350 |
| Maine | 16 | 15 | 3 | 1 | 1,176 | 606 | 280 | 117 |
| Maryland | 24 | 22 | 2 | 2 | 1,972 | 1,106 | 569 | 508 |
| Massachusetts[1] | 14 | 18 | .. | .. | 5,648 | 3,393 | 1,631 | 639 |
| Michigan | 83 | 60 | 6 | 3 | 4,104 | 2,227 | 1,063 | 607 |
| Minnesota | 86 | 38 | 5 | 5 | 2,262 | 1,319 | 925 | 465 |
| Mississippi | 79 | 50 | 8 | 9 | 2,009 | 955 | 228 | 265 |
| Missouri[2] | 114 | 94 | 15 | 18 | 6,037 | 2,695 | 1,566 | 539 |
| Montana | 28 | 11 | 16 | 17 | 512 | 229 | 123 | 143 |
| Nebraska | 92 | 61 | 26 | 23 | 1,796 | 957 | 484 | 805 |
| Nevada | 16 | 6 | 10 | 10 | 144 | 69 | 48 | 30 |
| N. Hampshire. | 10 | 10 | .. | .. | 704 | 536 | 221 | 55 |
| New Jersey | 21 | 21 | .. | .. | 2,884 | 1,443 | 757 | 357 |
| New Mexico | 26 | 14 | 12 | 12 | 430 | 164 | 109 | 81 |
| New York | 61 | 57 | 3 | 3 | 14,815 | 7,088 | 3,553 | 1,574 |
| N. Carolina | 98 | 85 | 4 | 6 | 1,849 | 1,126 | 251 | 297 |
| N. Dakota | 46 | 14 | 5 | 5 | 594 | 388 | 228 | 115 |
| Ohio | 88 | 88 | 1 | .. | 7,513 | 3,328 | 1,849 | 789 |
| Oklahoma | 77 | 64 | 6 | 12 | 2,620 | 1,089 | 360 | 333 |
| Oregon | 34 | 12 | 2 | 3 | 1,041 | 426 | 252 | 222 |
| Pennsylvania[3] | 67 | 63 | 4 | 4 | 11,345 | 5,724 | 2,774 | 1,490 |
| R. Island[1] | 5 | 6 | .. | .. | 751 | 377 | 234 | 154 |
| S. Carolina | 43 | 37 | .. | 5 | 1,275 | 688 | 210 | 273 |
| S. Dakota | 65 | 9 | 7 | 8 | 651 | 272 | 168 | 157 |
| Tennessee | 96 | 63 | 33 | 33 | 3,338 | 1,373 | 433 | 408 |
| Texas | 245 | 138 | 77 | 85 | 5,888 | 3,081 | 884 | 573 |
| Utah | 27 | 6 | 21 | 21 | 427 | 228 | 158 | 109 |
| Vermont | 14 | 11 | 3 | 3 | 679 | 389 | 155 | 63 |
| Virginia[4] | 100 | ... | .. | .. | 2,359 | 1,488 | 422 | 324 |
| Washington | 38 | 18 | 10 | 19 | 1,630 | 819 | 480 | 321 |
| W. Virginia | 55 | 32 | 11 | 10 | 1,639 | 941 | 355 | 182 |
| Wisconsin | 71 | 55 | 2 | 2 | 2,652 | 1,726 | 906 | 473 |
| Wyoming | 14 | 5 | 10 | 9 | 235 | 118 | 52 | 50 |
| Canal Zone | ... | ... | .. | .. | 107 | 72 | 25 | 19 |
| Hawaii | ... | ... | .. | .. | 123 | 79 | 25 | 11 |
| P. Islands | ... | ... | .. | .. | 691 | 108 | 33 | 37 |
| Totals | 2,935 | 1,986 | 500 | 545 | 138,120 | 69,661 | 33,135 | 18,772 |
| Honorary members and members listed at foreign addresses | | | | | | | 78 | ..... |
| Members in government services | | | | | | | 1,070 | ..... |
| Journals to foreign addresses, government services, etc. | | | | | | | ..... | 2,102 |
| Grand totals | | | | | | | 34,283 | 20,874 |

* Not including members of American Medical Association.

NOTE.—The number of members of the different associations stated in this table is in accord with the membership of the several associations as they were reported to the Secretary on May 1, 1912.

The lack of an effective uniform system for reporting the membership of the state associations accounts for whatever discrepancies this table shows and detracts from the value of the statement.

Component societies are those societies which compose the state association. A component society may include one county or more.

1. These state associations are divided into district societies, and these are listed in the table as component societies. Some of these districts are smaller and some larger than the county, the county lines being ignored.

2. There are two component societies in St. Louis County—the St. Louis City and the St. Louis County Medical societies—each, however, covering definite territory.

3. Provision is made for the physicians in each of these counties to join the component society in an adjoining county.

4. Virginia has not adopted the plan of organization. Hence, strictly speaking, it has no component county societies. Members join the state society direct.

#### AD INTERIM COMMITTEES

Since the last meeting of the House, June 29, 1911, the following appointments have been made by the President:

A committee to represent the American Medical Association at the Third National Conservation Congress was constituted and the following were appointed:

William A. Evans, Chairman, Chicago; Abraham Jacobi, New York; Norman Bridge, Los Angeles, Cal.; Hubert Work, Pueblo, Colo.; Oscar Dowling, Shreveport, La.; The Very Reverend Andrew J. Morrissey, South Bend, Ind.

The following changes in the personnel of the committees have been made during the year:

Committee on Nomenclature and Classification of Diseases.—Cressy L. Wilbur, Chairman, Washington, D. C., vice Frank P. Foster, New York City, deceased. Frank B. Mallory, Boston, vice Alexander Duane, New York City, resigned.

Committee on Anesthesia.—Yandell Henderson, Chairman, New Haven. Conn., vice George E. Brewer, New York City. resigned. Thomas S. Cullen. Baltimore, appointed to fill the vacancy on the committee.

Committee to Consider the Mode of Commemorating the Completion of the Panama Canal.—M. L. Graves, Galveston, Texas, vice Amos Graves, San Antonio, deceased.

### REAPPORTIONMENT

The attention of the House is called to By-Law, Section 3, Chapter 3, page 9. This is the year for reapportioning the delegates of the various state associations. The by-law requires that the House of Delegates shall appoint a committee of five on reapportionment of which the President and Secretary shall be members. I suggest that this appointment be made early in the session so that the Committee may report to the House as promptly as possible.

During the past year there has been some conflict regarding the scope of the work of the special committees that were appointed at the last meeting of the House of Delegates and the established Councils of the Association. In order that all the activities of the Association may be coordinated it is advisable that the House of Delegates extend the courtesies of the floor to the members of the various Councils and especially that it request the secretaries of these Councils to attend the sessions of the House, according them the privilege of the floor, in order that the House may be constantly in position to obtain information concerning work that is being done by these Councils and that this body may direct these activities.

Another matter that must be brought to the attention of the House of Delegates is the fact that there is a vast amount of work to be accomplished during the four days of the meeting, and I urge that the House take time to properly consider the matters presented and to act with serious deliberation on them. In order that this end may be attained, it is advisable that the reference committees shall meet at places and times which shall be publicly announced in order that not only members of the House but that the members of the Association may appear before these reference committees. The House should know, when a reference committee reports, that it has carefully considered the subject and that an opportunity to be heard has been granted all members who are interested in the question. I fully appreciate that this will occupy a great deal of the time of the members of the reference committees, but the importance of the work commands the service of the delegates.

It is advisable that the House of Delegates define precisely what is understood by the term "invited guest." A number of the Sections have desired to invite scientists who are eligible to membership in component societies of the American Medical Association but who have neglected to obtain this membership, to present papers before their Sections. The ruling in the past has been that as associate membership is limited to those who are not eligible to regular membership in the Association, so it is evidently intended that "invited guests" shall be limited to those who are not eligible to membership in the organization. Reading the section of the by-laws with reference to invited guests, it will be noted that this is not definitely stated since the term "scientists" can be held to include certain men who can become members in their local societies. If the House concurs in the precedence that has been established, Section 9, Chapter 1 of the by-laws should be amended to read as follows:

"Sec. 9.—Invited Guests.—Scientists, who are not eligible to membership in the component society of the locality in which they reside, may be invited by the general officers or by the officers of a Section to attend any annual session and to take part in the scientific work. They shall be designated as invited guests and be entitled to participate in the scientific and social functions."

### REPORT OF THE JUDICIAL COUNCIL

One of the most important reports submitted this year to the House of Delegates is that of the Judicial Council, embodying as it does a revision of the Principles of Medical Ethics, so framed that it may be regarded as a code of laws governing the membership of this Association. This report should have the serious consideration of the House. I wish to add that the Council has gone over the revision proposed at both meetings which that body held and that a number of the preliminary proofs of the revision were submitted to the past officers of the Association and a considerable number of the House of Delegates for their criticism. With the three exceptions the fifty-nine replies received have endorsed the general principles announced. Of these three, one asked that no action be taken and that the Council should omit this portion of its report; a second made no criticism except that the whole revision was unworthy of consideration; and in the third, it was suggested that the subject be referred to a special committee and no action be taken until after mature deliberation. The fact that the Judicial Council has spent a year in drafting the present form of revision seems to answer this third objection. However, the entire subject is presented to the House of Delegates for its consideration but it must be remembered that unless some action is taken at this session, the Judicial Council will have no laws under which cases may be brought to its attention until the Association does frame some legal code.

Respectfully submitted,

Alexander R. Craig, Secretary.

## Report of the Board of Trustees

*To the Members of the House of Delegates of the American Medical Association:*

*Gentlemen:* In submitting our annual report for the past year we congratulate you on the continued prosperity of the Association, on the splendid work it is doing through its publications and its councils for the improvement in medical education, and for the enlightenment of the public regarding health matters and public sanitation in its broadest conceptions.

### DAVIS MEMORIAL

It is a pleasure to state that Library Hall in the new building has been dedicated to the memory of Dr. N. S. Davis and a bronze statue of the distinguished founder of the Association will be placed therein. Though a modest recognition, it is intended as an honor and a tribute to his high character and his services to the cause of humanity, and to the profession which he loved and so faithfully served throughout a long professional life.

With your endorsement, Mr. Frederick G. Hallett, Secretary of the Conjoint Board of London, was invited by the Council on Medical Education to its annual conference in Chicago in February last. The Council asked the Board of Trustees to authorize the payment of Mr. Hallett's expenses; this authorization was granted, and his expenses were paid from the fund appropriated to the Council. The Council will doubtless report fully as to the value and importance of his visit.

Concerning the resolution by the sections on the preparatio of text-books, the Trustees believe that at the present tim the publication of text-books in the manner suggested in th resolution which was referred to the Board is not advisable

### THE BUTTON

In our report last year we recommended that you reconsider your action relative to substituting a new design for the officia button and emblem of the Association. We presented no argu ment—except that the new design was unsatisfactory from th standpoint of manufacture,—which is of small moment expect ing that the matter would be discussed in the House of Dele gates, or that a hearing would be granted by the Referenc Committee before which the subject would automatically g The Committee in its report, which included several other mat ters, recommended that the action of the previous year shoul stand. The report was adopted without discussion; in fac without the subject being given any consideration whatever b the House. Did we not believe that the matter was of sufficien importance to warrant careful consideration by the House o Delegates, we would not bring it before you again.

The emblem of the Association is something more than th button: it is, in a sense, our trade-mark. It is used as suc at least, on our books, pamphlets, etc. Not only this, but as button on the lapel of the coats of our members—over 20,00 have been distributed—it has become well known, and is ge erally recognized as the emblem of the organized medical pr fession. It would seem, therefore, that this emblem should n be radically changed unless there are very special reasons f doing so. So far as we know, the only reason given is the la passed by Congress seven years ago. This law, howeve specifically exempts "persons, corporations or societies th actually used . . . the said emblem, sign or insignia prior to Jan. 5, 1905." In other words, we have just as much right to use this emblem now as we had before the law was passed. Further, so far as we know, this law has not been enforced even as to those who started to use the red cross since the law was passed.

The old button is distinctive; it means something in and of itself. Even the layman recognizes it as meaning something distinctive, and seeing it on the lapel of a physician's coat, at once appreciates its significance. The new button, on the contrary, has no significance, except to a very few who are versed in mythology. It is not distinctive; is meaningless unless it is explained, and few would be able to explain it. The design submitted by the original committee, two years ago, was larger than the one finally adopted, and the words "American Medical Association" were printed in full. The reduction in size and the substitution of the initials "A. M. A." for "American Medical Association," have made the proposed button still less suggestive than in its original form. We feel, therefore, that if we must have a new emblem, something more appropriate than the one you have adopted should be worked out. A design for a button and trade-mark must satisfy certain definite conditions. It must be simple, distinctive, easily recognizable and capable of satisfactory reproduction in metal, enamel, type and embossing. These conditions are not met by the new design. An emblem must possess something besides artistic merit to be acceptable.

We desire to again emphasize the fact that changing the emblem of the Association is worthy of careful consideration, and we hope before a final change is made that the matter will be discussed on the floor of the House of Delegates. The Board passed a resolution to the effect that the old design be retained as it has long since become a distinct trade-mark and there are other reasons why it should be retained.

### MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION

This question in its relation to component societies and the National Association has been referred to the Board of Trustees. It has been considered by the Board on more than one occasion in its meetings and in reports to the House of Delegates. We regret not being able so far to make a satisfactory and final report. The question was referred to the state societies for action and report to the Board. Most of them evidently did not understand it and did not take specific action. The committee appointed by the President and the Board of Trustees, to investigate and elucidate the matter, will report to you. With our present knowledge and under present conditions, we feel compelled to refer the whole matter back to the House of Delegates for more elaborate inquiry and fuller investigation, believing it should be made a special order for your consideration.

### POSTAL RATES

We are glad to announce that the Board has modified the records of the membership and subscription departments so that these are now satisfactory to the Post-Office Department relative to second-class rates. To comply with the requirements of the Post-Office Department it was necessary to make slight modification in the By-Laws. The Board has made these modifications; they are as follows:

The first paragraph of Sec. 2, Chapter 1, has been modified to read:

> "Members.—Any physician, reported as a member in good standing of a constituent association by the secretary of that association, who on the prescribed form shall apply for membership and subscribe for The Journal, paying the annual dues for the current year, shall be a member."

Sec. 5 of the same chapter (Chapter 1) has been changed to read:

> "Delinquency.—Any member who, for one year, has failed to pay his annual dues, shall forfeit his membership thirty days after notice from the Secretary has been mailed to his last known address."

Chapter XIII has been modified to read as follows:

> "The annual dues shall be five dollars, payable in advance on the first day of January of each year, of which not less than four dollars shall be credited to the subscription for one year to The Journal."

The above modifications were submitted to the Post-Office Department at Washington, and received its approval.

The President's Commission on Post-Office matters, in its report, has recommended an increase of second-class postage rates from 1 cent to 2 cents a pound. If this increase is adopted by Congress, it means, of course, the doubling of our second-class postage bill, which last year amounted to $22,435, and this year will be more.

### ORGANIZATION TRANSFER RECOMMENDED

The Board feels that "organization" should be transferred from the Council on Health and Public Instruction to the Judicial Council. The plan toward which we have been working for several years is the organization of a series of permanent councils which shall cover the various activities of the Association. When the Council on Health and Public Instruction was created it was understood that it would have under its jurisdiction the various activities of the Association as they related to the public; as for instance, legislation, defense of research, public education, cooperation with non-medical organizations, etc. The broadening of the functions of the Judicial Council makes it the council to which, we believe, will gradually be transferred the various activities affecting the profession itself. In other words, there will be one—the Judicial Council—to have general supervision of all matters affecting internal relations of the profession; the other—the Council on Health and Public Instruction—all matters affecting external relations of the organization—that is, its relation to the public and to non-medical organizations. "Organization" naturally comes under the Secretary of the Association, who is now Secretary of the Judicial Council.

This general subject was discussed by the Board of Trustees at its last meeting, and by the Council on Health and Public Instruction, and by the Judicial Council, all favoring the transfer of "organization" to the Judicial Council.

The Board therefore recommends the following changes in the By-Laws:

Strike out the word "organization" from line 8, paragraph 2, section 5, chapter XIX of the By-Laws.

Insert at the end of the second paragraph of section 4, chapter XIX the words "(4) to all matters regarding organization of the medical profession."

### LENGTH OF SECTION PAPERS

At its annual meeting in February, the Board passed a resolution limiting papers read before the sections to four printed pages of The Journal and the discussion by each speaker to 500 words, unless otherwise ordered by the publication committee of the Board. The object of these changes, slight in the average case, is to enable the management to publish section papers within a reasonable time and before the matter is stale, and also to give more space to valuable current literature than is now afforded. We believe this will be for the best interest of all concerned. Readers of papers in the sections are limited to twenty minutes and most of them can, without sacrifice of important matter, be abbreviated when necessary, so as to conform to these requirements.

### THE ARCHIVES OF INTERNAL MEDICINE AND THE AMERICAN JOURNAL OF DISEASES OF CHILDREN

The *Archives* is now in its fifth year, and may be regarded as a success. The paid circulation on the first of January, 1912, was a little over 2,100 copies—a slight increase over the preceding year. To some this may not seem a large circulation, but it must be remembered that this periodical does not appeal to the great majority of practitioners. At the same time it means the publication of scientific work and articles that otherwise might not be published, and placing the matter in the hands of those who desire it at a moderate price.

The circulation of the *Journal of Children's Diseases* at the end of December, 1911, was approximately 2,000 copies. A circulation this large was not to be expected; it shows, however, that such a journal was needed. Of course it appeals only to those who are especially interested in the advanced scientific knowledge relating to pediatrics.

Neither the *Archives* nor the *Journal of Children's Diseases* could be published by private enterprise, without financial support from advertisements of a questionable nature; even with our facilities for printing and distribution they are barely paying the cost of publication. There was a slight loss on the *Archives*, but this resulted from the increased amount of matter. The two volumes for 1911 contained 1,730 pages. 25 per cent. increase over the average of previous years.

To meet frequent requests from every section of the country, where two or more members in good standing occupy the same office, the Board by resolution authorized the Editor and General Manager to send the *Archives of Internal Medicine*, or the *American Journal of Diseases of Children*, in lieu of the Association Journal to such members as may make application therefor, provided the full annual dues for the year have been paid.

### SURGICAL JOURNAL

A petition of about 100 of the most distinguished surgeons of the country has been presented to the Board of Trustees urging the publication of a surgical journal by the Association. The matter has been discussed for two years and preliminary steps were taken by the Board a year ago. An editorial board was appointed but there was no satisfactory agreement as to the form and character of the journal. The petition suggested a salaried editor and an advisory editorial board. The editorial board appointed recommended the publication of a journal along the lines of the *Journal de Chirurgie*. The Trustees, at their last meeting in February, believing it best to institute a journal along modest lines in the beginning, passed a resolution authorizing the publication of a surgical journal to be edited and managed by an editorial board, similar to those of the *Archives of Internal Medicine* and the *American Journal of Diseases of Children*. Nothing has yet been done, but it is understood that the editorial board will meet to consider the matter at the June meeting of the Association.

### COUNCIL ON PHARMACY AND CHEMISTRY

It is not necessary to dilate on the splendid work which is being done by our Council on Pharmacy and Chemistry and by the Chemical Laboratory. A reference to the pages of The Journal week by week makes it unnecessary to do more than to refer to the matter, and to congratulate ourselves that this splendid work can be carried on under the auspices of our Association.

It is to be regretted that this Council does not have greater cooperation from the leading pharmaceutic houses of the country. While this Council will undoubtedly eventually do more for American pharmaceutic manufacturing concerns, by advancing the standard, thus securing the confidence of the medical profession of the world, it appears that there is an agreement among a few of the firms to ignore the Council; consequently they are not submitting their preparations. On the other hand, practically all of the reliable foreign firms are finding it of decided advantage to have their products passed on by the Council and published in N. N. R. Needless to say, the influence of the Council on all manufacturers is already enormous. To-day they are very careful what they put out and what they say, simply because they know that the medical profession has a body of men competent to criticize, and a journal ready to publish facts without fear or favor. Of course it rests with the profession itself whether this opposition by some firms shall continue. If physicians will refuse to use any proprietary preparation, no matter by whom made, unless it is passed on by the Council, the firms that hold aloof will soon follow the lead of the foreign houses.

Believing the time had come for more constructive work, a year ago the Council appointed a committee on Therapeutic Research and asked for an appropriation of $500. The Trustees granted this request, and again at our last meeting a further sum of $1,500 was appropriated for this work. It is needless to say that the importance of such work cannot be overestimated; it means the application of scientific principles to drug therapy. Some of the investigations now being conducted under the Council's committee are as follows:

1. An investigation of the clinical value of cardiovascular drugs, including digitalis, caffein, strychnin, camphor and the atropin groups. This work is in charge of Dr. David L. Edsall, of the Washington University Medical School. St. Louis.

2. A study of the relative therapeutic effects and toxicity of the natural and synthetic sodium salicylates. This includes (a) a pharmacologic investigation, the results of which have already been published in the *Archives of Internal Medicine*; (b) The chemical work has been carried on in our own laboratory, but not yet published; (c) A clinical investigation, in which the Council has secured the cooperation of some seventy clinicians connected with hospitals and covering nearly the whole country. This work is in charge of Professor Sollmann, of the Western Reserve University, Cleveland.

3. An investigation of the duration of the action of digitalis, to include experiments on animals, and also clinical investigation. This is in charge of Professor Hatcher, of Cornell University Medical College, New York City.

4. A study of the impurities in chloroform, including their origin and effects. This is purely experimental work, in charge of Dr. Worth Hale, Pharmacologist in the Hygienic Laboratory of the U. S. P. H. and M.-H. S., Washington, D. C.

5. A study of intestinal antiseptics. This includes a critical investigation of the literature on the subject, and also experimental and clinical investigation. This is in charge of Dr. Norman M. Harris, of the University of Chicago. Dr. Harris has been conducting this work in the Johns Hopkins Hospital for several months.

6. A study of the action of the organic iodids, their efficiency, freedom from side actions, and their absorption and excretion. This work is in charge of Dr. Capps, of Rush Medical College, Chicago, with the cooperation of Dr. F. MacLean, of the University of Oregon, who is conducting the investigation of the fate of the iodids in the organism.

7. A critical review of the literature of hypophosphites, glycerophosphates, lecithin and phosphorus. This is under the direction of Dr. John Howland, of the Washington University Medical School, St. Louis.

### NOSTRUMS AND QUACKERY

A most important work has developed in connection with, or rather as an offshoot of, the work of the Council on Pharmacy and Chemistry and the Chemical Laboratory. This is the work which is enlightening the public in regard to the frauds connected with patent medicines and quackery in general. This work has broadened out enormously, and is having quite an influence on the public. It requires the entire time of the one in charge, and of three clerical and stenographic assistants. The correspondence with laymen has enormously increased, showing that the public is becoming greatly interested. The important exposés, after appearing in The Journal, are usually elaborated on, and issued in pamphlet form for circulation among the public. A large amount of this matter has also been gathered into book form and published under the title "Nostrums and Quackery." The first edition of this book was 10,000 copies. These are about gone, and another edition is in preparation. One encouraging fact is that a large number of newspapers have been won over and are copying much of the matter we publish.

### BUILDINGS

Our new building furnishes ample and satisfactory facilities for printing and carrying on the various enterprises of the Association. The old building, which will probably not be needed for several years, has been leased from May 1, at an annual rental of $4,764, which is a very satisfactory income from the property.

### DIRECTORY

The Third Edition of the American Medical Directory has been issued, and many of you, no doubt, have had an opportunity of examining it. Those of you who have done so will recognize that it is something of which the Association can be proud. It is, without doubt, the most complete and most correct medical directory of the physicians of the United States that has yet been issued. Above all—and this does not appear on the surface—the information it contains is based on official information and is dependable.

As a rule, a directory is a commercial enterprise; hence it is considered legitimate—in fact almost necessary—to inser advertisements on the backbone, outside covers, edges and margins of reading pages, as well as to intersperse them in the reading pages. This, of course, is not done with our Directory. Further, other medical directories give a good deal of information—often misleading—regarding an individual, for which he pays either in cash or by subscription for the book. This makes it really an advertisement. In our Directory all are treated alike.

By means of symbols it has been possible to include in small space a large amount of information. In this edition, aside from the ordinary matter which appears in such a directory, there are included symbols to indicate the specialty, if any, the special societies to which an individual belongs, teaching positions, etc. The present book contains 180 pages more than the preceding one, owing to the fact that in the new edition there is a vast amount of additional information. The previous editions were unhandy on account of their size, and we have improved this by using a thin, opaque, imported paper.

As an individual or separate enterprise, our Directory is not an income-producer, but as an adjunct in the Association's general uplift work it is certainly of great value in many ways.

### FINANCIAL

Following this report will be found tabulated matter relating to the subscription of THE JOURNAL, etc., followed by the official detailed report of the auditors and treasurer covering the year 1911.

Both the retiring president and the president-elect have attended the special and regular meetings of the Board of Trustees and have in every way manifested the keenest interest in the work of the Association and the welfare of the profession. The magnitude of our aims and efforts increases with the coming years. No medical organization so powerful for good has ever before existed to appeal to the conscience of its votaries in the interest of humanity. The incentive to united professional endeavor was never stronger. In the interest of its own honor, its unselfish devotion to a generous cause, its promise of a greater future, as well as its solicitude for the public weal, we shall not labor or trust in vain.

Respectfully submitted,

W. W. GRANT, Chairman.
C. A. DAUGHERTY,
FRANK J. LUTZ,
C. E. CANTRELL,
W. T. COUNCILMAN,
M. L. HARRIS, Secretary,
PHILIP MARVEL,
PHILIP MILLS JONES,
W. T. SARLES.

## Addenda to Trustees' Report

### SUBSCRIPTION DEPARTMENT

The regular weekly issue of THE JOURNAL of the American Medical Association, from Jan. 1, 1911, to Dec. 31, 1911, inclusive, 52 issues, was as follows:

| Issue | Number | Total |
|---|---|---|
| January 7 | 59,098 | |
| January 14 | 58,120 | |
| January 21 | 57,567 | |
| January 28 | 57,470 | |
| | | 232,255 |
| February 4 | 57,674 | |
| February 11 | 57,617 | |
| February 18 | 57,696 | |
| February 25 | 57,117 | |
| | | 230,104 |
| March 4 | 57,106 | |
| March 11 | 56,619 | |
| March 18 | 56,097 | |
| March 25 | 56,122 | |
| | | 225,944 |
| April 1 | 54,166 | |
| April 8 | 57,739 | |
| April 15 | 53,863 | |
| April 22 | 54,179 | |
| April 29 | 53,792 | |
| | | 273,739 |
| May 6 | 54,078 | |
| May 13 | 54,571 | |
| May 20 | 68,071 | |
| May 27 | 54,676 | |
| | | 231,396 |
| June 3 | 54,489 | |
| June 10 | 54,984 | |
| June 17 | 55,223 | |
| June 24 | 54,551 | |
| | | 219,247 |
| July 1 | 54,117 | |
| July 8 | 54,490 | |
| July 15 | 54,428 | |
| July 22 | 54,577 | |
| July 29 | 54,575 | |
| | | 272,187 |
| August 5 | 54,676 | |
| August 12 | 54,604 | |
| August 19 | 56,388 | |
| August 26 | 54,959 | |
| | | 220,627 |
| September 2 | 54,735 | |
| September 9 | 54,781 | |
| September 16 | 54,580 | |
| September 23 | 55,282 | |
| September 30 | 55,296 | |
| | | 274,674 |
| October 7 | 55,124 | |
| October 14 | 55,220 | |
| October 21 | 56,093 | |
| October 28 | 56,936 | |
| | | 223,373 |
| November 4 | 57,759 | |
| November 11 | 57,508 | |
| November 18 | 57,961 | |
| November 25 | 58,522 | |
| | | 231,750 |
| December 2 | 58,634 | |
| December 9 | 58,107 | |
| December 16 | 58,514 | |
| December 23 | 58,587 | |
| December 30 | 58,848 | |
| | | 292,690 |
| Total issue for twelve months | | 2,927,986 |
| Weekly average | | 56,307 |

### Percentage of Physicians Receiving The Journal

This table gives the number of physicians (based on the second edition of the American Medical Directory) in the United States, number receiving THE JOURNAL and the approximate percentage in each state. Copies to physicians in the United States Army, United States Navy, Marine-Hospital Service, etc., omitted.

| State. | Number Receiving JOURNAL. | Physicians in State 2d A. M. A. Dir. | Approx. per cent. 2d A. M. A. Dir. |
|---|---|---|---|
| Alabama | 625 | 2,287 | 27.3 |
| Arizona | 158 | 246 | 64.2 |
| Arkansas | 625 | 2,535 | 24.6 |
| California | 2,664 | 4,313 | 61.7 |
| Colorado | 870 | 1,690 | 51.5 |
| Connecticut | 706 | 1,424 | 49.5 |
| Delaware | 87 | 220 | 39.5 |
| District of Columbia | 556 | 1,231 | 45.1 |
| Florida | 359 | 786 | 45.6 |
| Georgia | 757 | 2,887 | 26.4 |
| Idaho | 191 | 343 | 55.6 |
| Illinois | 4,842 | 9,744 | 49.6 |
| Indiana | 1,789 | 5,306 | 33.3 |
| Iowa | 1,743 | 3,624 | 48. |
| Kansas | 1,181 | 2,650 | 44.5 |
| Kentucky | 1,018 | 3,708 | 27.4 |
| Louisiana | 766 | 1,798 | 42.6 |
| Maine | 417 | 1,198 | 34.8 |
| Maryland | 990 | 2,012 | 49.2 |
| Massachusetts | 2,369 | 5,577 | 42.4 |
| Michigan | 1,748 | 4,109 | 42.4 |
| Minnesota | 1,289 | 2,204 | 58.4 |
| Mississippi | 563 | 2,054 | 27.4 |
| Missouri | 2,261 | 6,332 | 35.7 |
| Montana | 250 | 417 | 59.9 |
| Nebraska | 843 | 1,776 | 48. |
| Nevada | 91 | 177 | 51.4 |
| New Hampshire | 288 | 679 | 42.4 |
| New Jersey | 1,109 | 2,455 | 45.1 |
| New Mexico | 198 | 367 | 52.6 |
| New York | 5,097 | 14,117 | 36.1 |
| North Carolina | 577 | 1,761 | 32.7 |
| North Dakota | 365 | 552 | 66.1 |
| Ohio | 2,775 | 7,838 | 35.4 |
| Oklahoma | 790 | 2,703 | 29.1 |
| Oregon | 495 | 782 | 63.9 |
| Pennsylvania | 4,241 | 11,056 | 38.3 |
| Rhode Island | 335 | 720 | 46.5 |
| South Carolina | 432 | 1,141 | 37.7 |
| South Dakota | 347 | 607 | 57.1 |
| Tennessee | 871 | 3,303 | 26.3 |
| Texas | 1,634 | 5,789 | 28.2 |
| Utah | 281 | 359 | 78.3 |
| Vermont | 215 | 663 | 32.4 |
| Virginia | 790 | 2,215 | 35.6 |
| Washington | 844 | 1,404 | 60.1 |
| West Virginia | 578 | 1,608 | 35.9 |
| Wisconsin | 1,392 | 2,518 | 55.2 |
| Wyoming | 106 | 202 | 52.4 |

The following table shows the number of members and subscribers for each year, commencing with 1900:

| Year. | Members. | Subscribers. |
|---|---|---|
| Jan. 1, 1900 | 8,445 | 4,633 |
| Jan. 1, 1901 | 9,841 | 8,339 |
| Jan. 1, 1902 | 11,107 | 10,795 |
| Jan. 1, 1903 | 12,553 | 12,378 |
| Jan. 1, 1904 | 13,899 | 14,674 |
| Jan. 1, 1905 | 17,570 | 15,698 |
| Jan. 1, 1906 | 20,826 | 17,669 |
| Jan. 1, 1907 | 26,255 | 20,166 |
| Jan. 1, 1908 | 29,382 | 20,880 |
| Jan. 1, 1909 | 31,999 | 18,983 |
| Jan. 1, 1910 | 33,032 | 19,832 |
| Jan. 1, 1911 | 33,540 | 20,504 |
| Jan. 1, 1912 | 33,250 | 21,620 |

During the year, 1911, there were 2,080 names transferred from the subscription to the membership department.

## Treasurer's Report

Report of the Treasurer of the American Medical Association for the Period from July 13 to Dec. 31, 1911

RECEIPTS

| | | |
|---|---|---|
| July 13. 1911—Assets received from Dr. Frank Billings, former Treasurer— | | |
| Cash balance in First National Bank | $ 9,860.21 | |
| Certificates of deposits in First Trust and Savings Bank | 70,000.00 | |
| Bonds per auditor's schedule | 40,000.00 | |
| Aug. 14, 1911—Interest on deposit receipt for $40,000.00 dated Dec. 9, 1910 | 812.50 | |
| Oct. 4, 1911—Interest on bonds | 400.00 | |
| Dec. 30, 1911—Interest on bonds | 400.00 | |
| Dec. 30. 1911—Interest on checking account | 63.86 | |
| | | $121,536.57 |

DISBURSEMENTS

| | | | |
|---|---|---|---|
| Aug. 14, 1911—To check to editor and general manager | $10,000.00 | | |
| Oct. 11, 1911—To check to editor and general manager | 10,000.00 | | |
| | | $ 20,000.00 | |
| Dec. 30, 1911—Balance: | | | |
| Bonds per schedule | $40,000.00 | | |
| Certificates of deposits | 60,000.00 | | |
| Checking account | 1,536.57 | | |
| | | 101,536.57 | |
| | | | $121,536.57 |

W. A. PUSEY,
Treasurer.

## Auditor's Report

Marwick, Mitchell, Peat & Co., Chartered Accountants
115 South La Salle Street
Chicago, Jan. 30, 1912.

*To the Board of Trustees of the American Medical Association, Chicago, Ill.*

*Dear Sirs:*

In accordance with your instructions, we have audited the accounts of the American Medical Association for the year ended Dec. 31, 1911. on which we now submit our report, together with the following statements:

Exhibits
- "A" Balance Sheet as at Dec. 31, 1911.
- "B" Income Account for the year ended Dec. 31, 1911.

Schedules
- "1" Bonds as at Dec. 31, 1911.
- "2" Journal Publication Expenses for the year ended Dec. 31. 1911.
- "3" General Expenses for the year ended Dec. 31, 1911.
- "4" Provision for Depreciation for the year ended Dec. 31, 1911.
- "5" Association Expenditure for the year ended Dec. 31, 1911.

We examined the securities representing the investments of the Association and counted the cash on hand. The cash in banks was verified by certificates from the bankers.

The disbursements were vouched and found in order, and a satisfactory test of the revenue of the Association was made.

The balance sheet now submitted is, in our opinion, a full and fair statement of the financial position of the Association as at Dec. 31, 1911, and as shown by the books, subject to the qualification that no provision has been set aside for accrued taxes, and subscriptions and memberships paid in advance, which are partially offset by unpaid subscriptions and memberships earned but not included in the accounts.

The following is a comparative condensed balance sheet as at Dec. 31, 1910 and 1911:

| | ——December 31—— | | | |
|---|---|---|---|---|
| Assets: | 1911 | 1910 | Increase | Decrease |
| Property and Plant | $352,345.40 | $288,833.66 | $63,511.74 | .......... |
| Biographical Information | .......... | 1,546.83 | .......... | 1,546.83 |
| Investments | 99,063.75 | 94,231.88 | 4,831.87 | .......... |
| Current and Working | 43,912.91 | 64,948.87 | .......... | 21,035.96 |
| Prepaid Accounts | 16,437.03 | 1,072.32 | 15,364.71 | .......... |
| Total Assets | $511,759.09 | $450,633.56 | $61,125.53 | .......... |
| Liabilities | 9,414.39 | 2,104.18 | 7,310.21 | .......... |
| Surplus | $502,344.70 | $448,529.38 | $53,815.32 | .......... |

The increase in surplus, $53,815.32, represents the net income for the year under review, particulars of which are recorded in Exhibit "B."

During the calendar year 1911 depreciation aggregating $19,398.02 has been written off the property accounts. Of this, $17,371.77 is applicable to the new buildings and machinery, plant, etc., while the balance, $2,026.25, is on the old building, not now used in connection with the operation of the business.

The expenses of the year just closed include $12,500.00 in respect of the cost of issuing the third or 1912 edition of the Directory.

The City of Chicago 4 per cent. school bonds due in 1911 have been redeemed at par, namely, $14,000.00. The difference between par and cost value, viz., $1,168.13, is entered in the income account, Exhibit "B."

### EXHIBIT "A."

Balance Sheet as at Dec. 31, 1911.

ASSETS

| | | | |
|---|---|---|---|
| Property and Plant: | | | |
| Real Estate and Buildings | | | $264,312.59 |
| Machinery | | | 62,181.47 |
| Type and Metal | | | 9,796.30 |
| Furniture and Fixtures | | | 13,649.13 |
| Laboratory | | | 1,220.30 |
| Library | | | 1,185.61 |
| Total Property and Plant | | | $352,345.40 |
| Investments: | | | |
| Bonds at Cost ("Schedule "1") | | $39,063.75 | |
| Certificates of Deposit | | 60,000.00 | |
| Total Investments | | | $99,063.75 |
| Current and Working Assets: | | | |
| Material and Supplies as per Inventory | | 11,849.71 | |
| Accounts Receivable: | | | |
| Advertising | $19,765.30 | | |
| Reprints | 1,069.17 | | |
| Jobbing and Miscellaneous | 2,346.42 | | |
| | | 23,180.89 | |
| Bills Receivable | | 245.31 | |
| Cash in Bank and on Hand: | | | |
| The First National Bank of Chicago | $ 1,536.57 | | |
| Continental and Commercial National Bank of Chicago | 5.206.30 | | |
| Cash on Hand | 1,844.13 | | |
| Office Fund | 50.00 | | |
| | | 8,637.00 | |
| Total Current and Working Assets | | | 43.912.91 |
| Prepaid Accounts: | | | |
| Insurance | | $ 1,352.59 | |
| Atlantic City 1912 Session | | 38.00 | |
| Unissued Publications | | 15,046.44 | |
| Total Prepaid Accounts | | | 16,437.03 |
| Total | | | $511,759.09 |

LIABILITIES

| | | |
|---|---|---|
| Miscellaneous Accounts Payable | | $ 7,621.91 |
| Advance Payments on Publications | | 1,792.48 |
| Surplus: | | |
| As at Dec. 31, 1910 | $448,529.38 | |
| Net Income for Year ended Dec. 31, 1911 | 53,815.32 | |
| | | 502,344.70 |
| Total | | $511,759.09 |

### EXHIBIT "B"

Income Account for the Year Ended Dec. 31, 1911

| | | | |
|---|---|---|---|
| Revenue: | | | |
| Membership Dues | | | $ 36,740.39 |
| Journal Subscriptions | | | 232,235.48 |
| Journal Advertising | | | 177,955.61 |
| Profit Derived from: | | | |
| Jobbing | | | 3,636.74 |
| Books | | | 1,910.48 |
| Reprints | | | 3,502.39 |
| Buttons | | | 67.93 |
| Miscellaneous Sales, etc | | | 3,456.77 |
| Gross Revenue | | | $459.505.79 |
| Expenses: | | | |
| Journal Publication Expenses (Schedule "2") | | $197,977.77 | |
| General Expenses (Schedule "3") | | 121,660.74 | |
| 1911 Session Account | | 4,857.61 | |
| Provision for Depreciation (Schedule "4") | | 19,398.02 | |
| | | | 343,894.14 |
| Net Revenue | | | $115.611.65 |
| Other Income: | | | |
| Interest: | | | |
| On Bonds | | $ 1,600.00 | |
| On Treasurer's Account | | 1,068.10 | |
| On Bank Balances | | 432.76 | |
| | | $ 3,100.86 | |
| Loss on Bad and Doubtful Accounts and Notes less Recoveries | | 132.10 | |
| | | | $2,968.7 |
| Gross Income | | | $118,580.4 |
| Deductions from Income: | | | |
| Association Expenditures (Schedule "5") | | $ 48,190.20 | |
| Biographical Index | | 2,906.76 | |
| Difference between par value and cost price of City of Chicago 4 per cent. School Bonds | | 1,168.13 | |
| Third edition of Directory, proportion of expense charged off | | 12,500.00 | |
| | | | 64,765.0 |
| Net Income | | | $ 53,815.3 |

### SCHEDULE "1"

Bonds as at Dec. 31, 1911

| No. | Description and Particulars | Par Value | Cost |
|---|---|---|---|
| 5 | Atchison, Topeka & Santa Fe Railway Co. 4 per cent. 100-year gold bonds... | $ 5,000.00 | $ 4,988.75 |
| 5 | Erie Railroad Co. 4 per cent. 100-year gold bonds ........ | 5,000.00 | 4,932.50 |
| 5 | Baltimore & Ohio Railway Co. 4 per cent. first mortgage........ | 5,000.00 | 5,032.50 |
| 5 | Union Pacific Railroad Co. 4 per cent. first mortgage ........ | 5,000.00 | 5,207.50 |
| 5 | Reading Co. 4 per cent. general mortgage. | 5,000.00 | 4,870.00 |
| 5 | Reading Co. and the Philadelphia & Reading Coal & Iron Co. 4 per cent. general mortgage, par value $1,000.00 each, at 94½........ | 5,000.00 | 4,732.50 |
| 5 | Atchison, Topeka & Santa Fe Railway Co. 4 per cent. first mortgage bonds, payable April and October, principal due 1995. Nos. 32785, 35162, 40517, 40515 and 40516, par value $1,000.00 each, at 90½........ | 5,000.00 | 4,532.50 |
| 5 | Baltimore & Ohio Railway Co. 4 per cent first mortgage bonds, payable April and October, principal due 1948, Nos. 53591, 53594, 53593, 34986 and 34987, par value $1,000.00 each, at 95. | 5,000.00 | 4,767.50 |
|  | Total ........ | $40,000.00 | $39,063.75 |

### SCHEDULE "2"

Journal Publication Expenses for the Year Ended Dec. 31, 1911

| | | |
|---|---|---|
| Wages ........ | | $ 84,012.10 |
| Editorials, News and Reporting........ | | 9,017.99 |
| Materials and Supplies: | | |
| Paper ........ | $ 93,716.41 | |
| Ink ........ | 2,967.03 | |
| Electrotypes ........ | 3,444.08 | |
| Binding ........ | 215.73 | |
| Miscellaneous Supplies ........ | 4,604.43 | |
| | | 104,947.68 |
| Total ........ | | $197,977.77 |

### SCHEDULE "3"

General Expenses for the Year Ended Dec. 31, 1911

| | | |
|---|---|---|
| Salaries ........ | | $ 45,871.58 |
| Postage: | | |
| Journal—Second Class ........ | $ 22,435.81 | |
| General ........ | 12,417.86 | |
| | | 34,853.67 |
| Commissions: | | |
| Journal ........ | $ 7,496.47 | |
| Buttons ........ | 59.28 | |
| | | 7,555.75 |
| Plant: | | |
| Repairs and Renewals........ | $ 4,092.46 | |
| Power ........ | 3,258.51 | |
| Light ........ | 1,234.20 | |
| Fuel ........ | 1,603.41 | |
| Building Maintenance ........ | 1,112.92 | |
| Supplies ........ | 3,207.54 | |
| | | 14,509.04 |
| Insurance and Taxes........ | | 3,335.55 |
| Discount ........ | | 3,458.54 |
| Collection Commission........ | | 1,627.11 |
| Expenses, Cartage ........ | | 1,903.21 |
| Agents' Salaries ........ | | 1,185.75 |
| Exchange ........ | | 1,387.58 |
| Legal ........ | | 2,249.95 |
| Office Supplies ........ | | 565.60 |
| Telephone and Telegraph........ | | 787.91 |
| Reprints ........ | | 161.98 |
| Miscellaneous ........ | | 2,207.52 |
| Total ........ | | $121,660.74 |

### SCHEDULE "4"

Provision for Depreciation for the Year Ended Dec. 31, 1911

| *Classification* | *Amount* |
|---|---|
| Buildings ........ | $ 7,995.83 |
| Machinery ........ | 6,909.05 |
| Furniture and Fixtures........ | 1,773.31 |
| Type ........ | 707.71 |
| Metal ........ | 1,446.48 |
| Factory Fixtures ........ | 430.05 |
| Laboratory Equipment ........ | 135.59 |
| Total........ | $ 19,398.02 |

### SCHEDULE "5"

Association Expenditure for the Year Ended Dec. 31, 1911

| | |
|---|---|
| Association ........ | $ 10,349.57 |
| Health and Public Instruction........ | 18,978.61 |
| Pharmacy and Chemistry........ | 9,386.40 |
| Medical Education ........ | 6,126.64 |
| Propaganda Literature ........ | 3,348.98 |
| Total ........ | $ 48,190.20 |

We are pleased to report that the records of the Association are maintained in a careful and efficient manner, and we also desire to acknowledge the courtesies extended to us during the course of our examination. Yours truly,

Marwick, Mitchell, Peat & Co.,
Chartered Accountants.

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## Report of the Judicial Council

*To the Members of the House of Delegates of the American Medical Association:*

The Judicial Council, elected at the Los Angeles meeting, organized by selecting Dr. Frank Billings, Chicago, as chairman. The by-law defining the Judicial Council (Sec. 4, Chapter IX) directs that this Council shall act under regulations approved by the next ensuing House of Delegates. As there are no methods of procedure and no laws to govern the personal conduct of a member in his relations with other members, the Council offers for the approval of the House the following:

### RULES TO GOVERN THE JUDICIAL COUNCIL

1. The Judicial Council shall meet during the annual session of the American Medical Association and at other times at the call of the chairman or upon the written request of three members of the Council.

2. Three members of the Judicial Council shall constitute a quorum.

3. It shall require the affirmative vote of a majority of the Council to decide any question.

4. The time and place of the meetings of the Council shall be announced in each call for a meeting, which call shall be issued at least ten days before the time of the meeting to the members of the Council and the parties to any question pending.

5. In the adjudication of all questions involving the character and status of individuals or societies, the parties implicated must be duly informed of the charges and afforded an opportunity for defense.

6. No mere hypothetical question asking for expression of opinion shall be considered by the Council and no question of any character shall be considered until such question is referred to the Council in accordance with the rules adopted for its procedure.

### METHODS OF PROCEDURE

1. In all cases in which the Council has original jurisdiction, questions must be stated in writing whenever they are submitted by action of the House of Delegates or by any of the constituent state associations.

2. In all cases in which the Council has appellate jurisdiction, action must be originated by written appeal made by the individual or organization aggrieved.

3. Documentary evidence in printed or typewritten form must be presented to the Secretary of the Council with a copy of the complaint.

4. The Judicial Council shall set a time for the hearing of the cases that are referred to the Council and shall give notice to the prosecutor and to the defendant of the time and place at which the hearing is to be held. Such notice shall be mailed to both parties to the controversy at their last known address not less than ten days before the date set for the hearing, and no hearing shall be held without this notice unless this condition be waived by both the prosecution and defense.

5. The prosecutor and the defendant, or either of them may be represented before the Judicial Council by any member of the organized medical profession included in the American Medical Association.

6. The attendance at all hearings of cases shall be limited to the members of the Judicial Council, the secretary of the Council, the two principals and their representatives and the witnesses called in the case, provided, however, that at the request of the accused, the Judicial Council, at its discretion, may hold a public hearing. Should either party to the controversy fail to appear in person or to be represented by a member of the Association at the time and place regularly set for the hearing, the Judicial Council shall, at its discretion, continue the case, quash the indictment, or render a decision.

The Judicial Council approves the method of procedure for transferring membership from one component society to another, including the "member's transfer card," as outlined by the Committee on Uniform Regulation of Membership (page 1811); and recommends that these be approved by this House as the procedure for bringing before the Judicial Council questions relating to the transfer of membership from one component society to another, and for filing complaints by a member of one component society against a member of another component society.

The Judicial Council recommends that Sec. 4, Chapter I of the by-laws, "Effect on Membership of Removal to Another State" be amended by substituting for all that follows the title of the section, the following:

"A member who changes the location at which he practices medicine from the state through whose constituent association he holds membership in the American Medical Association to another state in which there is a constituent association, is eligible to membership in the component society of his new location upon the presentation of a transfer card and an official statement that his dues have been paid in full in the society in which he holds membership. He shall forfeit his membership in the American Medical Association one year after such change of location, unless he becomes a member of the constituent association of the state to which he has moved. Provided, however, that if the component society into whose territory such member has moved shall refuse him membership, the member shall be privileged to appeal to the Judicial Council of this Association to determine whether or not he be guilty of any act that warrants the enforcement of the provisions of this section. Pending the decision of such appeal, he shall retain his membership in the American Medical Association through his original state association. And provided further, that the term, 'the practice of medicine' throughout these by-laws shall be held to mean the offering of service or counsel for the relief of those suffering from abnormal physical or mental conditions."

The Judicial Council further recommends that the second paragraph of Sec. 2, Chapter I of the by-laws be amended by substituting for the present paragraph, the following:

"Commissioned medical officers of the United States Army, United States Navy, and the United States Public Health and Marine-Hospital Service shall be members of this Association so long as they are engaged actively in their respective service and thereafter if they have been retired on account of age or physical disability. These members shall not be required to pay dues and shall not receive THE JOURNAL of the American Medical Association except by personal subscription."

As has been stated, there are no laws approved by the Association under which an aggrieved member may bring action against the member through whose acts he suffers. The Judicial Council offers the revision of the Principles of Medical Ethics appended to this report for adoption by this House and suggests that Sec. 3, Chapter I of the by-laws be amended by adding to the section:

"Furthermore, membership in this Association shall be conditioned on a member conducting himself in accordance with the Principles of Medical Ethics of the Association."

The Judicial Council specially recommends to the House of Delegates that laws be enacted by the Association condemning the secret division of fees and the giving of commissions; also, laws for the proper control of contract practice, and further, that the House of Delegates requests that similar laws be enacted by the several state associations.

Finally, the Judicial Council desires to call the attention of the House of Delegates to the peculiar position in which it finds itself under the by-law that defines the scope of the Council. The Council feels that it is a mistake to have executive duties joined to judicial; that the highest service the Council can render the Association is in the capacity of a judiciary and that the best results demand that the Council be relieved of all activities which may cause the justice of its findings as a court to be honestly questioned. The Council, therefore, prays the House of Delegates to amend Sec. 4, Chapter IX of the by-laws by striking out the last sentence:

"The Judicial Council may investigate professional conditions and all matters pertaining to the relations of physicians to one another and to the public and shall make such recommendations to the House of Delegates and the constituent associations as it deems necessary."

Respectfully submitted,

FRANK BILLINGS, Chairman,
A. B. COOKE,
ALEXANDER LAMBERT,
JAMES E. MOORE,
HUBERT WORK,
ALEXANDER R. CRAIG, Secretary.

# PRINCIPLES OF MEDICAL ETHICS

## A PROPOSED REVISION

## CHAPTER I

## The Duties of Physicians to Their Patients

### THE PHYSICIAN'S RESPONSIBILITY

SECTION 1.—A profession has for its prime object the service it can render to humanity; reward or financial gain should be a subordinate consideration. The practice of medicine is a profession. In choosing this profession an individual assumes an obligation to conduct himself in accord with its ideals.

SEC. 2.—Patience and delicacy should characterize all the acts of a physician. The confidences concerning individual or domestic life entrusted by a patient to a physician, and the defects of disposition or flaws of character observed in patients during medical attendance should be held as a trust and should never be revealed except when imperatively required by the laws of the state. There are occasions, however, when a physician must determine whether or not his duty to society requires him to take definite action to protect a healthy individual from becoming infected, because the physician has knowledge, obtained through the confidences entrusted to him as a physician, of a communicable disease to which the healthy individual is about to be exposed. In such a case, the physician should act as he would desire another to act toward one of his own family under like circumstances. Before he determines his course, the physician should know the civil law of his commonwealth concerning privileged communications.

SEC. 3.—A physician should give timely notice of dangerous manifestations of the disease to the friends of the patient. He should neither exaggerate nor minimize the gravity of the patient's condition. He should assure himself that the patient or his friends have such knowledge of the patient's condition as will serve the best interests of the patient and the family.

SEC. 4.—A physician is free to choose whom he will serve. He should, however, always respond to any request for his assistance in an emergency or whenever temperate public opinion expects the service. Once having undertaken a case, a physician should not abandon or neglect the patient because the disease is deemed incurable; nor should he withdraw from the case for any reason until a sufficient notice of a desire to be released has been given the patient or his friends to make it possible for them to secure another medical attendant.

## CHAPTER II

## The Duties of Physicians to Each Other and to the Profession at Large

### ARTICLE I.—DUTIES TO THE PROFESSION

SECTION 1.—The obligation assumed on entering the profession requires the physician to comport himself as a gentleman and demands that he use every honorable means to uphold the dignity and honor of his vocation, to exalt its standards and to extend its sphere of usefulness. A physician should not base his practice on an exclusive dogma or sectarian system, for "sects are implacable despots; to accept their thraldom is to take away all liberty from one's actions and thought." (Nicon, father of Galen.)

SEC. 2.—In order that the dignity and honor of the medical profession may be upheld, its standards exalted, its sphere of usefulness extended, and the advancement of medical science promoted, a physician should associate himself with medical societies and contribute his time, energy and means in order that these societies may represent the ideals of the profession.

SEC. 3.—A physician should be "an upright man, instructed in the art of healing." Consequently, he must keep himself pure in character and conform to a high standard of morals, and must be diligent and conscientious in his studies. "He should also be modest, sober, patient, prompt to do his whole duty without anxiety; pious without going so far as superstition, conducting himself with propriety in his profession and in all the actions of his life." (Hippocrates.)

SEC. 4.—Solicitation of patients by circulars or advertisements, or by personal communications or interviews, not warranted by personal relations, is unprofessional. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, as by furnishing or inspiring newspaper comments concerning cases in which the physician has been or is concerned. All other like self-laudations defy the traditions and lower the tone of any profession and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary simple business cards, being a matter of personal taste or local custom, and sometimes of convenience, is not *per se* improper. As implied, it is unprofessional to disregard local customs or offend recognized ideals in publishing or circulating such cards.

It is unprofessional to promise radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or of success in the treatment of diseases; or to employ any methods to gain the attention of the public for the purpose of obtaining patients.

SEC. 5.—It is unprofessional, for personal profit, to hold patents for surgical instruments or medicines; to accept rebates on prescriptions or surgical appliances, or perquisites from attendants who aid in the care of patients.

SEC. 6.—It is unprofessional for a physician to assist unqualified persons to evade legal restrictions governing the practice of medicine; it is equally unethical to prescribe or dispense secret medicines or other secret remedial agents, or manufacture or promote their use in any way.

SEC. 7.—Physicians should expose without fear or favor, before the proper medical or legal tribunals, corrupt or dishonest conduct of members of the profession. Every physician should aid in safeguarding the profession against the admission to its ranks of those who are unfit or unqualified because deficient either in moral character or education.

### ARTICLE II.—PROFESSIONAL SERVICES OF PHYSICIANS TO EACH OTHER

SECTION 1.—Experience teaches that it is unwise for a physician to treat members of his own family or himself. Consequently, a physician should always cheerfully and gratuitously respond with his professional services to the call of any physician practicing in his vicinity, or of the immediate family dependents of physicians.

SEC. 2.—When a physician from a distance is called on to advise another physician or one of his family dependents, and the physician to whom the service is rendered is in easy financial circumstances, a compensation that will at least meet the traveling expenses of the visiting physician should be proffered. When such a service requires an absence from the accustomed field of professional work of the visitor that might reasonably be expected to entail a pecuniary loss, such loss should, in part at least, be provided for in the compensation offered.

SEC. 3.—When a physician or a member of his dependent family is seriously ill, he or his family should select a physician from among his neighboring colleagues to take charge of the case. Other physicians may be associated in the care of the patient as consultants.

### ARTICLE III.—DUTIES OF PHYSICIANS IN CONSULTATIONS

SECTION 1.—In serious illness, especially in doubtful or difficult conditions, the physician should request consultation.

SEC. 2.—In every consultation, the benefit to be derived by the patient is of first importance. All the physicians interested in the case should be frank and candid with the patient and his family. There never is occasion for insincerity, rivalry or envy and these should never be permitted between consultants.

SEC. 3.—It is the duty of a physician, particularly in the instance of a consultation, to be punctual in attendance. When, however, the consultant or the physician in charge is unavoidably delayed, the one who first arrives should wait for the other for a reasonable time, after which the consultation should be considered postponed. When the consultant has come from a distance, or when for any reason it will be difficult to meet the physician in charge at another time, or if the case is urgent, or if it be the desire of the patient, he may examine the patient and mail his written opinion, or see that it is delivered under seal, to the physician in charge. Under these conditions, the consultant's conduct must be especially tactful; he must remember that he is framing an opinion without the aid of the physician who has observed the course of the disease.

SEC. 4.—When a patient is sent to one specially skilled in the care of the condition from which he is thought to be suffering, and for any reason it is impracticable for the physician in charge of the case to accompany the patient, the physician in charge should send to the consultant by mail, or in the care of the patient under seal, a history of the case, together with the physician's opinion and an outline of the treatment, or so much of this as may possibly be of service to the consultant; and as soon as possible after the case has been seen and studied, the consultant should address the physician in charge and advise him of the results of the consultant's investigation of the case. Both these opinions are confidential and must be so regarded by the consultant and by the physician in charge.

SEC. 5.—After the physicians called in consultation have completed their investigations of the case, they may meet by themselves to discuss conditions and determine the course to be followed in the treatment of the patient. No statement or discussion of the case should take place before the patient or friends, except in the presence of all the physicians attending, or by their common consent; and no opinions or prognostications should be delivered as a result of the deliberations of the consultants, which have not been concurred in by the consultants at their conference.

Sec. 6.—The physician in attendance is in charge of the case and is responsible for the treatment of the patient. Consequently, he may prescribe for the patient at any time and is privileged to vary the mode of treatment outlined and agreed on at a consultation whenever, in his opinion, such a change is warranted. However, at the next consultation, he should state his reasons for departing from the course decided on at the previous conference. When an emergency occurs during the absence of the attending physician, a consultant may provide for the emergency and the subsequent care of the patient until the arrival of the physician in charge, but should do no more than this without the consent of the physician in charge.

Sec. 7.—Should the attending physician and the consultant find it impossible to agree in their views of a case, another consultant should be called to the conference or the first consultant should withdraw. However, since the consultant was employed by the patient in order that his opinion might be obtained, he should be permitted to state the result of his study of the case to the patient, or his next friend, in the presence of the physician in charge.

Sec. 8.—When a physician has attended a case as a consultant, he should not become the attendant of the patient during that illness except with the consent of the physician who was in charge at the time of the consultation.

### ARTICLE IV.—DUTIES OF PHYSICIANS IN CASES OF INTERFERENCE

Section 1.—The physician, in his intercourse with a patient under the care of another physician, should observe the strictest caution and reserve; should give no disingenuous hints relative to the nature and treatment of the patient's disorder; nor should the course of conduct of the physician, directly or indirectly, tend to diminish the trust reposed in the attending physician.

Sec. 2.—A physician should avoid making social calls on those who are under the professional care of other physicians without the knowledge and consent of the attendant. Should such a friendly visit be made, there should be no inquiry relative to the nature of the disease or comment upon the treatment of the case, but the conversation should be on subjects other than the physical condition of the patient.

Sec. 3.—A physician should never take charge of or prescribe for a patient who is under the care of another physician, except in an emergency, until after the other physician has relinquished the case or has been properly dismissed.

Sec. 4.—When a physician does succeed another physician in the charge of a case, he should not make comments on or insinuations regarding the practice of the one who preceded him. Such comments or insinuations tend to lower the esteem of the patient for the medical profession and so react against the critic.

Sec. 5.—When a physician is called in an emergency and finds that he has been sent for because the family attendant is not at hand, or when a physician is asked to see another physician's patient because of an aggravation of the disease, he should provide only for the patient's immediate need and should withdraw from the case on the arrival of the family physician after he has reported the condition found and the treatment administered.

Sec. 6.—When several physicians have been summoned in a case of sudden illness or of accident, the first to arrive should be considered the physician in charge. However, as soon as the exigencies of the case permit, or on the arrival of the acknowledged family attendant or the physician the patient desires to serve him, the first physician should withdraw in favor of the chosen attendant; should the patient or his family wish someone other than the physician known to be the family physician to take charge of the case the patient should advise the family physician of his desire. When, because of sudden illness or accident, a patient is taken to a hospital, the patient should be returned to the care of his known family physician as soon as the condition of the patient and the circumstances of the case warrant this transfer.

Sec. 7.—When a physician is requested by a colleague to care for a patient during his temporary absence, or when, because of an emergency, he is asked to see a patient of a colleague, the physician should treat the patient in the same manner and with the same delicacy as he would have one of his own patients cared for under similar circumstances. The patient should be returned to the care of the attending physician as soon as possible.

Sec. 8.—When a physician is called to the patient of another physician during the enforced absence of that physician, the patient should be relinquished on the return of the latter.

Sec. 9.—When a physician attends a woman in labor in the absence of another who has been engaged to attend, such physician should resign the patient to the one first engaged, upon his arrival; the physician is entitled to compensation for the professional services he may have rendered.

### ARTICLE V.—DIFFERENCES BETWEEN PHYSICIANS

Section 1.—Whenever there arises between physicians a grave difference of opinion which cannot be promptly adjusted, the dispute should be referred for arbitration to a committee of impartial physicians, preferably the Board of Censors of a component county society of the American Medical Association.

### ARTICLE VI.—COMPENSATION

Section 1.—The poverty of a patient, the mutual professional obligation of physicians and certain public duties should command the gratuitous services of a physician. A physician should also give his services to a selected group of eleemosynary institutions, but institutions endowed by the public, or by the rich, or by societies, and organizations for mutual benefit, or for accident, sickness and life insurance, or for analogous purposes should be accorded no such privileges.

Sec. 2.—It is unprofessional for a physician to dispose of his services under conditions that make it impossible to render adequate service to his patient or which interfere with reasonable competition among the physicians of a community. To do this is detrimental to the public and to the individual physician, and lowers the dignity of the profession.

Sec. 3.—It is not advisable for a county medical society to establish a fee bill; when, however, as is frequently the case, the physicians in a town or community agree upon the minimum fee to be accepted from their patients as a return for their services, honorable conduct demands adherence to this agreement.

Sec. 4.—It is detrimental to the public good and degrading to the profession, and therefore unprofessional, to give or to receive a commission or to divide a fee for medical advice or surgical treatment, unless the patient or his next friend is fully informed as to the terms of the transaction. The patient should be made to realize that a proper fee should be paid the family physician for the service he renders in determining the surgical or medical treatment suited to the condition, and in advising concerning those best qualified to render any special service that may be required by the patient.

## CHAPTER III

## The Duties of the Profession to the Public

SECTION 1.—Physicians, as good citizens and because their professional training specially qualifies them to render this service, should give advice concerning the public health of the community. They should bear their full part in enforcing its laws and sustaining the institutions that advance the interests of humanity. They should cooperate especially with the proper authorities in the administration of sanitary laws and regulations. They should be ready to counsel the public on subjects relating to sanitary police, public hygiene and legal medicine.

SEC. 2.—Physicians, especially those engaged in public health work, should enlighten the public regarding quarantine regulations; on the location, arrangement and dietaries of hospitals, asylums, schools, prisons and similar institutions; and concerning measures for the prevention of epidemic and contagious diseases. When an epidemic prevails, a physician must continue his labors for the alleviation of suffering people, without regard to the risk to his own health or life or to financial return. At all times, it is the duty of the physician to notify the properly constituted public health authorities of every case of communicable disease under his care, in accordance with the laws, rules and regulations of the health authorities of the locality in which the patient is.

SEC. 3.—Physicians should warn the public against the devices practiced and the false pretensions made by charlatans which may cause injury to health and loss of life.

SEC. 4.—By legitimate patronage, physicians should recognize and promote the profession of pharmacy; but any pharmacist, unless he be qualified as a physician, who assumes to prescribe for the sick, should be denied such countenance and support. Moreover, whenever a druggist or pharmacist dispenses deteriorated or adulterated drugs, or substitutes one remedy for another designated in a prescription, he thereby forfeits all claims to the favorable consideration of the public and physicians.

## CONCLUSION

While the foregoing statements express in a general way the duty of the physician to his patients, to other members of the profession and to the profession at large, as well as of the profession to the public, it is not to be supposed that they cover the whole field of medical ethics, or that the physician is not under many duties and obligations besides these herein set forth. In a word, it is incumbent on the physician that under all conditions, his bearing toward patients, the public, and fellow practitioner should be characterized by a gentlemanly deportment and that he constantly should behave toward others as he desires them to deal with him. Finally, these principles are primarily for the good of the public, and their enforcement should be conducted in such a manner as shall deserve and receive the endorsement of the community.

## Report of the Council on Medical Education

*To the Members of the House of Delegates of the American Medical Association:*

### I. MEDICAL COLLEGES

Two years ago, following the completion of the second tour of inspection of the medical colleges of the United States and Canada by the Council on Medical Education, the 143 institutions were graded on a civil service basis, and divided into classes A, B and C. Colleges considered acceptable were listed in Class A; colleges needing certain definite improvements were placed in Class B, and colleges which needed a complete reorganization to make them acceptable were placed in Class C.

Including the Canada schools, 78 colleges were listed in Class A, and of these 68, including 4 Canadian and 2 negro schools, gave the complete four-year medical course, and 10 gave, in an acceptable manner, only the first two years in medicine. In Class B there were 33 medical schools, including 3 Canadian and 1 negro colleges. all giving the complete four-year medical course leading to the M.D. degree. In Class C there were 32 medical schools, including 1 Canadian and 4 negro schools.

TABLE 1.—CLASSIFICATION OF COLLEGES

| Colleges | A | B | C | Totals |
|---|---|---|---|---|
| Giving the four-year course: | | | | |
| In the United States.......... | 62 | 29 | 27 | 118 |
| For colored race........... | 2 | 1 | 4 | 7 |
| In Canada .................. | 4 | 3 | 1 | 8 |
| Giving first two years only...... | 10 | .. | .. | 10 |
| Totals................. | 78 | 33 | 32 | 143 |

The complete list so classified was read to the House of Delegates June 6, 1910, was included in the report of the Reference Committee, was adopted and published in the regular minutes of the House of Delegates. Thus, for the first time in the history of medical education, there was published a complete classified list of all the medical colleges in the United States and Canada. The beneficial results of the publication of this classification are difficult to calculate. Over 5,000 reprints of the report have already been sent out and numerous requests for the pamphlet continue to come in. Through this classification prospective the medical student has a means of knowing the character of the college he is about to enter.

Since the report was published 19 more medical colleges have been closed by merger or otherwise, making a total of 56 which have been closed since the Council's first classification was reported in 1907:

TABLE 2.—COLLEGES CLOSED SINCE 1907

| Year | Class A | | Class B | | Class C | | Totals | | Total Closed |
|---|---|---|---|---|---|---|---|---|---|
| | Merged | Extinct | Mg. | Ext. | Mg. | Ext. | Mg. | Ext. | |
| 1907 | 3 | .. | 3 | 1 | .. | 3 | 6 | 4 | 10 |
| 1908 | 2 | .. | 2 | .. | 1 | 4 | 5 | 4 | 9 |
| 1909 | 3 | 1 | 2 | .. | .. | 7 | 5 | 8 | 13 |
| 1910 | 1 | .. | 3 | .. | 3 | 6 | 7 | 6 | 13 |
| 1911 | 1 | 1 | 3 | .. | 1 | 5 | 5 | 6 | 11 |
| | 10 | 2 | 13 | 1 | 5 | 25 | 28 | 28 | 56 |

Of these 53 colleges 37 were closed during the interim between the Council's first classification and the publication of the second, and 16 have been closed in the last two years.

### THE THIRD INSPECTION

In accordance with the instructions from this body the Council has continued the work of inspecting medical colleges and the third tour has just been completed. As a standard of measurement during this inspection the Council was guided by the "Outline of the Essentials of an Acceptable Medical College," which was prepared during the second tour of inspection and reported to the House of Delegates in June, 1910. As stated at that time, after omitting a number of utterly worthless institutions, this outline represented, in the majority of points, a line considerably below the average of conditions existing at that time in all the medical colleges of the United States and Canada:

### OUTLINE OF THE ESSENTIALS OF AN ACCEPTABLE MEDICAL COLLEGE

1. A strict enforcement of all standards and requirements, the college itself to be held responsible for any instances where they are not enforced.

2. A requirement for admission of at least a four-year high-school education superimposed on eight years of grammar school work, or the actual equivalent education, this to consist of 14 units as defined by the College Entrance Examination Board and required by the Carnegie Foundation for the Advancement of Teaching. (See schedule, page 103).

3. As soon as conditions warrant, the minimum requirement for admission should be enlarged to include at least one year's college work each in physics, chemistry and biology and a reading knowledge of at least one modern language, preferably German or French.

### SCHEDULE OF SUBJECTS OFFERED IN ACADEMIC AND SECONDARY SCHOOLS, CREDITS IN WHICH ARE ACCEPTABLE FOR ENTRANCE TO MEDICAL COLLEGES

BASED ON THE REQUIREMENTS OF THE COLLEGE ENTRANCE EXAMINATION BOARD

| SUBJECTS. | UNITS. | REQUIRED. | ELECTIVE. |
|---|---|---|---|
| ENGLISH | | | |
| READING AND PRACTICE | 2 | 2 | ... |
| Study and Practice | 1 | ... | 1 |
| MATHEMATICS | | | |
| ALGEBRA, TO QUADRATICS | 1 | 1 | ... |
| ALGEBRA (Quadratic Equations, Binomial Theorem and Progressions) | ½ | ... | ½ |
| PLANE GEOMETRY | 1 | 1 | ... |
| Solid Geometry | ½ | ... | ½ |
| Trigonometry | ½ | ... | ½ |
| LATIN | | | |
| GRAMMAR AND COMPOSITION | 1 | 1 | ... |
| CAESAR | 1 | 1 | 4 |
| Cicero | 1 | ... | 1 |
| Virgil | 1 | ... | 1 |
| Cornelius Nepos | 1 | ... | 1 |
| Greek | | | |
| Grammar and Composition | 1 | * | 1 |
| Xenophon | 1 | ... | 1 |
| Homer | 1 | ... | 1 |
| German | | | |
| Elementary | 2 | ** | 2 |
| Intermediate | 1 | ... | 1 |
| French | | | |
| Elementary | 2 | ** | 2 |
| Intermediate | 1 | ... | 1 |
| Spanish | | | |
| Elementary | 2 | ** | 2 |
| HISTORY | | | |
| UNITED STATES HISTORY | 1 | 1 | ... |
| Greek and Roman History | 1 | ... | 1 |
| Medieval and Modern | 1 | ... | 1 |
| English | 1 | ... | 1 |
| SCIENCE † | | | |
| Botany or Zoology, each | ½ | ... | ½ |
| or Biology | 1 | ... | 1 |
| Chemistry | 1 | ... | 1 |
| PHYSICS | 1 | 1 | ... |
| Physiography | ½ | ... | ½ |
| Physiology | ½ | ... | ½ |
| Drawing | 1 | ... | 1 |
| Music | | | |
| Appreciation | 1 | ... | 1 |
| Harmony | 1 | ... | 1 |
| Total | 34 | 8 | 26 |

A *unit* is the credit value of 36 weeks' work of 5 recitation periods per week, each recitation period to be of not less than 40 minutes.

*Required Branches:* Of the 14 units of high school work it is suggested that the subjects in capitals aggregating 8 units should be required. Other work to the amount of at least 6 units may be made up from any of the other subjects of the above schedule.

* Two units of Greek may be substituted for the two required units of Latin.

** A reading knowledge of German, French or other modern language is recommended in the high school courses of students contemplating the study of medicine without higher preliminary qualifications.

† It is understood that each science course must include laboratory work.

4. A requirement that students be in actual attendance in the college within the first week of each annual session and thereafter.

5. That actual attendance at classes be insisted on except for good cause, such as for sickness, and that no credit be given under any circumstances for less than 80 per cent. of attendance on each course.

6. That advanced standing be granted only to students of other acceptable colleges and that in granting advanced standing there shall be no discrimination against the college's full-course students

7. Careful and intelligent supervision of the entire school b a dean or other executive officer who holds, and has sufficier authority to carry out, fair ideals of medical education a interpreted by modern demands.

8. A good system of records showing conveniently the cre dentials, attendance, grades and accounts of the students.

9. A fully graded course covering four years of at least 3 weeks each, exclusive of holidays, and at least 30 hours pe week of actual work; this course should be clearly set fort in a carefully prepared and printed schedule of lectures an classes.

10. Two years of work consisting largely of laboratory wor in thoroughly equipped laboratories in anatomy, histolog embryology, physiology, chemistry (inorganic, organic an physiologic), bacteriology, pathology, pharmacology, thera peutics and clinical diagnosis.

11. Two years of clinical work largely in hospitals and di pensaries, with thorough courses in internal medicine (inclu ing physical diagnosis, pediatrics, nervous and mental di cases), surgery (including surgical anatomy and operati surgery on the cadaver), obstetrics, gynecology, laryngolog rhinology, ophthalmology, otology, dermatology, hygiene an medical jurisprudence.

12. As soon as conditions warrant the requirements fo graduation should be enlarged to include at least twel months of continuous work as an intern in an acceptab hospital.

13. At least six expert, thoroughly trained instructors in th laboratory branches, salaried so they may devote their enti time to instruction and to that research without which the cannot well keep up with the rapid progress being made their subjects. These instructors should rank sufficiently hig to have some voice in the conduct of the college. There shou also be a sufficient number of assistants in each department look after the less important details.

14. The medical teaching should be of at least the san degree of excellence as obtains in our recognized liberal ar colleges and technical schools.

15. The members of the faculty, with a few allowable exce tions, should be graduates of institutions recognized as medic colleges and should have had a training in all departments medicine. They should be appointed because of their abilit as teachers and not because they happen to be on the atten ing staff of some hospital or for other like reasons.

16. The college should own or entirely control a hospital order that students may come into close and extended conta with patients under the supervision of the attending staff. T hospital should have a sufficiently large number of patients permit the student to see and study the common varieties surgical and medical cases as well as a fair number in each the specialties.

17. The college should have easily accessible hospital fac ities of a daily average of not less than 200 patients which c be utilized for clinical teaching (for senior classes of 100 st dents or less), these patients to represent in fair proporti all departments of medicine.

18. The college should have additional hospital facilities f children's diseases, contagious diseases and nervous and ment diseases.

19. Facilities for at least five maternity cases for each seni student, who should have actual charge of these cases und the supervision of the attending physician.

20. Facilities for at least 30 autopsies during each colle session (for senior classes of 100 students or less).

21. A dispensary, or out-patient department, under the co trol of the college, the attendance to be a daily average of cases (for senior classes of 100 students or less), the patie to be carefully classified, good histories and records of t patients to be kept and the material to be well used.

22. The college should have a working medical library include the more modern text and reference books and 10 more leading medical periodicals; the library room to easily accessible to students during all or the greater part the day; to have suitable tables and chairs and to have attendant in charge.

23. A working medical museum having its various anatom embryologic, pathologic and other specimens carefully p pared, labeled and indexed so that any specimen may be eas found and employed for teaching purposes.

24. A supply of such useful auxiliary apparatus as a ste opticon, a reflectoscope, carefully prepared charts, embryolo or other models, manikins, dummies for use in bandaging Roentgen ray or other apparatus now so generally used medical teaching.

25. The college should show evidences of reasonably modern methods in all departments and evidences that the equipment and facilities are being intelligently used in the training of medical students.

26. A statement in which the college's requirements for admission, tuition, time of attendance on the classes, sessions and graduation are clearly set forth should be given, together with complete lists of its matriculants and latest graduating lass in regular annual catalogues or announcements.

### *Definitions of a Medical College* and a Medical School†*

"An institution to be ranked as a medical college must have at least six (6) professors giving their entire time to medical eaching, a graded course of four full years of college grade in medicine, and must require for admission not less than the usual four years of academic or high-school preparation, or its equivalent, in addition to the preacademic or grammar school tudies."

"By a medical school as differentiated from a medical college s meant a part of a university requiring for admission the equivalent of two years of collegiate work and which offers nstruction of not less than two years' duration, leading to the legree of Doctor of Medicine."

### GRADING OF MEDICAL COLLEGES

In a similar manner as in the previous classification, the olleges were rated on a civil service basis on a scale of 1,000 oints. The data relating to each college were grouped under en general heads in such manner that the groups would have s nearly equal weight as possible, each group allowing a ossible 100 points (10 per cent.) of a possible 1,000 points 100 per cent.). The ten heads under which the data were rranged are as follows:

1. Showing of graduates before state boards and other evidences f the training received by the graduate.
2. Enforcement of a satisfactory preliminary educational requireent and the granting of advanced standing.
3. Character of curriculum, grading of course, length of session, me allowed for matriculation and supervision.
4. Medical school buildings; light, heat, ventilation, cleanliness.
5. Laboratory facilities and instruction.
6. Dispensary facilities and instruction.
7. Hospital facilities and instructions, maternity work, autopsies, ecialties.
8. Faculty, number and qualifications of trained teachers, allme instructors, and assistants especially of the laboratory anches, and extent of research work.
9. Extent to which the school is conducted for properly teaching e science of medicine rather than for the profit of the faculty rectly or indirectly.
10. Possession and use made of libraries, museums, charts, stereoticons, etc.

Colleges receiving a rating of 70 per cent. or above in each nd all of the ten divisions of data are included in Class A; olleges receiving an average of 70 per cent. or above, but hich receive a rating below 70 per cent. in one, two or three the divisions are included in Class A minus; colleges receiving an average of between 50 and 70 per cent. and colleges ving an average of above 70 per cent., but which receive a ting below 70 per cent. in more than three of the divisions ove named, are included in Class B and colleges receiving s than 50 per cent. are included in Class C. In other ords, Class A colleges are those which are acceptable; Class minus, those which are lacking in certain respects, but which e otherwise acceptable; Class B, those which, under their esent organization, might be made acceptable by general provements, and Class C, those which require a complete organization to make them acceptable. On the basis of this ird inspection the Council now presents for your consideraon a revised classification of the medical colleges of the ited States and Canada with the recommendation that it be blished.

### COUNCIL'S ACTION NOT HASTY

Following the first tour of inspection four years ago, the ouncil was criticized for not publishing outright a classification of medical colleges. None was published at that time, wever, because the Council desired to give a number of lleges, which were contemplating improvements, the opportunity to make good. The delay has been more than justified. ny colleges have secured additional facilities, numerous rgers have been brought about and, on the whole, the situan has greatly improved. The general conditions, as revealed the first inspection, however, were given the widest possible publicity so that since two years ago pleas of ignorance in regard to the demands of modern medicine are unworthy of consideration and the regular publication of frequently revised classifications is highly essential in order to secure the needed improvements of medical education.

### PERSISTENT EFFORT NECESSARY

That persistent, continuous work is needed in the investigation and reporting on medical schools is evidenced by the following facts:

(a) At least 45 medical colleges are still adhering to less than a four-year high school education as a minimum of preliminary education.

(b) Several of these schools make use of questionable makeshifts in the effort to enroll larger numbers of students—and thereby to add to the income of the school.

(c) Most of these 45 schools allow advanced standing for work done in other inferior colleges.

(d) A score or more of colleges are still being conducted for profit in that they are adding to the college plant—the property of the faculty in each instance—or paying off debts on such college property out of students fees.

(e) Only 33 medical colleges have a reasonably close and mutually advantageous connection with universities. On the other hand, there are 46 which have the word "university" as a part of their titles or which claim to be medical departments of universities and which are misrepresentations in as far as their university connection is more or less vague or entirely lacking.

(f) In at least 56 medical colleges no research work whatever is being carried on.

(g) While this country has 120, or about 40 per cent., of the world's supply of medical schools, only about 30 in this country could compare in any way favorably with the medical schools of the leading nations abroad.

### MORE MERGERS NEEDED

It would be a vast improvement if we could reduce our oversupply of medical schools to a smaller number of better-equipped institutions. Toward this end there are several locations where mergers should be made, since two or more medical schools are competing for clinical facilities in local hospitals and as a consequence neither secures adequate advantages. This is particularly true in Atlanta, Dallas, Memphis, Milwaukee and Richmond. A merger of the institutions in these cities would not only give the one stronger institution all the privileges now divided among the separate institutions, but added privileges might also be secured as was the case following the mergers at Louisville, Indianapolis and Cincinnati. Medical education would doubtless be improved if further mergers were brought about also in Baltimore, Boston, Chicago, Philadelphia, St. Louis and Washington.

Better supervision is needed in some of our medical schools which clearly are not making use of the advantages they now have. For example some could secure larger dispensary facilities if that department was better organized. Others could have larger privileges in hospitals if they would make use of them in the proper training of medical students.

### MEDICAL RESEARCH

No medical school can be fully alive to the present needs of medical education unless it has the constant inspiration that comes through medical research within the college. How can the school without research know what subjects should be most emphasized in the medical curriculum, or what methods should be employed in teaching? Nevertheless, we have in this country today only 30 medical colleges where active and valuable research is being carried on. In about 30 others some little effort at research is being made by individuals, but the men are handicapped by lack of time, assistants or material, or the college is of too low a standard to receive any benefit from it. In at least 56 medical colleges no research work whatever is being carried on.

### THE MODERN MEDICAL SCHOOL

From the research carried on by the Council for the last eight years, it is important to place before the public and the medical profession a statement outlining what is meant by a modern medical school.

The modern medical school should be developed as the medical department of the university and its function will be to turn out well-qualified practitioners of medicine, and to add its quota to the definite knowledge of medical matters. To fulfil these functions the medical school must have (a) well-qualified students, (b) expert teachers, (c) well-equipped laboratories, and (d) ample clinical material.

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* This definition of a college is based on that given in the revised dinances of the State of New York, and which also was adopted the Carnegie Foundation for the Advancement of Teaching as eir standard.

† Based on the definition of the term "school," adopted in 1909 the Association of American Universities.

### MEDICAL STUDENTS

Medical students, in addition to their primary and secondary education, should be required to have completed (a) one or two years devoted to higher physics, chemistry and biology; (b) should complete four years of medical study, and (c) take a year's internship in a good hospital. The council has long been of the opinion that this should represent the minimum requirement for the medical degree in this country. This would enable the student to graduate at about 25 or 26 years of age, whereas the extreme requirements of few of the medical colleges in this country delay the age of graduation to about 28 or 29 years—an extreme which does not prevail in England, France or Germany, which stand high in educational and scientific matters. Thirty years of age is altogether too late in life for the average medical student to complete his course and adapt himself to the development of a practice. Hence the council deplores the tendency of some university medical schools to extend their entrance requirements to three or more years of collegiate work. The highest extreme at the present time should not be more than two years of university science, and even this requirement should be accepted with the understanding that an attempt be made in the near future to save a year somewhere in our primary or secondary school course. The two-year standard has already been quite widely adopted in this country.

The intern year in a hospital should be made a requirement throughout the country by state medical licensing boards within the next two or three years. That this would be a reasonable requirement is evidenced by the fact that there are now in this country at least 2,500 hospitals having twenty-five or more beds each, or having a total of at least 200,000 beds. There is no doubt that internship could be provided in the better portion of these hospitals for every one of the 4,000 senior medical students now enrolled in the medical colleges in this country.

### TRAINED TEACHERS

Of great importance in connection with medical education in this country is a system by which specially trained medical teachers and research men in anatomy, physiology, pharmacology and pathology can be secured. At present it is very difficult to secure such teachers.

The chief reason that such work has not attracted high class men is that the medical schools have had no money to pay reasonable salaries. So the means of securing such teachers would be to provide better salaries, if not pensions also—through such agencies as the Carnegie Foundation—thus providing for old age of these teachers and for their families. These places could be made still more attractive if the colleges would supply the professors with a larger number of assistants and better facilities so they would have time and opportunity to carry on research work.

The lack of well-trained medical men has led many of our medical schools to fill positions with men holding the Ph.D., men well trained in their special sciences, but lacking the medical training, and, therefore, lacking the medical point of view. The lack of the medical point of view prevents such teachers from fully understanding the work of the clinical departments and correlating their work with those departments. Since there is so much to learn in a very limited space of time, the subjects of the medical course should be selected and taught by those who have received the complete medical training, and who are thereby better enabled to correlate these subjects with the other branches of the medical course.

### CLINICAL TEACHERS

In only a few instances in this country have medical schools placed their clinical professors on definite salaries and limited them in their private practice. The same apparently holds true in Great Britain. The plan adopted by the German universities comes nearest to the ideal. There the clinical professor is chosen because of his scientific ability, receives a fair but moderate salary, and is made to feel that his university and hospital work is of first importance. He usually devotes at least four or five hours each day to his clinical cases, to teaching or to research work. It is recognized as proper and even desirable for him to have some private practice so long as it does not interfere with his university work. He is recognized as the highest authority in his special field, and his services can be secured by the rich as well as the poor.

This private practice keeps the professor in touch with the people and with the medical profession and makes him a more practical teacher. It prevents his forming wrong conclusions and becoming narrow, which might be the case were he confined to his laboratory and hospitals. Furthermore, the income from this private practice attracts and holds high-class men in the clinical chairs.

The clinical professor must be not only a great physician and trained teacher, but he must be competent to carry on, to direct and to stimulate research work. There is no higher type of medical research than scientific clinical research, and every medical school should provide ample means and ample material toward this end. Some of the best pieces of medical research have been along clinical lines, such as Lister's discovery of antiseptic surgery and Kocher's researches in connection with exophthalmic goiter. By removing a part of the thyroid gland Kocher proved that the symptoms of exophthalmic goiter were due to a hypersecretion of that gland—and won for himself the Nobel prize.

### ASSOCIATES AND ASSISTANTS

Under the clinical professor should be a number of salaried associates and assistants who would devote their entire time to clinical work, teaching and research. They should be given living salaries, which need not be especially large, since the training they receive could be regarded as compensation of great value, and it is from those who have shown marked ability in this group that selections should be made of clinical professors.

### CONTROL BY MEDICAL MEN

The organization of the medical departments of our universities cannot safely be placed in the hands of non-medical trustees or non-medical professors of the scientific department, since the premedical sciences are apt to be emphasized without regard to the medical curriculum as a whole; the laboratory courses are apt to be developed along impractical and undesirable lines, and the needs for the development of the clinical department cannot be fully appreciated. In fact, if medical matters are left entirely in non-medical hands for their adjustment a deplorable disagreement would be apt to arise between university teachers and medicine, similar to what Professor von Müller says exists in Germany between scientific jurisprudence and the practice of law. The reorganization of medical education in this country, therefore, must be made by the men who are most familiar with the facts and needs of the situation—the medical men themselves.

### THE TEACHING PLANT

This comprises (a) the laboratories with the necessary equipment and material; (b) the hospitals and dispensaries with the essential equipment and material, and (c) sufficient endowment to carry on the laboratory and clinical work.

1. *The Laboratories.*—Four laboratories, or, better still, four separate buildings are essential; one for anatomy, including embryology and histology; one for physiology, including physiologic chemistry; one for pathology, including bacteriology, and one for pharmacology. To carry on the work o these four laboratories, at a moderate estimate, $40,000 a year would be necessary, and in a large university severa times this amount might be required. The most importan factor is the man in charge of the department. A strong ma with inexpensive building and equipment will accomplish mor than a mediocre man with the most elaborate equipment. A to the scheme of organization of, and teaching in, the laboratory departments there seems to be no disagreement.

2. *The Clinical Work.*—The essentials are (a) a moder hospital having for each clinical department a continuous service under the immediate charge of the heads of the department and his assistants; (b) a dispensary, or out-patient service similarly controlled, and (c) for each clinical departmen clinical and research laboratories, class-rooms, operating room etc. Comment has already been made in regard to competen clinical professors. These, as in the laboratory courses, constitute the most important factor.

### UNIVERSITY VS. PUBLIC HOSPITALS

For the university to build and maintain its own teachin hospital may not be the best step in all instances. It woul doubtless be the best for all parties concerned if our grea municipal hospitals could be conducted as scientific institutions in charge of the teachers and investigators of our stron university medical schools. This would not only enable thos hospitals to fulfil a greater function in the development thoroughly qualified physicians, but it would also be best f the patients, since they would have the benefit of the be methods of treatment under recognized experts. A campaig of education should be carried on to show our municip authorities that the hospital will be conducted in the be interests of its patients and the community at large, if the same time it is fulfilling its function as a great center inical teaching and research. The fame which is held by the reat charity hospital of Vienna could likewise be obtained y the large municipal hospitals of New York, of Chicago and sewhere. In Chicago the Cook County Hospital now has ,000 charity patients, and with its new building to cost 8,000,000, to be erected in a short time, will have 3,000 beds. hink of the amount of good that could be accomplished if is great institution was developed along modern lines, in iarge of trained teachers with proper facilities for teaching id research! Think how much better care and treatment ie patients of the hospital would receive and the greater enefit it would be to the community at large through the etter training given to its medical men. This could be done ith a full recognition of the hospital's first and most impor- nt function—that of giving the patient the best medical ttention—by providing that no patient should be used for aching without his or her consent.

The splendid medical clinic of Friedrich Müller in Munich is been developed in a municipal hospital—and the same is ue of most of the German clinics—made possible by an rangement between the municipal authorities and the uni- rsity authorities, by which the university, with the consent the municipal authorities, appoints the head of the medical partment to the position of attending physician to the hos- tal. No patient can be used for teaching if he objects. As matter of fact, most of the patients are glad to be demon- rated and discussed, and less than 10 per cent. object. lthough there are a few hospitals conducted by universities, ost of the hospitals used as teaching hospitals in Great ritain and the Continent are municipal government or semi- iblic institutions, which are affiliated with medical depart- ents. These affiliations are made and continued because the spital and the medical school find it to their mutual advan- ge.

The same state of affairs should be brought about in this untry, and, in fact, a start has already been made. At ncinnati the large municipal hospital has been placed in arge of the clinical teachers of the University of Cincinnati; St. Louis, the Washington University has made a close filiation with the new Barnes Hospital; in Boston, Harvard s made an affiliation with the Peter Brigham and several her special hospitals; in New York, Columbia University d the Presbyterian Hospital have established similar rela- ons: in Cleveland, Western Reserve University has formed combination with the Lakeside Hospital; in Chicago, Rush edical College has had for a number of years the medical ntrol of the Presbyterian Hospital, and recently has made nilar contracts and arrangements with the Children's emorial Hospital, the Home for Destitute Crippled Children d the Hospital for Infectious Diseases.

The best plan is to make a definite contract between the dical school and the hospital, giving the medical school the ht to nominate the members of the attending staff, with e understanding also that, when a man severs his connec- n with the medical school, by virtue of that act he resigns m his hospital appointment. Further, the medical school ould agree to provide for the scientific, medical and surgical re of the patients and control the clinical teaching, with the viso that no patient who objects shall be used for clinical struction.

We do not desire to belittle in any way the value of the iversity-conducted hospital. We feel, however, that the arity hospital needs the services of the clinical teachers of medical school; that the medical school needs the great arity hospital in order to carry on its clinical teaching and earch work, and that the interests of the entire community best subserved by such a combination

In this combination between hospital and medical school hospital should provide the means for conducting the hos- al proper. The medical school should pay the salaries of attending medical men and provide the necessary facili- s for teaching and research. There should be that sort of ision of labor, that sort of team work, which will make combination of mutual benefit, and will result in both rties to the contract regarding each other with mutual niration and respect.

### THE TASKS OF THE FUTURE

Therefore, in the reorganization of medical education in s country the medical profession must accomplish three at tasks: 1. It must urge the state licensing board to uire that amount of medical training which is necessary ore the medical student can safely begin independent prac- , and this requirement should be put into effect within next few years.

2. The second great task is to secure through our universities and from other sources sufficient funds to place the medical schools on a full university basis, and at the same time to reorganize our medical departments on the general lines of the German universities so as to develop the trained teachers which are so much needed. In this reorganization we must secure state aid and private endowment and the support and cooperation of the university officers and trustees.

3. The third great task is to secure the proper affiliation between our great charity hospitals and our medical schools. By a campaign of education we must secure the cooperation of the governing bodies of these hospitals; we must convince them that the best interests of the patients and of the entire community can be best conserved by such a relationship; we must convince them of the great importance of developing the teaching and research functions of the hospital.

These three tasks require the active cooperation and support of three different classes of men: the state boards, the university authorities and the governing bodies of hospitals. The initiative in these great movements must come from the medical profession itself and results can be obtained by an active, aggressive campaign of education.

### GREAT PROGRESS MADE

The preceding statements are made to point out the need of continuous, persistent effort on the part of the American Medical Association and should in no way belittle the great progress made in recent years. In fact, as shown in our report last year, very rapid progress has been made since 1904 when the American Medical Association created its permanent committee on medical education. Since that time the colleges have been reduced from 166 to 120 and, as shown in Table 2, this reduction has been brought about chiefly by the closing of inferior schools and by mergers, so that the colleges which remain present a much higher average of excellence. The following list shows how decidedly entrance standards have been raised. Also sessions have been lengthened, better teachers have been employed, new buildings have been erected, better endowments have been secured, new laboratories have been provided, better equipment furnished and, particularly during the past year, much closer relations have been established with hospitals, and larger clinical privileges secured for medical students.

### PRELIMINARY EDUCATION

Since our last report five more colleges have entered on the requirement of a year or more devoted to physics, chemistry and biology in addition to the four-year high school course, making a total of 46 which are now exacting the higher requirement.

### COLLEGES AND STATES HAVING HIGHER REQUIREMENTS

The thirty medical schools which are now requiring as a minimum for entrance two or more years of work in a college of liberal arts in addition to a four-year high school education are as follows:

| College | Begun |
|---|---|
| Johns Hopkins University, Medical Department | 1893 |
| Harvard Medical School | 1900 |
| Western Reserve University, Medical Department | 1901 |
| University of Chicago, Rush Medical College | 1904 |
| University of California, Medical Department | 1905 |
| University of Minnesota, College of Medicine and Surgery | 1907 |
| University of North Dakota, College of Medicine | 1907 |
| University of Wisconsin, College of Medicine | 1907 |
| Cornell University Medical College | 1908 |
| Wake Forest College, School of Medicine | 1908 |
| Leland Stanford Junior University, Department of Medicine | 1909 |
| Yale Medical School | 1909 |
| University of Kansas, School of Medicine | 1909 |
| University of Michigan, College of Medicine | 1909 |
| University of Nebraska, College of Medicine | 1909 |
| University of South Dakota, College of Medicine | 1909 |
| University of Colorado, School of Medicine | 1910 |
| Indiana University, School of Medicine* | 1910 |
| State University of Iowa, College of Medicine* | 1910 |
| State University of Iowa, College of Homeopathic Medicine | 1910 |
| Drake University College of Medicine | 1910 |
| University of Missouri, Department of Medicine† | 1910 |
| Dartmouth Medical School | 1910 |
| Columbia University College of Physicians and Surgeons | 1910 |
| Syracuse University College of Medicine* | 1910 |
| University of Pennsylvania, Medical Department* | 1910 |
| University of Utah, Medical Department* | 1910 |
| Northwestern University Medical School‡ | 1911 |
| Georgetown University, School of Medicine | 1912 |
| Washington University, Medical Department | 1912 |

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* One year required for the session of 1909-10.
† One year has been required since 1906.
‡ One year required since the session of 1908-09.

The sixteen following colleges require in addition to a four-year high school course one year of work in college, physics, chemistry and biology:

| College | In Force |
|---|---|
| Howard University School of Medicine | 1910 |
| Kansas Medical College | 1910 |
| Tulane University, Medical Department | 1910 |
| St. Louis University School of Medicine | 1910 |
| University Medical College, Kansas City | 1910 |
| University of North Carolina School of Medicine | 1910 |
| Ohio-Miami Medical College, University of Cincinnati* | 1910 |
| University of Oregon, Medical Department | 1910 |
| University of Texas, Medical Department | 1910 |
| University of Virginia, Department of Medicine | 1910 |
| Fordham University School of Medicine | 1911 |
| University of Pittsburgh, Medical Department | 1911 |
| Medical School of Maine | 1912 |
| University of Michigan, Homeopathic College | 1912 |
| University and Bellevue Hospital Medical College | 1912 |
| University of Vermont, College of Medicine | 1912 |

## II. STATE LICENSURE

From the fact that forty-seven medical colleges have adopted higher entrance requirements it is interesting to note that nine state examining boards have also adopted preliminary requirements in advance of a four-year high school education. These are as follows:

| State Examining Board of | No. of Years Required | Affects Students Matriculating | Affects All Applicants |
|---|---|---|---|
| North Dakota | 2 | 1907-08 | 1911 |
| South Dakota | 1 | 1907-08 | 1911 |
| Iowa | 2 | 1907-08 | 1911 |
| Minnesota | 2 | 1908-09 | 1912 |
| Colorado | 1 | 1908-09 | 1912 |
| Colorado | 2 | 1910-11 | 1914 |
| Connecticut | 1 | 1910-11 | 1914 |
| Kansas | 1 | 1910-11 | 1914 |
| Indiana | 1 | 1909-10 | 1913 |
| Indiana | 2 | 1910-11 | 1914 |
| Utah | 1 | 1910-11 | 1914 |

There are several other states which are contemplating similar increase in their requirements in the near future.

### OTHER STATE BOARD ADVANCES

Advancement in the regulations governing the licensing of physicians is necessarily slow owing to the difficulty of securing legislation. That always means an uphill fight against all the forces which are opposed to reasonable standards of education and to proper qualifications for the license to practice medicine. Nevertheless considerable advancement has been made during the past year.

One noteworthy achievement was the securing by Pennsylvania of a new medical practice act providing for a single board—the Bureau of Medical Education and Licensure—displacing the three separate sectarian boards which previously had the work in charge. Another important advance was the securing in Mississippi of an amendment to the medical practice act requiring that every applicant for a license be a graduate of a reputable medical college—leaving only one state in the South, Tennessee, which permits non-graduates to secure the license. In several states advancement in educational requirements have been made. The regular boards of Arkansas and Louisiana have both adopted the four-year or 14-unit high school course as the minimum standard of preliminary education and have adopted methods which will guarantee its enforcement. The Board of Texas during the last few years has been gradually raising its standard until now it is definitely on the 14-unit basis.

### STATE BOARD ADVANCES MUCH NEEDED

Much remains to be done, however, in establishing proper safeguards between the people and the stream of incompetent and untrained "doctors" who seek the right to practice. The needs for better legislation and for better methods of examination stand out in greater contrast owing to the rapid advances made in medical education during the last seven or eight years.

### HIGHER PRELIMINARY REQUIREMENTS NEEDED

For example, there are still 12 states having no fixed standard of preliminary education and 17 which require less than a four-year high school education. In fact of the 21 states which are avowedly on the four-year high school basis, only 6 or possibly 8 have methods of evaluating credentials which guarantee that every physician licensed actually has had the required training. The general failure to enforce preliminary standards is due chiefly to the unquestioning acceptance of the so-called "equivalent certificates." A routine method of going back of these certificates, as investigation has proved, would show that many if not the majority of these certificates represent much less than the "equivalent" education. Meanwhile in the 21 states referred to there are 12 or 14 low grade medical colleges which could not exist were it not for this failure on the part of state boards to carefully evaluate credentials of preliminary education.

### RECOGNITION OF COLLEGES

Six state boards are entirely without authority to refuse recognition to a medical college no matter how worthless it may be, and in 14 other states the authority is divided among two or three boards, or other causes are hindering the use of such authority. There are also six states wherein the authority to safeguard the public against incompetent doctors rests in the care of two or more independent boards. In some of these states a candidate, if he fails before one board, can go to the second, or to the third, and, however incompetent he may be, seldom fails to receive his license.

### SUPPORT OF THE LICENSING BOARDS

It is becoming more and more important that our state boards be placed on a different financial basis than at present prevails. Now most boards have to depend entirely on the fees received from applicants. Owing to the overcrowded condition of the profession, to the higher standards of preliminary education and to more effective methods of examination the numbers of applicants appearing in many of the state are decreasing so that, even if much larger license fees b demanded, the boards will still be without ample funds t enforce the provisions of the practice act. The fee system i thus faulty, in that efforts by the board to adopt highe standards or better methods of examination, tend directly t reduce the number of candidates and to a correspondin degree the income of the board. Is it not about time, there fore, that for each board a state appropriation should b made, generous enough to provide not only for an able executive officer, but also for examinations that would be thoroug for such legal action as may be necessary for the enforcemen of the practice act and for a careful system of records? It i pleasing to note that the new Pennsylvania practice act pro vides for an annual appropriation of $30,000 for the suppor of the board.

### ONE STANDARD FOR ADMISSION TO THE PRACTICE OF MEDICIN

Probably the greatest problem in this country and whic has no parallel in any other civilized nation is that due to th existence and recognition of medical sects. Pseudo-medic cults have secured a foothold through a skillful avoidance the real issue. Each has argued for certain privileges as con pared with privileges granted to other schools of medicin The real issue, however, is that medical practice acts are n intended to protect this or that medical sect but to prote the public against incompetence and fraud. It is, therefor a question of education and training and not one of this that sect or method of treatment. Medical legislation shou know no class, and provide no special privilege, but shou provide that only those who are competent, as measured by certain definite routine in which all candidates are treat alike, should be permitted to treat human ailments. T practice of medicine is much broader than the giving or t withholding of drugs. Probably every reputable physici could specify hundreds of cases in his practice where to ha withheld a drug would have resulted in the death of t patient. The practitioner of medicine, therefore, no matt what methods of treatment he may advocate, should required to show a sufficient knowledge of diseases, and have undergone a sufficiently thorough training in the fun mental branches of medicine *to enable him to recognize t disease he is attempting to treat*—that is, he must be al to make a diagnosis—otherwise he should not be considered qualified to practice medicine. To treat a patient witho first obtaining a knowledge of the disorder is pure guess-wo and unscientific.

## III. FUTURE WORK OF THE COUNCIL

### NEXT ANNUAL CONFERENCE

Through the action last year of this body and of the Bo of Trustees of the American Medical Association, the Cou was enabled to have Mr. Frederic G. Hallett, Secretary of Examining Board in England, present at our Eighth Ann Conference on Medical Education held last February. Hallett's report on the methods of conducting the licens examinations in England was very complete and eminen satisfactory. Rich as it was in suggestions, it will doubt have splendid results in the bettering of the state licens examinations in this country. So satisfactory, indeed, was the visit of Mr. Hallett, that the Council would earnestly recommend that similar measures be taken in the study of other problems arising during the development of medical education in this country.

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* Will require two years in 1913 and thereafter.

#### THE PROBLEM OF THE CLINICAL YEAR

Probably the most important problem which will come up for discussion at our next conference, is to ascertain the best scheme of reorganizing the clinical years of the medical course, and at the same time developing the best clinical teachers. This part of medical teaching seems to have reached its highest development in Germany where the matter has been given a great deal of study. The Council, therefore, would like to be given authority to invite one of the great German clinicians, such as Professor Friedrich von Müller, to be present at our next conference and explain the German system to the medical educators of this country. By this plan this country will receive benefit from the large experience of those who have developed what apparently comes nearest to the ideal system of clinical teaching.

#### INVESTIGATION OF HOSPITALS

The next important requirement to demand of applicants for license to practice medicine, is that, in addition to their four years of medical training, they shall have served for a year as an intern in some good hospital. This has already been referred to. Before the requirement is insisted on, however, it is highly important that there be an investigation made of the hospitals of the country so as to ascertain how many of them are satisfactorily equipped to furnish interns with the kind of training needed. With the sanction of the House of Delegates the Council is in position to at once take up this investigation.

#### THE EXTENSIVE ROUTINE OFFICE WORK

The other lines of work being regularly carried on by the Council are the collection and publication of state licensing board statistics, the collection and publication of statistics regarding medical colleges, students and graduates, keeping in touch with the literature regarding medical education, keeping up-to-date files of the catalogues of the medical colleges of this and other countries, securing the verification of the credentials of those claiming graduation from medical schools abroad, keeping a register of medical students, besides answering a daily correspondence which is gradually increasing in volume.

The work has never progressed more satisfactorily than it is progressing now, and, although much remains to be accomplished, the Council has every reason to feel that splendid results from its work have been obtained.

Respectfully submitted.

Arthur Dean Bevan,
Chairman.
N. P. Colwell,
Secretary.

President Murphy directed that the above report be referred to the Reference Committee on Medical Education, and said: I hope I will be pardoned for expressing in words what I see in the faces of the members of this House, a sense of extreme satisfaction with the work of this Council, as reported by Dr. Bevan, as to its fairness, its industry, its intelligence and its virility. If we had about seven to ten councils of this type and with these qualities in this Association, we could do from ten to twenty times the work we are doing to-day. (Applause.)

### Committee on Apportionment Appointed

Dr. A. T. McCormack, Kentucky, moved that the order of business be interrupted and that the House proceed to the appointment of a Committee on Reapportionment in accordance with the suggestions made in the report of the secretary. Seconded and carried.

Dr. McCormack moved that the following, in addition to the President and Secretary, constitute the committee: Edwin Walker, Indiana; J. Z. Shedd, New Hampshire; Jere L. Crook, Tennessee. Seconded and carried.

### The District of Columbia Society

Dr. G. Wythe Cook, District of Columbia, was accorded the floor on a question of personal privilege, and asked that a record be made of the following:

#### IN THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

Whereas, The medical profession of the District of Columbia has heretofore affiliated with the American Medical Association under the name of the Medical Association of the District of Columbia, and

Whereas, The Medical Association of the District of Columbia and the Medical Society of the District of Columbia, for the purposes of harmony and unification, did by unanimous vote of both bodies in joint session on the tenth day of July, 1911, amalgamate and adopt for the new body the name and title of The Medical Society of the District of Columbia, and

Whereas, The Medical Society of the District of Columbia in its constitution, under the heading of "status," declares: "This society shall be a continuation and amalgamation of the Medical Society of the District of Columbia (founded Sept. 26, 1817, and chartered by acts of Congress of Feb. 16, 1819, and July 7, 1838) and the Medical Association of the District of Columbia (organized Jan. 11, 1833)" and "This society shall be a representative medical organization of the District of Columbia, constituted and maintained in conformity with the general plan of the American Medical Association; it hereby declares its allegiance to the American Medical Association and agrees with other state and territorial medical associations to the formation and the perpetuation of the House of Delegates of the American Medical Association." Therefore, be it

*Resolved*, That the American Medical Association be and is hereby requested to recognize the Medical Society of the District of Columbia as the legitimate successor of the Medical Association of the District of Columbia and as such entitled to membership and representation in the American Medical Association with all the rights and privileges of its other constituent bodies.

The foregoing preamble and resolution was reported to the medical society by its executive committee and unanimously adopted at a regular meeting held April 17, 1912.

J. B. Nichols, President.
H. C. Macatee, Recording Secretary.

The President directed that this statement be referred to the Reference Committee on Miscellaneous Business.

On motion the House of Delegates then adjourned until 2 p. m.

### The Reference Committees

The list of committees, referred to on page 1783 and to which reports and other matters are referred for examination and recommendation, are as follows:

#### SECTIONS AND SECTION WORK

| | |
|---|---|
| Wesley T. Mulligan | Rochester, N. Y. |
| Granville MacGowan | Los Angeles, Cal. |
| Hugh Cabot | Boston, Mass. |
| Thomas G. Davis | Pittsburgh, Pa. |
| A. H. Levings | Milwaukee, Wis. |

#### RULES AND ORDER OF BUSINESS

| | |
|---|---|
| W. R. Tipton | East Las Vegas, N. Mex. |
| A. R. Mitchell | Lincoln, Neb. |
| G. A. Warren | Black Rock, Ark. |
| G. R. R. Fisher | Bound Brook, N. J. |
| G. L. Taneyhill | Baltimore, Md. |

#### MEDICAL EDUCATION

| | |
|---|---|
| J. H. J. Upham | Columbus, Ohio |
| H. D. Arnold | Boston, Mass. |
| Reid Hunt | Washington, D. C. |
| George W. Guthrie | Wilkes Barre, Pa. |
| A. T. Bristow | Brooklyn, N. Y. |

#### HYGIENE AND PUBLIC HEALTH

| | |
|---|---|
| Oscar Dowling | Shreveport, La. |
| John Champlin | Westerly, R. I. |
| Edward Jackson | Denver, Colo. |
| Victor H. Stickney | Dickinson, N. Dak. |
| Lawrence Littig | Davenport, Iowa |

#### LEGISLATION AND POLITICAL ACTION

| | |
|---|---|
| W. A. Evans | Chicago, Ill. |
| Morgan Smith | Little Rock, Ark. |
| A. B. Cooke | Nashville, Tenn. |
| Jefferson R. Kean (U. S. Army) | Washington, D. C. |
| W. C. Gorgas | Canal Zone, Panama |

#### AMENDMENTS TO CONSTITUTION AND BY-LAWS

| | |
|---|---|
| A. T. McCormack | Bowling Green, Ky. |
| Joe Beckton | Greeneville, Tex. |
| Seale Harris | Mobile, Ala. |
| J. N. Jenne | Burlington, Vt. |
| William L. Noble | Chicago, Ill. |

#### REPORTS OF OFFICERS

| | |
|---|---|
| Hubert Work | Pueblo, Colo. |
| J. W. Young | Grenada, Miss. |
| Donald Campbell | Butte, Mont. |
| W. W. Richmond | Clinton, Ky. |
| E. A. Hines | Seneca, S. C. |

#### CREDENTIALS

| | |
|---|---|
| D. Chester Brown | Danbury, Conn. |
| E. A. Vander Veer | Albany, N. Y. |
| E. W. Van Allen | Springfield, Mass. |
| E. J. Goodwin | St. Louis, Mo. |
| W. E. Anderson | Farmville, Va. |

#### MISCELLANEOUS BUSINESS

| | |
|---|---|
| A. C. Scott | Temple, Tex. |
| J. F. Highsmith | Fayetteville, N. C. |
| R. R. Smith | Grand Rapids, Mich. |
| P. A. Haley | Charleston, W. Va. |
| W. A. Jones | Minneapolis, Minn. |

## Second Meeting—Monday Afternoon, June 3

At the second session of the House of Delegates of the American Medical Association, held at the Solarium of the Hotel Traymore, Monday afternoon, June 3, the report of the Council on Health and Public Instruction was called for and presented. It was was not read in full but was laid before the House of Delegates in printed form as it appeared in the Handbook.

The report follows:

### Report of the Council on Health and Public Instruction

*To the Members of the House of Delegates of the American Medical Association:*

The Council presents herewith its second report.

The report made to the House of Delegates at Los Angeles in 1911 covers the first seven months of the Council's existence from Nov. 1, 1910, to June 1, 1911. This report covers the eleven months from June 1, 1911 to May 1, 1912. During the past year the organization of the Council has not been changed. The work of the various bureaus and subcommittees of the Council will be taken up in order. In addition to this work, the Council has endeavored during the past year, to develop definite plans for permanent, constructive work with the intention of following up the most essential duties first, and endeavoring to make each year's work a foundation for that of the succeeding year.

The Council is profoundly impressed with the amount of public interest at present exhibited in health matters, and the need of proper instruction and education for the public on all questions relating to public health and the work of the medical profession. When the marvelous progress of the last thirty years in the knowledge of the cause and prevention of diseases is considered, it must be evident to all that it is only necessary to place the facts before the people to secure their confidence and support. But during the past thirty years, medical knowledge has advanced so rapidly, that a large portion of the public has been left behind. The gap thus created has only recently been realized. To bring together the people and the profession, to restore that confidence in the scientifically trained physician to-day that was in former years given to the family physician and to unite the public and the medical profession in an intelligent and irresistible campaign for better health conditions is one of the most important duties which now confronts this Association. This work has been delegated by this Association to the Council on Health and Public Instruction as its representative. If the results accomplished so far are not as great as might be desired, it is not through any lack of realization of the importance of its work by the Council, but rather through an earnest desire to lay secure foundations before attempting to build any more elaborate structure: to move slowly until sure of our position.

#### PLANS OF THE COUNCIL

Following the Los Angeles meeting and before the fall meeting of the Council, a memorandum, outlining the work for the coming year, was drafted by the Secretary and Chairman and sent to each member. After discussing the attitude of the public and the medical profession toward each other and the function of the Council as a medium of communication between physicians and the people, the following recommendations were made for the guidance of the Council during the coming year:

1. That the Council declare that in its judgment its principal mission is the development of public confidence in the purposes and work of the American Medical Association and of the profession.

2. That in addition to its present work and committee and bureau activities already provided for, the Council concentrate its efforts during the coming year on the following:

(a) Formulation and adoption of a platform setting forth the aims and purposes of the Association and the profession, and asking for the support and confidence of the public;

(b) Continuation and extension of the Press Bureau;

(c) Organization of a Speaker's Bureau;

(d) Compilation of a handbook for speakers;

(e) Organization and development of a Bureau of Literature.

These recommendations meeting with the approval of the Council, the extension of the Press Bureau was first taken up. Following this, the organization of a Speakers' Bureau was inaugurated and at the same time the collection of suitable material for a speaker's handbook was begun. The development of the Speakers' Bureau was found to involve some unexpected problems, which will be discussed later.

#### PRESS BUREAU

The organization and early development of the Press Bureau was considered at length in last year's report. A bulletin has been sent out every week, containing extracts from THE JOURNAL, abstracts of original articles, items of public interest, etc. During the latter half of 1911, beside the regular press bulletins sent to the daily newspapers, occasional bulletins were sent to other publications on the mailing list. Beginning with the first of January, 1912, the entire mailing list of selected publications was used. We are now sending a regular weekly bulletin to a mailing list of approximately 4,900 newspapers and publications, divided as follows:

| | |
|---|---|
| Daily newspapers having a circulation of 3,000 or over | 880 |
| Daily newspapers having a circulation of under 3,000 | 1,235 |
| Selected weekly newspapers in counties in which no daily is published | 1,937 |
| Religious papers | 126 |
| Agricultural papers | 230 |
| Educational | 71 |
| Labor | 215 |
| Fraternal publications | 85 |
| Miscellaneous | 77 |
| Total | 4,856 |

#### SUBJECTS OF BULLETINS

A list of subjects considered in the Bulletin is attached in order to give some idea of the scope of this work:

June 2.—Cold-Storage Eggs; Our Vanishing Shore-Birds; Another Pure Food Decision; Sexual Hygiene in the Austrian Schools; Milk Legislation in Ontario; Safeguards for Marriage; Dietetics Taught by Cartoon; "Reasonable" Lying Permissible.

June 16.—The Public Drinking-Cup; The Supreme Court on the Food and Drugs Act; Prophylaxis of Fourth-of-July Tetanus; Great is Mammon; The Tuberculosis Patient After Sanatorium Treatment; Industrial Laboratory Secrecy.

June 23.—The Present Status of Antityphoid Vaccination; The Independent Press; The Declining Birth-Rate in Rural New York State; Convictions Under the Food and Drugs Act.

June 30.—The President and the Food and Drugs Act; Restriction of the Sale of Habit-Forming Drugs; Misrepresentation a Weapon of the Reactionaries; Suicide Reports in the Press.

July 7.—President-Elect Jacobi; A Saner Fourth; The Public and The Public Health; The Disinfection of Water-Supplies.

July 14.—The Germicidal Properties of Disinfectants; Pasteur; A Microscope for Two; Incompatibility Between Internal and External Applications.

July 28.—The Cholera Situation; Personal Liberty and School Inspection.

August 4.—Also "Getting" the Courts; Another Outrage; State Support of Medical Education: The Value of Vaccination in Preventing Small-Pox; Spotted Fever Carried by Wood Ticks: School Children and Cattle; En-Ar-Co Oil a Dangerous Mixture; Macaura Comes Back.

August 11.—A "Trust" Which Should be Encouraged; Doctor's License Revoked for Fraud; Cremation Slowly Increasing; Civilization and The Tropics; Danger of Tuberculosi Infection through Butter; German Health Resorts.

August 18.—Care of Infants in Hot Weather; Another Consumption Cure; Leslie's Weekly—A Consistent Journal; Dictator McCabe.

August 18.—(Special Bulletin on Medical Education) Number of Medical Students in the United States; Medica Graduates in 1911; Women in Medicine; Number of Colleges The Cost of a Medical Education; The World's Supply o Medical Schools; Colleges Listed as Acceptable (Class A) Medical Colleges Closed During the Year; Gifts to Medica Education During the Past Year; The Passing of Physiomedicalism; Seven Years' Progress in Medical Education.

August 25.—Fourth-of-July Accidents for 1911; Contro of Typhoid in the Army; The Irrepressible Conflict; Malt Fever in Texas; Deaths by Drowning; Health Campaign i the South; A Possible Solution of the Storage Egg Problem.

September 2.—Effects of Alum in Baking-Powder; An Ep demic as the Result of Kissing; Who is "H. L. Harris"? Pellagra Spreading Rapidly.

September 15.—Heating and Ventilation; Testimonial of Dead Woman a Boomerang; Charity and Stamina; Value of Cheese as a Food; The Dangers of Flannelette; Francis Truth—A Divine Healer Up to Date.

September 22.—Malta Fever in Texas; Dr. Wiley Exonerated; Sectarian Licensing Boards a Danger to Public Health.

September 29.—"Medical Trust" Asks Congressional Investigation; Books for the Blind; Hookworm Infection in the Gold Mines of California; Controlling Hydrophobia in the Human Subject; Malta Fever in Texas; Effective Garbage Disposal.

October 13.—A National Department of Health; Sudden Disaster and Constant Disease; Antifat and Society Women; Bubonic Plague.

October 20.—Bogus Scientific Institutions; What's the Matter With Kansas?; Expensive Sugar or Cheap Saccharin, Which? The Alleged Hygienic Value of Ozone; Another Interference with the Freedom of Cattle.

October 26.—Typhoid Fever and the Water of the Great Lakes; A Milk-Borne Epidemic of Typhoid Fever; Success of Cold Storage is no Guarantee of the Quality of Cold-Storage Food.

November 3.—Benzoate of Soda Again; Protecting the Health of Prisoners; Sectarian Catspaws for Fakers; Politics and the Public Health Service; Dust a Cause of Municipal Disease.

November 10.—Can Hair Turn White in a Night? Milk-Borne Tonsillitis; Prevention and Hot Treatment; Irrational Governmental Decisions on Benzoate; Generous But Not Just; Probable Tapeworm Infections of Michigan Waters; Another Patent-Medicine Man in the Meshes of the Law; Chamlee Goes to California.

November 17.—The Profits of Vaccination; Carnegie University; Aviator's Disease.

December 1.—Senator Works Declines to Furnish Facts; Poisoning by Gas; The Prevention of Industrial Disease; Teeth not a Luxury.

December 8.—The Washington Typhoid Epidemic; Governmental Aid for Cattle, Why Not a Little for Man? Senator Works as a Trust-Buster; Vital Statistics Legislation; Eradicating Rocky Mountain Spotted Fever; The Christmas Red Cross Film.

December 15.—Dentistry—Old and New; The Banishment of the Common Drinking-Cup; A Commission to Investigate the Vaccination Question; Control of Occupational Diseases.

December 22.—Need of a Central Body to Protect the Great Lakes; Senator Owen Amends His Bill; The Canal Zone as an Ideal Health Resort; Some Officers of the National League for Medical Freedom.

January 5.—Vaccination for Typhoid Fever; Shuttlemakers' Disease and its Cause; Deaths of Physicians in 1911; Judicial Wisdom.

January 12.—The Referee Board Report on Saccharin; The Key to the Situation; Why the Owen Bill Should Pass; Water-Drinking with Meals; Society of Universal Science; The Owen Bill.

February 9.—Development of Frail Children; Lead-Poisoning; Typhoid Fever Again in Milwaukee; Health Resorts and Infection; Saccharin Again; Ozone Myths; The Health of the People; Systematic Compaign Against Cancer; Wood Alcohol Prohibited in Austria in Foods and Drugs; When the Hen Embalms Her Eggs.

February 16.—What's Sauce for the Ecuador Goose is Sauce for the American Eagle; Vegetables as a Factor in the Spread of Typhoid: A Combination of "Ethical Proprietary" Manufacturers; The Significance of Bovine Tuberculosis in Human Disease; The Propaganda for Reform.

February 23.—Body Cells and Food Substances; Spices as Preservatives; The Relation of Rice to Certain Diseases; Mrs. Eddy and the National League for Medical Freedom; A Good Way to Prevent Accidents; Professional Reform or Public Discipline; Public Parks and the Physician.

March 1.—A Rational Calendar; A Triumph of Sanitation; Sewage Disposal and Bad Odors; A Rational Holiday Schedule; Faithful Work.

March 8.—Southern Educator Predicts Health Age; Physical Effects of Immigration; Health Conditions in Alaska; Are Americans Degenerating? Practical Typhoid Fever; Health Questions and Politics; Milk-Fat, Tissue-Fat and Food-Fat; Property Rights vs. Public Health.

March 15.—A New Life-Saving Feature in the Construction of Tenements; The Thyroid and Moral Responsibility; The Problem of the Feeble-Minded; The Influence of Caffein on Mental and Moral Efficiency and on The Circulation; Progress in Vital Statistics Registration; Epidemics of So-Called Influenza.

March 22.—A Legal Decision on a Medical Question; Nostrum Advertising in the Religious Press; Hampering Animal Experimentation; Transmission of Fever by Lice; Life-Insurance Companies and Conservation of Human Life; Who Will Succeed Wiley? What's the Matter with Michigan? Dr. Wiley Resigns.

March 29.—Sanitation at Panama; A New Arsenical Danger; Mental Disorders and Immigration; Tropical Diseases in Panama; Progress of Workmen's Compensation Legislation; The "Blue Sky" Law and Medical Frauds; National Mental Hygiene; Nature's Creation.

April 6.—Cheese—A Neglected Food; The Royal Society; What is Hunger? Conquering Tropical Diseases; Health and Marriage; Merited Honor; "The Mills of the Gods"; Typhoid Fever a Preventable Disease.

April 12.—Information Concerning Pellagra; Malta Fever in the United States; Increased Pay in Public Health Service; Congress on Hygiene and Demography; Food Wastes in Public Institutions; Voluntary Submission to Treatment for Insanity; Beriberi, Rice and Beans.

April 20.—Typhus Fever and Body Lice; Why We Should Fear Bugs; Alcohol and Insanity; The Value of Animal Experiments; Is Certified Milk Safe? Books and Bacteria; Clara Barton; The Insanity Dodge Unsuccessful in Canada; The Report of the Royal Commission on Vivisection; Cheap Confectionery in Pennsylvania; A Short and Easy Road to Wealth; What One State Has Done for the Country; The Owen Bill Before the Senate.

April 27.—Race Decay and Social Hygiene; Proposed Amendments to the Immigration Law; The Federal Children's Bureau and Its First Director; Business and Sanitation; Clean Milk at a Reasonable Price.

In addition to the weekly distribution of this material, a circular letter addressed to the editors of the newspapers was sent out on January 2, stating the position of the Association on public health matters, and its reasons for taking up the education of the public.

From June 1, 1911, to Dec. 31, 1911, there were sent out 26 press bulletins with an average circulation of 2,200, or a total circulation of 57,200. From Jan. 1, 1912, to May 1, 1912, there have been sent out 14 bulletins, with an average circulation of 4,900, or a total circulation of 68,600, making a total for the eleven months from June 1, 1911, to May 1, 1912, of 40 bulletins with a total circulation of 125,800 copies.

Space does not permit of the insertion of a list of publications which have used material from the press Bulletin, but the newspaper clippings containing such extracts and sent in by the press clipping bureaus furnishing press service to THE JOURNAL show that the aggregate circulation of newspapers from which such clippings were received in 1911 was 5,869,278 and for the first four months of 1912 was 4,734,234.

### DISTRIBUTION OF EDUCATIONAL MATTER ON FRAUDS AND NOSTRUMS

Using the press bulletin mailing list as a medium for the distribution of the reprints published by THE JOURNAL on nostrums and quackery, copies of separate reprints have been mailed from time to time to the newspapers in order to keep them informed as to the work of the Association in exposing frauds. Beginning June 14, 1911, the following pamphlets were sent at intervals of one week to the editor of each daily newspaper in the country:

June 14.—Convictions Under the Food and Drugs Act.
June 21.—Chamlee Cancer Cure Fraud.
June 28.—International Medical Institute.
July 5—Rupert Wells.
July 12.—Murine.
July 19.—Curry Cancer Cure Fraud.
July 26.—Yonkerman's Tuberculozyne.
Aug. 2.—Toxo-Absorbent Company.
Aug. 9.—Drs. Mixer.
Aug. 16.—A Family of Cancer Fakers.
Aug. 23.—Nature's Creation.

These eleven pamphlets sent to approximately 2,150 newspapers involved a distribution of about 23,650 pamphlets.

The next lot of pamphlets were sent to the same newspapers, and also to religious, agricultural, labor and other special publications, forming a total mailing list of 2,500 papers. This list comprised the following:

October 4.—Lung Germine.
October 11.—Oxidaze.
October 18.—Nature's Creation (Revised Edition).
October 25.—Van Bysterveld Medicine Co.
November 1.—Aicsol (Lloyd).
November 8.—J. Lawrence Hill, M.D.
November 15.—Bertha C. Day Co.

November 22.—Oxydonor and Similar Fakes.
November 29.—Dr. Branaman.
December 6.—American College of Mechano-Therapy.
December 13.—Press Agents and Preservatives.
December 20.—Interstate Remedy Company.

These twelve pamphlets sent to 2,500 newspapers involved a distribution of 30,000 copies.

Beginning January 10, a similar distribution of pamphlets to country weekly newspapers was begun. This list comprised approximately 1,950, the following pamphlets being mailed:

January 10.—Lung Germine.
January 17.—Nature's Creation.
January 24.—Van Bysterveld Medicine Company.
January 31.—Aicsol.
February 7.—J. Lawrence Hill, M.D.
February 14.—Bertha C. Day Co., of Fort Wayne, Ind.
February 21.—Oxydonor and Similar Fakes.
February 28.—Interstate Remedy Company.
March 6—Fake Gall-Stone Cures.
March 13.—Press Agents and Preservatives.
March 20.—Carnegie University.
March 27.—Convictions Under the Pure Food and Drugs Act.
April 3.—Cora B. Miller.
April 10.—Dr. Branaman.
April 17.—Nature's Creation.
April 24.—Marjorie Hamilton.
May 1.—Stuart's Plaster-Pads.

Making a total of 33,150 pamphlets distributed to country newspapers.

The total number of pamphlets sent out to newspapers on the three lists enumerated above, amounts to 86,800.

In December, 1911, a copy of "Nostrums and Quackery" was mailed to the editors of 2,500 publications. This included every daily newspaper and every religious, agricultural, educational, fraternal and labor publication in the country. Many of these publications reviewed the book, commenting favorably on it and commending the Association for sending it out.

The results of this work are apparent to any one who has been watching the newspapers carefully for the past two years. The attitude of a great majority of newspapers toward the heartless frauds and impositions that have been practiced on the public is entirely different from that which characterized them a short time ago. The heavy handicap under which this work is being conducted is evident when one realizes that the patent medicine and nostrum advertising is the most lucrative of any form of newspaper advertising. While it is too much to expect the newspaper editors to close their advertising columns to this class of patronage, many of the better class of newspapers are doing so, and many more are exercising greater care than ever before and are thereby excluding the worst specimens of this class. When it is realized that the financial power of the patent medicine manufacturer and dealer, the manufacturer of adulterated and sophisticated food and the medical faker constitute the influence which is now being used to defeat and obstruct public health legislation and progress all over the country, the importance of exposing these people to the newspaper publishers and editors becomes apparent.

A most gratifying evidence of the attitude of newspaper men toward the matter sent out by the Press Bureau is found in the fact that although for a year past we have been sending regular installments of printed matter to nearly 5,000 newspapers and publications, we have only received in that time, six refusals to receive it or requests that it be discontinued. Many of the most influential newspapers are to-day regularly using this material and are giving assistance and cooperation in the education of the public. Many of the higher grade newspapers habitually use the material sent them as leading editorials or as matter for editorial comment.

The principal difficulty encountered by the editor of the country weekly which wishes to use the material sent it, is the cost of composition. A number of editors of country weeklies have written the Secretary, asking whether it was not possible to send "plate matter," i. e., stereotyped plates ready to be inserted into the forms, instead of printed matter which has to be set up separately for each paper. For the present this has not been possible, but the Council hopes later on to be able to add such a feature to its press service.

### SPEAKERS' BUREAU

Following the development of the Press Bureau, the organization of a Speakers' Bureau was authorized by the Council, and the Secretary was instructed to inaugurate this feature on Jan. 1, 1911. Accordingly, a letter was sent to about 100 members, selected after correspondence with members of the Council, secretaries of state societies, and others. The plan proposed was that appointments be made for public addresses for meetings held under the auspices of the local medical societies in states adjoining that in which the speaker lived. This arrangement was suggested in order to economize time for the speakers and expenses for the Council. The Council agreed to pay the traveling expenses of speakers filling appointments made through the lecture bureau. Sixty-four of those written to agreed to undertake this work under the conditions laid down. The names of the speakers now listed with the bureau appear below.

ALABAMA
Dr. William H. Sanders..Mobile
Dr. Seale Harris.........Mobile

ARIZONA
Dr. J. W. Foss........Phoenix
Dr. J. W. Flinn........Prescott

ARKANSAS
Dr. Morgan Smith...Little Rock

CALIFORNIA
Dr. W. F. Snow....Sacramento

COLORADO
Dr. R. W. Corwin.......Pueblo

DISTRICT OF COLUMBIA
Dr. W. M. Barton...Washington
Dr. L. H. Reichelderfer...... ................Washington

MAINE
Dr. Edwin Gehring....Portland

MARYLAND
Dr. C. H. Jones......Baltimore

PENNSYLVANIA
Dr. G. W. Wagoner...Johnstown

RHODE ISLAND
Dr. G. T. Swarts....Providence

SOUTH CAROLINA
Dr. J. W. Jervey.....Greenville
Dr. E. A. Hines.........Seneca

SOUTH DAKOTA
Dr. J. W. Parson....Sioux Falls

TENNESSEE
Dr. G. H. Price.......Nashville
Dr. B. F. Turner.......Memphis

MASSACHUSETTS
Dr. M. J. Rosenau.......Boston
Dr. M. W. Richardson...Boston

MICHIGAN
Dr. A. F. Fischer.......Hubbell
Dr. G. L. Kiefer.........Detroit
Dr. E. W. Abrams...Dollar Bay
Dr. Victor C. Vaughan.Ann Arbor

MINNESOTA
Dr. H. M. Bracken.....St. Paul
Dr. H. W. Hill.......Minneapolis
Dr. H. L. Tomlinson....St. Paul

MISSISSIPPI
Dr. W. S. Leathers...University

MONTANA
Dr. T. D. Tuttle........Helena
Dr. T. C. Witherspoon....Butte

FLORIDA
Dr. J. Y. Porter....Jacksonville
Dr. Hiram Byrd....Jacksonville

ILLINOIS
Dr. J. W. Petit.........Ottawa
Dr. E. W. Fiegenbaum...... ...............Edwardsville

INDIANA
Dr. F. A. Tucker....Noblesville
Dr. J. N. Hurty....Indianapolis

KANSAS
Dr. S. J. Crumbine......Topeka

KENTUCKY
Dr. W. L. Heizer.Bowling Green

LOUISIANA
Dr. Oscar Dowling...Shreveport

NEBRASKA
Dr. D. T. Quigley..North Platte

NEW JERSEY
Dr. Richard C. Newton...... ................Mont Clair

NEW MEXICO
Dr. S. D. Swope........Deming

NEW YORK
Dr. S. A. Knopf......New York
Dr. F. Park Lewis.......Buffalo

NORTH DAKOTA
Dr. V. H. Stickney...Dickinson

OHIO
Dr. C. A. L. Reed....Cincinnati

OKLAHOMA
Dr. J. C. Mahr.......Muskogee

OREGON
Dr. C. S. White.......Portland
Dr. C. J. Smith.......Pendleton

TEXAS
Dr. I. C. Chase.....Fort Worth
Dr. M. M. Carrick........Dallas
Dr. C. E. Cantrell....Greenville

UTAH
Dr. W. B. Ewing.Salt Lake City

WASHINGTON
Dr. E. R. Kelley........Seattle

WEST VIRGINIA
Dr. C. A. Wingerter...Wheeling
Dr. S. L. Jepson......Wheeling

WISCONSIN
Dr. M. P. Ravenel......Madison

A letter was then sent to the secretary of each state association, outlining a plan, and enclosing a list of speakers from surrounding states. The secretary of the state association was requested to take the matter up with local organizations and to inform them that speakers for public meetings should be secured through the lecture bureau. It was estimated that each meeting would involve an expense of about $25. The amount at the disposal of the Council would provide for about 300 meetings, or an average of six to each state. Instructions were given as to methods of arranging for meetings, best methods of advertising, etc., in the light of experience gained through Dr. McCormack's meetings in the last seven years.

In only eleven states has the organized medical profession availed itself of this opportunity to secure competent speakers for the education of the public. From February 1 to May 1, thirty-seven meetings have been held, and in seven cases, requests for speakers have not been filled for various reasons, making a total of forty-four requests for speakers from eleven states. These requests arranged in States, are as follows:

Arkansas.—Meeting held, Little Rock.

Illinois.—Meetings held, Galesburg, Urbana (4), Jacksonville, Ottawa, Aurora. Speakers requested but not furnished, Carbondale, Nashville.

Kansas.—Meetings held, Hutchinson, Holton, Newton.

Kentucky.—Meeting held, Bowling Green.

Michigan.—Meetings held, Grand Rapids, Muskegon, Ann Arbor (3), Lansing. Speakers requested but not furnished, Traverse City.

Minnesota.—Meetings held, Winona (2).

New Mexico.—Meetings held, Albuquerque, Silver City.

Oklahoma.—Meetings held, Oklahoma City, Muskogee.

Pennsylvania.—Meeting held, York. Speakers requested but not furnished, Bradford, Greenburg.

South Dakota.—Meetings held, Mitchell, Aberdeen, Deadwood, Pierre, Sioux Falls, Waterloo.

Utah.—Meetings held, Ogden. Salt Lake City. Speakers requested but not furnished, Manti.

Wisconsin.—Meetings held, Grand Rapids, Wausau, Waukesha, La Crosse, Beloit.

In the following states no requests for speakers have been received: Arizona, Colorado, Delaware, District of Columbia, Florida, Georgia, Idaho, Iowa, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oregon, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia.

It was originally estimated that the expenses of each meeting would amount to about $25. The total expenses of furnishing speakers for the twenty-seven meetings which had been held, and for which expense accounts had been rendered at the time of the preparation of this report, shows a total expense of $688.82, or an average expense of $25.51 per meeting. As these meetings were held in different parts of the country, this can be taken as a fair estimate. It is probable that speakers for public meetings can be furnished in any state at an average cost of $25 per meeting.

In view of the fact that only eleven states availed themselves of this opportunity to secure speakers, and that in many states no apparent effort was made to interest their profession or the public, it does not seem advisable to restrict this work in the future to medical organizations. In fact, there is no reason why it should be so restricted. Physicians, especially those prominent in the management of medical organizations, are, as a rule, busy men. The sacrifice of time and strength required to arrange for, and successfully conduct public meetings is an unjust burden on the physician. The work is for the benefit of the public, and the public should bear the burden as it receives the benefit. While continuing the policy of furnishing speakers for meetings held by local medical societies, it also seems advisable in the future to provide speakers for meetings held under the auspices of women's clubs, local health leagues, teachers' and farmers' institutes, high schools, colleges and universities. There is reason to believe that the educational effect of such meetings will be far greater than those held under the management of professional organizations.

The first four months of the speakers' bureau are to be regarded largely as experimental. It was necessary to find out by actual experience how much demand existed for such meetings, and whether this demand could best be supplied through medical organizations; what would be the average expense, what class of speakers were best needed to fill the demand, etc. The experience gained will be of value in extending this work during the coming year. As we believe that the public will ask for a great many more meetings than have been requested by medical societies, a liberal appropriation for this purpose should be made for the coming year. It will also be necessary, in order to secure the interest and confidence of the public, to approach them first through the services of the leaders of the profession, those who are known throughout the country and who stand high in public and professional esteem. These leaders of the profession must interest and instruct the public while younger and unknown men are being trained as public teachers. Such a service will require sacrifices but will in the end yield large returns in public support and confidence

### BUREAU OF LITERATURE

The amount of time required to develop the Speakers' Bureau and the other work of the Council has made it impossible to take up to any extent, as yet, the development of a Bureau of Literature. The Council has, in the main, been limited to the distribution of pamphlets containing reprints of The Journal articles on Nostrums and Quackery, as well as a few general pamphlets containing reprints from The Journal, among these being the following:

Why Should Vital Statistics Be Registered?

The Control of Typhoid Fever.

Dust Menace and Municipal Disease.

Report of the Committee of the Section on Preventive Medicine and Public Health on Model Health Ordinances for a City which is a Resort for Consumptives.

Report of the Committee on Houses for Working People.

Report of the Committee on the Purification of Sewage.

Report of the Committee on Laws and Methods of Control of Tuberculosis in a Health Resort.

The Council now has on hand, and has ordered the publication of an excellent paper by Dr. J. W. Pettit of Ottawa, Ill., on a model program for local and state organizations for the suppression of tuberculosis, an abstract of which was read at the Conference on Public Health and Medical Legislation, held Feb. 26 and 27, 1912.

The Council has also distributed a large number of copies of the brief prepared by the attorneys of the Association on chiropractic, and a pamphlet containing a transcript of the testimony for the defense in a Wisconsin case, in which a chiropractor was tried and convicted of practicing medicine without a license.

There is a field and a demand for pamphlets on health topics written by men of recognized standing in the profession for distribution at a nominal cost to the public. The extent of this field is covered by the various state boards of health, as set forth in the report of the Council for the last year. It is the present endeavor of the Council to find a field and a line of subjects not covered by any existing health agency which can be taken up and developed.

### HANDBOOK FOR SPEAKERS

Realizing that if any number of speakers were to be put into the field and effective work secured, it would be necessary to compile a reference book containing authoritative facts, figures and references regarding infections and preventable diseases, the Secretary was instructed by the Council to begin the preparation of such a handbook. Circumstances made it impossible to advance in this direction very rapidly until after the first of January, since which time the desired material has been compiled on tuberculosis, typhoid fever, diphtheria and yellow fever. Suitable material on other subjects is under preparation, as this report is written. It is planned to prepare and place in the hands of each speaker a reference handbook containing essential facts about preventable diseases, quotations from recognized authorities, table of figures, reports, references, etc., on all subjects connected with public health and the education of the public thereon. Such a book will grow in value with each edition and will soon be recognized as a storehouse of material for public-health workers.

### ORGANIZATION

The report for last year covered Dr. McCormack's work up to July 1. The first week in September he spent in Honolulu. He spoke in Fresno, Cal., on September 13, in Reno, Nev., on September 15 and on September 17 began a tour of the northwestern states. From September 17 to 25 he was in Oregon; September 26 to October 1 in Washington, October 2 to 8 in Utah, and October 9 to 12 in Idaho. Six meetings were held in Oregon, six in Washington, two in Utah and two in Idaho. November 13 to December 3 was devoted to Illinois, ten meetings being held. From the close of the Los Angeles meeting to the first of December, Dr. McCormack visited eight states and addressed twenty-nine public meetings.

At the meeting of the Trustees in October of 1911, the management and responsibility for Dr. McCormack's work, and the control of his employment was placed in the hands of the Council. After receiving notification of this change from the Board of Trustees, Dr. McCormack was asked to indicate the conditions and terms under which it would be satisfactory to him to continue his work. He replied that he did not desire to continue it, and asked that his work be terminated with the first of December, 1911. The Council, both through its Chairman and by formal resolution has repeatedly urged Dr. McCormack to indicate the conditions and terms under which he would be willing to consider a continuation of his valuable work, but he has so far declined to consider a resumption of his activities. No appointments have been made for him since the first week in December, 1911. It is the earnest and sincere desire of the Council that Dr. McCormack may be induced to devote at least a part of his time to the work which he has so ably carried on for many years.

### LEGISLATION

The progress of the campaign for a National Department of Health is doubtless familiar to all the members of the House of Delegates. As the efforts of the Association for the passage of the Owen bill have been placed in the hands of an independent committee which will report to you direct, it is not necessary to discuss the details of this campaign in this report.

Beginning the last week of February, a letter was sent to a selected correspondent in the home town of each member of Congress, asking for the name of the family physician of the congressman. A second letter was then sent to the family physician of each congressman, so far as obtainable, asking him to write or call personally on the congressman in question, explaining the purpose of the Owen Bill, and asking for his support.

On April 29, a circular letter was sent to each member of the National Auxiliary Legislative Committee, numbering about 2,000, asking each member to wire at once to the senators from his state, asking them to support the Owen Bill for the sake of public health; to have as many physicians as possible in each county do the same thing; to have a resolution, endorsing the bill and asking the senators to support it, passed at once by the county society, and a certified copy sent to both of the senators; to secure the endorsement of as many prominent citizens in the county as possible; to secure endorsements of women's clubs, local health organizations, civic and commercial organizations and other bodies, and to get the endorsement of any newspapers in the county with favorable editorial comments, if possible. With this letter was sent a copy of the report of the Senate Committee and a reprint from The Journal giving an extract from the Congressional *Record*, showing the debate on the floor of the Senate.

In addition to these two series of letters, a large amount of printed matter has been distributed. The Bulletin for Nov. 15, containing the text of the Owen Bill, editorials and extracts from The Journal and many newspapers, biographical reports regarding the promoters of the National League for Medical Freedom, cartoons and other material, has been widely distributed. Four editions of this bulletin were printed, amounting to about 20,000 copies. A large number of copies of Senator Owen's speech of the report of the Senate Committee on the Owen Bill, and of various reprints from The Journal have also been distributed, being sent to medical societies, women's clubs and individuals asking for literature.

Regarding public health legislation in the states, the following legislatures have been in session during the past winter: Kentucky, Maryland, Massachusetts, Mississippi, New Jersey, New York, Rhode Island, South Carolina and Virginia. The legislature in Louisiana convenes in May.

Among the principal measures adopted have been the following:

Kentucky.—A repealing vital statistics law was defeated. An optometry bill was defeated. An effective provision made for regulating opticians. A bill reorganizing the state board of health was defeated. An investigation of the books and official activities of the secretary of the state board resulted in a report highly commending the work of this body. Senate bill No. 56, placing the power to test cattle for tuberculosis in the hands of the county courts instead of the state board of health was passed but later vetoed by the governor.

Mississippi.—A new medical practice act was adopted. also a bill providing for the registration of vital statistics. Mississippi is entitled to great credit as the first of the southern states to adopt a model up-to-date vital statistics law.

New Jersey.—Sterilization law adopted.

Virginia.—A bill amending the medical practice act and enlarging the powers of the state examining boards was passed. Also a bill for the registration of vital statistics. Chiropractic and optometry bills were defeated. The state board of health was given an appropriation of $35,000. A bill amalgamating the medical department of the University of Virginia and the Medical College of Virginia was defeated.

### BUREAU OF PROTECTION OF MEDICAL RESEARCH

The series of pamphlets on this subject prepared by the committee under the chairmanship of Prof. W. B. Cannon, has been increased by the publication of a paper on Animal Experimentation and Diphtheria, by W. H. Parks of New York, and an article on Animal Experimentation and Its Benefits to Mankind, by Prof. Cannon. These two pamphlets form Nos. 22 and 23 of the series, and practically conclude it. This series is conceded to be the best collection of material on animal experimentation adapted to popular use that has been prepared. They are in constant demand and are ready at any time for the instruction of the public in any state in which ignorant or sentimental agitators may attempt to influence public opinion against proper research methods for the advance of scientific medical knowledge.

### COLLECTION OF STATE LAWS

The collection of state laws on health topics has been enlarged and rearranged during the past year. Laws on twenty-eight subjects pertaining to public health have been secured from all of the states insofar as they have been enacted. The collection of supreme court decisions on medical practice acts, powers and duties of state and municipal health officers, public health functions of the state, etc., has also been materially increased.

### CARTOONS

At the Los Angeles meeting in 1911 the Council offered a prize of $200 for the best series of six cartoons on public health topics. A gratifying exhibit resulted, about 400 cartoons being submitted. In addition to acquiring the series awarded the prize, a number of others were purchased. During the year, cartoons on special subjects have been prepared, and have appeared in The Journal and in some of the reprints on Nostrums and Quackery. In the bulletin for Jan. 15, 1912, these cartoons were printed. Stereotyped plates of these cartoons have been furnished to a considerable number of newspapers, health bulletins, county society bulletins, etc. Our experience of the past year indicates that the cartoon has a legitimate place in public health education, and that it is capable of extensive development. It is hoped that sets of the series awarded the prize at this year's exhibition can be reproduced full size, suitable for framing for physicians' offices, and reception rooms, public health exhibits, etc.

### SPECIAL NUMBERS OF THE BULLETIN

The American Medical Association Bulletin has been used to distribute information and material for public and professional education. The Bulletin for May 15, 1911, contained the Post-Graduate Study Course for 1911 and 1912. This was distributed to county societies wishing to follow this course. The Bulletin for Sept. 15, 1911, which was a special number containing in the main a reprint of the number for Nov. 15, and was used in large quantities in the states in which optometry bills were introduced during the past winter, four editions being printed in order to supply the demand.

The Bulletin for Nov. 15, 1911, was devoted entirely to the campaign for a National Department of Health. It consisted of cartoons, editorials, extracts from The Journal, a summary of the Owen bill, as well as the full text of the bill, numerous editorial extracts from newspapers and biographical and other matter regarding the officers of the National League for Medical Freedom. This Bulletin has proved of the utmost value in educating the public and the profession on this subject, between twenty and twenty-five thousand copies of it having been distributed in January, February and March The Bulletin for January 15 was devoted entirely to the work of the Council, containing an account of the various branches of this work, its committee, etc., as well as all the cartoons which had appeared up to the time of publication.

### OTHER PAMPHLETS

In addition to the distribution of the numbers o the Bulletin, the pamphlet on Vital Statistics has bee reprinted and widely distributed, as well as the report o the Senate committee on the Owen bill. Large quantities o Senator Owen's speech have also been distributed. This speec was made in the United States Senate on March 24, 1910. supply of reprints of this speech has been furnished b Senator Owen.

### COMMITTEES APPOINTED

Early in the fall of 1911 Mr. John F. Gilchrist, vice-president of the Commonwealth Edison Company of Chicago an president of the Electric Light Association, requested th Council, in behalf of his association, to appoint a commissio to take up the question of resuscitation from electrical shoc with a view to preparing an authoritative chart containin the latest and most accurate information on this subject fo distribution and exhibition in electric power houses, rela stations, and other places where the employees are expose to danger from electrical currents. After a number of co ferences and much correspondence it was decided to create joint committee to be appointed by the Council and to made up of representatives of the American Medical Associa tion, the National Electrical Light Association, and the Ame ican Institute of Electrical Engineers. The committee wa accordingly appointed as follows:

*Committee to Study Resuscitation after Electrical Shock*—Dr. W. B. Cannon, Chairman, Professor of Physiology, Ha vard Medical School, Boston.

Nominated by the American Medical Association.—Dr. Yandell Henderson, Professor of Physiology, Yale University, New Haven, Conn.; Dr. George W. Crile, 214 Osborn Building, Cleveland, Ohio; Dr. S. J. Meltzer, Rockefeller Institute, New York City.

Nominated by the National Electrical Light Association.—Dr. Edward A. Spitzka, Professor of Anatomy, Jefferson Medical College, Philadelphia; Mr. W. C. L. Eglin, Philadelphia Electric Co., Philadelphia.

Nominated by the American Institute of Electrical Engineers.—Prof. Elihu Thompson, Harvard University, Cambridge, Mass.; Dr. Arthur E. Kennelly, Ex-President of the American Institute of Electrical Engineers, Lynn, Mass.

Elected by the Committee.—Mr. W. D. Weaver, Secretary, Editor *Electrical World*, 239 West Thirty-Ninth Etreet, New York City.

The Council feels that it has reason to congratulate the Association on the appointment of this committee, representing as it does, the best men in physiology and research, as well as men of international reputation in electrical circles. It is also gratifying to have established friendly relations with such bodies as the National Electrical Light Association and the American Institute of Electrical Engineers. The plan followed in establishing this committee can be adopted to advantage in other lines.

### COMMITTEE ON COOPERATION WITH THE NATIONAL EDUCATIONAL ASSOCIATION

At the meeting of the Council at Los Angeles in June, 1911, the appointment of a permanent committee to serve with a similar committee from the National Educational Association was authorized. The committee appointed by the Council consists of Dr. R. W. Corwin, Chairman, Pueblo, Colo.; Dr. M. J. Rosenau, Boston, Mass.; Dr. J. M. Dodson, Chicago.

A committee appointed to represent the National Educational Association consists of Thomas D. Wood, Chairman, Jacob A. Shawan, Albert E. Winship, John F. Keating, Philander P. Claxton, William H. Allen, Secretary.

This committee met at St. Louis in February, the meeting of the executive committee of the National Educational Association, and will also meet in Chicago in July at the general meeting of the association.

### OTHER COMMITTEES

The Council has also authorized the appointment of a committee on medical expert testimony, to consist of representatives of the American Medical Association, the American Bar Association, and the Commission on Uniform Laws. The Council has also authorized the appointment of a committee on railway sanitation to consist of representatives of the American Medical Association, of the Association of Railway Surgeons, of state boards of health, and probably of the administrative departments of some of the large railroads. The Council has also authorized the organization of a vital statistics legislation committee to consist of representatives of the American Medical Association, the American Public Health Association, the American Bar Association, the Commissioners on Uniform Laws, and the Bureau of the Census to consider any changes or modifications which may be necessary in the present model law.

Correspondence regarding the formation of these committees is going on at the time this report is written.

### ANNUAL CONFERENCE

The Joint Annual Conference on Medical Education and Legislation was held in Chicago, Feb. 26 and 27, 1912. In addition to those heretofore invited to these conferences, an invitation was sent to the officers and members of all state boards of health, as well as to the officers of the sixty largest cities. The second day's program was of great interest and benefit. The annual conferences held under the joint auspices of the Council on Medical Education and the Council on Health and Public Instruction have become a recognized feature of the year's work and are of great benefit in working out effective plans for improving conditions.

### AVOIDANCE OF CONFLICTING COMMITTEES

This Council was established at the St. Louis session in 1910. Previous to its organization, members of the House of Delegates will recall several years of discussion as to the best way of avoiding the frequent appointment of independent, temporary committees with overlapping jurisdiction and without proper provisions for carrying on their work. After two years' deliberation, it seemed to be the judgment of the House of Delegates that there should be four permanent councils or boards which should be in continual existence with offices at the Association headquarters, and that the principal activities of the Association between sessions of the House of Delegates should be covered by these four councils. The fields of activity of the Council on Pharmacy and Chemistry, and the Council on Medical Education, are evident. At the Los Angeles meeting the Judicial Council was practically reorganized and its functions enlarged so as to cover any unoccupied territory. The line that was evidently intended to be drawn between the work of the Judicial Council and that of the Council on Health and Public Instruction, was that the Judicial Council should have jurisdiction over all matters relating to the internal activities and relations of the organization, while the Council on Health and Public Instruction should have oversight of all matters pertaining to the external relations of the organization and the profession. The advantages of such a system of permanent, responsible councils over that of temporary, independent and often hastily created committees with overlapping and contradictory discussions is too evident to require discussion. The Council begs to bring to the attention of the House of Delegates the plan in accordance with which it was organized, and to suggest that careful consideration be given to the authorization of new and independent committees, and that such action be taken only when it is evident that the work of the proposed committee does not lie within the province of one of the four existing permanent boards of the Association. Committees appointed by the Council after careful consideration, lengthy correspondence, and consultation with other and outside interests, are almost certain to be more satisfactory in their results than committees hastily selected or created without careful consideration of the exact limitations of their authority. Such a committee as that appointed on Resuscitation from Electrical Shock would be almost impossible, without the utmost and careful deliberation in its selection. The creation of new and independent committees charged with functions lying within the jurisdiction of one of the permanent boards unavoidably results in considerable embarrassment. The Council would therefore recommend that careful consideration be given to reports of recommendations for the creation of new committees.

### SUB-COMMITTEES OF THE COUNCIL

As the second portion of its report, the Council submits the reports of its various sub-committees, whose work is of quite as much importance as that of the Council itself. It has seemed evident for some time past that one of the most important functions of this Council would be that it would form a center or hub around which would be gathered a considerable number of sub-committees, working on definite portions of the general field of the Council. The Council feels that the work of these sub-committees is of the utmost importance and recommends their reports to your careful consideration.

Respectfully submitted,

Henry B. Favill, Chairman,
Joseph N. McCormack,
Walter B. Cannon,
Henry M. Bracken,
William C. Woodward,
Frederick R. Green, Secretary.

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## REPORT OF THE COMMITTEE ON THE PREVENTION OF BLINDNESS

*To the Council on Health and Public Instruction:*

During the past year the propaganda on ophthalmia neonatorum has been so widespread that in almost every state there have been papers read before county and state medical societies as well as a large number of popular addresses on this subject. It has been considered in the regular columns of many medical journals, as well as editorially, and the persistent efforts to arouse effective interest on the part of the medical profession to control an infection which is followed by such disastrous consequences, but which hitherto has not been controlled, has been most effective. The use of prophylactics has become general. Six states and many cities are now distributing a prophylactic gratuitously. In New York State during the past year 18,811 outfits, containing a 1 per cent. solution of nitrate of silver, with circular in English, Italian and Polish, were sent through the 1,600 health officers to both midwives and physicians. Indeed the seriousness of birth infections is now being so much more widely appreciated that the proportion of babies that have become blind from this cause has largely diminished. The facts remain, however, that human nature is always the same, and no matter how complete may be the actual knowledge on the part of both midwife and obstetrician on the possibility of infection of the eyes at birth, there will always be those who are negligent and careless, as in every phase of human activity, and it becomes increasingly evident that unless stringent regulations are made and enforced children will be allowed to become blind whose eyes should have been saved. The same conditions obtain everywhere, in the most highly civilized and best regulated communities as in lumbering and mining towns, unless efficient sanitary regulations are enacted and enforced.

Perhaps the most effective object lesson of the past year, showing the practicability of the complete control of birth infections of the eyes, comes from Boston. In the revised laws of 1902, section 49 was introduced as follows:

> Should one or both eyes of an infant become inflamed, swollen and red, and show an unnatural discharge at any time within two weeks of its birth, it shall be the duty of the nurse, relative or other attendant having charge of such infant to report in writing within six hours thereafter, to the board of health of the city or town in which the parents of the infant reside, the fact that such inflammation, swelling and redness of the eyes and unnatural discharge exists. On the receipt of such report, or of the same symptoms given by a physician as provided by the following section, the board of health shall take such immediate action as it may deem necessary in order that blindness may be prevented. Whoever violates the provisions of this section shall be punished by a fine of not more than one hundred dollars.

In 1910 this was further amended by the addition of sections 1 and 2, chapter 485, as follows:

> Sec. 1. The State Board of Health shall furnish, free of cost, to physicians registered under the laws of the Commonwealth, such prophylactic remedy as it may deem best for the prevention of ophthalmia neonatorum.
>
> Sec. 2. To carry out the provisions of this act there may be expended annually from the treasury of the Commonwealth a sum not exceeding twenty-five hundred dollars.

In 1911 this was further amended by the addition of chapter 643, which provides salaries for officials doing the work as well as for the prophylactic to be distributed. This law reads as follows:

> The sums hereafter mentioned are appropriated for the salaries and expenses of the State Board of Health for the fiscal year ending on the 30th day of November, 1911, to wit:
>
> For expenses in carrying out the provisions of the law relative to the prevention of ophthalmia neonatorum, a sum not exceeding two thousand five hundred dollars.

Ophthalmia neonatorum was made a notifiable disease by resolution of the State Board of Health on May 6, 1909.

The law passed in 1902 has been a dead letter. The doctors had generally disregarded the existing law and no board of health had ever instituted prosecutions to enforce it. Indeed until June 4, 1909, this disease was not even included in the State Board of Health's printed list of reportable diseases. The general attitude toward the matter according to the *Boston Common*, which is quoted by the *Boston Medical and Surgical Reporter*, was that of a physician, a graduate of one of the university medical schools, who, excusing his failure to report the disease called the child's resulting blindness "an accident, just as one sometimes stumbles on the stairs." The Boston Board of Health, however, cooperating with the State Commission for the Blind, called the attention of the physicians once more to the subject. A year ago, also, the State Board of Health sent out to each physician four separate notices of the reporting law. When this was not sufficient the Boston Board of Health instigated a test prosecution. A case was chosen which was not gonorrheal in origin and which did not result in blindness, and although both of these points were raised in the defense the court convicted the physician and the superior court sustained the decision on appeal. The month before the conviction the number of returns under the law had been ten; the month after the number was twenty. The next month, there being no prosecutions, the number fell back to ten, but in December new prosecutions were carried through and the returns rose during the next four months to 15, 32, 97 and 116 respectively. The last number seems to represent a fairly thorough enforcement of the law and the number is being maintained. It also gives some indications of the probable number of infections in cities of like population. The enforcement of the reporting law, however, is the least important part of the Boston Board of Health's preventive work. Every reported case of ophthalmia neonatorum is immediately followed up by a competent nurse who sees to it that proper treatment is given to the child and that, if necessary, it is sent to the hospital.

Since the institution of this "follow up" system in Boston, and this should appear in black-letter type, *not a single known case of the disease has resulted in blindness.*

Concerning this the secretary of the State Board of Health writes, under date of April 24, 1912: "I have just received your letter of April 22 in relation to ophthalmia neonatorum in this state and have called up the Boston Board of Health with the resulting information that 1,068 cases of ophthalmia neonatorum were reported to the Boston Board of Health last year. In the state, as a whole, there were 1,343 cases reported for the year ending Dec. 31, 1911.

The statement that no children have become blind in Boston since the following-up system was introduced is practically true, although Dr. Shea of the Boston board tells me that about two weeks ago, a case did occur in which it is probable partial blindness will result. The case was a long-drawn out one and the final result was due, apparently, to the fact that a recurrence took place after this case had been discharged from observation, and a period of two or three weeks elapsed during which no treatment was instituted.

Dr. Shea makes the very interesting statement that since the prophylactic has been distributed to physicians of the commonwealth, it is comparatively rare to receive at the city laboratory specimens of pus which show gonococcus, whereas before the distribution of the prophylactic such positive findings were common.

The vital, almost epoch-making importance of this record will be better understood and appreciated when read in connection with the conditions obtaining in the four preceding years, during which time the statistics and results of ophthalmia neonatorum have been observed.

| | No. Under Observation | No. Made Blind or Partially Blind |
|---|---|---|
| 1907-08................ | 46 | 12 |
| 1908-09................ | 116 | 29 |
| 1909-10................ | 119 | 13 |
| 1910-11................ | 107 | 11 |

The report continues:

"The most unexpected finding in the four years' study in Massachusetts has been the fact that the doctors and not the midwives are responsible for blindness from ophthalmia neonatorum. So far as the figures show, however, this is not because midwives have been careful while doctors have been careless, but because the midwife has appeared very little in the figures. Out of the 388 cases under observation, a midwife had attended the birth in only ten cases. Neglect was shown in three of these, a high percentage when compared with the percentage of neglect in cases attended by physicians.

"The doctors of Massachusetts, then, must be held responsible, and back of them are their medical schools. The public social institutions have been able to do much in the way of prevention, but much of their work is necessarily corrective, after the harm has been done. The institutions in the best position to do preventive work are the medical schools, and upon these should be placed the burden of that eternal vigilance which must always be the price of sight for the babies."

An almost precisely similar system has been adopted in New York, except that no prosecutions of physicians have been instituted. In the metropolis 40 per cent. or approximately 40,000 births annually are directed by midwives. They are, however, subject to the most exacting supervision; they are licensed only from year to year and after thorough medical inspection. One failure to report the existence of ophthalmia neonatorum when present is followed by a severe reprimand. For a second failure the license is revoked. In both cities, as indeed has now become general, a 1 per cent solution of nitrate of silver is distributed gratuitously to both midwives and physicians, that used in New York being most convenient and effective. It consists of a small paraffine ampule holding half a dozen drops of the solution, sufficient for both eyes for one case, but not enough to continue the treatment should such a temptation exist. In the cases reported from New York nearly twice as many infections are found in the practice of the physicians as of midwives. This is probably due to the fact that the penalties for neglect in the case of the latter have been more rigidly enforced. In the entire state of New York during the year 1911 but sixty cases of ophthal-mi neonatorum were reported to the State Department of Health.

An important document, Public Health Bulletin No. 49, which can be obtained by writing to the Assistant Surgeon General, Dr. J. W. Kerr, Department of Public Health and Marine-Hospital Service, Washington, on ophthalmia neonatorum, embodies a résumé of all of the laws and regulations in force in the United States relating to this subject. The subject is summarized as follows:

> All of the laws in force contain one or more good provisions, such as those requiring birth reports, with reference to instructions in them regarding ophthalmia neonatorum; case reports o health authorities not only by midwives but also by physicians and parents; distribution of literature; instructions as o treatment; disinfection; furnishing of prophylactics; con-rol over midwives; and medical attendance if the person is nable to pay. All of these provisions should be included in a uniform law, which is desirable in order to successfully contral ophthalmia neonatorum.

Unfortunately the activities of the sanitarian are too often estrained to pointing out the evils of ophthalmia neonatorum with no means at his disposal to combat them. It is society s a whole, in the last analysis, which must utilize the knowledge at its disposal and furnish the means to eliminate he disease. These are cheap and comparatively easy of appli-ation, but society must ultimately decide whether it is willing to pay the price.

It has become evident, therefore, that not only academically ut actually birth blindness can be, and is being, stopped. t is necessary only that other communities should adopt ike effective measures to give to the United States the roud preeminence of being the first nation to make good he prophecy of Cohn "that in all civilized countries ophthalmia neonatorum must and shall be wiped out," and to justify he conclusions voiced by Mr. Henry J. Wilson, secretary of Gardner's Trust for the Blind, when he says in the *London Chronicle* that the amount of blindness all over the world is radually decreasing, and one of the most important agents in this beneficent result he considers to be the making of phthalmia neonatorum a compulsory notifiable disease.

### TRACHOMA

Another menace to the integrity of sight is trachoma. The mportance of this has for many years been fully recognized y the federal government and no immigrant enters our ports ithout his having his lids everted and their condition examined. Its cause is not yet well known. It flourishes best here sanitary conditions are worst. It thrives in the hovels nd congested tenements where the air is bad and the food poor quality and insufficient. It is slow and insidious in s development, a mass of sago-grain elevations gradually fill the retrotarsal fold limiting the lid movements and leaving he eye half closed. The infection is carried by means of the rocious roller towel, which is still found in some primitive tablishments, and by other methods of direct communica-on. The health departments of many cities have prohibited e use of roller towels; they should be forbidden anywhere. hen once established trachoma is exceedingly difficult to ntrol.

Notwithstanding the strenuous methods employed to keep out it seems to have become firmly seated in certain sec-ons of this country. The public eye clinics of Chicago are led with patients showing the resultant deformities. Wilder, a series of careful studies, located a center from which seems to proceed in Southern Illinois. It has been found at the mountains of Kentucky and Tennessee are full of while in Oklahoma it has become a public menace.

In reply to an inquiry addressed to the Office of Indian fairs, Department of the Interior, under date of Oct. 25, 11, a letter says: "We have in the field four traveling perts in trachoma who devote their entire time to the atment of the pupils of the Indian schools for this disease. e have compiled a number of statistics in regard to its evalence among Indians, and the percentage ranges from ro to 75 per cent. in various schools in Indian communities. many cases the disease is typical and mild, while in other mmunities it is followed by severe sequelæ resulting in rious impairment of vision, entropion and blindness in a ge proportion of those suffering from this disease. A pam-let has been issued by the United States government on choma.

As an example of the seriousness of this condition recent aminations by a government expert at the Indian stations Oklahoma shows as follows:

| | | |
|---|---|---|
| At Shawnee ....... | 162 were examined | 160 had trachoma |
| At Sax and Fox.... | 130 were examined | 77 had trachoma |
| At Otto ........... | 76 were examined | 42 had trachoma |
| At Ponca ......... | 133 were examined | 92 had trachoma |
| At Darlington ..... | 250 were examined | 210 had trachoma |

Despite the fact that the disease is assuming serious proportions and especially in Oklahoma, where the number of Indians is large, the government maintains but four nurses in the work and but two physicians. It is bad enough that such a serious state of affairs should have been permitted to obtain among the poor wards of the nation. It becomes alarming when we realize its possible extension to our own people, a catastrophe which has actually occurred, for still more recent reports show that almost 50 per cent of the white children in the public schools have become infected.

Dr. Daniel W. White, United States government eye and trachoma expert, recently examined the public schools of Pawnee, Okla., and found 48 per cent of the pupils affected with trachoma; and he estimates that all of the public schools of that state will show, on examination, that 20 per cent. to 40 per cent. of the pupils are affected with trachoma. He seems to think it very strange that its existence should be general and yet the medical fraternity of the state have not given it more serious consideration. Dr. White has made a close study of this disease all over the United States and has personally examined 100,000 Indians in Oklahoma, and found 70,000 of them affected. This does not include the general number of white people whom he has also examined in that state. The following are his exact figures:

PAWNEE, OKLA., Sept. 19, 1911.

A synopsis of eye examinations in the Pawnee, Oklahoma, public schools, by Dr. G. A. Landes and Dr. Daniel W. White, U. S. eye and trachoma experts.

| | |
|---|---|
| Number of pupils examined.................. | 495 |
| Number presenting trachoma ................ | 237 |
| Number presenting no trachoma ............ | 159 |
| Number of suspicious cases.................. | 58 |
| Number of cases of conjunctivitis............ | 42 |
| Percentage of pupils with trachoma........... | 59%+ |
| Percentage of pupils having no trachoma...... | 41%— |
| Percentage of suspicious cases............... | 21% |
| Number of pupils presenting impaired vision due either to refractive errors or inflammation of the lids of the eyeballs.............. | 39 |
| Percentage of normal eyes of total examined.. | 32% |
| Percentage of trachoma...................... | 48% |
| Percentage of suspicious cases.............. | 12% |
| Percentage of conjunctivitis................. | 8% |

From these statistics it would seem imperative that measures be taken immediately by the federal government to supplement the able efforts of the few men who are now employed in fighting this disease in order that its extent may be determined and steps taken to prevent its spreading further.

### INDUSTRIAL ACCIDENTS

Industrial accidents to the eyes constitute one of the common causes of preventable blindness. Many large interests have already inaugurated protective measures for their employees, in self protection as well as from motives of humanity. Safety devices are being more and more generally employed. In conversation with the chief claim attorney of the New York Central railroad a few weeks ago the fact was pointed out that the explosion of water and lubricating glasses was a frequent and preventable cause of eye injuries, and that this occurred because the glasses were of poor quality and improperly protected. That this was fully appreciated by the keen officials was shown when Mr. Whiting produced a chart on which the history of every accident was carefully noted, and the conditions which had produced it analyzed. He had already recommended that a new lubricating device should be put on all of the engines of the entire system at a cost of twenty-five thousand dollars. The management hesitated at the great expense, but when the next day a claim of seven thousand dollars was settled for the loss of an eye, the change was immediately ordered, and the future protection of the men assured. The possibility of making more general the wide-spread knowledge of this character in order that the other large interests may profit by such an experience, led to the formation of the American Association for the Conservation of Vision. This association is honored by having among its vice-presidents the president of the United States and other eminent citizens, and receives the approval and financial support of the Russell Sage Foundation. It has for its object the preservation of the eyes of the nation. It recognizes the fact that the time during which effective care can be given is in the plastic period of school life, when from 30 to 32 per cent. of the children are found to have defective eyes, and it plans with the help of physicians, especially ophthalmologists, and sanitarians, with the aid of architects and illuminating engineers, of teachers and social workers, to study the conditions that are prejudicial to good sight and when possible to endeavor to have them corrected.

In a letter received from Mr. Leonard P. Ayers of the Department of Child Hygiene of the Russell Sage Foundation, he says:

"Two years ago, I made an analysis of some thousands of cases of physical examinations made in the elementary schools of New York City. Among the 7,608 cases examined, 1,411 were recorded as having defective vision. An analysis of these cases shows a distinct advance in the percentage of children having defective vision with each advancing grade and each advancing year of age." These results were as follows:

PER CENT. HAVING DEFECTIVE VISION BY AGES

| Age | Per cent. |
|---|---|
| 6 | ... |
| 7 | ... |
| 8 | 17.5 |
| 9 | 20.2 |
| 10 | 25.0 |
| 11 | 23.9 |
| 12 | 26.5 |
| 13 | 23.7 |
| 14 | 27.7 |
| 15 | 25.6 |

PER CENT. HAVING DEFECTIVE VISION BY GRADES

| Grade | Per cent. |
|---|---|
| 1 | ... |
| 2 | 20.2 |
| 3 | 21.9 |
| 4 | 25.8 |
| 5 | 24.8 |
| 6 | 24.5 |
| 7 | 26.9 |
| 8 | 32.3 |

Percentages of defective vision at the ages of six and seven years are not given, because the pupils at those ages are, almost without exception, in the first grade, and, as they cannot write, they are not tested for defective vision.

Among the conditions which have developed by the long continued or excessive use of the eyes is myopia, which when it progresses produces complications of a most disastrous character. Concerning this, Hirshberg in his recent monograph just published on the treatment of shortsight, says: "My observations, especially in my private practice, and my carefully entered clinical records carried on for more than three decades, have given me the comforting conviction that by means of a long continued abstention from close work the stretching process which constitutes myopia can be so far arrested, indeed relatively speaking, it is by no means rare for it actually to be brought to a standstill—that further diminution of acuity will not occur. Heedless of all considerations of rapid advance in learning, he continues, as soon as he sees the first indication of these important changes he sets aside all ordinary school teaching for the next two years or replaces it by a special form of home training which should be oral in character and all copy-book writing and prolonged eye study entirely excluded. It will be evident then that our school methods in which the same curriculum is employed for those whose eyes have begun to fail and for those whose eyes are strong, must be modified. There should be special classes for those with defective eyes, or better still, the whole curriculum should be so modified as to limit the enormous amount of eye work which is now required from the adolescent.

### BLINDNESS FROM WOOD ALCOHOL

The extent of blindness due to wood alcohol is everywhere in evidence. In a letter to the Committee on Prevention of Blindness of the New York Association for the Blind, Dr. May wrote:

"I believe that the adulteration of liquors with wood alcohol would cease if the guilty parties were aware of the serious consequences which result from such acts, and were instructed in the poisonous effects of this adulterant. In other words, a great deal of the adulteration is due, in part at least, to ignorance, and I do not believe that it would continue if the serious effects were generally known.

"Why would it not be a good plan to send a circular to every retail liquor dealer in the city (and elsewhere) with some such simple sentence as the following, printed in letters of large size:

"Do you know that Wood Alcohol is a Deadly Poiso
and is Responsible for Many Deaths? and that even as
Small a Quantity as a Teaspoonful has caused Blindness?"

There has been a marked decrease in the sale of this adulterant by reason of prosecutions carried on against saloon keepers
and others under the initiative of the New York City Board o
Health.

It would be desirable if some absolutely distinctive nam
were to be given to this toxic substance as the word "alcohol"
is in itself misleading and leads the ignorant to think that i
is a form of spiritous liquor. Its very name would be a pro
hibition to its use if it were called "Wood Poison."

It has been possible only to touch superficially and briefl
upon certain important methods which are prejudicial t
vision and which are easily controlled. To limit the prevent
able blindness this must be made

### A NATIONAL MOVEMENT

There are many others of great importance in which as muc
can be done and with equally beneficial results. To sum
marize them; there should be a uniform law for the contr
of ophthalmia neonatorum in the different states, whic
should provide for the prompt notification of birth. Th
English system of thirty-six hours has proved to be effectiv
This is not the birth report, but merely, as the name indicate
a notification. It should include the names of the father an
mother, the place of birth, sex of the child, the name
the child when it can be obtained, although this is n
essential and should not delay the notification. This shoul
also include the inquiry as to whether or not a prophylact
had been used against ophthalmia neonatorum (interpret
in midwives' certificates, "babies sore eyes") with the furth
inquiry "if not, why." This should be followed within t
days by the regular report of birth which can be made o
more deliberately and which should include all of the fac
usually required. The first notification makes it possib
for the health board to follow up cases at a later date, whi
when done greatly increases the possibility of full repor
being secured. It should provide for the reporting of t
inflammation of the eyes of the new born when it exists, a
with an adequate penalty for its neglect. It should provi
for the distribution of a free prophylactic by the state wi
circulars of advice to midwives, mothers and others as
the dangers of ophthalmia neonatorum, the necessity of i
immediate treatment and the legal requirements of its bei
reported. The embodiment in the law (where they do n
exist) of provisions making ophthalmia neonatorum a repo
able disease on the part of all attendants, medical or oth
wise, and the enforcing of this requirement by prosecuti
persons who neglect to observe the provisions of the la
promptly, and publishing the results of the prosecution. Mo
suasion and educative measures are first necessary, but le
measures are imperative to make them successful. The vesti
of authority in health officers, where it does not exist,
immediately provide proper treatment for infected cases
soon as they are reported. It is only by immediate ca
which often is not secured, that blindness in babies so infect
may be prevented. The initiative for all this work shou
be in the department of public health, but it must rece
the general support of the medical profession and pub
in order to be made effective. The department of health sho
also require that the final conditions of children infec
with ophthalmia neonatorum should be reported. It is o
in this way that any actual knowledge of the extent of
injury done can ever be computed.

These measures can be secured only by the cooperation
attending physicians with the department of public heal
With the midwife it is merely a question of execut
efficiency. The welfare of every community from a moral
well as from a sanitary standpoint, demands that the
cumstances associated with the birth of the child shall
officially known and properly recorded. The new born inf
on its entrance into this world becomes an individual w
personal rights and privileges, which may not be igno
While the relationship of the attendant at birth is o

peculiarly personal nature there is at the same time a responsibility to society at large which is equally binding. It is precisely because of the helplessness of the individual at this period of his life—when his most precious possession is menaced. that of sight—that the law and the doctor, his natural and rightful protectors, must safeguard it for him. This can be done only by the law first planning the measures to be employed for his protection and by the doctor loyally sustaining them. There has been great objection on the part of some physicians to the first essential in saving the eyes of babies from the effects of ophthalmia neonatorum, that of making the disease reportable under penalty, because of the feeling that the morality of the parents was thereby impugned. But in only a portion, although it is large, of all ophthalmias of infancy is found the gonococcus. It is evident that this conclusion is by no means justified; but even if it were the sole infecting cause and the reports were open to public inspection, which they are not, how insignificant the temporary embarrassment of the mature adults, fully able to defend themselves, compared with the possible alternative of a life-time of blindness of an innocent individual who is at least equally worthy of consideration.

If ophthalmia neonatorum is to be abolished the initiative must be taken by the doctor until adequate laws are made and enforced. This should continue to be a subject for consideration and effective action by every state and county medical society.

The department of public health in conjunction with the department of public education should secure regular examinations of the eyes of all school children and when defects of the eyes exist that cannot be corrected with glasses suitable provision should be made for the instruction of those children without compelling them to submit to a curriculum which when followed means the destruction of their eyes. It would be possible to definitely plan a program for the protection of the eyes of the school children and to carry it into effect if a committee representing the American Medical Association and the National Education Association were to work conjointly toward this end. Advice as to school construction, determining of methods of examining the eyes of school children with recommendations as to special instruction for those with defective or diseased eyes could then be carried into effect with the result of saving many eyes that under present methods will assuredly be lost. The federal government should provide adequate measures for the investigation of trachoma throughout the United States and where it is found to exist, as it is a menace to the entire community, measures should be taken in conjunction with the local authorities for its control as is done in the case of any other serious infectious disease. These and many other measures for the prevention of unnecessary damage to the eyes is planned by the American Association for the Conservation of Vision and it is hoped that in conjunction with the state medical societies and health boards to initiate measures which will in the near future do much to limit the development of unnecessary blindness and serve as an important agent in the conservation of human eyes.

Respectfully submitted.

F. Park Lewis,
J. Clifton Edgar,
F. F. Wesbrook.
George E. de Schweinitz,
Thomas S. Holloway,
Casey A. Wood.
John Green,
Clarence Loeb,
William Campbell Posey,
Mark D. Stevenson,
*Committee on Prevention of Blindness.*

## REPORT OF THE COMMITTEE ON VISUAL STANDARDS FOR PILOTS

*To the Council on Health and Public Instruction:*

In the report tendered to the Council last year, the Committee felicitated itself upon the adoption of the visual standards which they had presented to the Department of Commerce and Labor to determine the fitness of applicants for license as master, mate or pilot in the federal marine. By order of the secretary of the department, Hon. Charles Nagel, these standards went into force on July 1, 1911, and for the first time in the history of the government the officers of the Marine-Hospital Service had a definite standard to guide them in their recommendations for appointment or rejection of candidates to the supervising inspectors of steamboats.

It soon became apparent, however, that the new order was creating considerable dissatisfaction among pilots and others affected by the new standards, for it was ascertained that a number of those who had been long in service did not possess sufficient visual acuity to enable them to pass the tests required for the renewal of license.

Under the old régime, there was but one test made, i. e., that for color blindness, when candidates were applying for their original license, and the department demanded no reexaminations. On account of the likelihood, however, of visual deterioration, either for form or color, in consequence of age or disease, the new standards required reexaminations every five years, when all licenses are renewed, although the visual acuity required at this test was lower than that demanded for the original license, being in the opinion of the committee the least amount of vision a pilot might have to enable him to be a safe navigator.

Being debarred from the service by their failure to pass the visual tests demanded for the renewal of the license, the rejected officers, as was natural, exerted every effort to have themselves reinstated, and securing the cooperation of the organizations with which they were connected and the sympathy and support of prominent navigation boards in some of our largest ports, appealed to the Department of Commerce and Labor to have the new standards set aside. In response to their request, the Department of Commerce and Labor appointed a day to hear the complaints and consider the protests, and requested the attendance of the Committee at this hearing for the purpose of giving the Board of Supervising Inspectors, under whose auspices the hearing was heard, "the benefit of your valuable assistance in its efforts to establish and maintain a standard of vision that will be sufficiently high without being unnecessarily restrictive or distressing."*

Your Committee accordingly appeared at the conference in Washington on Jan. 24, 1912, and explained to the Board of Supervising Steamboat Inspectors and to the pilots and marine officers present, as well as representatives of shipping interests from various cities, that in requesting the adoption of suitable standards to govern the examination of pilots' eyes, the American Medical Association was actuated purely by disinterested motives, and that the sole aim of the Association was to protect lives and shipping, that the standards were as low as was consistent with safety and that reexaminations were necessary on account of the deterioration of vision which sometimes happens in consequence of age and disease. Your Committee was accorded a respectful hearing and it was hoped that the Department of Commerce and Labor might be persuaded to stand firm and adhere to the standards which they had put in force. Shortly afterward, however, i. e., Feb. 23, 1912, the Committee was informed that although the standards demanded at the examination for the original license would still be maintained, the tests for visual acuity at the time of the renewal of license had been dispensed with, though the candidates would be tested for color at that time and a normal color sense required. The order issued by the Department of Commerce and Labor being as follows:

Washington, Feb. 23, 1912.

U. S. Supervising and Local Inspectors, Steamboat Inspection Service and Others Concerned.

*Gentlemen:*—In order that there may be no delay incident to putting into effect the new rule in regard to visual examination, you are advised that the following resolution was adopted by the Board of Supervising Inspectors on Feb. 20, 1912, and approved by The Honorable, the Secretary of Commerce and Labor, on Feb. 23, 1912:

"*Resolved*, That section 48, Rule V of the general rules and regulations prescribed by the Board of Supervising Inspectors as amended January, 1911, be struck out and the following substituted therefor:

"48. No original license as master, mate or pilot of any vessel propelled in whole or in part by steam, gas, fluid, naptha, alco-vapor, electric, or other like motors, or master or mate of sail vessels, shall be issued except upon the official certificate of a surgeon of the Public Health and Marine-Hospital Service respecting the vision of the person applying for such original license. The word 'original' as contemplated in this rule shall mean the first license of any character issued to a master, mate or pilot, and shall not be held to mean, for instance, that a license issued to a master who was previously licensed as a mate or pilot shall be considered an original master's license.

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* Quotation from a letter to the chairman of the committee from Secretary Nagel.

"No license as master, mate or pilot of any class of vessel specified and enumerated in the foregoing paragraph shall be renewed except upon the official certificate of a surgeon of the Public Health and Marine-Hospital Service that the color sense of the applicant for renewal is normal. Where an applicant for renewal of license is situated so that it will put him to great inconvenience or expense to appear before a surgeon of the Public Health and Marine-Hospital Service for examination, the certificate of a reputable physician or oculist as to the color sense of the applicant will be accepted in lieu of the certificate of the surgeon of the Public Health and Marine-Hospital Service.

"Any person who received a license prior to the adoption of the rule demanding a visual examination may have such license renewed for daylight navigation only, if no other bar to such renewal appears.

"Any person holding a license as mate on steamers navigating waters flowing into the Gulf of Mexico and their tributaries issued prior to 1905 may have such license renewed without being subjected to the examination for color sense.

"Any applicant for renewal of license who has been refused such renewal on account of the requirements of section 48, rule V, respecting visual acuity and color sense, as amended in January, 1911, may apply for renewal of license under the provisions of the foregoing section, and nothing herein contained shall debar an applicant who has lost the sight of one eye from securing a renewal of his license, providing that his color sense is normal."

Respectfully, George Uhler,
*Supervising Inspector General D. N. H.*

The Committee regrets that the Department of Commerce and Labor was compelled to recede from its ruling of January, 1911, when all of the recommendations of the Committee were accepted, for as the matter now stands there is nothing to debar a marine officer from continuing his duties after he has once qualified at the original test, even if in after years his vision becomes seriously compromised. The insistence on normal color perception at each test for renewal of license and the maintenance of the standards for original license as suggested by the Committee, are, however, of signal importance and unquestionably will do much to lessen the dangers of navigation.

Owing to the disturbance in maritime circles created by the standards just referred to, to govern federal marine officers, the Committee deemed it unwise to take active measures for the enforcement of similar standards in the case of state or branch pilots. These pilots, as explained in the original communication of the Chairman of the Committee to the Council, are not under the jurisdiction of the federal government, and are amenable only to the laws of the various states. Although in charge of the pilotage of all vessels to and from foreign ports, they are subjected to no proper ophthalmological tests whatsoever, all the examinations being conducted by laymen, and it is believed that many possess neither sufficient visual acuity or accuracy in the discrimination of colors to enable them to perform the duties of pilots satisfactorily at all times.*

Although, as already expressed in its previous report, the Committee realizes that by reason of political influence the task of compelling these pilots to submit to a proper visual examination will be most difficult, they feel, nevertheless, that a determined effort must be made to force the enactment of such laws as will eliminate all with defective color or visual sense from the public services.

Should a bill recently introduced into Congress which aims to bring this class of pilots under federal control become a law, the solution of the problem will be found, as state pilots would then be examined by the Marine-Hospital officers under the standards put in force at the instance of this Committee. The Committee is endeavoring to aid the interests in charge of this bill in its passage through Congress and desires the approval and support of the Council in this undertaking.

The recent disaster to the *Titanic* has shown the dreadful inefficiency of government requirements to safeguard the lives of travelers on the water. To commit the lives of thousands absolutely into the hand of pilots, who determine in large measure for themselves whether they are physically properly capacitated to do so, is in the opinion of the Committee most reprehensible.

Your Committee desires its continuance for another year, therefore, for the purpose of furthering such plans as may insure in each pilot the chief requisites of his profession, good sight and normal color perception.

William Campbell Posey, Chairman,
Philadelphia, Pa.
William H. Wilmer,
Washington, D. C.
Charles H. Williams,
Boston, Mass.

## Report of the Committee for Public Health Education Among Women

*To the Council on Health and Public Instruction:*

First, we wish to thank the women and the men who have done the work, some of the details of which are set forth in the following report. We are sorry that at best the report is partial and a very inadequate statement of results; while the time, skill and labor represented by the year's work have received no mention at all. Keeping accurate records of many speakers, subjects and audiences demands clerical work and consumes time which in most instances has of necessity been given to planning and execution instead.

This Committee was appointed three years ago to take the initiative among women's clubs and similar organizations in public education for the prevention of disease. Dr. Rosalie Slaughter Morton, the first chairman, and her co-workers enlisted the interest of women of the American Medical Association in forty-four states, the District of Columbia, Alaska, Panama and Hawaii. Upon this foundation we have sought to build.

There are now remaining three states unorganized. In two of these there are no women members of the American Medical Association. In Delaware there are but five women physicians, in Louisiana women are not admitted to the county societies and therefore cannot have membership in the American Medical Association. Since the adoption by the Council of the resolution making possible the appointment of men on this Committee some of the obstacles to organization have been removed. The chairmanships of Nevada, Montana, South Dakota and Rhode Island are now filled by men and we hope to secure the interest of men in the states still unorganized.

In accordance with the resolution of the Council, as far as possible an effort has been made to secure committees on public health education in the state societies with the state chairmen under this committee as members and similar committees in the county societies, making the chairmen of such committees the county chairmen under this committee. A few more states than last year and many more counties are now so organized and the question will be discussed at more state meetings this spring. At the same time an effort has been made to secure committees on health and hygiene, with physicians as members or advisors, in the women's clubs, Young Women's Christian Associations, Young Men's Christian Associations and similar organizations of men and women. This Committee, by assisting in the arrangement of programs and securing speakers, then becomes the medium of communication between the people and those physicians who ar willing to give public instruction in matters pertaining t health. For this purpose 10,000 leaflets presenting for consideration fifty-nine topics have been distributed.

Between July 1, 1911, and April 1, 1912, talks were give to approximately 3,342 audiences not including 935 audience of school children, or forty-seven series to the public and si series to school children. In many instances no record o attendance has been kept so that any statement is unfair Thirteen states report 13,634 men and 55,190 women Twenty-five states report an approximate total of 119,63 exclusive of school children and series. It has been imposs ble to observe the recommendation of the Council that th work be primarily among women if that statement is to b interpreted to mean that talks to men are to be exclude Organizations of men appeal to the education committees c the county societies for assistance as do the organizations c women. Since those committees have been appointed f public education such requests cannot be refused.

The plan of this Committee is to take the initiative whe no work is being done for the prevention of disease and t aid existing efforts in communities already interested i health subjects. For this reason much of the work for th Committee has been done in connection with other organiz. tions and must be reported with them.

Work to which we wish to call especial attention has bee done in the following states: In California the state chai an, who was also state bacteriologist, sent out the Bacteriological Instruction Outfit loaned by the State Board of Health o schools, clubs and hospitals. In Connecticut the chairman f Fairfield County, who is Inspector of Public Schools in ridgeport, is using her office to teach hygiene in the schools ith the purpose of encouraging the board of education to ntroduce that study into the regular curriculum, and at the ame time is extending her instruction into homes through he school nurses. In the District of Columbia an educa- ional department is being conducted with the Women's Clinic nder the auspices of this Committee and the directors of he clinic. The colored people as well as others are receiving struction. When we consider the crowding of colored people their own houses and their close relation with the family fe of the conventional home in the United States this seems commendable step in prevention of disease.

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* Two Delaware river pilots in active service have been proved to be color blind by three competent ophthalmologists.

We would call attention also to the work of this Com- ittee in Iowa, where together with the Congress of Mothers plan for a baby's health contest has been elaborated. By is means attention of parents is called to physical defects the child at the earliest possible age, and advice about re finds its way into most inaccessible homes. In Nevada here people are widely scattered pamphlets have been cir- lated as freely as obtainable funds would allow, and a plan r celebration of Health Day in the schools and churches has en elaborated. In New York even in the smaller cities, ries of public lectures are a prominent feature. In Okla- ma the school children are being organized into a Keep- ell-Army in which they will be taught common facts of giene. The membership dues in this army will be used support a state hospital for crippled children whose friends ill thus learn that disease can be cured. In Montgomery ounty, Ohio, the Committee has for two years had super- sion of books on health subjects put upon the shelves in the blic library. In Tennessee this Committee with the State ederation of Women's Clubs has aroused the interest of e state officials in the sanitary condition of the state prison, d an effort is on foot to exterminate tuberculosis in that stitution.

Education through the Farmers' Institutes has been more idely extended than last year but is capable of further velopment.

In many places Health Day has been observed very suc- ssfully in the public schools and in churches.

Through the influence of this Committee, in many states e medical societies either state, district or county have held en meetings for the consideration of health subjects. In any states, also, the newspapers have been willing to pub- h health articles if signed. There is a growing willingness give full reports of open meetings.

We wish to thank those physicians who have been willing write articles for publication. We have tried to make eir kindness count for as much as possible by sending them e reprinted in parts of the country widely separated. We ank especially the publisher of the *Minnesota Journal-Lancet* r sending to our state chairmen for republication copies articles originally published in that journal.

We wish to thank the Sub-Committee on Medical Literature r their careful work in personally reviewing large numbers books that the titles of helpful ones might be added to ose already selected. To meet the demand for knowledge such books the bibliography will be bound under separate ver.

We wish to thank the Committee on Cooperation for the rge correspondence carried on with regard to twenty con- rences and with the sixty-seven organizations affiliated with e Charity Organization Department of the Russell Sage undation which have to do with public health.

We wish, also, to thank medical societies and other organi- tions and individuals not only for their cooperation but for nerous aid in the financial support of this movement as well for the use of audience rooms. The expense for speakers d other arrangements for meetings has in every case been rne locally.

To give permanence to the work and to free it, so far as ible, from dependence upon individual enthusiasm we for the coming year to continue the effort to secure mmittees in state and county societies and in organizations the laity. We plan to try to spread more widely through press authoritative statements concerning the prevention disease, and to make available in all states means of educa- n which are found most successful in any.

Respectfully submitted,

ELEANORA S. EVERHARD, Chairman.
GERTRUDE FELKER, Secretary.

### REPORT OF THE COMMITTEE ON COOPERATION WITH THE NATIONAL EDUCATIONAL ASSOCIATION

*To the Council on Health and Public Instruction:*

The Committee on Cooperation with the National Educational Association begs to report that the entire membership attended the meeting of the Council of the National Educational Association, held at St. Louis, Feb. 26 to 28, 1912.

On Tuesday, Feb. 27, 1912, the joint committees—that of the American Medical Association and that of the National Educational Association—unanimously adopted the following resolutions for presentation to the Council:

WHEREAS, There has been throughout the country an awakening to the health needs of school children, and

WHEREAS, The numerous forward steps already taken would help each school and community, if made available, and

WHEREAS, Present experience and present needs are not now available for want of that comprehensive study for which this committee was appointed, and

WHEREAS, this committee has been assured the continued cooperation of the U. S. Bureau of Education and of other distinguished bodies, able to assist effectively, and

WHEREAS, the preparation of constructive report which will bring together and make universally available the best results and methods in country and city schools, will involve expense for investigation, clerical work and publicity; be it therefore

*Resolved*, That an initial appropriation of $1,600 be requested of the National Council of Education for a first report on health aspects of school environment and equipment and for promulgating other helpful suggestions.

For the Committee:

THOMAS D. WOOD, Chairman
JACOB A. SHAWAN,
ALBERT E. WINSHIP,
JOHN F. KEATING,
PHILANDER P. CLAXTON,
WILLIAM H. ALLEN, Secy.

*Committee of the A. M. A.*

R. W. CORWIN, Chairman,
JOHN M. DODSON,
M. J. ROSENAU,

On Wednesday, February 28th, Professor Keating presented the above resolutions at a meeting of the Council and they were unanimously and enthusiastically passed by that body. They are finally to be acted upon by the N. E. A., at their next meeting, July 6-12, 1912, at Chicago.

It was suggested by the joint committee that the same sum, $1,600, be asked of the A. M. A. as asked of the N. E. A., for the purpose of defraying expenses of carrying on the campaign of education.

It gives your committee pleasure to add that the Council from the N. E. A. is most heartily in sympathy with this movement and that every member of the committee of the N. E. A. was enthusiastic in believing that much good will be accomplished in teaching health sciences in the public school.

Your committee feels that its work has been successfully launched and if followed as it should be that much desired good will be obtained.

Very respectfully,

R. W. CORWIN, Chairman.

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### REPORT OF THE COMMITTEE ON UNIFORM REGULATION OF MEMBERSHIP

*To the Council on Health and Public Instruction:*

The Committee on Uniform Regulation of Membership has held two meetings during the past year to discuss the best methods for the uniform regulation of membership in state associations. In order to bring the work of this committee before the members of the House of Delegates, a brief review of the work of previous years seems advisable.

This committee was created by the action of the House of Delegates at the Chicago session in 1908, following a recommendation in the report of the General Secretary that a committee be created "to secure data regarding the present provisions of the constitution and by-laws of the various state associations, as well as the procedure followed by state and county secretaries, and to report the findings and recommendations of the House of Delegates." At the Atlantic City session in 1907, this committee made an extended report, tabulating data from all of the state associations under the following heads:

(a) Fiscal year.
(b) Dues.
(c) Method of handling suspended members.
(d) Recommendations as to best method of handling membership matters.

In addition, the report contained a considerable amount of tabulated matter regarding membership conditions in different parts of the organization.

The committee recommended:

1. That all state associations be requested to make their fiscal year conform to the calendar year and to request the component county societies to adopt the same rule.

2. That the committee be continued and that four state secretaries be added to it.

The recommendations of the committee were adopted.

At the St. Louis session in 1910, the committee, in addition to other matters referred to it, further recommended that rules be adopted by all county and state associations providing that membership shall be good for one year only, i. e., that the roll for each county and state association be made up each year, to include as members in good standing, only those who have paid their dues on or before a certain date, thus doing away with suspended members, and members not in good standing, and providing simply for members and non-members. The committee also recommended that a uniform system of records be devised to be prepared by the American Medical Association for the use of such county and state societies as wish to adopt it. The report was adopted, and the committee continued.

During the next year, the committee was placed under the newly organized Council on Health and Public Instruction. At the Los Angeles session in 1911, the committee asked that it be continued and that the Trustees be requested to make a sufficient appropriation for the committee to hold two meetings at the headquarters of the Association. This report was adopted.

Accordingly, a meeting of the committee was held on December 9 and 10, 1911, at the Association headquarters. After a full discussion of the entire problem, the committee unanimously adopted the following recommendations:

1. That the fiscal year of component and constituent societies should begin January 1 and end December 31, and that all annual reports from component county societies, including the names of officers, delegates and the roster of members for the ensuing year, together with the state per capita assessments, should be in the hands of the state secretary on January 1 of each year.

2. That it was advisable to devise and adopt uniform application blanks, receipt blanks, membership cards and transfer cards.

3. That all constituent state associations should hold charters from the American Medical Association.

4. That a uniform plan for the transfer of members from one component county society to another was necessary for the good of the organization.

After careful discussion, the following plan was worked out in harmony with the plans of the Judicial Council for procedure in disciplining members:

PROPOSED PLAN FOR UNIFORM TRANSFER OF MEMBERS

1. Transfer card issued by Secretary of Transferring Society.

2. Transfer card deposited with Secretary of Receiving Society and accepted by Receiving Society.

Or transfer card deposited with Receiving Society and rejected.

3. Transfer card and application referred to Board of Censors of Receiving Society for investigation by them, according to Chapter 4, Section 2 of the Constitution and By-Laws for County Society, to report in writing reasons for rejection of applicant. Report of Board of Censors with transfer card and copy of the record to be forwarded at once to the Secretary of the Transferring Society.

4. Transferring Society sustains action of Receiving Society and orders membership of transferred member cancelled.

Or Transferring Society does not sustain action of Receiving Society. In this case, the Secretary of the Transferring Society shall forward all papers in the case, with statement of its position to the Secretary of the Council of its constituent State Society.

5. State Council after consideration (A) sustains action of Receiving Society and orders Transferring Society to cancel membership. (B) Transferring Society refers the case to Council of State Society to which Receiving Society belongs.

6. State Council of Receiving Society disapproves action of County Society and orders applicant accepted.

Or State Council upholds action of County Society in rejecting application and so reports to State Council of Transferring Society.

7. State Council of Transferring Society must either (A) accept decision of State Council of Receiving Society and orde County Society to cancel membership, or (B) appeal tc Judicial Council of the American Medical Association.

A second meeting of the committee was held at the Association headquarters on March 30, 1912. The committee approved of three uniform blanks for county and state societies, viz.:

1. Uniform receipt book for county secretaries.

2. Uniform pocket card for state secretaries.

3. Uniform transfer card.

The committee also recommended that county societies be requested to hold their annual meetings during October, an that the newly elected executive officers (not including delegates), should assume office on January 1 following.

In view of the importance of the proper regulation o membership matters for the good of the Association, and o the widely differing customs that have been followed heretofore in the various state associations, it seemed advisable t the committee that the entire question of membership, it method of regulation and its bearing on the work of th organization, should be thoroughly discussed by the executiv officers of the various constituent state associations. Th growth and development of the Association and its variou parts during the past sixty years has been largely accidenta rather than in accordance with any carefully planned systen A thorough understanding of existing conditions, and of th relations of the various parts of the Association to each othe on the part of the executive officers of the state association is, in the opinion of the committee, of the utmost importanc

The committee, therefore, recommends that a meeting the secretaries of the constituent state associations be calle in Chicago some time during the fall of 1912, and that th Board of Trustees be requested to appropriate a sufficie amount of money to pay the traveling expenses of the sta secretaries in attending this meeting, and that the recommendations of this committee as contained in this report be approv by the House of Delegates and that the committee be instruct to present these recommendations to the state secretaries f their approval and adoption.

Respectfully submitted.

Dr. Thomas McDavitt, Chairma
Dr. E. J. Goodwin,
Dr. E. W. Weis,
Dr. Claude A. Thompson,
Dr. Joseph H. Martin,
Dr. F. R. Green, Secretary.

*(To be continued)*

# Book Notices

Milk and the Public Health. By William G. Savage, B.S M.D., D.P.H. Cloth. Price, $3.25 net. Pp. 459, with illustratio New York: Macmillan Company, 1912.

The student of hygiene and preventive medicine will w come a book which covers the sanitary aspect of mi supplies. The literature on milk and its relation to the pul health is enormous and is difficult to assemble from all sour This book is an important contribution and stands alone a text- and reference-book on the subject of milk and the pul health. Little pretense is made of taking up the chemi side of the question; the sanitary condition of milk can judged only by bacteriologic investigation and this forms fundamental idea underlying the book.

The arrangement is systematic and logical. The first p discusses in an introductory chapter the chemical and cell content of milk. The sources of bacterial invasion, the ki of bacteria and their influence on milk are then taken up finally the all-important relation of milk to disease. presentation of the subject is clear and concise. But e here, as in so many other publications, the confusion names of lactic acid bacteria is not wanting. The choice names for these organisms—*B. acidi lactici* and *B. lactis acidi*—has led to many errors and misquotations. Such confusion should be avoided with scrupulous care.

The second part gives particulars of the bacteriologic examination of milk. The methods are given in logical sequence and the opinions of advocates of different methods are detailed with impartiality. Several advances over older methods are recorded and the desirability of uniformity in laboratory procedures emphasized. The statement, however, that "the usually harmless lactic acid bacilli do not grow, or at least not readily, at 37 C." is not correct, and the fact seems to be overlooked that the common lactic acid bacteria are derived from cow manure. The author ably defends the opinion that bacterial examinations of milk are not sufficient, but should be worked hand in hand with sanitary inspection. This point cannot be emphasized too strongly.

The third part deals with the public health control of the milk-supply. The author writes chiefly of conditions in England. A good deal is also said of the movements for a betterment of milk-supplies in this country, including a clear presentation of the work of medical milk commissions and their influence on the general supply. Pasteurization of milk is warmly advocated as a measure of at least temporary importance.

The book contains many valuable tables and the illustrations are of high quality. A book of this nature and merit is invaluable as a text-book for students in sanitary science and will, it is confidently expected, find a large circle of readers.

Heredity in the Light of Recent Research. By L. Doncaster, M.D. The Cambridge Manuals of Science and Literature. Cloth. Price, $0.40 net. Pp. 143. New York: G. P. Putnam's Sons, 1911.

This volume in the series published as the Cambridge Manuals of Science and Literature is a concise but clear sketch of the problems of variations and heredity. The chapter on the statistical study of heredity is as simple an exposition of the biometrical method of Galton and Pearson as can be given. The chapters on Mendelian heredity give the most important features of Mendelism in a clear and easily comprehended manner. The application of the conclusions drawn from the study of heredity in general to the problem of heredity in man are made with logical frankness. For example, "if, as the study of heredity suggests, though it would be rash to say it is proved, man is almost entirely the product of inborn factors which are little affected by environment, then improved conditions may only encourage the propagation of the degenerate and the race as a whole may go back rather than forward. Responsible students are not lacking who maintain that this is already taking place. . . . some restriction on the reproduction of the mentally deficient is undoubtedly demanded by modern knowledge of heredity."

The author furnishes a good literary list and a short and valuable glossary.

The book can be commended to those who regard the practical problems of heredity as the foundation for eugenics and wish to keep in touch with the rapid advance of the last twelve years but cannot go to the original sources of information.

Lehrbuch der Kystoskopie und stereokystophotographischer Atlas. Von Dr. S. Jacoby. Cloth. Price, 25 marks. Pp. 248. With 48 stereoscopic views and 121 illustrations. Leipsic: Dr. Werner Klinkhardt, 1911.

There is a tendency at present to visualize in the teaching of all branches of medicine and surgery. This is indicated by the numerous atlases used in the study of anatomy and stereopticon views of dissections on the living and dead. This book has much more text than the ordinary atlas and many plates of figures illustrating different conditions in the bladder. There are 243 pages of profusely illustrated text and forty-eight plates of views of the bladder under different conditions, showing the appearance of pathologic conditions of the bladder. The first four chapters deal with the history of the cystoscope and the principle on which it is founded, with a description of the Nitze cystoscope and its numerous modifications, with stereocystoscopy and electric arrangements necessary for the practice of cystoscopy. These matters are considered at considerable length and, while a thorough knowledge of the cystoscope is necessary before cystoscopy can be successfully practiced, these chapters might be abridged to advantage.

Chapter 6 deals with cystoscopic technic, the indications for cystoscopy, and the method by which complete and satisfactory cystoscopy should be performed; Chapter 7, which is especially good, deals with the cystocopic appearance of the bladder, discusses its normal color, the appearance and arrangement of the vessels, the shadows and folds of mucous membrane, etc.

One chapter is devoted to catheterization of the ureters and is one of the most valuable in the book. Here are considered the methods of obtaining urine from each kidney, indications and contra-indications of ureteral catheterization, the source of errors in ureter catheterization, uretero and pyelography, and functional kidney diagnosis.

While somewhat technical the book could be read to advantage by the general practitioner, as it discusses in a most satisfactory way the value, indications, contra-indications, the sources of error, etc., of each procedure taken up for discussion. For the specialist engaged in cystoscopy it is a book that can hardly be dispensed with.

A Pocket Atlas and Text-Book of the Fundus Oculi. With Note and Drawing Book. Text by G. Lindsay Johnson, M.A., M.D., F.R.C.S. With 99 drawings from life by Arthur W. Head, F.Z.S. Cloth. Price, $2.50. Pp. 205. Chicago: F. A. Hardy & Co., 10 S. Wabash Avenue.

So much of general as well as special interest is to be learned from the examination of the fundus oculi that no physician nowadays is fully equipped for his work who cannot use the ophthalmoscope. This little hand-book, which can easily be carried in one's coat pocket, is intended for the use of the beginner in ophthalmoscopy and fulfils its purpose well. One finds much more mathematical optics than is necessary for a practical understanding of the use of the instrument, but the very lucid anatomic and pathologic descriptions will be a great aid to the student in the comprehension of what he sees. There are twenty-eight colored plates showing fifty-five fundus pictures, each accompanied by a case history. While some of the pictures are a little sharp and glaring, they are, as a whole, wonderfully true to nature, and much better than those frequently found in more expensive manuals. In the effort to make the work as concise as possible some things have been omitted which one would expect to find, but on the contrary there are many helpful hints from the author's extended experience which are not to be found elsewhere. One finds little of importance to criticize. Not all will agree with Dr. Johnson when he says that "albuminuric retinitis is by far the commonest of all retinal affections." It would be better to say that sclerosis of the retinal vessels and the changes in the membrane itself resulting therefrom are far more commonly seen in American patients. A convenient note- and sketch-book is bound up with the atlas for the use of the student and practitioner in the dark-room in making notes and sketches of his own cases.

Studies in Psychiatry. By Members of the New York Psychiatrical Society. Volume 1. Nervous and Mental Disease Monograph Series No. 9. Paper. Price, $2. Pp. 222. New York: Journal of Nervous and Mental Disease Publishing Company, 1912.

This, the first volume of the "Studies in Psychiatry," consists for the greater part of a reproduction of articles written by members of the New York Psychiatric Society, each worth preserving in permanent form under book covers. In order to give the reader an idea what he may expect to find in this book, it would be necessary to reproduce the entire table of contents. Without underestimating the worth of some of the other articles, however, we may especially mention Dana's article, "The Curability of Early General Paresis;" Adolph Meyer's "Remarks on Habit Disorganizations in the Essential Deteriorations," and "The Relationship of Hysteria, Psychasthenia and Dementia Præcox;" August Hoch's article, "Constitutional Factors in the Dementia Præcox Group," which is rapidly becoming a classic; likewise the lucid description of cyclothymia, by Jelliffe; and the two splendid articles on the "Eye Findings in Dementia Præcox," by Tyson and Clark. These studies combine the valuable features of the clinical lecture with those of the original article. It is quite refreshing to turn to these studies, written in good English and entirely free from colloquialisms, after having perused the raw clinical lecture, taken down in shorthand and printed without revision. The choicest thoughts clothed in the most becoming garb are not too good to apply to the intricate problems in psychiatry. And as the articles reproduced in these studies present the best thoughts of the best men in the best possible language, they can be safely recommended to all who are interested in psychiatric literature.

Handbook of Mental Examination Methods. By Shepherd Ivory Franz, Ph.D., Scientific Director and Psychologist, Government Hospital for the Insane. Nervous and Mental Disease Monograph Series No. 10. Paper. Price, $2. Pp. 165, with illustrations. New York: Journal of Nervous and Mental Disease Publishing Company, 1912.

This little book constitutes a valuable addition to the many meritorious monographs already published by this company. The methods of examination described by the author are those utilized in the best psychopathic hospitals. His selection is a judicious one, complex methods requiring the use of expensive instruments and a special laboratory having been omitted. Careful perusal of the book forces the conviction that the author was compelled to consult many volumes and diverse articles scattered throughout the literature; and he has succeeded in compressing this enormous material into the small space of 165 pages. The entire subject is presented under the following headings: "Sensation," "Movement," "Speech and Aphasia," "Attention," "Apprehension and Perception," "Memory," "Association," "Calculation Tests," "Time of Mental Processes," "General Intelligence," and "General Examination and Methods of Dealing with Observational Data." Each chapter is followed with a well-selected number of references, enabling the reader to pursue the subject still further. This monograph will be of immense value to the neurologist and psychiatrist. It would be futile to criticize this work, as it is without a doubt the best short book on the subject of mental examination methods written in any language. The clear presentation of the difficult subject-matter is to be especially commended, for things are so simplified that any intelligent reader may, after a single reading, apply the various methods of examination in his actual practice.

Die Harnsteine: Ihre Physiographie und Pathogenese. Von Dr. Otto Kleinschmidt, Volontär-Assistenten der Chirurgischen Universitäts-Klinik zu Königsberg i. Pr. Mit einem Vorwort von L. Aschoff, Freiburg i. Br. Paper. Price, 20 marks. Pp. 88, with illustrations. Berlin: Julius Springer, 1911.

This monograph of eighty-one pages deals exclusively with urinary calculi. The first nine pages are devoted to a consideration of the history of urinary calculi and of the theories, such as those of Ebstein, Lichtwitz, Kukula, Jores, which have been advanced to explain their formation. Considerable attention is devoted to the chemical composition of the stones and the relation of their chemical composition to gross appearance.

The book deals most satisfactorily and comprehensively with the present status of calculus formation and could be used to advantage as a reference book. Following the text are sixteen colored plates illustrating the color and composition of the various stones.

The Conquest of Nerves. By J. W. Courtney, M.D. Cloth. Price, $1.25. Pp. 209. New York: Macmillan Company, 1911.

In this small volume the author has furnished the general reading public another literary, if not scientific, contribution to the subject of "nerves." He takes up the several cults and healing-fads and attempts to show that where cures have actually been accomplished that this was made possible only through the instrumentality of "self." In his preface the author wishes us to know that "the object of this modest little volume is to fulfill that most important teaching function which the busy doctor is, unfortunately, too often forced to neglect. Hence, it is the author's most earnest desire that it should come into the hands of individuals with 'nerves,' at that critical moment when, with faith in the curative power of orthodox medical science dead and that in themselves fast dying, they ordinarily fall into the first trap set for them by quackery." The term "nerves" he applies to neurasthenia, hysteria, neurosis and psychoneurosis, and assumes that in all four groups the underlying morbid condition of the nervous system is identical, and the sufferer, so far as treatment is concerned, may apply to his case whichever of the above imposing terms he sees fit. It would be futile to find fault with the writer of a popular book on medicine for being unscientific and vague in statement. We may be thankful that in this instance there are so few inaccuracies and not more "roasts" of the medical profession.

Nachweis und Bestimmung von Giften auf biologischen Wege. Von Dr. Hermann Fühner, Privatdozenten für Pharmakologie an der Universität Freiburg i. B. Paper. Price, $2.25 and postage. Pp. 176, with 89 illustrations. New York: Rebman Company, 1911.

This monograph presents a novelty for pharmacology and medical jurisprudence, and undoubtedly will be useful in making accessible scattered facts of great practical importance During the last few years, especially through the investigations of experimental pharmacologists, we have learned o many instances in which the effect of certain substances o living organisms is entirely characteristic, e.g., the detection o epinephrin by its mydriatic effect on the frog's eye; the acetonitrile test of Reid Hunt for thyroid activity, etc. These together with longer-known instances of characteristic biologi reactions, have been collected by Fühner, and detailed wit sufficient information to permit their use for analytical, experimental or legal purposes. There are some serious omissions such as the test for epinephrin by strips of uterus, and th cock's comb test for ergot, but these will probably be rectifie in subsequent editions. Enough facts and information ar collected to make the book extremely valuable for all person doing work along the lines of medical jurisprudence, pharmacology or experimental medicine.

Hautkrankheiten sexuellen Ursprungs bei Frauen. Von D Oskar Scheuer, Facharzt für Haut- und Geschlechtskrankheiten i Wien. Paper. Price, 9.50 marks. Pp. 204. Berlin: Urban Schwarzenberg (New York: Rebman Company), 1911.

After a short summary of the historical phase of ski affections as they apply peculiarly to women, the auth takes up the relation of the skin and other organs to th functions of the ovary. Here the changes occurring periodi ally are considered in detail, with, of course, especial referen to the graafian follicle, the corpus luteum and the so-calle internal secretion, without, however, making alliance with a particular theory as to the production of this secretion. Th blood-changes that take place as a result of this influence du ing both menstruation and pregnancy are considered in deta with particular reference to the existence of a relation betwe such changes and localized skin lesions. In the followi chapters Scheuer considers puberty, chlorosis, menstruatio diseases of the reproductive organs, castration, pregnanc labor, the puerperium and the menopause.

The volume closes with a most complete bibliography, no means the least valuable section of the work. Followi as it does, closely along the border line between gynecolo and obstetrics on the one hand and dermatology on the oth this monograph has a definite place to fill in the literature each speciality.

The Surgery of Oral Diseases and Malformations. Th Diagnosis and Treatment. By George Van Ingen Brown, D.D. M.D., C.M., Oral Surgeon to St. Mary's Hospital, Milwaukee. Clo Price, $6. Pp. 740, with 359 Illustrations. Philadelphia: Lea Febiger, 1912.

This book is written from the standpoint of a physici familiar with general diseases of the body and their relat to lesions of the mouth and vice versa. Books of this ch acter have usually been prepared by specialists for speciali The relation of local diseases to systemic conditions and v versa have never been understood. The book is divided i thirteen chapters dealing with the following subjects: an thesia—hemorrhage—shock; pathological dentition; infecti diseases; diseases of the mucous membrane of the mou diseases of the nervous system affecting the buccal regi diseases of bone; diseases of the glands; tumors; diseases the maxillary sinus; diseases, tumors and malformations of tongue; nasal deformities and diseases in relation to the maxillae; diseases, injuries and malformations of the lips; harelip, cleft palate, and defects of speech.

The author devotes considerable space to his own researches and to his own methods of operation on cleft palate and harelip. This book may be regarded as a reference as well as a text-book, and one of the best on the subject in the English language.

The Triumph of American Medicine in the Construction of the Panama Canal. By J. Ewing Mears, M.D., LL.D. Cloth. Pp. 25. Philadelphia: William J. Dornan, 701 Arch Street, 1911.

This little monograph, well printed and illustrated, should be read by those interested in modern public health work, and in the problem of securing healthy surroundings for themselves and their families. It was written following a visit to the Canal Zone, and is a condensed but appreciative review of the work done by Colonel Gorgas and his department in Panama. Even those who are familiar with this epoch-making work must feel a glow of pride after reading the entire story. As the author well says in his closing paragraphs: "May we not congratulate our professional brethren who have so unselfishly devoted their talents and their lives to the service of their country on the great work they have accomplished? . . . So long as preventable destroying diseases flee before the conquering hosts of efficient sanitation, so long will the labors of these enviable benefactors of the human race be cherished."

Manual of Physiology for Students and Practitioners. By H. Willoughby Lyle, M.D., B.S., F.R.C.S., Assistant Ophthalmic Surgeon to King's College Hospital, London. Cloth. Price, $4. Pp. 747, with 135 illustrations. New York: Oxford University Press, 1911.

The author has succeeded in fulfilling his object in the publication of a work that will meet the demands of both the student and the practitioner. He presents the important facts of physiology in a simple, plain and concise manner, devoid of unnecessary details, rendering it especially valuable as a reference book for the busy practitioner. His long experience as a teacher has been of service, as shown in the arrangement of the material. The chapters on the heart and circulatory system and on the nervous system are especially good.

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# Current Medical Literature

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### American Journal of Medical Sciences, Philadelphia

*May, CXLIII, No. 5, pp. 625-780*

1 Pneumonia. J. T. Fotheringham, Toronto.
2 Anatomic Explanation of Relatively Less Resonant, Higher Pitched, Vesiculotympanitic Percussion Note Normally Found at Right Pulmonary Apex. G. Fetterolf and G. W. Norris, Philadelphia.
3 *Rupture of Kidney in Children. C. L. Gibson, New York.
4 *So-Called "Mixed" Tumors of Salivary Glands. L. B. Wilson and B. C. Willis, Rochester, Minn.
5 *Duodenal Alimentation. W. G. Morgan, Washington, D. C.
6 Typhoid Hemiplegia: Three Clinical Cases and One with Necropsy. E. M. Williams, Philadelphia.
7 *Blood of Patients with Pulmonary Tuberculosis Undergoing Sanitarium and Tuberculin Treatment. A. F. Miller, E. J. S. Lupton and L. Brown, Saranac Lake, N. Y.
8 Treatment of Acne with Stock and Autogenous Acne Bacillus Vaccine. E. D. Lovejoy, New York.
9 *Fatal Case of Tetany with Autopsy Findings Showing Hemorrhages in Parathyroid Glands. F. Proescher and T. Diller, Pittsburgh.
10 Rheumatic Myositis. V. C. Rowland, Cleveland, Ohio.
11 *Adams-Stokes Syndrome, with Complete Heart-Block and Practically Normal Bundle of His. W. Pepper and J. H. Austin, Philadelphia.
12 Reflex Vagus Phenomena Grouped in Symptom-Complexes. S. Neuhof, New York.

3. **Rupture of Kidney in Children.**—Four cases of complete traumatic rupture of the kidney in children, aged from 8 to 12 years, are reported by Gibson. A nephrectomy was done in each case and the patients recovered. One child fell a distance of 4½ feet landing on the ground on the right side. This case is interesting, showing a complete rupture resulting from a relatively slight trauma, leaving no mark on the body and producing absolutely no shock, the masking of kidney symptoms by the bruising of the lower abdominal muscles and the colon, the absence of any urinary symptoms until five days after the injury, and also that the kidney may be divided completely in two without appreciable solution of continuity of its capsule. The similarity of the lesions is interesting, being exactly alike in all four cases; complete division of the viscus in two parts, the lower one being the lesser. In one instance the capsule remained untorn. The fact that the kidney lesions were the same with the different kinds of violence seems to confirm the theory of "bursting" by hydraulic pressure. Also, the line of rupture; vertical to the long axis at about the junction of the two lower thirds, would seem to indicate that there is here an instance of a definite line of least resistance such as Gibson has not seen indicated in any treatise on the subject. Although the lesion in all these cases was severe, the symptoms, on the whole, were mild, and in several ways deficient.

4. **Mixed Tumors of Salivary Glands.**—Fifty-six cases of mixed tumors of the salivary glands, which have been removed at operation at St. Mary's Hospital, are analyzed by Wilson and Willis. The sexes are almost equally divided, but with a slight preponderance of males. The age at onset in more than two-thirds of the cases is under forty years, while in one-half the cases it falls between twenty and forty years. These figures agree, on the whole, with those of other observers. The length of the period between the onset of the tumor and the time of surgical operation varies from one month to forty-four years, with a large preponderance of the cases running from one to ten years, and an average of six years and four months. The obvious lesson from this is that these tumors do not cause sufficient inconvenience to the patients to make them seek operation early. In only fourteen cases was there a history of pain. Of the twenty-one patients with tumors of the parotid who could give a definite history concerning mumps, fourteen (66 per cent.) were sure they had never had the disease. In other words, there seems to be no etiologic relationship established by the statistics of mumps and "mixed" tumors of the parotid. Of the fifty-six tumors, fifty were in the parotid and six in the submaxillary glands. Thirty were on the right side and twenty-six were on the left side. Grossly, the tumors may be divided into four groups: (1) Hard, fibrous masses with little cartilage and with little parenchyma; in this group were fifteen cases. (2) Very hard tumors containing large cartilage masses; in this group were seventeen cases. (3) Soft, more or less sarcoma-like tumors with a relatively small amount of fibrous connective tissue and a relatively large amount of parenchyma cells; in this group were four tumors. There is little evidence that these tumors arise from proliferating adult epithelium, or endothelium. On the other hand, there is considerable evidence to support the theory that these tumors are mesotheliomas of embryonic origin. After fairly complete operative removal few of the tumors recur.

5. **Duodenal Alimentation.**—Duodenal feeding, in Morgan's opinion, constitutes a mark of great progress in medicine, filling a long-felt want, a method of resting the stomach, and at the same time affording the economy abundant nourishment. In those cases in which it is indicated the results are most gratifying.

7. **Blood in Tuberculosis.**—The number of red blood-cells per cubic millimeter appears from a study of 273 cases to be slightly above normal. These cases when charted in the form of a frequency curve show for the incipient cases that the model for women is 4,500,000, for men slightly over 5,000,000. For the moderately advanced cases the mode for both men and women appears to be 5,000,000. The curves in both instances show a rather sharp rise and a slightly less rapid fall. The median and the mode differ slightly, the former being slightly higher than the latter. No relation to color index and color of mucous membranes was found to exist. Nothing was learned in a study of 130 incipient and 107 moderately advanced cases as to the relation to hemoglobin and color of mucous membranes. The hemoglobin was measured on admission by the Talquist scale and occasionally with the von Fleischl instrument in 272 patients. The results in

the incipient and moderately advanced stages for males and females as well as the totals in each group were charted. The mode in every case but one was 90 per cent., the moderately advanced male group having 95 per cent. as the mode.

Two hundred and seventy-five cases were studied as to the leukocytes. For incipients the mode is between 7,000 and 8,000, with a sharp rise from 4,000 and a more gradual decline. The males and females each exhibit a less marked mode at 8,000 to 9,000 and 7,000, respectively. For the moderately advanced cases the mode lies between 8,000 to 10,000, with a sharp rise from 5,000 and a gradual decline. The males and females each exhibit a fairly well-marked mode at 10,000 and 8,000, respectively. These figures all relate to counts made on admission, as the counts made on discharge are too few for any inductions to be drawn, but would seem to indicate that the curves are much flatter. There seemed to be no relation to duration of disease in 107 cases. Nothing was learned as to relation to weight from a study of 168 cases. There was apparently no relation to tubercle bacilli in sputum in 169 cases. In a study of sixty cases the percentage of the polymorphonuclears varied inversely with the percentage of the mononuclears, and was lowest in the incipient; higher in the moderately advanced, and highest in the far-advanced. The eosinophils followed the same rule as the mononuclears. It appears in this study that a reaction to tuberculin is almost always accompanied by a temperature. This followed in all the cases. During the period of reaction there is always an essential increase in the number of leukocytes when accompanied by a considerable increase in temperature; that the increase in leukocytes begins four to five hours after injection, and is closely followed by the rise in temperature. There was no evidence of a leukopenia observed in any of these cases. The rise of leukocytes is generally followed by a decrease in the number of leukocytes during the day after the first dose which causes an increase. In case of a repetition of the same dose or a slight increase of the dose the increase of the number of leukocytes corresponding to a considerable increase in the temperature appeared to be smaller and extended over a longer time. The counts taken at 1 a. m., four to five hours after injection, showed neither a leukocytosis nor a leukopenia. There were twenty-seven cases studied.

9. **Hemorrhages in Parathyroids.**—The changes in three parathyroid glands were almost uniform in this case. With low power, extensive infiltration of the parenchyma with large fat cells was noted, causing partial atrophy. The connective-tissue stroma was greatly thickened and divided the parenchyma into various sized lobules. Blood-vessels and capillaries were greatly distended. With higher power the parenchyma consisted largely of small, indistinctly outlined epithelial cells which were rich in chromatin (Cell Type II). The protoplasm stained bluish red. On the edge of the gland were found large, compact, distinctly outlined polygonal epithelial or oxyphile cells (Cell Type I). The protoplasm of these cells was finely granular, somewhat cloudy, and stained fairly well with eosin. The small intercellular mass stained more deeply with eosin. The nuclei of the cells were not so rich in chromatin as in Cell Type II, and as in some near the periphery. Some cells were without nuclei. Small groups of the same cells were found inside of Cell Type II. The fine granulated appearance and the bluish-red color of Cell Types I and II suggested a slight parenchymatous degeneration. In normal epithelial cells the protoplasm stains deep red with eosin, or is nearly colorless.

The most interesting morbid change in the glands was the multiple hemorrhages which were diffused throughout one-half to two-thirds of the parenchyma in the form of small circumscribed areas. These hemorrhages could be traced to medium-sized blood-vessels. Larger perivascular hemorrhages, as found in the parathyroid glands of children, were not noted. The appearance of the hemorrhages was as follows: The red blood cells lay directly on the epithelial cells, which could be demonstrated with the Van Gieson stain. In contrast with the distended blood-vessels and capillaries fine, spindle-shaped endothelial cells were seen, deeply stained and at regular distances apart, which differentiated them from a hemorrhage. The fibrous adventitia of the vessels showed slight hyaline degeneration. Some vessels had very small lumina. The walls of the veins were much distended. In some places drops of colloid inside of glandular-like formations of epithelial cells were seen. Retrogressive changes of the hemorrhages, such as pigment, were not found, and this led to the conclusion that the hemorrhages must have been of recent origin. The red blood cells presented a peculiar appearance. Some of them appeared deeply stained with eosin and were distinctly outlined. Others were merely visible and were stained very lightly, giving the impression that the hemoglobin had been extracted from them.

11. **Adams-Stokes Syndrome With Heart-Block.**—The special points of interest in this case that Pepper and Austin bring out in this paper are: A progressing typical case of heart-block lasting for three or four years, at first partial block alternating with normal rhythm, with occasional attacks of complete block, and later persistent complete block, and yet at the autopsy apparently no sufficient lesion was discovered in the bundle of His to explain the block; the giving of a dose of salvarsan to the patient while he had complete heart-block and was having attacks daily of Stokes-Adams syndrome without any noticeable good or bad result; the extreme length of several of the syncopal attacks. One attack lasted eight minutes, during the last four minutes of which the auricles apparently stopped beating in addition to the cessation of the ventricles. Apparently the man was dead, but artificial respiration brought him to life. Another attack was nearly as long, and very dramatic. This lasted six minutes, and for fully three minutes the auricles had apparently stopped beating, as no sounds could be heard over the chest, no pulsation noted in the neck, no respiratory movements occurred and the patient's color, which at first had been white, became dusky. Artificial respiration again restored the man to life and consciousness, which was promptly followed by a violent hysterical outburst, in which the man sang, cried and shouted. That these periods of apparent cessation of auricular action may have been due to auricular fibrillation the authors believe cannot be denied.

In the first report of this case, already referred to, attention was particularly called to what was believed to be a genuine instance, though an isolated single one, of hemisystole. Apparently, as shown by the tracing on a single occasion, the left ventricle did contract normally after the auricular contraction; but the right ventricle did not contract, or possibly contracted very feebly, and the following statement was made in that article. The serial sections showed at the bifurcation of the bundle the branch passing to the right ventricle slightly encroached on by an area of fat and fibrous tissue, while the branch to the left ventricle was normal. Although during the man's first stay in the hospital he showed for several days constant irregular ventricular action during complete block without syncopal attacks, he never showed this irregularity later, even though he had syncopal attacks and complete block.

### Wisconsin Medical Journal, Milwaukee

*May, X, No. 12, pp. 685-750*

13 Few Suggestions to Examining Physicians in Commitment of Insane. W. F. Lorenz, Mendota.
14 Treatment of Puerperal Infection. T. J. Watkins, Chicago.
15 Placenta Prævia. G. A. Carhart, Milwaukee.
16 Surgical Management of Developmental Defects in New-Born. H. Greenberg, Milwaukee.
17 Value of Bacterins in Pneumonia. W. E. Robertson and G. M. Illman, Philadelphia.

### American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

*May, LXV, No. 413, pp. 753-936*

18 *Study of 139 Cases of Induction of Labor with Modified Champetier De Ribes Bag. G. L. Brodhead, New York.
19 *Vaginal Hysterotomy in Late Months of Pregnancy. R. W. Lobenstine, New York.
20 Vaginal Cesarean Section and Its Limitations, Particularly in Eclampsia. G. W. Kosmak, New York.
21 Is Toxic Vomiting of Pregnancy a Clinical Entity? F. R. Williams, Bisbee, Ariz.
22 Integrity of Uterine Scar After Cesarean Section. J. A. Harrar, New York.
23 Louise Bourgeois. W. H. Allport, Chicago.
24 Management of Appendicitis in Childhood. W. F. Campbell, Brooklyn.
25 Minor Points in Infant Feeding. R. A. Benson, New York.
26 Empyema of Infancy. S. A. Blummer, New York.
27 Use of Flexner Serum in Cerebrospinal Meningitis. E. G Hynes, New York.

18. **Induction of Labor**—For the induction of labor with a Champetier de Ribes bag, sizes two and three, have been found most useful by Brodhead. Accidental rupture of the membranes occurs in only 3 per cent. of all cases. The great value of the bag is shown by the fact that in 90 per cent. of all cases, labor was induced by the use of not more than two bags, while in nearly 70 per cent. one bag was sufficient. In only 6 per cent. of all cases was labor not induced by the bags. Anesthesia for bag introduction is usually unnecessary, as shown by the fact that in only 14 per cent. of private cases was an anesthetic used, or in 16.6 per cent. of all cases including many hospital cases in which the anesthetic was deemed advisable for clinical purposes. In 37 per cent. of all cases, labor begins at the time of the introduction of the first bag, in 70 per cent. of all cases labor commences within twelve hours after the insertion of the first bag, while in 88 per cent. of all cases, labor begins within thirty hours after the insertion of the first bag. The average length of time intervening between the insertion of the bag and the onset of labor is in primipara eight hours and twenty-two minutes, in multipara ten hours and twenty-two minutes, and in all cases, nine hours and forty-one minutes.

In all primiparas, the average duration of labor induced by the bag was twenty-two hours, nine minutes. In all multiparas, the average was fifteen hours fifty-two minutes and the average in all cases was eighteen hours two minutes. Forty-nine per cent. of labors induced by the bag terminated normally and 70 per cent. terminated normally or with the low-forceps operation. In 5 per cent. of all cases, the presentation was changed, but in only one case was the outcome affected because of the accident. In 139 cases, the cord presented or prolapsed in six, or 4.3 per cent., but it must be remembered that in sixty-three cases, labor was induced for contracted pelvis, relative disproportion of hydramnion, and that therefore the accident under any circumstances was much more likely to occur. The morbidity in private work is practically *nil*, and in hospital work very slight. The fetal mortality in private work was about 5 per cent., in hospital work 11 per cent. This can be explained partly by the fact that private patients receive naturally more individual attention, and the results necessarily are correspondingly better. The maternal mortality from the use of the bag is *nil*.

19. **Vaginal Hysterotomy.**—Vaginal hysterotomy is regarded by Lobenstine as an operation that will in competent hands and under proper conditions tend to markedly lessen both maternal and infant mortality in a number of the more serious complications of pregnancy. The prerequisites of success are: Skill in vaginal surgery, proper surroundings, abundance of good light and at least two competent assistants.

### Northwest Medicine, Seattle, Wash.

*May, IV, No. 4, pp. 133-164*

28 Rhizotomy for Spastic Paralysis (Radiocotomy.) E. Viko, Salt Lake City, Utah.
29 Trifacial Neuralgia. A. A. Robinson, Ogden, Utah.
30 Pyuria and Determination of Its Origin. H. Klussman, Spokane.
31 Use of Cystoscope in Diagnosis. O. S. Fowler, Denver.
32 Blood of Infancy and Early Childhood. J. B. Manning, Seattle.
33 Local Anesthesia in Operative Treatment of Anorectal Diseases. E. H. Brown, Portland, Ore.
34 Prevention of Typhoid by Vaccines. E. P. Fick, Seattle.
35 Tonsillotomy or Tonsillectomy, Which? F. Stauffer, Salt Lake City, Utah.

### New Orleans Medical and Surgical Journal

*May, LXIV, No. 11, pp. 811-880*

36 Outline of Care of Obstetric Patient in the Allgemeines Krankenhaus Frauenklinik, Vienna, 2d Division. M. A. Shlenker, New Orleans.
37 Brain Tumors. E. M. Hummel, New Orleans.
38 Enemata and Murphy Drip. E. D. Martin, New Orelans.
39 Treatment of Old Intra-Capsular Fracture of Hip-Joint by Nailing. E. S. Hatch, New Orleans.
40 *Treatment of Tetanus. J. D. Martin, New Orleans.
41 Is Acute Anterio-Poliomyelitis, or Infantile Paralysis, Infectious or Strictly a Sporadic Disease? C. E. Edgerton, Conshatta, La.
42 Non-Specific Congestive Endometritis. E. R. Harrington, Natchitoches, La.
43 Open Treatment of Fractures of Shafts of Long Bones. A. C. McLamore, Gahagan, La.

40. **Treatment of Tetanus.**—Martin summarizes his treatment as follows: The wound should be as thoroughly asepticized as possible, freely opened, and any foreign body removed, then swabbed out with pure carbolic acid, followed by alcohol. Fifteen hundred units of antitetanic serum should be given each day for at least five or six days, and chloretone in 30-grain doses should be given by rectum. When the respirations go above 30 it means the diaphragm muscle is having a hard time, and if not relieved it is only a question of how long it will be able to last. Morphin should be given only when there is pain. Liquid nourishment is to be given. A most important part of the treatment is to keep the bowels open.

### Journal-Lancet, Minneapolis

*May 15, XXXII, No. 10, pp. 253-280*

44 Abscess of Liver Associated with or Following Suppurative Appendicitis. S. M. Hohf, Yankton, S. Dak.
45 Multiple Myeloma. T. W. Stumm, St. Paul.
46 New Public Health. H. W. Hill, Minneapolis.

### Military Surgeon, Washington, D. C.

*May, XXX, No. 5, pp. 485-617*

47 Closing Remarks to Graduating Class of Naval Medical School on March 25, 1912. H. G. Beyer, U. S. Navy.
48 Military Absenteeism in Man; Relation of Medical Department Thereto. E. L. Munson, Fort Leavenworth, Kan.
49 Russian Army Medical Service in Manchuria; Critical Review of Some of Its Phases. G. M. Blech.
50 Salvarsan; Description of Apparatus for Intravenous Administration. R. U. Patterson, U. S. Army.
51 Recruiting in Navy. C. H. T. Lowndes, U. S. Navy.
52 Contagious Diseases on Board Ship. E. G. Parker, U. S. Navy.
53 *Some Tests as to Efficacy of Chlorinated Lime in Purifying Drinking-Water. A. T. Cooper, U. S. Army.
54 Value of Medical Statistics. S. W. French, U. S. Army.
55 Advantages of Accepted Plan for Latrine Boxes. W. Lyster, U. S. Army.
56 Entero Vesical Fistula of Amebic Origin. C. G. Levison, U. S. Army.
57 Calomel in Gonorrheal Prophylaxis. R. B. Henry, U. S. Navy.

53. **Purifying Drinking Water.**—Cooper's experiments tend to show that chlorinated lime will markedly reduce the bacterial count in water and in strong enough dilutions render it safe for drinking purposes. In case of an emergency it may be used as a quick, cheap, and fairly efficient way, where no other means are at hand, to render suspicious water safe. As a general rule if one gram of chlorinated lime, containing approximately 30 per cent. of available chlorin, is thoroughly mixed in a liter of water and enough of this mixture, to make one part of chlorinated lime to 200,000 parts of water, is added to clear water which is intended to be used for drinking purposes, and this water allowed to stand for at least 20 minutes after having been thoroughly shaken, Cooper says that the water so treated may be used with impunity for drinking purposes.

### Colorado Medicine, Denver

*May, IX, No. 5, pp. 129-160*

58 Management of Infantile Eczema. A. J. Markley, Denver.
59 Appendicitis as Complication of Pregnancy and Puerperium. H. McClannahan, Colorado Springs.
60 Benign Cyst of Long Bones. H. W. Wilcox, Denver.
61 Indications for Operation of Inguinal Hernia. E. W. Knowles, Greeley.
62 Etiology of Puerperal Eclampsia. S. McKibben, Creede.
63 Some Aspects of Acute Lobar Pneumonia. W. Senger, Pueblo.
64 Steamboat Springs as a Spa. H. C. Dodge, Steamboat Springs.

### American Journal of Surgery, New York

*May, XXVI, No. 5, pp. 161-192*

65 Myoma Heart. C. C. Barrows, New York.
66 Cholecystostomy Versus Cholecystectomy. L. Frank, Louisville, Ky.
67 Diagnosis of Appendicitis. F. C. Paffard, Brooklyn.
68 Treatment of Posterior Uterine Displacements. H. A. Wade, Brooklyn.
69 Surgical Essentials. F. E. Neef, New York.
70 Treatment of Infertilitas Masculinus. Q. W. Hunter, Louisville, Ky.
71 *Scalpel Savers. D. H. Stewart, New York.

71. **Scalpel Savers.**—The knives used by Stewart for the skin incision are simply pieces of strip steel 9 inches long, a little more than ½-inch wide (anywhere between a half and three-quarters), and 1/16-inch thick. The edges are cut on it as one would like a knife to be shaped. He says that to use a scalpel for a skin incision or on a bone is almost like driving tacks with a watch for a hammer. The scalpel has its proper field in cutting subdermic and soft tissues, and to that field its use must be limited if its edge and usefulness are to be preserved.

### Albany Medical Annals, New York

*May, XXXIII, No. 5, pp. 253-314*

72 *Services of Sciences to Rational Medicine. H. W. Wiley, Washington, D. C.
73 Anatomy of Human Heart. N. K. Fromm, Albany, N. Y.
74 Pathology of Heart. H. S. Bernstein, Albany, N. Y.
75 Treatment of Diseases of Heart. S. B. Ward, Albany, N. Y.
76 Surgery of Heart. C. G. Hacker, Albany, N. Y.

72. Abstracted in THE JOURNAL, May 11, 1912. p. 1474.

### Chicago Medical Recorder

*May 15, XXXIV, No. 5, pp. 241-306*

77 *Cat and Transmission of Disease. C. A. Osborne, Worcester, Mass.
78 Occupational Disease. G. W. Webster, Chicago.

77. **Cat and Transmission of Disease.**—Osborne reviews the part the cat plays, or is in a position to play, in the transmission of disease. When the wide-spread distribution of both plant and animal parasites in all species of animals is considered, and the still more significant fact, that animal experimentation already has revealed the identity of many pathogenic microorganisms in different animal species, the problem of the cat as a carrier of disease becomes alive with undesirable possibilities. The economic aspect of the question to the farmer is in need of immediate investigation. The cat is peculiarly adapted to distribute specific disease organisms as she ranges over the farm. In the city, as the cat makes her home in places where food is for sale, there is unlimited opportunity for infection of food, while meat, butter and milk furnish culture media for many bacterial organisms injurious to man. The scavenging habits of the cat, in connection with her great freedom in the house, give her unlimited opportunity for acquiring and spreading infection from person to person. Osborne would make bacteriologic studies of the bacterial flora of the mouth and throat of the cat, because she has such unlimited opportunity to take in all species of infectious organisms. For the safety of the child and the general public a cat should be kept under as complete control as any other domestic animal. A cat which has become infected, or one which is suspected of being infected with any transmissible disease, should be quarantined so as to insure against the spread of the disease. All tramp cats ought to be kept from contact with children until it is certain that they harbor no infection. Boards of health of towns and cities can no longer ignore the cat as an active agent in carrying many kinds of disease infection. They should therefore take such measures as will eliminate all cats from public streets, alleys and all places under public jurisdiction.

### California State Journal of Medicine, San Francisco

*May, X, No. 5, pp. 177-220*

79 Treatment of Severe Cases of Diabetes. E. Schmoll, San Francisco.
80 Cases of Sinus Thrombosis and Retropharyngeal Abscess. D. H. Trowbridge, Fresno.
81 *Blood-Pressure in Pneumonia. F. F. Gundrum and E. E. Johnson, Sacramento.
82 Special Factors Concerning Surgery of Cancer of Lip and Tongue. H. A. L. Ryfkogel, San Francisco.
83 Salvarsan in Cutaneous Syphilis. H. Morrow, San Francisco.
84 Intravenous Injection of Salvarsan, with Special Reference to Its Technic. G. W. Hartman, San Francisco.
85 Alcoholic Injection of Superior Laryngeal Nerve. H. S. Moore, San Francisco.
86 Choice of Technic in Hysterectomy. J. H. Barbat, San Francisco.
87 *Treatment of Urethritis in Male. H. C. Loos and A. E. Banks, San Diego.
88 Treatment of Scoliosis. J. T. Watkins, San Francisco.

81. **Blood-Pressure in Pneumonia.**—During the months of December and January past, the authors studied a series of thirty consecutive patients admitted to the hospital with pneumonia. All blood-pressure readings were made with an ordinary mercury manometer of the Riva-Rocci type or with a spring manometer which was frequently compared to the mercury column. The blood-pressure and the pulse, taken simultaneously, were recorded daily or oftener if any marked change in the patient's clinical condition was noted. Of the thirty cases twenty-six were lobar in type, four bronchopneumonic. The patients were all adult males from eighteen to sixty years of age. Twenty were alcoholics; ten denied alcoholic history. The termination in ten cases was by crisis; in eleven by lysis, and in nine by death. The mortality (30 per cent.) is high but not remarkable for a public institution where all of the patients are of the "less fortunate." They found very great variations in blood-pressure on admission (65 to 122) and of pulse as well (68 to 148). The B-P (Gibson) quotient on admission was one or more than one in eighteen cases and less than one in twelve. Of the eighteen cases showing a quotient of one or more than one on admission, seventeen (94 per cent.) recovered and one (6 per cent.) died. Of the twelve patients whose quotient was less than one, three (25 per cent.) recovered and nine (75 per cent.) died. The findings on the day after admission were much more suggestive. Twenty-one patients showed a quotient of one or higher and nine lower than one, which figures correspond exactly with the death-rate. The correspondence is not so exact, however, as these figures would indicate, for of the twenty-one who had one or plus one fraction on the second day, twenty (96 per cent.) recovered and one (4 per cent.) died. Several patients whose quotients began to drop down were apparently greatly helped by increase or change in medication. The authors used moderate doses of strychnin by mouth as long as the quotient could be maintained at one or more. If more stimulation was required they added caffein in 4-grain doses especially if the heart muscle seemed to be inefficient. The majority of the favorable cases received no other drug. The unfavorable cases were given, in addition, adrenalin hypodermatically when the low pressure was apparently due to peripheral dilation and digitalin and camphor when cardiac weakness developed. Gundrum and Johnson have placed most reliance on the strychnin and caffein with occasional doses of adrenalin for times of special danger, possibly because they used this combination first and on favorable cases.

87. **Treatment of Urethritis.**—For the dysuria and frequent desire and other deep urethral symptoms the authors have found nothing so serviceable as a formula something like the following, varying of course with the individual case:

| ℞ | Gm. or c.c. | | |
|---|---|---|---|
| Chloralis hydratis | 52 | | gr. viii |
| Potassii bicarbonatis | 66 | | gr. x |
| Potassii bromidi | 33 | or | gr. v |
| Extract hyoscyami | 66 | | m. x |
| Glycerini | | | |
| Aqua. q.s. | | | |

M. One such dose every four hours.

As soon as relief is obtained they follow with 7½ gr. doses of hexamethylene tetramine every four or five hours for a day or two, which seems to have an inhibiting action on the process. The patient is ordered to bed if feasible, and a suspensory bandage is fitted at once. A purge of calomel followed by a hot rectal enema is beneficial. The diet is light and bland and now if never before the patient is taught how to acquire the cold water habit, large draughts of water being ordered just as often as the patient will take them. Nothing is done in the way of local treatment till relief from severe dysuria is obtained, then after irrigating the anterior urethra with boric acid solution, hot, a No. 12 F. soft rubber catheter is passed just beyond the shut-off muscle and the posterior urethra and bladder and thoroughly rinsed with the same solution running from the Valentine irrigator through the catheter, following which a weak solution of protargol (2 per cent. or 3 per cent.) is instilled into the deep urethra with a Guyon syringe and the catheter then slowly withdrawn, allowing a stream of the solution to fill the anterior urethra. This latter is held in by a clamp or the fingers for about three minutes. This treatment is repeated once or twice daily according to the manner in which the patient tolerates it, gradually increasing the strength of the solution till a 5 per cent. to 10 per cent. solution is being used.

### Lancet-Clinic, Cincinnati

*May 18, CVII, No. 20, pp. 531-558*

89 Obstructive Prostatitis. G. F. McKim, Cincinnati.
90 Etiology of Visceroptosis, with Special Reference to Pregnancy Factor. C. Culbertson, Chicago.
91 Principles Underlying Treatment of Visceroptosis. W. Mac L. Thompson, Chicago.
92 *Diagnostic Aids in Surgery of Renal Pelvis and Ureter, with Special Reference to Pyelography. W. F. Braasch, Rochester, Minn.
93 Studying Manner of Housing and Treating Tubercular Patients in Europe, Summer of 1911. C. R. Holmes, Cincinnati.

92. Abstracted in THE JOURNAL Nov. 4, 1911, p. 1556.

### New York State Journal of Medicine, New York

*May, XII, No. 5, pp. 209-276*

94 *Animal Experimentation and Its Benefits to Mankind. W. B. Cannon, Boston.
95 *Services of Sciences to Rational Medicine. H. W. Wiley, Washington, D. C.
96 *Duty of Family Physician in Management of Surgical Cases. J. M. T. Finney, Baltimore.
97 Anaphylaxis in Its Relations to Clinical Medicine. B. White, Brooklyn.
98 Present Status of Vaccine (Bacterins) Therapeutics in Purulent Diseases of Ear. R. H. Huvelle, New York.
99 Vaccine Therapy in Medicine. T. W. Clarke, Utica.

94 and 96. Abstracted in The Journal May 11, 1912, p. 1475.

95. Abstracted in The Journal May 11, 1912, p. 1474 and also published in the *Albany Medical Annals* for May.

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## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### British Medical Journal, London

*May 11, L, No. 2680, pp. 1053-1108*

1 Sanity and Insanity. F. W. Mott.
2 Coma and Its Differential Diagnosis. D. Forsyth.
3 *Galvanization of Brain. R. T. Caesar.
4 *Typhoid Complicated with Cholecystitis. W. A. Evelyn.
5 Green Urine Due to Proprietary Pill. F. L. Golla and H. D. Rolleston.
6 Mechanism and Treatment of Shock. H. T. Gray and L. Parsons.

3. **Galvanization of Brain.**—The rapidity with which the effusion, due to a recent injury, disappears under the application of a properly applied current, Caesar says, is very striking. He has reduced a 2¼ inch swelling of the ankle-joint in thirty-five minutes, and that is quite an ordinary and usual experience, and the reduction is accompanied by entire loss of pain. If, then, this can be done to the ankle-joint, why not make use of the same treatment in the case of the brain? It is, of course, not advisable to use the galvanic current too soon, time must be given for recovery from shock. This would probably begin at a month or six weeks from the onset. In cases of embolism it would do no harm to commence much earlier. Each case should be judged on its own merits. A case is cited.

A man was at the bottom of a mine shaft when a stone or "key" fell on his head, rendering him unconscious. The skull on the left side above and in front of the ear was fractured. He was for three months unconscious. He then made a gradual return to consciousness and a tedious return to partial recovery. His right arm was useless. Speech was normal, but he very easily lost all power to talk, any slight excitement or sudden noise rendering him incoherent. He suffered from convulsions which were very easily induced. Several pieces of bone were removed, but he was not much better. Two years after the accident, he had great difficulty in speaking, and it was often impossible to understand what he said. He was in a very nervous state, was quite unable to go about by himself, could not dress himself, as he could not use his right arm. He was unable to express his thoughts in words. His eyesight was "blurred and foggy," and he "saw double." He suffered from convulsions, very slight causes being sufficient to excite them. He was quite unable to raise his arm from his side, though he could pronate it slightly; his hand was numb; he could grasp an object in his hand, but could not let go again. The electrical reactions of the various muscles were curiously varied, but there was no reaction of degeneration.

Caesar commenced treatment July, 1911. On this occasion the current was passed through the brain and right arm, the latter being immersed in a porcelain arm bath. The amount of current was only 2 milliamperes, this being sufficient. He afterwards increased the current considerably, being guided entirely by symptoms. On two occasions he passed as much as 30 milliamperes. The application of the current was always followed by an increased sense of well-being; it acted as a tonic to him; it made him somewhat drowsy and he slept well from the commencement of his treatment. The current was passed on each occasion for fifteen minutes. This was followed by stimulation of the affected muscles by means of the interrupted continuous current, 100 interruptions to the second.

No medicine was given. This combined treatment was carried out twice weekly for six weeks. He can now talk quite easily and plainly, having only a slight stammer, and can convert his thoughts into words without any trouble whatever. The convulsions have stopped. His eyesight is normal. He can use his right arm quite well, can dress and feed himself without any trouble, but cannot extend his thumb. The arm is much wasted, but is considerably increased in size under the treatment, and will continue to improve with use. He goes about by himself, transacts his business, and has so entirely and successfully recovered that he has obtained another post similar to the one he occupied before his accident.

4. **Typhoid Complicated With Cholecystitis.**—The points of interest in Evelyn's case are: 1. The total absence of any pain whatsoever at any time during the life of the patient pointing to the presence of gall-stones until the sudden and violent attack. 2. The absolute constipation throughout the illness, a condition more often met with nowadays in enteric fever than not. 3. The presence of the *Bacillus typhosus* in the pure cultures made from the lining of the gall-bladder.

### Lancet, London

*May 11, L, No. 19, pp. 1253-1318*

7 *Treatment of Acute Appendicitis; When and How to Operate. Sir G. T. Beatson.
8 Hedonal as a General Anesthetic Adminisered by Intravenous Infusion. C. M. Page.
9 Vicious Circles Associated with Disorders of Nose, Throat and Ear. J. B. Hurry.
10 Vital Phenomena Occurring Under Anesthesia, Nervous, Circulatory, Respiratory and Metabolic, and Their Relation to Safety of Patient. D. W. Buxton.
11 Report on Inquiry Into Prevalence of Syphilis in South African Native and Its Influence in Aiding Spread of Tuberculosis. B. G. Brock.
12 Esophagotomy for Impacted Tooth-Plate. R. F. Jowers.
13 Multilocular or Alveolar Hydatid in Left Broad Ligament Complicated by Pregnancy. J. Oliver.
14 Heating of School-Rooms by Closed Slow Combustion Stoves Burning Coke. H. W. Sinclair and V. H. Kirkham.

7. **Treatment of Acute Appendicitis.**—It is held by Beatson that what we must aim at in our treatment of acute appendicitis is to bring the conditions at operation as near as possible to those that mark the "interval stage," when we know we can operate with comparative safety.

### Dublin Journal of Medical Science

*May, III, No. 485, pp. 321-400*

15 *Fatal Result Following Injection of Salvarsan. H. Moore.
16 Volvulus of Spermatic Cord. A. A. McConnell.
17 National Insurance Act and State Medicine. R. J. Rowlette.
18 Non-Notifiable Infectious Diseases as Cause of Mortality in Childhood, with Suggestions for Their Control. Sir J. Moore.
19 *Clinical Estimation of Blood-Pressure. G. E. Nesbitt.

15. **Fatal Results Following Injection of Salvarsan.**—Following intravenous injection of 0.5 gr. of salvarsan in a case of early general paralysis of insane, death occurred about thirty hours afterward. Ehrlich maintained that severe and advanced disease of the central nervous and circulatory system is a contra-indication to this treatment.

19. **Estimation of Blood-Pressure.**—The fallacies which have suggested themselves to Nesbitt as being likely to arise and to vitiate our conclusions in clinical work are discussed by him under four heads: 1. Instrumental. 2. The personal factor. 3. Disturbing factors in the subject. 4. Error of deduction (data being assumed correct).

### British Journal of Children's Diseases, London

*May, IX, No. 101, pp. 193-240*

20 *Two Cases of Amaurotic Family Idiocy or Tay-Sach's Disease. J. Turner.
21 *Paternal Transmission of Syphilis. C. F. Marshall.
22 Diabetes Insipidus in Boy with Positive Wassermann Reaction. F. P. Weber.
23 A New Galactagogue. W. Lauzun-Brown.

20. **Amaurotic Family Idiocy.**—One of Turner's cases is by him believed to be the first yet published out of upward of a hundred reported, which occurred in a child not of Jewish extraction. The boy's father, who has a small farm in Essex,

claimed that neither he, the father, nor his wife are Jewish, nor, so far as he knows, are there any Jewish ancestors on either side. The father is an Essex man. The patient (aged 5) was undeveloped, weighed only 39½ pounds, unable to stand or talk; he had a large umbilical hernia and no thumbs; a very small wart on the left hand seemed to be the only representative of a thumb. His knee-jerks were exaggerated, his plantar reflexes of the flexor type. Palate wide, teeth small and peg-like. His tongue lolled out of his mouth and he slobbered. He could swallow fairly well. He made a clicking noise with his tongue, but could not articulate. He was helpless, but gave no more trouble than would an infant. Stated not to be an epileptic. Beyond the statement that he was quite unobservant, there was no mention made of his sight. In the condition he was in it was difficult to test.

On January 7 there was a note that during the past week he had twitchings of face and eyes. He was then on his back, with flaccid limbs and absence of conjunctival reflexes. There was no plantar response and no reaction to pricking in legs or arms, but when pricked on the cheek he draws up the muscles of the stimulated side, and the same with the brow. He breathes regularly and slowly, occasionally whimpers, and draws up his arms and holds them suspended for a short time. Slight vertical nystagmus. Can swallow. Temperature normal. Feet cold. January 8, 1906, he died. The gross anatomic and histologic findings were typic of amaurotic idiocy.

21. **Paternal Transmission of Syphilis.**—It is Marshall's belief that there is not sufficient evidence to justify the renunciation of the doctrine of the paternal transmission of syphilis.

### Journal of Tropical Medicine and Hygiene, London

*May 1, XV, No. 9, pp. 129-144*

24 Blood in Sprue. G. C. Low.
25 "Winter Cases" of Pellagra. C. Wellman and D. H. Sparks.

### Annales de Gynécologie et d'Obstétrique, Paris

*April, XXXIX, No. 4, pp. 193-256*

26 *Rupture of Vagina During Labor. (Des ruptures de la voute du vagin pendant le travail.) J. Rouvier.
27 Intraperitoneal Hemorrhage from Rupture of Graafian Follicle. (Inondation péritonéale par rupture d'un follicule de de Graaf.) D. J. Cranwell.
28 *Influence of Pregnancy on Epilepsy. (Epilepsie et grossesse. Avortement provoqué.) M. Audebert.

26. **Rupture of Vagina During Delivery.**—Rouvier comments on the seriousness of complete rupture of the roof of the vagina as shown by review of the literature, and then reports four cases from his own experience. Three of his patients died and in the fourth the uterus was bound down by cicatricial tissue following rupture of the cul-de-sac of the vagina five years before. He now makes a point of examining the roof of the vagina after delivery in every difficult case, and in this way has discovered tears which otherwise might have escaped detection. In one of the fatal cases the obstetrician had been formally accused of malpractice, but the discovery of the rupture of the vagina threw a new light on the case.

28. **Influence of Pregnancy on Epilepsy.**—Audebert noted aggravation of the epilepsy in one case during the pregnancy. After the delivery of a child at term, which had succumbed during labor, the epilepsy relapsed into its previously comparatively mild form. In a case reported each by Charpentier and Vallois the aggravation proved fatal, the seizures becoming almost continuous by the second or third month and the patients dying in coma or acute mania. Audebert reports further the details of another case in which the epilepsy became much aggravated during the pregnancy and spontaneous abortion occurred at the second month. When the woman, 21 years old, became pregnant again the epilepsy became aggravated anew. The patient was under observation in the hospital and the intense headache and progressively increasing frequency and severity of the attacks and the knowledge that the child at best would have a serious inheritance of alcoholism from its grandparents and epilepsy from its mother—these reasons turned the scale in favor of termination of the pregnancy, after which the epilepsy and other symptoms became much attenuated.

### Annales de l'Institut Pasteur, Paris

*April, XXVI, No. 4, pp. 241-320*

29 Favorable Action of Manganese on Growth of Aspergillus Niger. G. Bertrand and M. Javillier.
30 Experimental Research on Typhus. III. C. Nicolle, E. Conseil and A. Conor. To be continued.
31 *Secondary Pyemia in Contagious Disease in Sheep and Goats. (Le "mal de Lure." Pyohémie secondaire à l'agalaxie contagieuse de la brebis et de la chèvre.) H. Carré.
32 Secondary Infections in Tuberculous Suppuration in the Lungs. (Des infections secondaires dans la tuberculose ulcéreuse du poumon.) A. Veillon and G. Repaci.
33 No Sero-Agglutination with Pneumococci. (Etudes sur le pneumocoque. IV.—Agglutination des pneumocoques humains et animaux.) L. Cotini and C. Truche.
34 Neutralization of Tetanus Toxin by Brain Substance. (A propos de la neutralisation de la toxine tétanique par la substance cérébrale.) A. Marie and M. Tiffeneau.

31. **Secondary Pyemic Disease in Contagious Epizootic.**—Carré has found a specific "pyobacillus" in a pyemic affection which develops secondary to a contagious disease in sheep and goats, prevalent last year in certain districts in the southeastern parts of France, especially in the Lure mountains. The disease causes suppuration and sloughing in joints, eyes and teats in animals affected with contagious agalactia, not in others, and it has a pronounced aggravating action on the primary disease.

### Lyon Chirurgical, Lyons

*May, VII, No. 5, pp. 485-608*

35 *Coxa Vara and Consecutive Spontaneous Fracture. (Coxa flecta des adolescents et fracture spontanée justa-epiphysaire du col du fémur.) M. Gangolphe.
36 *Bilateral Tuberculosis of the Kidney and Nephrectomy. V. Rochet and L. Thevenot.
37 Torsion of the Transverse Colon. E. Duroux.
38 *Roentgenotherapy of Hypertrophy of the Thymus. (Le traitement roentgénien de l'hypertrophie du thymus. Ses indications comparées à celles de la thymectomie.) C. Regaud and R. Crémieu.

35. **Coxa Vara.**—Gangolphe has become convinced by roentgenoscopic control of two cases, boys about 14, that the so-called essential or idiopathic coxa vara is in reality merely a disturbance in the growth of the bone from disproportion in its development, especially the hyperactivity of the region next to the epiphysis. The result of this is a softening of the bone at this point; the neck softens and bends like a wax candle on a hot day. The epiphysis may become separated or actual fracture may result, but the fracture or separation of the epiphysis is not the cause of the trouble but only a feature of its later stages. In one case described, the affection occurred in one hip while the other hip was sound, and the patient was cured by immobilization and weight extension. A few months later the same symptoms began to develop in the previously sound hip but prompt immobilization in time prevented the bending of the neck and the patient soon outgrew the tendency. The affection develops insidiously until suddenly or after some slight trauma the patient is suddenly unable to use his thigh and there is violent local pain, but no depression in the lumbar region characteristic of ordinary hip-joint disease, while there is absolute inability to use the limb. Roentgenoscopy explains the trouble at once, showing the curving of the neck of the femur for which no explanation can be found except the disproportionate growth of the various parts of the bones in the region. The sound limb should be supervised to detect the first tendency to its involvement in the process. When the patient is fatigued, the tendency to limp becomes more apparent. Gangolphe has recently reexamined his patients and found no traces left of the disturbance. He kept them in bed for a month, with an immobilizing dressing for fifty days, with massage and gradual weight-bearing.

36. **Nephrectomy with Bilateral Renal Tuberculosis.**—Rochet and Thevenot report the ultimate outcome in eleven cases of renal tuberculosis in which one kidney was seriously affected while the other, although tuberculous, was still functioning in a satisfactory manner. The most diseased kidney was removed and six patients survive to date; three in this group are in good health while in three others there are still signs of cystitis for which probably a tuberculous process in the ureter on the side of the operation is responsible. Inoculation of animals with the urine from each kidney before the operation gave positive results, showing that without the nephrectomy the patients would have all been doomed. I two other cases they removed a kidney causing intense pains

or alarming general symptoms although both kidneys were in advanced tuberculosis. Both patients soon succumbed in a few days to anuria. In another case of this kind with severe advanced bilateral tuberculous renal lesions the right kidney caused the most disturbance and it was punctured three times to evacuate the pus, a glassful escaping each time and the fever going down while the urine cleared up. The general condition during the four years since has been fairly satisfactory, the patient, a man of 38, being up and about and eating with appetite. The results from puncture in this case seem to be much better than those from nephrotomy alone in such conditions, the latter exposing to the danger of a chronic and debilitating fistula.

38. **Roentgen-Ray Treatment of Enlargement of the Thymus.** Regaud and Crémieu insist that Roentgen-ray exposures of the thymus are the simplest, most harmless and most effectual means of curing disturbances from an abnormally large thymus. From one to five exposures are sufficient for the purpose, they say. This treatment has been applied in eight cases to date, according to their compilation, and the results were very promising, the disturbances subsiding in a few hours or days. They have been conducting extensive experimental research on the action of the rays on the testicles of laboratory animals, dogs and sheep. The action seemed to be identical in all the species studied, and also in the clinical experiences reported, roentgenoscopy showing the reduction of size of the gland under the exposures. Friedlander seems to have been the first to apply the method. It is possible that radium would have a similar effect, and Regaud and Crémieu say that they should not be surprised if this radiotherapy superseded thymectomy entirely except in the most threatening emergencies. In the thirty-nine cases of thymectomy on record fifteen of the children died and in four of these fatal cases the thymectomy had been done on the wrong diagnosis, the real trouble having been bronchial lymphadenitis, the thymus not being responsible for the disturbances.

### Presse Médicale, Paris

*May 4, XX, No. 37, pp. 393-404*

39 Pituitary Extract in Therapeutics. (Applications thérapeutiques de l'action exercée sur les fibres musculaires lisses par le principe actif de l'hypophyse.) B. A. Houssay and M. Ibanez.
40 *Prolapse of the Rectum. C. Lenormant.

40. **Prolapse of the Rectum.**—Lenormant gives the details of eleven cases of rectal prolapse in which he has applied different technics. The sexes were about equally divided and the ages ranged from 19 to 64. He drew up the anus with a wire in a number of cases but his experience with this method was not very favorable as the wire broke into three pieces after a time in one patient; in another case no trace could be found of the wire ring after a few months. On the whole, he says, this wire technic is a good palliative measure but cannot be relied on permanently, except possibly as an adjuvant to fixation of the intestine. He prefers for the latter, fixation to the posterior wall of the abdomen through an elliptical gap cut in the peritoneum.

### Semaine Médicale, Paris

*May 1, XXXII, No. 18, pp. 205-216*

41 *Intramuscular Ether General Anesthesia. (Nouveau procédé d'anesthésie generale: l'étherisation par voie intramusculaire. Descarpentries.

*May 8, No. 19, pp. 217-228*

42 Mechanism and Features of the Elimination of Chlorids by the Kidneys. (La sécrétion rénale des chlorures.) L. Ambard and A. Weill.

41. See Paris Letter in THE JOURNAL May 25, p. 1612.

### Archiv für Gynaekologie, Berlin

*XCVI, No. 3, pp. 405-580. Last indexed May 18, p. 1548*

43 *Experimental Cancer Induced by Injection of Blastomycetes or Tissue from Human Cancers. (Ueber maligne Tumoren nach Injektion von Reinkulturen von Blastomyceten und über maligne Tumoren bei Tieren nach Implantation menschlichen Carcinoms.) G. Leopold.
44 Epithelium of the Amnion. (Zur Kenntnis der Amnionepithels in normalen und pathologischen Zuständen.) O. H. Forssell.
45 Case of and Literature on Primary Abdominal Pregnancy. (Die primäre Abdominalgravidität.) Richter.
46 Pathology of Tuberculosis of the Ovaries. H. Cohn.
47 Stretching of the Pubic Symphysis. (Untersuchungen über Entstehung und Bedeutung der Spaltbildungen in der Symphyse sowie über physiologische Erweiterungsvorgänge am Becken Schwangerer und Gebärender.) H. Loeschke.
48 *Causes and Treatment of Carcinoma of Female Genitals. A. Theilhaber.

43. **Experimental Cancer.**—This article is the final and complete report on extensive animal experimentation undertaken by Leopold in which he succeeded in inducing malignant growths by injecting pure cultures of blastomycetes in rats or by implanting scraps from human cancers in white rats and rabbits. The report, ready for publication, was found on his desk after his death.

48. **Causal Factors and Treatment of Cancer of Female Genital Organs.**—Theilhaber discusses the reasons for the greater preponderance of cancer of the genital organs in women. Among the factors predisposing to cancer are trauma, scar tissue and defective circulation, and he argues that the very operation removing the cancer leaves cicatricial tissue and impeded circulation which invite the development of a new cancer on the spot, so that a supposed "recurring" cancer is liable to be merely a new cancer invited by the predisposing factors above mentioned. There is usually some preceding cicatrix when cancer develops in the cervix, and fully 20 per cent. of the women with mammary cancer have had mastitis. In 40 per cent. in his own experience in the last two years the malignant disease was traced to trauma. Well developed breasts are peculiarly liable to frequent trauma. Chronic gonorrheal inflammation of large areas in the uterine mucosa and adnexa is another predisposing factor, interfering with the nourishment of the parts, and the latter factor is also evident in the changes of the menopause. All these six factors tend to depress the vitality and metabolism of the cells; the vessels dwindle in size and the vital juices are kept out. From these considerations Theilhaber questions the grounds on which the prevailing system of radical treatment of cancer is based. He thinks it very probable that a large proportion of recurrences after removal of a cancer are due, not to cancer cells left behind, but to development of new cancer in adjacent tissue on account of the conditions there being identical with those that induced the production of the cancer in the first place. He is confident that the body is able to master a few cancer cells left behind from the first operation. In three cases of panhysterectomy for cancer he knowingly left behind some macroscopic cancer nests, and yet the patients have been in good health since for three, five to eight years. He suggests that the extremely "radical" operations are liable to do harm in some cases, and he compares the final outcome of the modern extraradical procedures with those of years ago, especially Karl Braun, 1882, and Byrne, 1889, who used the actual cautery and their results compare favorably with those of the most extensive operations of the present era. He cites Jacobson's recent statement that among the women who had the adjoining lymph-nodes systematically removed only eighteen have escaped recurrence out of 2,765 abdominal operations for uterine cancer in the last ten years. For these and other reasons Theilhaber advocates vaginal panhysterectomy for cancer of the body of the uterus. He intends in future also to make greater use of the actual cautery instead of the knife. The heat from the cautery may have an action on adjacent tissues like that of the Roentgen rays or radium emanation; it may destroy any cancer cells left behind. The actual cautery should at least be used more in palliative operations.

### Archiv für klinische Chirurgie, Berlin

*XCVIII, No. 1, pp. 1-120. Last indexed June 1, p. 1727*

49 *Transplantation of Fat Tissue. (Die Fetttransplantation.) E. Rehn.
50 *Restoration of Continence After Excision of Rectum. (Wiederherstellung der Continenz nach der Excisio recti carcinomatosi.) J. Rotter.
51 Primary Carcinoma of the Appendix. E. Batzdorff.
52 Pathologic Bone Structure. (Pathologische Knochenstruktur.) K. Büdinger.
53 Operations for Hare-Lip and Cleft Palate. (Ueber Uranoplastik.) J. Schoemaker.
54 Fistulas and Cysts in the Neck. (Halsfisteln und Cysten.) R. Wenglowski.
55 Cysts in the Spleen. (Zur Casuistik der Milzcysten.) E. Suchanek.
56 Preperitoneal Position for Loop of Intestine After Operation on It. (Die präperitoneale Lagerung operierter Darmschlingen.) G. Lerda.

57 Advantages of a Vacuum Air Pump as Aid in Operating Room. (Die Verwendung von Saugluft im Operationssaal.) E. Unger and Sturmann.
58 Substitutes for the Trachea. (Ueber Luftröhrenersatz.) E. Schepelmann.
59 Catgut. (Zur Kenntnis des Catguts.) J. Voigt.
60 Roentgen Findings with Fracture of the Ankle and Stretching of Ligaments in the Foot. (Ueber einen Röntgenbefund bei Knöchelbruch und Fussverstauchung.) P. Ewald.

49. **Implants of Fat.**—After discussing the experiences of others in this line, Relm refers to a case reported by his chief, Lexer, last year in which he restored the normal outline to the face by implanting large pieces of adipose tissue taken from below the breast. The young woman had been frightfully disfigured by a sleighing accident, fracturing one side of her face, with sloughing of the muscles. The implant has retained its shape and consistency, restoring the normal oval and soft outline of the face. Relm reports much experimental work on the subject and another equally successful clinical case in a young man with traumatic epilepsy. The wound in the skull was reopened and a flap of fat tissue from the patient's upper arm was implanted to cover the defect found in the cortex and dura. The young man has had no return of his attacks to date, six months later. The implanted fat seems to retain its vitality.

50. **Continence After Excision of Rectum.**—Rotter reports his experiences with 103 patients and states that he retained the sphincter in seventy-four cases. Comparing the mortality in this group with those with an artificial anus, in which no attempt was made to retain the sphincter, shows the mortality to be respectively 12.7 and 5 per cent. The attempt to secure continence thus raised the mortality, and this assumption is justified by experiences cited from other clinics.

### Beiträge zur klinischen Chirurgie, Tübingen

*April, LXXVIII, No. 2, pp. 155-438.*

61 *Grafts of Peritoneum from Hernial Sacs. (Ueber freie Transplantation von Peritoneum.) H. Kolaczek.
62 *Primary Mesenteric Tuberculosis. (Klinisches und Pathologisches zu primären Mesenterialtuberkulose.) H. Schloessmann.
63 *Diagnosis of Hip-Joint Disease from Displacement of Trochanter. (Hat die Prüfung der Roser-Nélaton'schen Linie diagnostischen Wert?) E. Schwarz.
64 *Carcinoma of the Urachus. E. Schwarz.
65 Rupture of the Biceps Tendon. (Zur Frage der Bicepssehnenruptur.) P. Müller.
66 Deformity from Progressive Ossifying Myositis. O. Jüngling.
67 *Influence of Local Anemia on Action of Toxins and Infectious Processes. (Einfluss lokaler Anämie auf Giftwirkung und infektiöse Prozesse.) R. Bestelmeyer.
68 Drainage of Hepatic Duct. J. Borelius.
69 Ossification of Tuberosity of Tibia in Connection with Certain Disturbances in Children. (Untersuchungen über die Verknöcherung der Tuberositas anterior tibiae mittelst Röntgenstrahlen, in Bezug auf einige Krankheiten der Jugend.) C. Licini.
70 Bilateral Symmetrical Dissecting Osteochondritis. S. Weil.
71 *Myoma in Gastro-Intestinal Tract. (Zur Kasuistik der Myome des Magendarmkanales.) M. Hake.

61. **Peritoneum Grafts.**—Kolaczek devotes eighty-five pages to the description of his animal experimentation and clinical experience with transplanted pieces of hernial sacs to close gaps in the dura, to make an insulating sheath for tendons and nerves, to interpose in ankylosed joints, reenforce suture of a blood-vessel, and to cover or close defects in the peritoneum or other serous membranes. He used both the freshly excised sac and pieces kept alive or "dead" pieces preserved in 90 per cent. alcohol or prepared according to Foramitti's technic.

62. **Primary Mesenteric Tuberculosis.**—In the first case reported by Schloessmann isolated mesenteric tuberculosis developed with the clinical picture of acute ileus, in a boy of 16. In the second case the onset was equally sudden, and acute appendicitis seemed unmistakable. Both patients were apparently cured by prompt excision of the mesenteric lymph-nodes involved. A series of similar cases from the literature are reviewed and the sudden stormy onset emphasized as also the further course as an acute or chronic appendicitis or ileus.

63. **Position of the Trochanter in Hip-Joint Disease.**—Schwarz found that in only seventy out of 500 persons examined was the trochanter exactly on the Roser-Nélaton line, namely, that the spine, trochanter and tubercle, when the thigh is flexed at a right angle to the pelvis, are on a straight line. In all the others the trochanter was much above this line in health and disease.

64. **Cancer of the Urachus.**—Schwarz reports a case which he thinks is the first to be published of a primary carcinoma originating in a normal urachus. The patient was a man of 57 and the growth was successfully removed.

67. **Influence of Action of Local Anemia on Toxins and Infectious Processes.**—Bestelmeyer has been studying conditions when the blood is expelled from the parts—exactly the opposite of Bier's hyperemic treatment. Absorption is naturally reduced, but virulent bacteria do not seem to have their virulence diminished. Infectious processes display a tendency to necrosis rather than to suppuration. He adds that local anemia and Bier's constriction hyperemia have many features in common; the latter is an actual anemia in so far as the arterial blood is concerned.

71. **Myoma in Gastro-Intestinal Tract.**—Hake reports four new cases, bringing to fifty-two the number on record. In ten cases the patients were between 13 and 29, and in twenty-five between 60 and 89, the others lying between. The myomas run a latent course at the cardia but at the pylorus and in the intestine they cause symptoms early. In nine cases the myoma was in the rectum. In two cases there were multiple myomas both in the interior and exterior of the organ. Hemorrhage occurred in fourteen cases; it was the cause of death in eight, and led to a successful emergency operation in the others. Operative treatment was applied in twenty-one of the forty-three cases of which the details are tabulated. The operation was done for hemorrhage or on suspicion of cancer, mostly in the bowel cases. The myoma was in the appendix in one man of 56. The sexes were about equally involved in the total material.

### Correspondenz-Blatt für Schweizer Aerzte, Basel

*April 10, XLII, No. 11, pp. 401-440*

72 *Endocarditis not Entailing Valvular Defect. (Zur Frage der ohne Funktionsstörung im Sinne eines Herzfehlers verläufenden chronischen und recidivierenden Endocarditis der Mitralis und der Aortenklappen.) C. Amsler.

*April 20, No. 12, pp. 441-472*

73 Diagnosis and Treatment of Motor Insufficiency of the Stomach. (Mageninhaltsstauung.) E. Fricker.
74 Pituitary Extract as Oxytocic. (Hypophysenextrakt, das Pituitrin resp. Pitnglandol, als Wehenmittel.) E. Anderes.
75 Postoperative Paralysis. (Eine ursächlich unklare postoperative Plexuslähmung.) F. Paravicini.

*May 1, No. 13, pp. 473-520*

76 Electric Treatment of Arteriosclerosis. (Behandlung der Arteriosklerose mit hochfrequentem Strom.) A. Buhler.
77 Scleroma of Upper Air Passages. (Ueber das Sklerom der oberen Luftwege.) F. R. Nager.

72. **Verrucous Endocarditis Healing Without Functional Disturbance.**—Amsler states that of the seventy-six patients with chronic and recurring verrucous endocarditis at the Basel university medical clinic during the last four years, sixteen, that is, 21 per cent., recovered without any consecutive clinical functional disturbances. Even in cases in which a serious valvular defect was known to exist, yet the functional outcome was remarkably favorable. The verrucous affection involved the mitral or aortic valves, and in some cases not even at necropsy were evidences found of a cardiac defect, the lesions having healed smoothly. The cases were all of bacterial or bacterial-toxic origin. In some of the cases the heart cavities were somewhat enlarged and the heart a little heavier than normal, but these changes could be referred to factors outside the heart, contracted kidney, etc. He gives the necropsy findings in detail in the sixteen cases. The patients were 15, 17, 20 and up to 79 years old.

### Deutsche medizinische Wochenschrift, Berlin

*May 2, XXXVIII, No. 18, pp. 833-880*

78 *Chorea. (Behandlung der Chorea minor.) J. Grober.
79 Duodenal Ulcer. (Ueber das Ulcus duodeni.) A. Bier. Com
menced in No. 17.
80 *Pernicious Anemia. (Wesen der essentiellen perniziöser
Anämie.) V. Ellermann.
81 Roentgenoscopy of Gastro-Intestinal Tract.. (Zur Diagnosti
von Magendarmkrankheiten mittels des alten Röntge
Zeitinstrumentariums.) E. Zabel.
82 Movable Cecum. (Zur Lehre vom Coecum mobile.) W
Merkens.
83 Importance of Vaccine Therapy in Urology. H. Reiter.
84 Occupational Nail Disease in Candymakers. (Die Näge
entzündung der Konditoren—eine Berufskrankheit.) M
Strauss.

78. **Chorea.**—Grober remarks in the course of this general lecture on chorea that it is advisable for persons in contact with one who has acute chorea minor to rinse out the mouth and throat frequently and gargle with antiseptic fluids. He adds that this is advisable also for those in contact with any acute infectious disease, especially for the doctor and the attendants. The connection between chorea and articular rheumatism suggests the possible efficacy of the salicylates but he has never witnessed the slightest benefit from their use while the patients' repugnance to the salicylate seemed to aggravate the nervous tendency. He gives a drastic purge the first thing, as withdrawal of fluids from the body seemed to benefit both the local and general disturbance. He has frequently witnessed a pronounced mitigation of the choreic symptoms afterward, even when the purge had not been given until several days after the chorea was installed. The disease seemed to have been aborted, but there is of course a possibility of a casual coincidence. He says that the greater his experience with chorea the less dependence he places on drugs alone. The main factor in treatment is a tranquilizing environment, with care for nourishment and sleep, with nothing read or told the patient to excite him. Prolonged warm baths are often of decided benefit, keeping the water constantly at 34 to 37 C. (93.2 to 98.6 F.). Three such baths can be given during the day; the appetite and need for sleep are much promoted thereby, but anything in the way of a pack irritates and frightens a child with chorea. In his experience, one in three of the patients showed signs of endocarditis; rest is particularly important in these cases. He says that moist heat has given better service in local applications to the heart in these cases than ice, which he regards as dangerous here. He adds that in many cases neurasthenia and other nervous affections in children can be traced to a lack of care over the child during the period of convalescence from chorea.

80. **Probable Parasitic Origin for Pernicious Anemia.**—Ellermann thinks that there are numerous reasons for assuming that myeloid leukemia, lymphatic leukemia and essential pernicious anemia are all allied affections, just as the three forms of malaria, tertian, quartan, etc., are allied. As the infectious nature of leukemia has been demonstrated by animal experimentation, it seems plausible to assume the same origin for pernicious anemia with its three groups of anatomic changes, the gastritis, the production of marrow tissue in the long bones and the myeloid transformation of the spleen and liver and the secondary anemic changes, fatty degeneration and siderosis. If pernicious anemia is of infectious origin, this would explain the benefit from arsenic. An invisible virus has been discovered as responsible for fowl leukemia and a filterable virus for epidemic anemia in horses and in a similar disease in dogs, not to mention kala-azar in man, the parasites for which are well known.

### Deutsche Zeitschrift für Chirurgie, Leipsic

*April, CXIV, Nos. 5-6, pp. 417-608*

85 *Cysts in Bones. (Isoliert autretende cystische und cystisch-fibröse Umwandlung einzelner Knochenabschnitte.) R. Stumpf.
86 Experimental Research on Propbylaxis of Postoperative Peritonitis. (Thierversuche zur Frage der Prophylaxe postoperativer Bauchfellentzündungen.) E. Schepelmann.
87 Duodenal-Jejunal Hernia. (2 Fälle von Treitzschen Hernie.) Maschke. (Ein treitzscher Hernie mit doppelter Incarceration.) H. Priebatsch.
88 Rare Fractures and Dislocations of the Upper Arm. (Einige seltene Frakturen und Luxationen des Oberarmkopfes.) H. Luxembourg.
89 Congenital Absence of the Femur. (Ueber angeborenen Femurdefekt.) O. Creite.
90 *Anastomosis for Arteriovenous Gangrene of the Leg. H. Luxembourg.
91 Preliminary Sedatives with Local Anesthesia for Laparotomies. (Ueber Pantopon-Scopolamin-Lokalanästhesie bei Bauchoperationen, insbes. bei der Appendektomie.) M. Stenglein.
92 Incarcerated Hernia of the Bladder. (Fall einer eingeklemmten paraperitonealen Blasenhernie.) L. Sussenguth.
93 Treatment of Leg Ulcers. (Zur Behandlung der Unterschenkelgeschwüre.) A. Lindemann.
94 Bone Plastic Operations to Close Defects in the Skull. (Knochenplastik bei Substanzverlusten des Schädeldaches.) S. Solieri.

85. **Cysts in the Bones.**—Stumpf's long article is accompanied by colored plates and eighteen illustrations in the text of the findings in three cases, which he compares with those on record. Rachitis was evidently a factor in one case but chronic irritation or trauma was a probable factor in the others. Cystic fibrous metaplasia or fibrous ostitis is generally responsible for the lesions, but he does not think there is any sharp dividing line between them and the solitary cysts in the bones in whose wall only a little fibrous tissue is found, remarkably free from giant cells. In some cases on record both types were encountered.

90. **Arteriovenous Anastomosis.**—Luxembourg's patient was a man of 55 with chronic osteoarthritis of one shoulder and incipient angiosclerotic gangrene of the left foot. The femoral artery and vein were united and the result was good at first, but symptoms of sepsis developed two weeks later, which proved fatal four weeks after the operation. Thrombi found at necropsy teach that the vein should be ligated as far from the point of the anastomosis as possible. Even at the best the outcome of this operation is extremely uncertain; various complications may develop to annul the possible benefit from it.

### Jahrbuch für Kinderheilkunde, Berlin

*May, LXXV, No. 5, pp. 533-662*

95 *Lime Balance of Bottle-Fed Infant. (Kalkbilanz eines künstlich genährten Säuglings.) A. Niemann.
96 *Congenital Acromegaly. (Fall von angeborener abnormer Grösse der Extremitäten mit einem an Akromegalie erinnernden Symptomenkomplex.) V. Salle.
97 *Portable Incubator. (Tragbare Couveuse zum Transport von Frühgeborenen.) E. Welde.
98 *Tuberculin Treatment of Tuberculosis in Children. (Erfahrungen über die Behandlung der Kindertuberkulose mit dem Kochschen Alttuberkulin.) J. Cronquist.
99 Rachitic Osteochondritis. M. Kassowitz. Commenced in No. 4.
100 Technic for Breast Milk Feeding During First Month. (Zur Technik der Ernahrung der Brustkinder in den ersten Lebenswochen.) H. Rietschel. Commenced in No. 4.

95. **Lime Metabolism in Bottle-Fed Infant.**—This study of the lime balance supplements Niemann's research on the total metabolism in an artificially fed infant of which he published his conclusions in the preceding volume of the *Jahrbuch*.

96. **Acromegaly in New-Born Infant.**—Salle reports the clinical history and necropsy findings of a child that measured 58 cm. at birth and weighed 3,125 gm. but its hands were 7.5 cm. and its feet 10.6 cm. long, the middle finger 4.5 cm. and the big toe 3.4. The nose, chin and tongue were also abnormally large; the hypophysis was deformed from the pressure of a bulging portion in the base of the skull. The irritation from this had probably induced hyperfunctioning of the hypophysis.

97. **Portable Incubator.**—Welde's small incubator is kept warm on the principle of vacuum bottles. It is designed to send to the home on demand to bring the prematurely born infant safely to the clinic.

98. **Tuberculin Treatment of Tuberculosis in Children.**—Cronquist has given courses of "old" tuberculin to 102 tuberculous children since 1907, and here reviews his experience. Forty-eight of the children who are clinically cured of their tuberculosis have been reexamined twice or four times a year since with the local tuberculin tests, and twenty-three give a constantly negative response. His principle in treatment is to progress without inducing a reaction of any kind to the optimal, possibly quite large, doses and keep up these optimal doses only until the tuberculous process has quite healed. At any sign of a reaction he reduces the dose to a tenth of what it had been, and increases still more cautiously. He also makes a point of examining the urine every day for albumin during the entire tuberculin course, as he regards the slightest sign of irritation of the kidneys as a formal contra-indication for the tuberculin.

### Medizinische Klinik, Berlin

*May 5, VIII, No. 18, pp. 723-766*

101 Importance of Diet in Treatment of Cardiovascular Disease. (Die Diätbehandlung bei Herz- und Gefässkrankheiten.) H. Strauss.
102 Conservative Operative Treatment of Chronic Otitis Media. (Meine Methode der konservativen Radikaloperation bei chronischer Mittelohreiterung.) R. Barany.
103 Roentgenoscopy of the Stomach. (Radiologische und klinische Beobachtungen zur Mechanik des Magens.) K. Sick. Commenced in No. 17.
104 Depilatory Measures. (Haarentfernungsmittel.) E. Saalfeld.
105 Salvarsan in Syphilis. (Bericht über 216 intramuskuläre Salvarsaninjektionen.) B. Fuchs.
106 Mimicry in Animals and Plants. (Ueber Mimicry im Tier—und Pflanzenreich.) W. Wangerin.
107 Psoriasis. F. Pinkus.

### Münchener medizinische Wochenschrift

*April 23, LIX, No. 17, pp. 905-960*

108 Neosalvarsan. E. Schreiber.
109 Serotherapy of Typhoid. (Die Serumtherapie des Abdominaltyphus.) H. Lüdke.
110 Mental Factor in Mountain Sickness and Fatigue. (Die Rolle der Psyche bei der Bergkrankheit und der psychische Faktor bei Steigermüdungen.) C. Widmer.
111 Straight and Crooked Legs. (Das Gesetz von der Umformung der Beine und die X-Beine unserer Frauen.) K. Francke.
112 Technic for Ether Anesthesia. (Die "Gaze-Aether-Methode," das einfachste Verfahren der Aethernarkose.) M. v. Brunn.
113 *Ethyl-Chlorid General Anesthesia. (Ueber Chloräthylrausch und -Narkose.) G. E. Baumann.
114 Salvarsan in Yaws. (Ueber Salvarsan bei Framboesia.) G. Rost.
115 Fistula in the Chin. (Zur Diagnose und Therapie der Kinnfistel.) G. Hesse.
116 *Hands After Loss of Three Fingers (Ueber Zangenhände.) W. Steimann.
117 Children with a Tail. (Zur Kenntnis des geschwanzten Menschen.) G. Schwarz.
118 Raskin's Technic for Staining Diphtheria Bacilli. (Zur Diphtheriebazillenfärbung Raskin.) O. Goetze.
119 *By-Effects of Hormonal. (Hormonalnebenwirkungen.) E. Rosenkranz.

*April 30, No. 18, pp. 961-1024*

120 *Importance of Physical Measures in Treatment of Intermittent Limping. (Ueber intermittierendes Hinken.) W. Winternitz.
121 Anatomic Findings After Experimental Methyl-Alcohol Poisoning. (Tierexperimenteller Befund im Zentralnervensystem nach Methylalkoholvergiftung.) A. Rühle.
122 Retrogression of Syphilids Under Salvarsan. (Die histologische Rückbildung der Hautsyphilide unter Salvarsan.) Rohrbach.
123 *Acute and Chronic Septic Endocarditis. (Ueber Endocarditis lenta und die akute, durch den Strept. viridans hervorgerufene Endokarditis.) A. Lorey.
124 Staphylococcus Sepsis. (Zur Kenntnis der Staphylokokkensepsis im Anschluss an kleine Eiterungen der Körperoberfläche.) L. Nüruberger.
125 Importance of Shoulder for Deformities of Spine. (Bedeutung des Schultergurtels für die Haltungsanomalien und Rückgratsverkrümmungen.) K. Hasebroek.
126 *Total Dislocation of Cervical Vertebræ. (Die totalen Wirbelverschiebungen im Bereich der unteren Halswirbelsäule, ihre Prognosis and Beurteilung.) F. O. Quetsch.
127 Pigmentation of Skin After Salvarsan. (Melanodermie nach Salvarsanspätdermatitis.) K. Grön.
128 Pyramidon in Typhoid. (Zur Pyramidonbehandlung des Typhus.) M. John.
129 Agar as Vehicle for Local Medication in Gonorrhea. (Behandlung der Gonorrhoe, insbes. mit einer wasserhaltigen Gleitmasse als Vehikel für Antigonorrhoica.) C. Schindler.
130 Cremaster Reflex in Undescended Testicle. (Zur Diagnose des ektopischen Hodens.) H. Wachtel.
131 Improved Technic for Operative Treatment of Prolapse of Uterus. (Eine Variation der üblichen operativen Behandlung der weiblichen Prolapse.) Spoerl.
132 *By-Effects of Hormonal. (Ueber die Nebenerscheinungen bei Hormonalanwendung.) D. Frischberg.

113. **Ethyl-Chlorid General Anesthesia.**—Baumann describes the technic followed at the marine hospital at Kiel during the past year. No respiratory disturbances or tendency to suffocation were observed in any instance. A period of agitation was encountered only in the rarest cases and then it was very brief, and no tendency to vomiting or other disagreeable by-effect was noted.

116. **Industrial Accidents to the Hands.**—Steimann declares that surgeons are too apt to treat industrial accidents of the fingers with undue conservatism. He thinks that instead of retaining useless and disturbing middle fingers, it is much better to excise them and leave the hand with a clear space between the thumb and little finger. With the "hook hand" left in this way, the patient has a firm grip of whatever he takes hold of, and Steimann's recent reexamination in three typical cases has demonstrated that the hand renders good service in rough work and even in sewing and knitting, as he shows in fifteen illustrations.

119. **By-Effects of Hormonal.**—Rosenkranz reports symptoms resembling those of air embolism coming on during the injection of 10 c.c. of hormonal. After gasping for breath for a time the patient screamed that his head was bursting, his face was drawn and eyes fixed, the pulse accelerated. The dyspnea soon subsided after the headache developed, and the latter gradually declined in the course of several hours. The intravenous injection of the hormonal was given two days after a second laparotomy to release adhesions which had formed nineteen days after an appendicectomy. The patient was a young merchant; seven hours after the injection an enema succeeded in bringing a stool. A transient increase in peristalsis followed half an hour after the injection, as also in another case with complete paralysis of the intestine in which flatus passed a short time after the hormonal had been injected. This patient succumbed later to fulminating peritonitis. See abstract 132 below.

120. **Intermittent Limping.**—Winternitz makes the usual protest against the name of this affection, and then reports a case which throws light on the treatment from a new standpoint. His patient was an elderly man with general arteriosclerosis and a somewhat weakened heart, but vigorous. After walking for a time he would suddenly find it impossible to take a step, this attack of intermittent limping coming on five or six times in the course of a walk, the face and ears becoming pale, the lips cyanotic, with a disagreeable sensation in the chest, jaws and temples. After a pause of a minute or two, the pseudo-angina pectoris subsided and he proceeded on his walk. After five or six of these attacks he could go for an hour without further disturbance. The case teaches, Winternitz thinks, that the aim in treatment should be exercise, not rest, for the circulatory system. In this case the patient was not deterred from continuing his exercise by these annoying attacks of "intermittent claudication of the heart" as the trouble might be called. By continued exercise he overcame the tendency to the disturbance for the time being, and by systematically continued exercise afterward he has finally succeeded in overcoming the tendency permanently to date. Winternitz found that exercising on level ground did not have by any means so good an effect as climbing hills. When the patient's walk took him among the hills he conquered the tendency to intermittent limping much quicker than on level ground. Winternitz emphasizes anew the importance of keeping the vessels elastic, functionally capable and contractile by supplying them with normal blood and having the walls of the vessels well supplied with blood—this factor in the treatment of intermittent limping has been too much neglected hitherto, he thinks, especially physical and dietetic measures.

123. **Septic Endocarditis.**—Lorey reports two cases of septic endocarditis the work of the *Streptococcus viridans*, similar to the cases of septic endocarditis described by Schottmüller (summarized in The Journal, May 14, 1910, p. 1658), only that in Lorey's cases the affection was acute, and fatal in one case; the course was so insidious and chronic in all of Schottmüller's cases that he called the disease endocarditis lenta. Lorey's first patient was a woman of 26, previously robust, who suddenly developed high remittent fever with pains in some joints and daily chills; the genital organs were normal: The above streptococcus was cultivated from the blood and fatal embolism developed by the end of the month. The second patient was a young man and the onset was even more stormy, the discovery of the streptococcus in the blood explaining the signs of severe endocarditis observed; infarcts developed in the lungs, and the young man was left with mitral insufficiency as the affection subsided with a crisis about the seventh week. At present, seven months later, he seems quite restored except for his well compensated mitral insufficiency and a tendency to occasional palpitations after the day's work. Lorey calls attention to the fact that in this case he made an intravenous injection of 0.6 c.c. salvarsan the sixteenth day of the disease, when conditions seemed very threatening, and at once there was a marked change for the better. It lasted for a week when an infarct in the lung sent the temperature up again, but after this recovery proceeded. Lorey does not venture to say that the salvarsan was responsible for the favorable outcome, but remarks that only two other cases of recovery are on record (Lenhartz and Joachmann), and that none of the other measures applied seemed to afford the slightest relief.

126. **Dislocation of the Cervical Vertebræ.**—Quetsch reports five cases of total forward displacement of the lower cervical vertebræ in which there were little or no resulting disturbances as the patients adapted themselves to the new conditions and the partial paralysis in three of the cases subsided. Attempts at reduction are advisable, he says, only in the most recent cases. When attempted, it should be by cautious extension in an extension frame, and this should be done in all cases in which the spinal cord is suffering to a threatening extent. Improvement follows when the pressure of the bone on the spinal cord is relieved and better conditions for the local circulation are restored.

132. **By-Effects of Hormonal.**—Friselberg states that the hormonal answered the desired purpose in the case reported, but only after a threatening collapse. Before the injection was concluded, the patient, a man of 36, complained of intense headache, the pulse grew weak so that camphor had to be injected, the face was slightly cyanotic, and a very severe chill, lasting thirty minutes, followed. At its close the body temperature was 41 C. (105.8 F.), and then came profuse perspiration. During all this period the patient was confused and delirious, tossing in bed and having to be held to prevent his getting up. The injection had been made the fourth day after an operation for chronic appendicitis under chloroform, and 20 c.c. of hormonal had been injected, as the abdomen was enormously distended and the bowels had not moved. The action of the hormonal became evident even during the chill; flatus passed and the abdomen subsided to its normal size, with stool during the night. See abstract 119.

### Wiener klinische Wochenschrift, Vienna

*May 2, XXV, No. 18, pp. 651-690*

133 Experimental Research on Arthritic Atrophy of Muscles. A. Schiff and E. Zak.
134 Physiologic Chemistry of the Skin. (Chemie der Haut.) F. Luithlen.
135 Advantages of Physical Examination of Patient in Ventral Decubitus. (Zur physikalischen Untersuchung der Kranken bei Lagerung auf dem Bauche.) W. Jaworski.
136 *Treatment of Cholelithiasis. L. v. Aldor.
137 Percussion Test of Sensibility of the Abdominal Organs. (Prüfung der Schmerzempfindung der Abdominalorgane mittels Perkussion.) S. Zavadier.
138 Influence on Adrenals of Roentgen-Ray Exposures. (Einfluss der Bestrahlung der Nebennieren in physiologischer und therapeutischer Hinsicht.) A. Zimmern and P. Cottenot.

136. **Treatment of Cholelithiasis.**—Aldor practices at Carlsbad and in treatment of gall-stones he lays great stress on rectal infusion of two liters of Carlsbad water at a temperature of 45 or 55 C. (113.0 or 131 F.), preceded by an evacuating enema. The patient reclines afterward, with heat applied to the abdomen, and he can thus retain the hot water for an hour and a half or two hours. The copious diuresis that follows testifies to the large amount of the fluid absorbed, sparing the stomach the necessity for much drinking. The intestine tolerates greater heat than can be applied in the stomach. The hot enema has further a curative action on catarrhal bowel trouble, which almost invariably accompanies severe cholelithiasis. He reiterates that the aim in treatment of gall-stones is not to expel the stones; internal measures directed to this end are irrational and unconditionally harmful. Not the removal of the stones, but the cure of the inflammatory process which they have set up is the end to be sought. When the stones are at rest and the inflammation healed, the period of latency which ensues is equivalent to a complete cure. He urges to give morphin freely; his rule is 0.02 or 0.03 gm. in the acute attacks, always accompanied by 0.001 gm. atropin. He thinks there is no danger of drug addiction, for as soon as the gall-stone pains are past there is no longer any incitement to take morphin. In fifteen years of practice he has seen only one or two examples of gall-stone morphin addiction. The subsidence of the colic in the acute attack merely indicates the end of the condition of irritation of the sensory nerves, mostly in the cystic duct. The inflammatory process responsible for their irritation still persists, and the disregard of this fact is the chief cause for the acute inflammation's becoming a chronic affection. This explains further the illogical basis and harmful results of the remedies advertised to cure cholelithiasis—they are all more or less drastic purgatives or cholagogues. The immediate effect is a briefly transient relief, as after a drastic purgative with any catarrhal bowel trouble, but the catarrhal tendency is seriously aggravated by them. Increased secretion of bile only adds to the amount stagnating in the gall-bladder, so that cholagogues are directly contra-indicated. One of the benefits from the Carlsbad waters is that they reduce the secretion of bile while diluting that on hand. The chief aim of treatment in cholelithiasis, therefore, is to rest the parts and dilute the bile. Carlsbad householders have rearranged their gardens to facilitate the rest cures now deemed such an important factor in treatment of gall-stones, and "colics" are becoming very rare. The diet should be adapted to spare the stomach, intestines and liver as much work as possible, reducing the total albumin and avoiding alcohol and extractives. Blunders in differentiation are common everywhere. In one case a man of 40 had supposed chronic recurring cholecystitis. After years of treatment a surgeon found adhesions between the duodenum and the gall-bladder and removed the latter which proved to be normal. Two weeks later all the old symptoms reappeared and a second laparotomy revealed the true source of all the trouble in a duodenal ulcer. In another case a woman of 30 had attacks stimulating gall-stone colic, but von Aldor ascribed them to spasm of the colon alone. He was unable to dissuade the patient against an operation, and cholecystotomy was done and the gall-bladder found normal in every respect, but after the operation an infectious process developed in it and chronic cholecystitis has persisted ever since, with varying intensity. A severe empyema was a necropsy surprise in another case in which there had never been any symptoms to attract attention to the biliary apparatus. There is no conclusive evidence to date that gall-stones favor the development of cancer of the gall-bladder; statistics seem to indicate that the cancer is the primary lesion.

### Zentralblatt für Chirurgie, Leipsic

*May 4, XXXIX, No. 18, pp. 601-640*

139 *Paravertebral Nerve Blocking Anesthesia. (Zur Technik der paravertebralen Leitungsanästhesie.) H. Finsterer.

139. **Paravertebral Blocking of Nerves for Local Anesthesia.**—Finsterer is convinced that a ramus communicans from the ganglion or spinal nerve, connecting it with the splanchnic nerve, contains the sensory nerve fibers for the root of the mesentery. If they are blocked here, then the entire abdominal viscera will be anesthetized. He introduces the needle about 3 cm. from the median line, close to the spinous process of the first lumbar vertebra, until the needle at a depth of 4 or 5 cm. strikes the transverse process of the first lumbar vertebra. The tip of the needle is worked along its upper margin and then pushed in ½ or 1 cm. farther, pointing the tip toward the median line and a little upward. He then injects, fan-wise, 5 c.c. of a 1 per cent. solution of novocain. He has applied this technic in six cases and in four the anesthesia was perfect. The second and third lumbar nerves are treated in the same way, guided by the transverse process. The skin has to be anesthetized separately for the incision. Fifteen minutes must be allowed for the anesthetic to act, but its influence lasts unmodified up to two hours. The technic is harmless in comparison to spinal anesthesia but it requires some skill to reach the proper point. He adds that the method is not adapted for routine use but promises well for appendicitis and other operations on the large intestine when the general condition contra-indicates ether and chloroform.

### Zentralblatt für Gynäkologie, Leipsic

*May 4, XXXVI, No. 18, pp. 561-592*

140 *Local Anesthesia in Gynecology. (Vaginale Totalexstirpation des Uterus in Leitungsanästhesie.) E. Ruge.
141 *Artery Press for Instrumental Compression of Abdominal Aorta. (Eine ungefährliche und sichere Methode geburtshilflicher Blutstillung.) C. J. Gauss.
142 Pelvis Deformed from Defective Development of the Sacrum. (Das angeblich "dyspygische" Becken von Prof. Solowij.) W. Bylicki.

140. **Nerve-Blocking Anesthesia for Vaginal Hysterectomy.**—Ruge says that the public now clamor for local anesthesia, and that few fields are so promising for it as vaginal operations. Wernitz has reported 300 cases of curetting after abortion done under local anesthesia induced by injecting small amounts of a 1 or 2 per cent. solution of cocain into the cellular tissue of the vagina close to the uterus. Ruge uses a 1 per cent. solution of novocain with a little epinephrin and injects it through the roof of the vagina, 4 or 5 cm. deep, into the tissue surrounding the uterus, repeating the injection farther forward and back, at a depth of 2 or 3 cm. in front and less than this at the back, injecting from 3 to 5 c.c. at each of the symmetrical points—a total of about 40 c.c. of the anesthetic fluid. The main difference between this and Wernitz' technic is that the entire field of the vaginal operation is anesthetized. He has done a vaginal total hysterectomy

with this technic in two cases and neither of the women had any pain during the operation and kept assuring the surgeon that they did not feel anything of what was going on. Ruge adds that skilful local anesthesia does away with the necessity for preliminary sedatives, scopolamin, "twilight sleep," etc., which he always refrains from when possible.

141. **Artery Press to Arrest Post-Partum Hemorrhage.**—Gauss' instrument is something like a copying letter-press in a business office. A broad sheet of metal is passed under the patient's back; it curves up a trifle in the center and forms a solid background. The patient lies on this and pressure is applied from above by an elastic pad screwed down to compress the abdominal aorta. The patient is held immovable by small plates screwed inward against her side both right and left. He gives an illustrated description of the abdominal aorta press which answers the same purpose as Momburg's belt constriction only it applies the compression exclusively at the point where it is needed, and nowhere else. He has applied the *Aderpresse* to date in 100 cases of hemorrhage from atony or laceration of the uterus, and also in two cases of cesarean section. In the latter cases the hemostatic action of the press could be instructively studied. It failed completely in only one case and only one patient complained of unbearable pain. Another asked why her "Sunday bodice" was being put on her, the pressure of the pad recalling the tightly laced bodice of her old mountain home. No injury of the viscera or heart action was discovered in any instance from the use of the "iron maiden" as the press has been nicknamed.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*April 28, XXXIII, No. 51, pp. 529-544*

143 Resistance of Tubercle Bacilli and Their Products to Action of Radium. (Sulla resistenza del virus tubercolare e dei suoi prodotti all'azione del radio.) V. Puntoni.
144 Cholera Before It Was Eradicated in Tripoli. (Su alcuni casi di colera osservati a Tripoli.) L. Dozzi.

### Policlinico, Rome

*April 28, XIX, No. 18, pp. 629-664*

145 *Cystitis in Children. (Febbre intermittente da cistite nell'infanzia.) R. Petrucci.

145. **Febrile Cystitis in Children.**—Petrucci reports two cases of mysterious intermittent fever in children of 4 and 5. On inquiry it was ascertained that the children had complained of pain at micturition, and this gave the clue for discovery of the cystitis by microscopic examination of the urine. Petrucci warns that the urine should be examined as a routine measure in all cases of intermittent fever and chills of unknown origin, especially those which suggest intestinal or malarial affections.

### Riforma Medica, Naples

*April 27, XXVIII, No. 17, pp. 449-476*

146 *Syphilis of the Brain. (Sifilide cerebrale.) G. B. Queirolo.
147 *Pure Mitral Stenosis. (La stenosi mitralica pura. Ispezione e palpazione del cuore. Algie spontanee e provocate con la pressione.) M. Landolfi.

146. **Cerebral Syphilis.**—Queirolo reports two cases. In the first there was a tendency to paralysis of the face and arms with mental confusion, loss of memory, etc. No symptomatic measures had given any relief, the condition having grown gradually worse. There was nothing to suggest that the disturbances were due to arteriosclerosis of the cerebral vessels, and a tentative course of mercury and iodid gave surprising results; improvement was evident in a week or so and by the end of a month the cure was apparently complete and the patient resumed his official duties as a judge on the bench. The second patient was a woman of 62 without suspicion of syphilis in the family; she suddenly developed paresthesia and derangement of coordination in the limbs, progressing to total paralysis of the right leg and arm. The age of the patient and the slow, progressive course of the disturbances suggested a possible syphilitic origin, notwithstanding the negative history, and the diagnosis was confirmed by the improvement after three days of mercurial and iodid treatment and the cure was complete in a month. The lesions in these cases were of such comparatively recent date that complete restitution proved possible.

147. **Pure Mitral Stenosis.**—Landolfi has been making a special study of pure mitral stenosis and here reports his conclusions based on 200 cases. He reviews the routine examination and interpretation of the findings, saying that incipient, rudimentary mitral stenosis escapes detection by ordinary inspection and palpation but that it is possible to differentiate it even in its earliest stages by various signs and symptoms including the displacement of the wave of the apex beat to the left (which he found in 91 per cent.) or to the left and upward (5 per cent.); slight reduction in the passive mobility of the heart (55 per cent.); displacement upward of the apex when the patient changes from the reclining to the seated position (73 per cent.); the beat more extensive in the transverse sense (88 per cent.); the beat a little more pronounced than normal (7 per cent.); the beat arhythmical (51 per cent.) or a double impulse at the apex (5 per cent.); absence of the physiologic negative pulsation (25 per cent.); diffuse shock in the lower half of the sternum; well marked pulsation at the left and right margins of the sternum; cardiac impulse in the epigastrium (97 per cent.); in the lung region (33 per cent.); the auricular cardiac impulse of Grocco (15 per cent.); diastolic valvular shock over the pulmonary; presystolic or diastolic-presystolic thrill at the apex; Brun's dull pain at a point in the epigastrium, below and to the left of the xiphoid appendix, the continuous vague pain here being exaggerated by pressure and sometimes becoming sharp and radiating to the region around the umbilicus or the entire abdomen or in a girdle radiating to the lower part of the back; Vaquez' auricular tender point is the result of enlargement of the auricle. The pain here develops spontaneously at different points or can be elicited by pressure. The patient complains of vague discomfort in the back but locates the seat of the pain on demand in the region between the spine and the spinal margin of the left scapula. In conclusion Landolfi expatiates on the great diagnostic importance of the zones of Head in differentiation of pure mitral stenosis, and gives the details of five cases in which these zones were particularly in evidence.

### Revista de Medicina y Cirugia, Havana

*May 10, XVII, No. 9, pp. 243-274*

148 Severe Colitis Treated with Appendicostomy; Three Cases. R. Stincer.
149 Preventable Noise in Cities. (Ruidos y gritos en las ciudades. L. M. Cowley.

### Semana Medica, Buenos Aires

*April 4, XIX, No. 14, pp. 649-692*

150 *Parinaud's Conjunctivitis. (Estudio clinico, bacteriologico histo-patologico de la conjunctivitis infecciosa de Parinaud. R. Argañaraz.
151 Reflex Muscular Contraction Sign of Typhoid Fever. (Sign de Alvarado-Burke diagnostico de la fiebre tifoidea.) P. Saffores.

150. **Parinaud's Conjunctivitis.**—Argañaraz expatiates o the necessity for differentiating the conjunctivitis described b Parinaud from other forms of conjunctivitis, stating that it not contagious and that it is impossible to reproduce the affe tion in animals. In man it runs a relatively mild course, hea ing in from seven to ten months without leaving any trac The cornea and the lacrimal passages persist intact throug out its entire course. The assumption of an animal origin problematic, he continues, and the affection is not tuberculou The chief characteristics are the inflammation and granul tions, the swelling of the lids, the infarct in the lymph-nod and the fever and anorexia—no other form of conjunctivit combines these four groups of symptoms. Diphtheria ant toxin injections seem to modify favorably the primary sta of the disease, but he warns expressly against cauterization the granulations as this is liable to leave complications in t cornea while, left alone, the lesions subside in time complete The *Bacillus xerosis* seems to have something to do with t affection. He reports in detail three cases in children and o in a brother physician.

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# THE SPECIALIST IN MEDICINE *

GEORGE E. SHAMBAUGH, M.D.
CHICAGO

The practicing specialist in medicine has made for himself a secure position. The advantages afforded by concentration of effort in a restricted field and by closer attention to details have given to the specialist a peculiar opportunity of taking an important part in medical progress. The development of the fundamental sciences underlying medicine owes a great deal to the efforts of the practicing specialist whose studies have reached out to problems in physiology, in anatomy, in embryology and in all of the sciences which touch on his field of work.

The specialties stand out distinctly as outposts along the advanced line of medical progress. The real specialist in medicine, as in any field of work, is one who by persistent and concentrated efforts succeeds in placing himself in touch with this advanced line and in a position where he is able to see and to attack the various unsolved problems in his particular field. The idea of investigation, therefore, is fundamental in the conception of the real specialist whether he be a specialist in medicine or in another subject. The problems in clinical medicine which more often attract the practicing physician differ only in kind from the problems which the distinctly laboratory worker sets out to solve. The practicing specialist in medicine should be familiar with the methods of research and be able to apply them in the study of cases and in the solution of his clinical problems.

Could anything be more inspiring to the young man entering the practice of medicine than the opportunity offered by the specialties, in which, in limiting his work to a particular field, he may hope by concentration and perseverance to get in touch with the advanced line of medical progress and to take an actual part in the solving of its problems? That man who has the perseverance to succeed in this effort has earned the right to be called a specialist in his chosen field. The dilletant in medicine who loiters along the wayside and never makes himself master of his subject is not a real specialist any more than this type ever becomes a recognized specialist in any field of work. We are inclined to use the term specialist too loosely in medicine. Any practitioner who essays to restrict his practice to a particular field thinks he has the right to be called a specialist. He may be a mere dilletant in medicine, and, as far as his knowledge of the specialty goes, an ignoramus pure and simple, yet he may pose before the public as a specialist, an expert, an authority, in a technical and difficult field of work.

This opportunity for concentration of effort and for doing scientific work has attracted to the medical specialties in this country and abroad many from the best type of medical practitioners. These are men who are persevering, aggressive, who have the instinct for investigation and whose efforts have secured for the specialists in medicine their recognized position as consultants, as experts in solving difficult clinical problems. The specialties in medicine are unfortunate, on the other hand, in attracting also a less desirable class of practitioners, men whose chief interest in their work is commercial and who think they see in special practice opportunity for receiving larger returns for their services. In this respect the specialties resemble surgery, which, as compared with internal medicine, attracts a disproportionate share of those less desirable men whose interest in medicine is largely commercial and who lack the full measure of those higher humanitarian instincts which attract many to the study of medicine and which should be a conspicuous element in the character of every one who holds the position of medical adviser in a community. We have to admit that it has been chiefly the surgeon and the specialist and not the consulting internist who have been guilty of the dishonest practice of overcharging and of the division of fees.

We are facing at present in this country a situation which reflects discredit on the general medical profession and particularly on the specialties of the eye, ear, nose and throat. The situation is one that has developed out of our deplorable lack of proper standards in medical education. It has been shown[1] that but a couple of years ago we still had in this country more medical schools than are to be found on the whole continent of Europe. A large number of these are purely commercial, proprietary institutions, with practically no standards and sustained chiefly by clever advertising methods. The result has been an enormous overproduction of "uneducated, ill-trained medical practitioners." We have in the United States, for example, four or five times as many physicians in proportion to the population as exist in an older country like Germany.

The specialties of the eye, ear, nose and throat have had to carry a disproportionate share of these uneducated, ill-trained practitioners, who, failing to succeed in competition with the better trained men in their communities, seek to better their condition by limiting their practice to these special fields. The loose way in which in this country we have countenanced the use of the term specialist has made it possible for these men, with often no further preparation than a few weeks'

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* Chairman's address before the Section on Laryngology, Otology and Rhinology of the American Medical Association, at the Sixty-third Annual Session, held at Atlantic City, June, 1912.

[1] Medical Education in the United States and Canada. Report to the Carnegie Foundation for the Advancement of Teachers, 1910.

attendance at a postgraduate school, to pose in their communities as qualified specialists in the eye, ear, nose and throat. In many towns, throughout the middle west at least, where the legitimate work in these special fields could be easily taken care of by one, or at most two properly qualified specialists, it is not uncommon to find six or more practitioners advertising on their signs and in the local papers as specialists in the eye, ear, nose and throat. In these cities a larger number of practitioners are sometimes found limiting their work to these specialties than are engaged in the whole field of general practice. It is needless to point out that the public suffers through this overproduction of untrained specialists. It is this type of specialist who justifies the fear so often expressed that the specialist, working in a restricted field, may lose the proper sense of relation between his work and that of the internist. The lack of a proper general medical education and a faulty preparation for special practice give to these men their narrow perspective which makes them disposed to see all human ailments through the particular speculum they may be using.

The postgraduate schools of this country are supported largely by the attendance of practitioners who are seeking courses on the eye, ear, nose and throat. In foreign medical centers, where courses are offered to practitioners of medicine, most of the men taking these courses are Americans, and of these at least 90 per cent. are looking for courses in these specialties. Our postgraduate schools are often blamed for encouraging the development of the so-called "six weeks specialist," the type which the late Professor Schwartze designated as the "pseudospecialist." As a matter of fact, however, the postgraduate schools are doing only that which is demanded of them. When the majority of the men who come to these institutions are uneducated, ill-trained practitioners, who expect after a few weeks' or at most a few months' attendance on courses to return as qualified specialists, what can be done? To meet such a situation only the most superficial, elementary, so-called practical instruction can be given. No sustained effort can be attempted to give that special training in the fundamental sciences of anatomy, physiology, embryology, etc., which should form the foundation for any one who is preparing to do special practice. The courses covering the specialties which are required of the undergraduate student in our best medical schools are superior in every detail to those courses now offered in the postgraduate schools to prospective specialists.

The courses for practitioners both here and abroad naturally fail signally to give that sort of preparation which ought to constitute the fundamental training for every bona fide specialist whether in medicine or in another subject. This is the training for investigation, for research. Courses of instruction, the sole purpose of which is to drill the student in the established facts in medicine, are at best but superficial. The course which leads the student to approach these facts with the open mind of an investigator gives him the training best suited to meet the problems in routine practice. It is not so much the number of facts that a student acquires as it is the methods for investigating these facts that is of greatest value. The question has often been asked why it is that from so many of our physicians who seek postgraduate study abroad so few ever reach that advanced position where they are able to make actual contributions to medical progress. One reason is that most of them have been content in their studies to have facts ladled out to them and have failed to obtain the really important things — the spirit of research and the methods for investigating these facts.

The discredit which the overcrowding of the profession by uneducated, ill-trained practitioners has cast over the specialties in this country is but temporary. The medical as well as the lay public are demanding more and more that the physician who would be recognized as a specialist must have adequate preparation. In this country, just as abroad, he must identify himself with scientific medicine and win his spurs by making some real contribution to medical science. The readjustment throughout the country of the proper relation of the specialist to the general practitioner, the relation of the consultant, the expert, who by perseverance has pushed through to the advanced line in his chosen field, this readjustment will be hastened very much by correcting the existing evils in our system of medical education. Already this is being worked out. Already we can see the passing of the commercial proprietary medical school. Medical education in this country is to be taken over again by the university where it formerly was and where it rightfully belongs. Those spurious medical departments of universities, the attached proprietary institutions, where all that the university gave to its medical school was its name, are already disappearing. In their place will be developed the real university department of medicine, in which the idea fundamental in any department of a real university, the idea of investigation, will be made prominent. It is toward this goal that the trend of medical education is leading.

We are still far from the realization of an actual university department of medicine, although we have passed the stage where a self-respecting university willingly permits its name to be attached to a proprietary medical college. We recognize that a medical school organized as is the proprietary medical college cannot be called a bone fide department of a university. It will take time and patience to work out the development of the university department of medicine from the existing type of medical school, for there remains a long step between the medical school as it still exists in this country and a bona fide department of a real university. The full significance of this difference will not always be recognized by men who have grown up in the atmosphere of the proprietary medical college. These men are often found opposing the introduction of university ideas and university methods in medical teaching on the plea that the medical student needs practical as opposed to scientific instruction, that the research man is not the best instructor, etc. They are all anxious enough to have the institution called the medical department of a university but are opposed to the introduction of those methods and ideas which alone can make it a bona fide department of a university. Actual progress in the development of the real university department of medicine must come chiefly from the university. The American Medica Association, working through its Council on Medica Education, has in a very few years accomplished great work, especially toward standardizing the entranc requirement for medical schools, but the keynote to th medical school of the future, the university departmen of medicine, must come from the university itself, wher alone the ideals and aspirations of university instructio are fully appreciated. President Shurman, in an addres on "The Obligation of the University to Medical Education," has sounded this note where he says: "Have don with this sham in medical education . . . let thi new institution be not an attachment (or detachment) to the university but an organic and vital member like other departments of the university, and, like them, animated by its spirit and controlled by its standards."[2]

If the undergraduate instruction in medicine ought to be in the hand of the university, even more urgent is it that the real postgraduate instruction must be undertaken by the university. When the undergraduate instruction in medicine has been thoroughly done, the elementary work in the specialties will not need the "subsequent patching" which is all that the existing postgraduate schools are prepared to do. Real postgraduate instruction in medicine can develop only in connection with a university department of medicine, not in separate, so-called postgraduate institutions. When once the universities have completed the process of taking over the undergraduate instruction in medicine and have established real university medical departments, it is their problem to provide suitable courses for the training of the medical specialist. Such courses should be arranged to cover at least two or three years' work after the undergraduate instruction in medicine has been completed. They might very properly be of such a character as to lead to the higher degree in medicine, the degree of doctor of philosophy, for example, in ophthalmology or otology. These specialties are fully as technical and as far removed from general medicine and general surgery as is dentistry, yet the state requires of the dentist three years' special training. The public is entitled to at least the same protection from untrained specialists in medicine as from untrained dentists, particularly since the work in these specialties is the more difficult and also more dangerous. The development of the specialties in medicine is so recent that we have not as yet become thoroughly adjusted to the new situation. The training of the specialist presents an entirely new problem in medical education. The feeble efforts that have been made in postgraduate schools to supply this training have fallen far short of really solving the problem. When once the proper facilities are offered by the universities for adequate training in the specialties, it is but a short step for the state to require this training before the practicing physician can enter special practice.

All that we offer now for the training of the specialist is an attempt to provide the top story of his preparation, the purely clinical aspect. Is it any wonder that so many, doing special work with this sort of preparation and no adequate general medical training, become top heavy and overtreat patients locally who should be referred back to the general physician? It is no surprise that under these conditions the nearest approach to a scientific contribution, from so many who share this advantage of working in restricted fields, is the more or less garbled case report. The surprising thing is that with conditions as they are at present there should have developed in this country so large a body of real scientific specialists, men who have mastered their subjects, who are doing aggressive work in real medical progress, and who easily take their position among the foremost practicing specialists in the world. We have much for which to be proud and when once our temporary impediments have been removed, when conditions in this country are made more favorable for the development of the trained scientific medical specialist, we may confidently hope to take a much more prominent part in the progress of medical science.

122 South Michigan Avenue.

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[2] The Journal A. M. A., April 16, 1910, p. 1251.

# ANIMAL EXPERIMENTATION AND ITS BENEFITS TO MANKIND *

W. B. CANNON, M.D.
George Higginson Professor of Physiology in Harvard University
BOSTON

### OBSERVATION AND EXPERIMENTATION

Two ways are open to us for obtaining a knowledge of Nature: We may merely watch natural events as they occur, or we may arrange conditions so that the events will appear or disappear, or be modified, as we may wish. For example, the growth of wheat we may study carefully in different native surroundings, or we may place the wheat where we can at will examine the effect on it of heat and cold, sunlight and darkness, wind, gravity, drought and the chemicals of the soil, as these various agencies affect its growth and productiveness. The former method is purely observational, the latter is experimental. The experimental method, in which the conditions to be observed are under control, is, in the main, the distinguishing procedure of modern science.

There is nothing mysterious about experimentation. The method implies first that study of natural events suggests certain explanations for their occurrence, as, for example, that lime in the soil or high temperature makes hard wheat, and that the cautious person, instead of immediately accepting suggested explanations as true, prefers to put them to test.

Of the two methods of learning about Nature, the experimental has proved much more fruitful than the purely observational, chiefly, I think, because experimentation is concerned with means of controlling natural forces. The different sciences, however, are subject to the application of the experimental method in different degrees. Most subject to it are chemistry and physics, since of all the natural sciences they are most simple. As a result of the employment of experimentation, astounding advances have been made during the past hundred years in chemistry and physics, and in their industrial applications. All about us are innumerable instances of the practical benefits that have flowed from the experimental study of Nature in its physical and chemical aspects. I need mention only the telephone, the telegraph and wireless telegraphy, steam and gas and electric engines, to indicate how prodigious have been the transformations in civilized society wrought by practical utilization of the scientific discoveries.

There are other sciences, however, that do not lend themselves so readily to investigation by experiment. In consequence our understanding of them is still very defective. Some phases of geology, for example, fall into this class. It has been pointed out that we to-day know little more about the mechanism of the volcano than Pliny when he watched the eruption of Vesuvius that destroyed Pompeii. We cannot control the conditions of volcanic action experimentally, and therefore have only the simple observational method to apply.

### THE EXPERIMENTAL STUDY OF DISEASE

In medicine, also, the growth of our knowledge was similarly limited, until about the middle of the last century. Up to that time disease had been studied

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* In this paper is summarized evidence which has been presented in detail in pamphlets published by the Bureau for the Protection of Medical Research of the Council on Health and Public Instruction of the American Medical Association. These pamphlets, written by experts in the several fields, are referred to in the present paper and should be consulted by persons desiring further information. A price-list will be sent on application to the American Medical Association.

mainly by observation of sick people. To account for sickness all sorts of theories were advanced, such as bad air, the influence of stars, and mysterious humors and miasms; but these theories were subjected to almost no experimental test. Of course, the highly complex character of living creatures made the beginnings of experimental medicine difficult, for not only do living beings exist together in very complicated biologic relations, but each one is an extremely complex structure, with obscure processes going on within it. In spite of these difficulties, however, the experimental method began about 1850 to be applied systematically to the study of disease, and during the sixty-odd years since then all manner of medical and surgical problems have been experimentally investigated. What has been the result? According to Osler, the experimental study of physiology and pathology during the second half of the last century did more to emancipate medicine from the routine and thraldom of tradition than all the work of all the physicians from the days of Hippocrates (460 B. C.) to Jenner (1749-1823).

In that marvelous period of transformation of medical knowledge and practice the most fundamental discovery was that of the relation between microorganisms and disease. Pasteur, whose name will be forever linked with this discovery, was a chemist who became interested in conditions which produce bad taste in wines. In the "diseased" wines, as they were called, he found unusual microorganisms. "Did they occasion the bad taste?" he asked. To test this idea, it was only necessary to introduce some of these minute plant growths or germs into good wines. This he did, whereupon these wines also were rendered distasteful, and thus Pasteur's idea was substantiated. Later, when his attention was called to a disease in silkworms, he again found microorganisms present and thought that here, also, they might be the source of the trouble. Applying, as before, the test of experiment, he introduced the microorganisms into healthy silkworms and succeeded in reproducing in them the same disturbance. In this case the disease was no less certainly the product of the germ than the oak is the product of the acorn. The idea that all infectious diseases result from these microscopic invaders was a natural and logical next step. Thus originated the bacterial theory of infection.

This theory was soon tested experimentally by many investigators, who studied not only afflictions of the lower animals, but also those of man. And by the numerous proofs that were accumulated, the theory became so firmly established that we now no longer speak of the bacterial "theory" but of the bacterial or parasitic origin of infectious diseases.

### TUBERCULOSIS

The study of diseases which we recognize in human beings is of special interest. First in importance among these, perhaps, is tuberculosis. Klencke (1843) and Villemin (1865) had shown that "tubercle" was infectious by injecting into rabbits tuberculous tissue and sputum and thus inducing the disease, but its real nature was not clear until Koch, in 1882, announced the discovery of the germ always found with the disease, the tubercle bacillus. The proof that this germ is the cause of tuberculosis Koch obtained entirely by carefully controlled experiments on animals. He separated the bacteria from tuberculous tissues, made the bacteria grow "pure" outside the body, injected these pure cultures into healthy animals, thereby causing tuberculosis, and then recovered from their diseased tissues bacteria in all respects like the original. Conclusive proof was thus given that tuberculosis results from growth of the tubercle bacillus. All the preventive measures in our great modern campaign against the White Plague are the outcome of these and other experiments on animals. The signs in the street cars warning against spitting are there because animal tests proved that tuberculous sputum is infectious.

Twenty-six years ago Trudeau observed that rabbits inoculated with tuberculosis recovered if kept in the open air and supplied with abundant food, whereas other rabbits similarly inoculated and placed in unfavorable conditions of light, air and food succumbed to the disease. By these observations belief in the value of dietetic and open-air treatment was confirmed; and the further demonstration of the efficacy of such care of human beings afflicted with tuberculosis has led to its universal adoption.

What have been the results of these researches on animals? From them we have learned that tuberculosis is not inherited, that it is communicable and therefore preventable, and that in its earlier stages it is curable. In most countries the death-rate from pulmonary tuberculosis has been steadily declining. In Boston, where for twenty years before 1882 (when the tubercle bacillus was discovered) the death-rate had been about 42 per ten thousand, it fell in the subsequent twenty years to 21 per ten thousand. It has since fallen to less than 18 per ten thousand. That decrease has meant a saving of thousands and thousands of human lives in the city of Boston alone. Throughout the civilized world the reduction of mortality has been incalculably great.

The alternative to these happy results has been clearly stated by Trudeau:

> If it were not for the knowledge which science has won by animal experimentation in the field of this disease in the las twenty-five years, we should still be plunged in the apathy o ignorance and despair toward it, and tuberculosis would stil be exacting its pitiless toll unheeded and unhindered.[1]

### BUBONIC PLAGUE

Another disease which has brought torment and grea disaster to man is bubonic plague. Any one who ha read of visitations of this horrifying pestilence know how mysteriously and how swiftly death spread among large populations, and with what awful terror it wa regarded. Defoe, in his "Journal of the Plague Year," in London, tells how the streets became hushed as th infection spread insidiously from parish to parish, how the carts moved about at night receiving the heaped bodies of the dead, and how the bodies were dumped pell mell and by hundreds into huge pits dug for their buria Thousands died week after week in the city. In th presence of such tragedy the fright and apprehension o the people caused homes to be abandoned, friends to fle from friends; and when the disease developed, th desperate victims often sought death by suicide or becam insane. "People in the rage of the distemper," wrot Defoe, "or in the torment of their swellings, which wa indeed intolerable, running out of their own gover ment, raving and distracted and oftentimes laying vi lent hands upon themselves, throwing themselves out windows, shooting themselves, mothers murdering the own children in their lunacy." Such was the plague i London in 1665, and such it has been in the great pop lations of the orient in which it has so often raged,

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1. Trudeau: Animal Experimentation and Tuberculosis, Defen of Research Pamphlet II, 1909.

2. In India alone, in the one year 1905, the number of record deaths from plague was 1,040,429.

The mystery of this frightful scourge was lifted when, in 1894, Yersin and Kitasato discovered the germ, *Bacillus pestis,* which invariably accompanies the disease, and when later Simond and others showed, by experiments on animals, that it was spread among rats by fleas, and could be transferred by these same insects from rats to monkeys. The rat-flea also feeds on man when its natural prey is not available. Thus was established the biologic complex by which plague becomes infectious. The attitude of the entire medical world toward the plague was changed by these discoveries, for they suggested a definite program for checking or even abruptly stopping an epidemic.[3] In former times, when physicians were baffled, the people in their fear resorted to "fortunetellers, cunning men and astrologers," or placed their faith in "antipestilential pills" and "royal antidotes." What futile weapons to combat fleas and rats! Now traps are set, rookeries and vermin-breeding hovels are torn down, and victims already infected are isolated, so that they shall not be the cause of further infection. Through such measures, where it has been possible to apply them, seriously threatening epidemics of plague have been promptly stopped, and the terror of Black Death has been largely abolished. To experiments on rats, guinea-pigs and monkeys we are indebted for this deliverance.

### DIPHTHERIA

Another disease in which marvelous benefits to human beings have been secured through animal experimentation is diphtheria. The peculiar bacteria of this disease, noted by Klebs in 1883, were separated in pure culture by Loeffler, and were inoculated into guinea-pigs and rabbits. The characteristic whitish, tough membrane formed at the seat of inoculation. Since the bacteria were found not at all scattered through the body, but only where the membrane joined the living tissues, the conclusion was drawn that death of the animals was probably due to a poison or toxin produced by the bacteria and spread through the system by the circulating blood. These experiments on animals established for all time the rôle of the diphtheria bacillus and its toxin in producing diphtheria.

An even more practical discovery in connection with this disease was that of the mechanism of immunity. In 1888, Roux and Yersin found that if bouillon in which diphtheria bacilli have been growing is filtered and injected into guinea-pigs, it is highly poisonous in very small doses. The inference that diphtheria germs kill by producing a soluble poison or toxin was thus confirmed. Two years later, von Behring and Kitasato, by injecting first small, then increasing, doses of the toxin into goats, discovered that the animals became adapted or immune to the poison, and further that the immunity depended on an antidote or antitoxin contained in the blood. And still more important and surprising, they found that blood taken from an immune animal and injected into normal animals would protect these animals against fatal doses of the toxin, or would even cure animals that had shortly before received the fatal dose. If the toxin was mixed with some of the protective blood or serum outside the body, the poison was completely neutralized; and this mixture of toxin and antitoxin, when injected, had no harmful effect whatever.[4]

It is sometimes said by opponents of animal experimentation that the injection of "diseased blood" of an animal into our bodies is loathsome. This feeling, however, indicates an entire misunderstanding of the natural processes by which our bodies are protected against bacterial poison. Our bodies, when we successfully resist a disease like diphtheria, are protected by the development of antitoxin within us, precisely as the bodies of these laboratory animals were protected against increasing doses of toxin. And when we use antitoxin in treating diphtheria we merely take from the blood of a horse, which has been rendered immune by injected toxin, some of the protective substance which the animal has developed and apply it to increase the protective substance which our own bodies are producing.

What has been the practical outcome of these experimental studies of diphtheria? Dr. Park, of the New York City Board of Health, has shown that in 1893 the death-rate from diphtheria in nineteen large cities of the world was slightly over eighty per hundred thousand population; in 1895, when the antitoxin treatment was introduced, the rate began to drop in almost all the cities; and in 1907 the rate had fallen from the eighty per hundred thousand of 1895 to seventeen per hundred thousand. That this extraordinary change has come gradually is explained by the facts that antitoxin was not at once universally employed, that the value of large doses was not at first recognized, and that the supreme importance of early treatment was not immediately demonstrated. Numerous experiences have shown the marvelous effects of instant injection as soon as the disease appears. In the New York City Hospital for Contagious Diseases among 218 patients treated on the first day there were no deaths.[5] In the Boston City Hospital there have been during the past sixteen years, among nurses, physicians and attendants in the contagious wards, 431 cases of diphtheria. All these persons have received instant treatment; there has not been a single death. The figures that have been gathered are on so large a scale, and are so striking and so precise, that it is impossible to misunderstand them. They prove definitely that the antitoxin treatment has saved from death scores of thousands of human beings.

Death from diphtheria was formerly one of the most frightful modes of death, for the growing membrane led to literal strangulation. Here is Trousseau's classic description of the disease as it occurred in children. It was written about 1870.

> The difficulty of respiration increases in severity. Every hour, or every two or three hours, a suffocative fit comes on. The suffocative attacks follow one another more rapidly, and become more and more violent. From time to time the infant, in a state of excitement which it is impossible to describe, suddenly sits up, seizes the bed-curtains and tears them with convulsive frenzy; he throws himself on the neck of his mother or of those about him, embracing them and trying to clutch whatever he can as a something to hold by. At other times it is against himself that he directs his impotent efforts, grasping violently the front of his neck, as if to tear out from it that which is suffocating him. The puffy, purple face and the haggard, sparkling eyes express the most painful anxiety and the most profound terror; the exhausted child then falls into a sort of stupor, during which respiration is difficult and hissing. The face and lips are pale, and the eyes sunken. At last, after a supreme effort to breathe, the agonies of death begin, and the struggle ends.[6]

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[3] McCoy: The Relation of Animal Experimentation to Our Knowledge of the Plague, Defense of Research Pamphlet XV, 1910.

[4] A large body of knowledge, the science of immunology, has been built on these and other experiments on the resistance of organisms to infection. See Gay: Immunology, a Medical Science Developed Through Animal Experimentation, Defense of Research Pamphlet XVII, 1910.

[5] Park: The Rôle of Animal Experimentation in the Discoveries Leading to Our Present Knowledge of the Etiology, Prevention and Cure of Diphtheria, Defense of Research Pamphlet XXII, 1911.

[6] Trousseau: Lectures on Clinical Medicine, transl. by Rose and Bazire, i, 342.

With such distressing scenes in hospitals in which diphtheria cases were received, can we wonder that it was difficult to secure nurses who would remain?

The introduction of antitoxin not only reduced the death-rate in the remarkable manner already mentioned, but greatly relieved the distress of the afflicted. The injection of the curative serum soon causes the membrane to roll up, and to be so quickly removed that in most cases the danger of suffocation does not arise. At the meeting of the American Pediatric Society in 1896, when the first experiences with the new treatment were being reported, physicians spoke of the "marvelous" effects they had witnessed, and declared that in years of practice they had never known such surprising results as antitoxin had made possible.[7]

### EPIDEMIC CEREBROSPINAL MENINGITIS

Cerebrospinal meningitis is another disease which has claimed its victims by the scores in epidemics which from time to time have swept through our communities. Its mysterious onset and its dreadful power to kill and mutilate spread consternation whenever it appeared, for the physician was helpless in its presence. About seventy-five of every 100 cases ended in death, and the twenty-five patients who survived were often left blind, deaf, paralyzed or imbecile.

The germ causing this disease was discovered by Weichselbaum in 1887, but it was not until twenty years later, in 1906 and 1907, that Flexner developed an effective treatment. This consisted in producing in the horse an antiserum, in a manner similar to that used for diphtheria antitoxin. The antimeningitis serum was first carefully tested by injecting it into the spinal canal of monkeys previously infected with cerebrospinal meningitis, with the result that the serum quickly restored the animals to health. About twenty-five monkeys were used in the course of the investigation.

Already in nearly a thousand cases of epidemic cerebrospinal meningitis[8] the death-rate has been reduced from approximately 75 per cent. to about 25 per cent. among patients treated during the first days of the illness. And even when patients treated late are included, the mortality is only slightly over 30 per cent.

The reduction of mortality, however, is not the only benefit. The curative serum greatly shortens the duration of the disease, and, what is more important, the patient usually recovers without the deafness, blindness and paralysis, and the impairment of mental power, so often the consequence in untreated patients. Dunn has contrasted the appearance of the wards of the Children's Hospital, Boston, now as compared with the preserum days. He writes:

> Formerly there were almost always to be seen wasted little patients lying with head drawn back, neck rigid, limbs twisted and paralyzed, head swollen by hydrocephalus, and other painful conditions, and remaining thus for weeks or months until death resulted. Now the little meningitis patients are soon laughing, talking, and playing with other children, and need not be kept long in the hospital.[9]

Surely this direct result of animal experimentation that has already been manifested in saving for useful lives a half-thousand human beings is to be counted among America's choicest contributions to the "relief of man's estate."

### PUS AND SURGICAL ASEPSIS

One of the earliest interests of investigators engaged in experimental medicine was the study of the nature of pus, and of blood poisoning. Pus had been regarded as so necessary for the healing of wounds that its appearance was watched for, and it was designated "laudable pus." Yet accompanying it were much distress and pain and a very high mortality. In our Civil War blood-poisoning (pyemia) was not infrequent, and had a mortality of over 97 per cent. Fifty-one per cent. of the men who had the knee-joint opened died of infection, and of those who suffered a fracture with rupture of the skin about 66 per cent. died. The abdomen and other body cavities were forbidden fields for surgical interference because death so certainly followed the operation of opening them.

Careful microscopic inspection revealed the presence in pus of numerous bacteria. Might not the bacteria cause the pus? If they were excluded might not wounds heal without becoming purulent? Working on this suggestion and on ideas that Pasteur had expressed, Lister watched the healing of surgical wounds in men, and experimental wounds in lower animals, when access of germs to the wounds was prevented by phenol (carbolic acid) sprays and special dressings. The wounds healed without pus! Later it was found that phenol could be dispensed with, and that soaping and scrubbing the skin, and steam-sterilization of instruments and bandages were sufficient precautions against purulent infection; but nevertheless Lister's studies were the beginning of modern aseptic technic. All the astonishing advances in surgery during the past forty years have been made possible through these studies, which were inspired by the results of Pasteur's experiments on animals and in which animal experimentation played a highly important rôle.[10]

Not only in the development of surgical asepsis, but also in the development of surgical operations have animals been useful to man. The surgeon knows where to approach the brain because the parts of the brain associated with different bodily activities have been discovered through physiologic experiments on monkeys The restoration of cut nerves and the proper method of suturing them have been learned through a series of physiologic experiments. Many successful operations in the abdominal cavity have resulted directly from tests previously made on animals. The possibility of excising without danger a large extent of the small intestine—an operation sometimes necessary—was thus first demonstrated. Various means of making an artificial opening between the stomach and intestine, when the natural outlet of the stomach is blocked, were also experimentall devised. Proper methods of joining the ends of th severed bowel were, likewise, first shown on animals More recently, by animal experimentation, the surger of the chest has been developed; and now apparatus ha been invented which permits operations on the hear the lungs, and other structures of the chest cavity, with out the disturbing and possibly serious collapse of th lungs—formerly a constant danger when the thora was opened. And still more recently, through operation on animals, the surgery of blood-vessels has been pe fected to such a degree that the effects of dangerou hemorrhage may be readily treated by the transfusion of blood from a friend or relative to the person in need. These are merely illustrations of the immense advances in surgery during the past thirty or forty years which have sprung directly from experimental methods applied to surgical problems. The release of mankind from distress, disability and long-lasting pain, which has been the consequence of these advances, is beyond all calculation.

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[7] Boston Med. and Surg. Jour., 1896, cxxxv, 13.

[8] This form of meningitis should not be confused with other forms; health board statistics often do not differentiate the various types.

[9] Dunn: Animal Experimentation in Relation to Epidemic Cerebrospinal Meningitis, Defense of Research Pamphlet XXI, 1911.

[10] Keen: Modern Antiseptic Surgery and the Rôle of Exper ment in Its Discovery and Development, Defense of Resear Pamphlet XII, 1910.

### CHILD-BED FEVER

Similar to the infection of surgical wounds was child-bed fever. Gordon (1792), Oliver Wendell Holmes (1843) and Semmelweis (1847) had urged that this curse of motherhood was contagious and borne from patient to patient by the attending doctor, but little attention was paid to these claims until Pasteur cultivated the bacteria (streptococcus) from puerperal infection, and by experiments on rabbits demonstrated its power to produce blood-poisoning. The enormous mortality in the maternity hospitals before child-bed fever began to be treated as a disease of bacterial origin is not now well remembered. Not infrequently in former times these hospitals were regarded as the very portals of death. In all countries the death-rate ranged between 2 and 7 per cent. and at times rose to 14, 20 and once, in the Maternité in Paris, to the appalling height of 57 per cent.! In the sixty years ending with 1875, 363,624 women had died of puerperal fever in Prussia alone. Puerperal epidemics were said to be to woman what war is to man. "Like war they destroy the most healthy, the bravest and the most useful portion of the population; like war they take subjects in the flower of their age and spread terror and desolation throughout the territory which they devastate." These sentences were written in 1870.

In 1879, at a memorable meeting of the Academy of Medicine in Paris, the writer of the above sentences was explaining death from puerperal fever as due to atmospheric influences, overcrowding, the tainted air of old wards, or the power of mind over body, and had expressed his disdain for bacterial contagion by predicting that he expected to be long dead before the specific bacterium was discovered, when Pasteur arose, seized a piece of chalk, and drew on the blackboard outlines of the streptococcus. "There!" he exclaimed. "That is the shape of it!"

By use of asepsis, proved effective in preventing wound infection, the mortality from child-bed fever in hospitals has fallen to the neighborhood of 0.1 per cent.—which means an immeasurable reduction of human misery, and the preservation of numberless lives at a time of supreme importance to family and racial welfare.[11]

### THE DISCOVERY OF USEFUL DRUGS

Mankind has benefited from animals, not only in learning the bacterial transmission of various diseases and in the improvement of surgical technic, but also in the discovery of useful drugs. Indeed the whole modern science of drug-action is founded on animal experimentation. Consider for a moment what blessings have come from such investigations. All the drugs producing sleep which have been discovered during the past forty years have been discovered by experiments on animals. All the local anesthetics, as cocain, for example, rendering small surgical operations painless, have been discovered by experiments on animals. The only drug which will give prompt relief from the distress of angina pectoris is amyl nitrite—a drug which was discovered during experimentation on animals. All modern drugs for reducing fever; the cardiac tonic, strophanthus; the diuretics, caffein and theobromin; the emetic, apomorphin—were all introduced through experiments on animals. These do not by any means exhaust the list of medicaments discovered by the experimental method applied in pharmacology. Nor do they indicate all the uses of the method in that new science. Through tests on animals, some drugs whose worth was known have had their action more precisely defined; digitalis, for instance, is one of these. Others have been proved harmful; and still others have had their activity standardized. One of the most interesting examples of the use of animals to test the efficacy of drugs is that of ergot—a drug employed to stop hemorrhage, particularly the dangerous hemorrhage that sometimes follows childbirth. Ergot can thus be tested on an animal and proved potent before being placed in the hands of a physician, or it can be tested for the first time on a woman who is bleeding to death—the choice has to be made.

### SYPHILIS AND SALVARSAN

A most thrilling recent development in the study of drug action is the discovery by Ehrlich that through extensive selection chemicals can be found which affect specifically the invading germs, with little or no injury to the patient. This discovery has been utilized especially in the treatment of one of the most calamitous and ravaging of diseases, syphilis. In 1903, experimentation with this disease was made possible by Metchnikoff and Roux, who learned that it could be transmitted to monkeys. Later Schaudinn and Hoffmann found the microorganism of the disease, and soon its presence in inoculated animals was demonstrated. At almost the same time, by means of animal experiments, a biologic test, the "Wassermann reaction," was devised, which, when positive, proves the existence of the disease, even in the absence of other signs or symptoms. The value of this test in cases of doubtful diagnosis, or in latent syphilis, is immeasurable. All this experimentation prepared the way for Ehrlich's triumph. After the manufacture and trial of hundreds of substances, Ehrlich found one, number 606 in the series, now known as salvarsan, which when injected into a syphilitic rabbit caused the microorganisms entirely to disappear, and without injury to the rabbit. Then the drug was tested on dogs, without injury. Then two laboratory assistants volunteered to demonstrate the safety of injecting human beings. Only after this was the drug tried on patients. That was hardly two years ago. Even if the final judgment regarding salvarsan sets limits to the first hopes, nevertheless the astonishing results that have already been achieved prove that Ehrlich's experiments on rabbits have added an agency of greatest importance in treating this ancient scourge of social life.[12]

### THE USE OF ANIMALS FOR DIAGNOSIS

Prominent among the services of animal experimentation is that of helping in the diagnosis of disease. The *early* diagnosis of infectious disease is essential both for the treatment of individuals and for the prevention of epidemics. We depend on animal tests for determining many of the most serious, socially dangerous afflictions. In tuberculosis, for example, hope lies in early recognition of the nature of the illness. In the first stages the few tubercle bacilli in the sputum may not be observed under the microscope, yet the same material injected into a guinea-pig will clearly demonstrate their presence.

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[11] Williams: Obstetrics and Animal Experimentation, Defense of Research Pamphlet XVIII, 1911.

[12] Churchman: The Value of Animal Experimentation as Illustrated by Recent Advances in the Study of Syphilis, Defense of Research Pamphlet XX, 1911.

Cultures of the typhoid bacillus, injected into animals, will induce in the blood of the injected animals power to cause typhoid bacilli, and typhoid bacilli alone, to gather in clumps. Thus the blood of the injected animals can be used to detect the presence of typhoid bacilli in suspected persons as, for example, the apparently normal bacillus-carriers, who are such a menace to public health.

Cholera-carriers, and persons afflicted with cholera in mild form, can be discovered by the same method. Indeed the protection of a country from invasion by cholera involves measures in which diagnosis by animal tests is a very important procedure. When we consider that in a single epidemic many thousands have died, and that wide-spread disturbances of commerce and industry have resulted, we can understand the essential value of finding and controlling the first cases.

In the diagnosis of plague, and to a more or less degree in the diagnosis of dysentery, Malta fever, anthrax, glanders, actinomycosis and other microparasitic diseases, animal tests often play an essential rôle.[13]

More and more we are depending on prevention rather than cure to reduce mortality. Without the means of early and correct recognition of the infectious diseases which animal tests have largely provided, the sanitarians, who stand as sentinels in our great cities and along our coasts, would be deprived of their weapons of defense and be rendered useless as protectors of the public health.

### PHYSIOLOGY

The first of the medical sciences to use experimental methods was physiology—the science of the normal working of organs. The abnormal working of organs in disease is necessarily measured by the normal standard which physiologic investigation has revealed. Take away from physiologic knowledge that which is based on animal experimentation and almost nothing would be left! Probably no system in the body more frequently requires earnest study by the physician than the circulatory system. As Erlanger has shown, with much thoroughness, practically all that we know of the course of events in the heart, the proper interpretation of the cardiac sounds, the factors determining blood-pressure, the nervous control of heart and arteries, the intelligent treatment of cardiovascular disease—all have resulted from studies on animals.[14] What is true of the circulation is true also of digestion. Through the activities of a succession of investigators who experimented on animals, we now know the changes which food undergoes in each portion of the alimentary canal, the nature of the digestive juices, the condition under which they are poured out and, to a large degree, the causes and character of digestive disorders. Similarly we are now securing, through the brilliant researches of Sherrington and others, illuminating insight into some of the intricacies of the nervous system. These and many other notable contributions to physiology which almost daily stir our wonder at the marvelous organization of the body are the direct outcome of experiments on animals. It cannot be too strongly emphasized that almost the entire structure of physiologic knowledge on which the modern physician bases his judgment—knowledge which to the practitioner makes all the difference between understanding and blind bewilderment—has grown from the application of the experimental method.

### CRETINISM

Physiology in cooperation with clinical medicine has also contributed directly to the cure of human diseases. The distressing malady known as cretinism is due to absence of the thyroid gland from birth. Formerly cretins spent their lives as imbeciles, stunted in stature and hideous in appearance. The semibestial aspect, blubber-lips, turned-up nose sunken at the root, wide-open mouth, lolling tongue, small eyes with swollen lids half closed, the stolid expression of the face, the muddy, dry skin—all combined to make a monstrous creature. The physiologic experiments of Schiff showed that implantation of the thyroid gland in the body would prevent the changes caused by extirpation. Then it was discovered that feeding the gland or injecting the gland-extract was as good as implantation. And now absence of the thyroid can be compensated for by administering by mouth either thyroids, or tablets which contain the essential substance, derived from lower animals. The transformation that occurs in the cretinous idiots, when treated early, is nothing short of miraculous. As Osler has said:

> Not the magic wand of Prospero, or the brave kiss of the daughter of Hippocrates, ever effected such a change as that which we are now enabled to make in these unfortunate victims, doomed hitherto to live in hopeless imbecility, unspeakable afflictions to their parents and to their relatives.

### ANIMAL DISEASES

I have now presented evidence which proves that ou knowledge of the disastrous infections and our consequent ability to control them, both in individuals an in communities, have been derived directly from repeated carefully-planned experiments. The immense saving o life which has resulted is not confined to human beings however, but is shared by the lower animals as well. need only mention tuberculosis, anthrax, glanders, hog cholera, Texas fever and rabies, to indicate disease which have in the past caused the destruction of domesti herds in enormous numbers, with vast economic losses Happily the measures taken to protect the lower animal against infection can be more rigorously enforced tha those used to save human life, and the results therefor are all the more striking. By means of preventive measures and by protective inoculations, some diseases o cattle have been entirely abolished in this country, an others have been so promptly and radically dealt wit that they have seldom made serious headway.[15]

### PREVENTIVE MEDICINE

That there is the same possibility of protecting huma beings against diphtheria and rabies, against malari and yellow fever, and against many other infections ha long been known.

The oldest of the protective measures is that of va cination against small-pox. This ravaging pestilen has been reduced, in a most striking manner, in eve civilized country in which vaccination has been employe

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[13] Rosenau: The Rôle of Animal Experimentation in the Diagnosis of Disease, Defense of Research Pamphlet III, 1909. Also Richardson: Animal Experimentation in the Development of Our Knowledge of Dysentery, Cholera and Typhoid Fever, Defense of Research Pamphlet VIII, 1910.

[14] Erlanger: Animal Experimentation in Relation to Practical Knowledge of the Circulation, Defense of Research Pamphlet XIII, 1910.

[15] Moore: Animal Experimentation; The Protection It Affor to Animals Themselves and Its Value to the Live-Stock Industry the Country, Defense of Research Pamphlet VI, 1909.

Furthermore, the reduction of the disease and mortality has corresponded directly to the thoroughness with which the populations have been vaccinated and revaccinated. Germany, for example, has had no epidemic of small-pox since the compulsory vaccination law went into effect thirty-eight years ago, whereas in Persia and Asiatic Russia, where vaccination is neglected, small-pox is still a death-dealing scourge.[16] The claim that the disappearance of the disease is due to a general betterment of sanitation is not supported by our recent experience in the Philippine Islands. The six provinces near Manila, with a population of about one million people, had a record of over 6,000 deaths from small-pox annually before 1907. In 1907, vaccination was completed in these provinces. Since that year, in the six provinces, not one person who had been successfully vaccinated has died of small-pox and only a few cases have occurred among all classes.[17] Inasmuch as animals are used in securing the virus, these triumphs of preventive measures against the disease must be attributed to operations on animals.

Through the application of antirabic virus, death from hydrophobia—a hideous death—has fallen from between 6 and 14 per cent. of persons bitten by rabid animals to a fraction of 1 per cent.; more than 400 persons were bitten by mad dogs and treated by the virus in Paris in 1910, and there was not a single death. Any one who has read the life of Pasteur knows the dramatic story of his experiments on rabbits and his thrilling success in the very first human patients whom he treated. The conquest of rabies must be regarded as one of the greatest services rendered by animals to their fellow-beings.[18]

Another victory in the campaign to reduce illness and mortality has been won in the fight against mosquito-borne infections. Yellow fever and malignant malaria contributed more than any other one cause to the failure of the French to build the Panama Canal. The present remarkable freedom from these diseases at the canal, which is permitting the triumphal completion of that stupendous work, is highest testimony to the efficacy of preventive medicine when well-known methods of control can be thoroughly enforced.[19]

Of the volunteer regiments mobilized during the Spanish-American War, 90 per cent. became infected with typhoid within the first eight weeks after mobilization. In the entire army nearly 21,000 men were disabled by this disease and more than 1,600 died of it. Last year 12,800 men of the American army were mobilized at San Antonio, Tex., for several months. Only *one* case of typhoid fever, that of a hospital attendant not yet immunized, appeared in the entire force. That this extraordinary phenomenon was due to protective inoculation against typhoid infection, which each soldier received before going into encampment, is indicated by the prevalence of typhoid in San Antonio during the period. The experience of the British army in India has been similar.

The entire modern process of protective inoculation is a direct outgrowth of artificial immunity previously demonstrated in animals (Richardson[13]). And the sole hope of rendering wide areas of tropical country fit for civilized society rests on the possibility of eradicating native diseases through the well-tested and efficacious methods of preventive medicine.

### ANTIVIVISECTIONISTS AND THEIR METHODS

Such, then, are some of the benefits to man and to lower animals of the experimental method applied to medical problems. In spite of these benefits, however, strong hostility to this method of studying disease is felt by certain persons who call themselves "antivivisectionists." These persons have no direct acquaintance with the conditions of experimentation; many of them scorn the evidence that any advantage to man has come from studies on animals; to support their contentions they send broadcast pamphlets in which are printed hostile opinions of medical men who are long since dead, men who had no conception of the merciful procedures of modern experimentation and its life-giving results; or they quote the testimony of spurious experts whose reputations were made in literature, art or theology, and not in the service of healing. However well-meaning there motives may be, their literature for years has been characterized by fraud and trickery and evil insinuation which have been repeatedly pointed out, but with no effect.[20] These methods of American antivivisectionists duplicate those of the English. The Royal Commission, which has just reported after five years of study and consideration, has declared of the antivivisectionists, their "harrowing descriptions and illustrations of operations inflicted on animals, which are freely circulated by post, advertisement or otherwise, are in many cases calculated to mislead the public." Both in this country and abroad, therefore, the active antivivisectionists have sought, through garbled statements, false evidence and inaccurate description, to cast such discredit on medical research as to give the impression that pain and premature death cannot be escaped through application of the experimental method.

### THE ETHICAL QUESTION

Even when these reactionaries grant somewhat grudgingly that the distress of living creatures has been diminished by animal experimentation, they contend that the method of securing this result was immoral and is therefore unjustifiable. What renders the experimental use of animals immoral is difficult to understand when we consider other uses to which they are put. We force the harnessed horse to work, and in time of crisis, we drive him with lash and spur. We rob the mother cow of her calf, and than appropriate her milk. We permit the dehorning of cattle and their branding with hot irons. We do not object to the most shocking barn-yard operations, performed (without the sniff of an anesthetic) merely to make more palatable the flesh we eat. We slaughter ruthlessly, for sport, myriads of birds and beasts. Myriads more we slaughter for their furs and feathers. We kill for food every year in this country more than 50,000,000 beeves, sheep and hogs, and also 250,000,000 chickens, turkeys, ducks and geese. In nineteen of the largest cities in the United States more than 350,000 dogs and cats are destroyed annually, merely to clear the streets. Vermin and wild animals we subject to death in uncertain traps or end their existence with distressing poisons. If all injury and destruction of animal life is immoral, why select as an object for attack the treatment of the relatively few animals employed in the laboratories with the object of reducing pain and suffering in the world?

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[16] Schamberg: Vaccination and Its Relation to Animal Experimentation, Defense of Research Pamphlet I, 1911.

[17] Heiser: Public Health Reports, 1911, p. 277.

[18] Frothingham: The History, Prevalence and Prevention of Rabies, and Its Relation to Animal Experimentation, Defense of Research Pamphlet VII, 1910.

[19] Marshall: Animal Experimentation in Relation to Protozoan Tropical Diseases, Defense of Research Pamphlet XI, 1910.

[20] Cannon: Characteristics of Antivivisection Literature, Defense of Research Pamphlet XIX, 1911.

Surely the life of lower animals is not so sacred that we cannot utilize it for our own betterment. Society protects itself from harm by holding in quarantine dangerous human beings, or by incarcerating them, or even by killing them. If attacked by a foreign foe, society does not hesitate to send into battle its young men, chosen for their strength, to suffer grievous wounds and death for the social welfare. Such necessary sacrifices of our fellow men are among the tragedies of social existence. The sacrifices of animals, in various ways so essential to the continuance of the human race, may be regarded as among the tragedies of their existence. But of all these, what sacrifices could be more thoroughly justified morally than those of experimentation, which have contributed so greatly to the reduction of suffering and to prolongation of life, both for men and the animals themselves?[21]

### PRECAUTIONS AGAINST PAIN

I do not wish to give the impression that any one engaged in animal experimentation would, under any circumstances, justify the infliction of needless pain. That animals are in fact used humanely for the purposes of medical research has been again and again maintained and demonstrated whenever the question has been carefully examined. The English laboratory inspectors and the English Royal Commission are unanimous in testifying to the absence of cruelty in experimental procedures. In this country practically all institutions in which animals are used for medical and biologic research have adopted, by public and corporate action, regulations which place control of experimentation with the laboratory director. These regulations provide for the bodily comfort and the sanitary surroundings of the animals, and require all operations to be sanctioned by the director, who is held responsible for the importance of the problems studied and the propriety of the laboratory procedures. Furthermore, the regulations require all operations likely to cause greater discomfort than anesthetization itself to be done under anesthesia, and to be followed by painless death. Only the director can make exceptions to these last provisions, and he can do so only in the rare cases in which anesthesia or death of the animal would defeat the object of the experiments.[22]

The laboratory director, of all men, is most likely to know what is being done by those about him; more than any one else he is responsible to his institution, to the public interests and to his professional ideal; and his position is a warrant of his trustworthiness. To the laboratory director, therefore, the medical profession looks for the exercise of that enlightened compassion which lies at the heart of all medical service.

### OBJECTIONS TO PROPOSED LEGISLATION

In spite of accumulated evidence that animal experimentation is conducted in a humane manner in this country, and that strict precautions have been taken against infliction of unnecessary pain, every year in one state or another a "mild" restrictive bill is alluringly presented by the antivivisectionists. Its ostensible purpose is, not to prevent "legitimate vivisection" by responsible investigators, but to stop the practice among the unskilled—for example, the medical student in his room. Examination of the bill reveals, however, that no provision is made for spying on the medical student in his room, but that every arrangement is made for inspection of the responsible investigators. To many persons inspection seems reasonable; they approve of going at least so far with the petitioners for legislation. The medical profession, however, has in the main offered objections to the proposed inspection.[23]

These objections are based to some extent on the attitude of the antivivisectionists toward inspection as it has been carried on in England during the past thirty-six years. During all this period no noteworthy abuse of animal experimentation has been revealed by the inspectors. The inference drawn by the antivivisectionists is that occasional inspection is futile; indeed, they declare that, unless an inspector is in the laboratories continuously during all operations, horrible abuse of animals is sure to occur.[24] The impossibility of providing for such constant oversight would suggest to a person of common sense that a reasonable reliance be placed on the good will and natural humanity of those engaged in research. The agitators in this country, however, have argued that when danger of wrong exists, as in the conduct of a bank, for example, inspection is provided, and therefore laboratory inspection should be provided. An important defect in this argument rests in its application. For the inspection of banks experts in banking are appointed, but for the inspection of laboratories experts in experimentation are definitely excluded in the proposed legislation. For this important work the antivivisectionists desire only their own representatives. In the opinion of the experimenters such persons, untrained in observing and judging animal reactions, and lacking any insight whatever into the extraordinary complexities of medical investigation, are thoroughly incompetent. Indeed the most charitable interpretation to be placed on the ridiculously false and misleading statements continually made by these persons is that they are profoundly ignorant of processes which the laboratory workers have spent many years in learning—the most involved and entangled processes in nature, those occurring in highly organized animals.

Apart from objecting to inspection because it has not satisfied the antivivisectionists themselves, because it has not revealed abuses and because incompetent inspectors are insisted on, we may reasonably regard it as merely the first step in an effort to stop experimental medicine absolutely. In Great Britain, where legal restriction has gone farthest, there are no less than fifteen antivivisection societies urging that experiments on animals be abolished. In this country there are at least six such organizations whose aim likewise, expressed or implied, is abolition. The agitation for "mild" bills, for inspection or for slight restriction by these groups of agitator is, under the circumstances, properly regarded as merely the initial move toward total suppression of what ha been demonstrated in these last sixty years as the most powerful instrument of medical progress that has bee devised.

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[21] For further discussion, see Angell: The Ethics of Animal Experimentation, Defense of Research Pamphlet V, 1909.

[22] Cannon: Medical Control of Vivisection, Defense of Research Pamphlet XVI, 1910.

[23] It is, perhaps, unnecessary at this point to indicate th absurdity of the cry for the "open door." No one of insight an judgment is excluded from laboratories of medical research. I fact, in every laboratory with which I am acquainted the doors ar freely open to biologists and persons with medical training. To b sure, not everybody is welcomed, but not everybody is welcomed t a hospital operation. The surgeon, operating in a home does n permit the "open door;" he even goes so far as to exclude clos relatives of the patient. Yet he does not become thereby the obje of malignant suspicion.

[24] Minutes of Evidence, English Parliamentary Commission Vivisection, 1905-6, Coleridge's testimony, *passim.*

### THE TWO PARTIES

The issue then is joined. On the one side are the antivivisectionists who insist that animals shall not be experimented on, even though mankind may thereby be saved throughout coming centuries from pain and premature death. On the other side are the investigators, successors of those who first applied to medical problems the experimental method, a method which, besides delivering into our hands the unlimited energies of the physical world, has in a few decades wrought marvelous advances in our ability to conserve human life. These men realize that numerous sources of distress are still unexplained. Measles, scarlet fever, infantile paralysis, fatal diseases of the kidneys and liver, cerebral degenerations, the awful scourge of cancer[25]—almost all progress in our knowledge of these afflictions has come from experiments on animals—but how much more remains to be accomplished! Men and women and children, whose suffering extends to every one bound to them by the strong ties of love and sympathy, daily go down to death because the disease is a mystery and its cure unknown. Who shall say that experimental medicine shall not continue to bring its blessings? In the eager search for more light, who shall decide the critical case involving pain to animals? The antivivisectionists maintain that they should decide: the physicians, on the contrary, urge that the decision remain in their control. The antivivisectionists, ignorant of the problems and methods of medical research, limit their humanity to the welfare of the laboratory animals. The physicians, perceiving that more power to fight disease can only come from more knowledge, trust the deeper humanity of the investigators who are seeking that knowledge. In the end society, which reaps the benefit of medical progress, must determine which of these contending parties shall prevail.

240 Longwood Avenue.

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# HOOKWORM AMONG ORIENTAL IMMIGRANTS *

M. W. GLOVER, M.D.
Passed Assistant Surgeon, United States Public Health and Marine-Hospital Service
ANGEL ISLAND, CAL.

The Immigration Act regulating the admission of aliens into the United States provides for a medical examination to be conducted by officers of the Public Health and Marine-Hospital Service. The purpose of his examination is twofold: First, to prevent the introduction into this country of contagious disease of a dangerous or loathsome character, and, second, to weed out the physical or mental incompetents who are likely o become public charges.

Recently attention was directed to the introduction of hookworm by aliens arriving at the port of San Francisco from the Orient. This infection has been classed among the dangerous contagious diseases whose admission is prohibited. A routine examination of the stools of the aliens passing through the immigration station on Angel Island was attempted. For many reasons it was neither possible nor advisable to examine all, but from Sept. 23, 1910, to Nov. 30, 1911, the stools of 2,255 aliens were examined microscopically for the ova of the hookworm. Of this number, 1,077 were found to contain the eggs of either the *Necator americanus* or the *Ankylostoma duodenale*.

While this examination was undertaken primarily to determine whether or not the alien harbored the hookworm, note was made of the presence of the ova of other intestinal parasites, and, after Nov. 28, 1910, a permanent record of the findings was kept. Prior to that date, unfortunately, the records were loosely kept and, in the confusion incident to alterations to the hospital building, were lost.

It was during the period from Sept. 23 to Nov. 28, 1910, that the greater number of Hindus were examined. Among these, 63 per cent. were found to be infected with hookworm. The number of Hindus rejected for this condition was so great as effectually to check the immigration of this class of Orientals, which was then assuming embarrassing proportions. None of the examinations made during this period is recorded in the tables submitted herewith. It may be stated, however, that, as a rule, the stools of the Hindus were remarkably free from the eggs of other animal parasites.

These Hindus were for the most part unskilled laborers from the Punjab, and wholly of the male sex. The absence of the common parasites from their intestines was in most striking contrast to the Chinese and Japanese examined. It is a question whether or not their rigid religious ritual concerning foodstuffs, their preparation, etc., offer a satisfactory explanation of the absence of the *Trichuris* and *Ascaris*. Thirty-five per cent. of the stools of Hindus were negative, i. e., no ova of any variety could be found.

The technic of the examination at this station has passed through many phases, and at the present time an electric centrifuge is used, as this enables the greatest amount of work to be done in the shortest length of time with the minimum amount of personal discomfort. An attendant, after making a solution of a small portion of the stool, centrifuges it, washing until the supernatant fluid is colorless, and then carries the tube to the laboratory for the microscopic examination. A smear is made of a portion of the sediment in distilled water and examined, without a cover-glass, through the 16 mm. objective, 5 × ocular. Owing to the necessity for a quick report, only one slide is examined. I believe, however, that the percentage missed is very small. Ova of both varieties of hookworm have been observed in the stools of Chinese and Japanese (not infrequently both being found in the one stool), but, so far, the Hindu has yielded only the *Ankylostoma*. Eggs of parasites other than those mentioned in the table have occasionally been encountered, but as the identification was somewhat uncertain, they have not been included.

It should, perhaps, be stated that in these tabulated statements the subjects of examination were not selected, but were taken without regard to any clinical evidence of the infection they might have presented.

During this time seventeen whites (eleven males and six females) were examined, fifteen from Mexico, one from Central America and one from Russia. Two, one male (15-30) and one female (14 years old), both from Mexico, were found to be infected with hookworm.

In drawing any conclusions from the above tables as to the relative prevalence of intestinal parasites among Orientals at various ages, it should be remembered that only the comparatively young emigrate. Especially is this so in the case of Chinese among whom the exclusion act limits the newcomers to the minor sons of Chinese

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[25] Ewing: Animal Experimentation and Cancer, Defense of Research Pamphlet IV, 1909.

* Read before the San Francisco County Medical Society, March 2, 1912.

### IMMIGRANTS GROUPED ACCORDING TO RACE, SEX AND AGE

Nos. of Japanese Females by Age Periods

| Parasites | 0–14 | 15–30 | 31–50 | 51 | Total |
|---|---|---|---|---|---|
| Roundworms | 0 | 52 | 5 | 0 | 57 |
| Round- and whipworms | 1 | 144 | 14 | 0 | 159 |
| Whipworms | 1 | 38 | 6 | 0 | 45 |
| Round- and hookworms | 2 | 118 | 10 | 0 | 130 |
| Whip- and hookworms | 0 | 34 | 4 | 0 | 38 |
| Round-, whip- and hookworms | 2 | 154 | 14 | 1 | 171 |
| Round-, thread- and hookworms | 0 | 1 | 0 | 0 | 1 |
| Round, whip-, thread- and hookworms | 0 | 1 | 1 | 0 | 2 |
| Whip-, thread- and hookworms | 0 | 1 | 0 | 0 | 1 |
| Hookworms alone | 1 | 51 | 6 | 0 | 58 |
| Negative | 1 | 40 | 4 | 0 | 45 |
| Totals | 8 | 634 | 64 | 1 | 707 |

Nos. of Japanese Males by Age Periods

| Parasites | 0–14 | 15–30 | 31–50 | 51 | Total |
|---|---|---|---|---|---|
| Roundworms | 0 | 5 | 5 | 0 | 10 |
| Round- and whipworms | 2 | 6 | 5 | 1 | 14 |
| Whipworms | 0 | 3 | 4 | 0 | 7 |
| Round- and hookworms | 0 | 12 | 9 | 0 | 21 |
| Whip- and hookworms | 0 | 0 | 2 | 0 | 2 |
| Round-, whip- and hookworms | 3 | 11 | 1 | 1 | 16 |
| Hookworms alone | 0 | 9 | 2 | 0 | 11 |
| Negative | 2 | 5 | 2 | 0 | 9 |
| Totals | 7 | 51 | 30 | 2 | 90 |

Nos. of Chinese Males by Age Periods

| Parasites | 0–14 | 15–30 | 31–50 | 51 | Total |
|---|---|---|---|---|---|
| Roundworms | 3 | 48 | 106 | 17 | 174 |
| Round- and thread worms | 0 | 1 | 0 | 0 | 1 |
| Round- and whipworms | 32 | 171 | 60 | 12 | 275 |
| Whipworms | 1 | 23 | 12 | 1 | 37 |
| Round- and hookworms | 10 | 52 | 25 | 1 | 88 |
| Whip- and hookworms | 6 | 17 | 2 | 0 | 25 |
| Round-, whip- and hookworms | 45 | 182 | 21 | 3 | 251 |
| Hookworms alone | 0 | 19 | 6 | 1 | 26 |
| Negative | 1 | 35 | 75 | 14 | 125 |
| Totals | 98 | 548 | 307 | 49 | 1,002 |

Nos. of Chinese Females by Age Periods

| Parasites | 0–14 | 15–30 | 31–50 | 51 | Total |
|---|---|---|---|---|---|
| Roundworms | 2 | 2 | 0 | 0 | 4 |
| Round- and whipworms | 0 | 9 | 0 | 0 | 9 |
| Whipworms | 1 | 1 | 1 | 0 | 3 |
| Round-, whip- and hookworms | 0 | 5 | 0 | 0 | 5 |
| Hookworms alone | 0 | 0 | 1 | 0 | 1 |
| Negative | 0 | 6 | 2 | 0 | 8 |
| Totals | 3 | 23 | 4 | 0 | 30 |

Nos. of Hindu Males by Age Periods

| Parasites | 0–14 | 15–30 | 31–50 | 51 | Total |
|---|---|---|---|---|---|
| Roundworms | 0 | 4 | 1 | 0 | 5 |
| Round- and whipworms | 2 | 2 | 0 | 0 | 4 |
| Whipworms | 0 | 1 | 0 | 0 | 1 |
| Round- and hookworms | 1 | 4 | 0 | 0 | 5 |
| Whip- and hookworms | 0 | 1 | 0 | 0 | 1 |
| Round-, whip- and hookworms | 0 | 0 | 1 | 0 | 1 |
| Round, whip-, thread- and hookworms | 0 | 1 | 0 | 0 | 1 |
| Thread- and hookworms | 0 | 1 | 0 | 0 | 1 |
| Hookworms alone | 2 | 15 | 3 | 0 | 20 |
| Negative | 0 | 7 | 0 | 0 | 7 |
| Totals | 5 | 36 | 5 | 0 | 46 |

### IMMIGRANTS GROUPED ACCORDING TO RACE, SEX AND AGE —Continued

Nos. of Hindu Females by Age Periods

| Parasites | 0–14 | 15–30 | 31–50 | 51 | Total |
|---|---|---|---|---|---|
| Roundworms | 0 | 1 | 0 | 0 | 1 |
| Hookworms | 1 | 2 | 0 | 1 | 4 |
| Negative | 0 | 1 | 0 | 0 | 1 |
| Totals | 1 | 4 | 0 | 1 | 6 |

The incidence of hookworm infection among the Orientals may be conveniently grouped thus:

Japanese Females

| Age Periods | No. Infected | No. Examined | Per Cent. |
|---|---|---|---|
| 0-14 | 5 | 8 | 62.5 |
| 15-30 | 360 | 634 | 56.7 |
| 31-50 | 35 | 64 | 54.6 |
| 51 plus | 1 | 1 | 100.0 |
| Totals | 401 | 707 | 56.7 |

Japanese Males

| Age Periods | No. Infected | No. Examined | Per Cent. |
|---|---|---|---|
| 0-14 | 3 | 7 | 42.8 |
| 15-30 | 32 | 51 | 62.7 |
| 31-50 | 14 | 30 | 46.6 |
| 51 plus | 1 | 2 | 50.0 |
| Totals | 50 | 90 | 55.5 |

Chinese Males

| Age Periods | No. Infected | No. Examined | Per Cent. |
|---|---|---|---|
| 0-14 | 61 | 98 | 62.2 |
| 15-30 | 270 | 548 | 49.2 |
| 31-50 | 54 | 307 | 17.5 |
| 51 plus | 5 | 49 | 10.2 |
| Totals | 390 | 1,002 | 38.9 |

Chinese Females

| Age Periods | No. Infected | No. Examined | Per Cent. |
|---|---|---|---|
| 0-14 | . | 3 | .... |
| 15-30 | 5 | 23 | 21.7 |
| 31-50 | 1 | 4 | 25.0 |
| 51 plus | . | .. | .... |
| Totals | 6 | 30 | 20.0 |

Hindu Males (Subsequent to Nov. 28, 1910)

| Age Periods | No. Infected | No. Examined | Per Cent. |
|---|---|---|---|
| 0-14 | 3 | 5 | 60.0 |
| 15-30 | 22 | 36 | 61.0 |
| 31-50 | 4 | 5 | 80.0 |
| 51 plus | .. | .. | .... |
| Totals | 29 | 46 | 63 plus |

IMMIGRANTS GROUPED ACCORDING TO RACE, SEX AND AGE —Continued

HINDU FEMALES (Subsequent to Nov. 28, 1910)

| Age Periods | No. Infected | No. Examined | Per Cent. |
|---|---|---|---|
| 0.14...... | 1 | 1 | 100.00 |
| 15-30...... | 2 | 4 | 50.00 |
| 31-50...... | . | . | ...... |
| 51 plus.... | 1 | 1 | 100.00 |
| Totals.. | 4 | 6 | 66.66 |

already in the United States or to students, merchants, tourists, etc. The greater number of the Chinese men between the ages of 31 and 50 are returning aliens, i. e., they have been in the United States for years prior to a visit to China, while practically all of those of 51 years or more are of this class.

The greater prevalence of hookworm among Japanese women as compared with Chinese will be noted, but here the social condition must be taken into consideration before making any sweeping deductions. The Japanese women are, for the most part, country girls who have been working barefooted in the fields, while the Chinese women are the wives or daughters of merchants and mostly house women.

When one considers, however, the conditions under which the great majority of the Japanese women, figured above, come to the United States, one is induced to conclude that hookworm infection is more prevalent than this examination would indicate, at least in the districts mostly involved, viz., the kens or countries of Fukuoka, Kumamoto, Hiroshima and Tottori. These women have been more or less carefully selected on the ground of health and looks, since they come to the United States to become the wives of Japanese men now resident in this country. They are what is locally known as "picture brides," the marriage having been recorded in Japan by photographs of the contracting parties.

The conclusion that hookworm is very prevalent in Japan, or at least in some sections thereof, is further borne out by the fact that the immigration of the Japanese male coolie is practically *nil* at this time, and the Japanese males figured in the tables are either returning aliens or merchants, students, etc. Occasion was taken to examine the stools of fifty-two Japanese coolies who were *en route* from Japan to Tahiti in the South Seas and who were held on the station pending transshipment. Of these, forty-eight (92.3 per cent.) were found to harbor uncinarias in their intestinal tracts. As they were not entering the United States, they are not included in the tables above.

While there seems at first glance to be little or no clinical evidence of hookworm infection in the majority of these cases, experience soon leads one to recognize the slight differences, and even our attendants after a short time are able to pick the infected from the non-infected. There is a certain amount of anemia, which I believe to be most noticeable in the lips, a peculiar muddy complexion, often with a listless facies, and a lusterless appearance of the hair characterizing the hookworm infected at this port. Hemic murmurs are rather common. So far as subjective symptoms go, we have learned nothing at the immigration station. It is useless to ask an alien if he has any symptoms of a disease. He is invariably in perfect health according to his own statements, or if he should be so unfortunate as to possess some outward visible evidence of disease he either had it "since little boy" or "ketch him aboard ship just before come here." It is very seldom that one sees here what Ashford classes as severe cases. Such a patient would very likely be refused passage by the ship's doctor on general principles. We do, however, see many cases in which puberty has apparently been delayed through hookworm infection. The recognition of the influence of hookworm in retarding growth and development has cleared up what has frequently puzzled the officials administering the Chinese exclusion act, viz., the apparent discrepancy between the age claimed by a minor son of a Chinese merchant and the appearance of the applicant himself. Heretofore, when a Chinaman applied for the admission of his 18-year-old son and presented a small undersized lad of apparently 12 or 15 years of age, it was regarded as a slip in the technic of an endeavor to evade the Chinese exclusion act, and what was really an evidence of good faith worked to his detriment.

Before concluding, I cannot forbear to call attention to the important influence that Oriental immigration may have on the medical history of our country. It is not only hookworm and other intestinal parasites, but many other tropical diseases that may be imported into southwestern United States. Filariasis, amebiasis and malarial infections have been found among Orientals applying at San Francisco for admission. It would be well for practitioners in these localities to bear such diseases in mind, for it is impossible to reject all who arrive here so afflicted. Under our laws domiciled aliens returning from a visit to the Orient, native-born Chinese and foreign-born sons of natives cannot be denied entrance. In fact, the two latter classes are exempt from the medical examination as would be any other citizen of the United States or his children born abroad. The experiences of a year teach that the most we can hope to accomplish is to limit the amount of infection introduced and to draw the attention of local health officers and practitioners to existing conditions in the hope that gradually these diseases may be recognized and kept under control.

While this subject is in itself of more or less interest, in its relation to the public health and economy of the state it becomes of considerable importance, at least to the Pacific coast and adjoining southwestern states. It is in this region that the greater portion of the incoming Orientals settle. At present this region is more or less sparsely inhabited, but it is expected that, as its natural advantages become better known and transportation facilities improve, its population will greatly increase. With the Oriental agriculturist, pursuing his patriarchal methods of fertilization of the soil with human excreta and with his careless personal habits, it becomes only a question of time until foci of hookworm and other infections are established at every settlement of those races in this region.

It is possible that valuable information concerning the source and spread of endemic uncinariasis might be obtained by a study of these localities at this time. We have here in the districts taken up by Orientals in a comparatively sparsely settled country a condition somewhat approaching the eastern-southern United States in its early days, with the difference, however, that in the east the original hookworm-bearer, the negro, was more or less confined to one locality, while here in the west, migrating bodies of Orientals move from one place to another as labor opportunities offer, thus spreading their infection over a wider area. Now while the foci of infection are comparatively limited, the task of hookworm elimination and prophylaxis is easy compared to what it will be in the succeeding generations if nothing along these lines is now attempted.

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# THE RELATION BETWEEN A CHICKEN SARCOMA'S BEHAVIOR AND THE GROWTH'S FILTERABLE CAUSE *

PEYTON ROUS, M.D., JAMES B. MURPHY, M.D., AND W. H. TYTLER, M.D.
NEW YORK

In several previous papers from this laboratory the behavior of a chicken sarcoma transmitted by a filterable agent has been described.[1] Emphasis has been laid on the growth's typically neoplastic character, and on the lack of phenomena suggesting the presence of an extrinsic causative agent. The importance of the subject in its possible bearing on the etiology of mammalian growths has led us to a further experimental study, here to be briefly reported.

An obvious point at which to attack the problem of the relationship between the avian growth and its cause is furnished by the process of metastasis formation. The histologic findings indicate more clearly than in the case of most tumors[2] the development of secondaries of the sarcoma from transported cells. But is this the usual method of the growth's dissemination? And, if so, are not at least some of the metastases due to a localization of the causative agent as such?

To test whether the sarcoma cells, as emboli, can proliferate and give rise to tumors has not been difficult. A suspension in Ringer's solution of particles of the fresh neoplastic tissue was injected intravenously into a number of susceptible, normal fowls, and at short intervals these fowls were killed and portions of the lungs examined in serial section. The mode of formation of the lung-tumors was in this way traced. It was found that they uniformly arose by a survival and growth of the injected tumor cells, with penetration of the vessel-wall and extension into the surrounding tissue. The histologic pictures strikingly illustrate the development of a tumor by the multiplication of cells already neoplastic.

The visceral metastases of the sarcoma, occurring in the ordinary course of the disease, appear first and most frequently in the lungs. This rule is subject to exception much more rarely than in the case of human tumors metastasizing by the blood-stream. In only five of 157 fowls with visceral metastases were the lungs free of sarcoma and the further organs affected. In these cases, unfortunately, a patent foramen ovale was not looked for; but in two similar ones occurring since these statistics were compiled, the abnormality was present. Forty-one of the 157 fowls had metastases in the lungs alone; in 111 the lungs and other viscera were affected, often with very numerous secondary growths. In connection with the foregoing experiments, such a distribution is strong evidence for a general origin of the metastases from cell-emboli, which latter, as usual, are sieved out of the circulation by the pulmonary capillaries. There is, however, the alternate possibility that the extrinsic agent, as such, engenders tumors more easily in the lungs than in other organs. That this is not the case is shown by the results of direct intravenous injection of a Berkefeld filtrate containing the causative agent. In only two of eleven fowls developing a growth after such treatment was the sarcoma primary in the lungs, despite the fact that the agent was carried in bulk directly to these organs. In seven of the cases diatomaceous earth had been added to the filtrate and had lodged for the most part in the pulmonary capillaries, there producing injury such as has been found to favor the agent's action.[3]

Although it is thus certain that the chicken sarcoma's metastases are in general referable to a development of cell emboli, there remains the question whether secondary tumors may not be caused occasionally by the filterable agent as such. That the agent can enter the circulation is demonstrated by the appearance in some instances of a sarcoma after the injection into susceptible hosts of large quantities of centrifugated, "paraffin" plasma from fowls moribund with the metastasizing growth. The general importance of injury in determining the agent's action led us to attempt to obtain by its means secondary tumors under conditions which would show them to be independent in origin of transported cells.

Tissue derangements in tumor-bearing fowls were produced by the injection of scarlet red, or diatomaceous earth, or by incisions allowed to heal by secondary intention. The numerous experiments have given results almost entirely negative. Usually the sarcoma failed to localize at the seat of injury. A single case suggests the direct action of the extrinsic agent. In a chicken with a very large primary sarcoma, but no discoverable metastases in the viscera, a small secondary growth was found post mortem at the site of injection of diatomaceous earth. The heart was not examined for a foramen ovale. Two other instances of localization at the poin of injury are less significant because of the presence o many metastases in the lungs and elsewhere. A third an similar case has come to attention during the routin autopsies on several hundred tumor-bearing fowls. Th chicken had a large primary growth at the site of inoc ulation in the pectoral muscles, many metastases in th lungs but none in any other organ except the oviduct in which were two small nodules. The oviduct contained an inspissated egg, and its walls showed reactiv thickening and increased vascularization. Whether i any or all of these cases there was an action of the extrinsic agent, as such, cannot be said. When metastas develop at sites of injury in human beings the morpho ogy of the growths often shows their origin from transported cells; but this feature is of no assistance with spindle-celled sarcoma, such as ours, which might b primary anywhere.

The subsidiary part taken by the causative agent i the sarcoma's dissemination, if indeed it takes any dire part at all, is in keeping with what is already known the tumor's growth and general behavior.[1] Yet in th end the sarcoma must be closely dependent on the acti ity of its filterable cause, for when this latter has bee attenuated by a long stay in glycerin the tumors resul ing from its inoculation develop slowly and frequent retrogress.

The conditions which determine the curious relatio ship between the disease and its cause are of much inte est. How does it happen that the sarcoma, though ul mately dependent on an extrinsic agent, is dominat

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* From the Laboratories of the Rockefeller Institute for Medical Research.

[1] For the literature see an article by the authors, THE JOURNAL A. M. A., June 1, 1912, p. 1682.

[2] Rous, Peyton: Jour. Exper. Med., 1911, xiii, 397.

[3] THE JOURNAL A. M. A., June 8, 1912, p. 1751.

in its behavior by the cells composing it? Some simple reasons suggest themselves. In the first place, the agent's action to produce a neoplastic change takes place with extreme slowness as compared with the proliferation of the cells, once they have become neoplastic. Consequently the growth of the neoplasm appears to take place entirely by multiplication of the cells of an initial focus. Growth doubtless does take place wholly in this way in many cases because of a second peculiarity of the agent, namely, its dependence on a special set of conditions in order that it may produce a neoplastic change.[3] The necessity for such conditions goes far to explain the agent's failure to take an active part in the tumor's dissemination in the body, granting indeed that the agent is present in the circulation before the fowl is moribund. The possibility of immune processes effective against the agent when separate from the cells must be kept in mind. The immune processes thus far recognized have been directed against the cells themselves, as in the case of the mammalian tumors.

The relationship existing between the chicken sarcoma and its cause, as shown by previous papers and by the findings here presented, seems to us to furnish some basis for the conception of an extrinsic cause for other sarcomata.

Sixty-Sixth Street and Avenue A.

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# BLOOD CULTURES IN PNEUMONIA *

H. W. LYALL, A.B., A.M.
Bacteriologist to Long Island College Hospital
BROOKLYN

That there is a bacteriemia in many cases of pneumonia at some time during the course of the disease is now a well-established fact. Just how frequent this condition is, and whether it is actually present in every case are questions which have not been satisfactorily answered. Various observers have published, from time to time, reports of cases with widely varying results. It is possible that these discrepancies may be traced to differences in the technic employed, to the particular time in the course of the disease at which the cultures were taken, or to seasonal or geographic conditions affecting the severity of the disease, dependent, perhaps, on the virulence of the organism.

Rosenow,[1] in this country, and Prochaska,[2] Silvestrini and Sertoli,[3] abroad, report the highest percentage of positive results. Rosenow, in a series of 145 cases, recovered an organism in 132, or 91 per cent. He used, principally, broth in flasks, in which the proportion of blood present represented a dilution of 1 in 50 or 1 in 75. Prochaska, in two series of thirty and ten cases, respectively, reports finding the organism in 100 per cent. This author used both broth and agar, but obtained by far the more satisfactory results with the liquid medium, and points out the advantage of using a high dilution. Silvestrini and Sertoli obtained positive results in fifteen out of sixteen cases, almost all of which ended fatally.

On the other hand, there are numerous other observers whose percentage of positive cultures has been much lower. Sittman[4] reports six positive out of sixteen cases, Kuhnau[5] one out of nine, White[6] three out of nineteen. Schottmüller,[7] in a series of 209 cases, found an organism in the circulating blood in only 23 per cent. He used, for the most part, cultures on solid media making several plates representing varying dilutions of blood. Cole,[8] in 1902, out of thirty cases reported only 30 per cent. positive cultures, using broth and milk. Strouse and Clough,[9] in one of the most recent papers, obtained positive results in 56 per cent. of cases in a series of twenty-five.

With reference to the recovery of the pneumococcus from the blood at the time of crisis, of lysis or after, results have been more uniform, the majority of authors failing to obtain growth at this time. Rosenow notes positive results after crisis in a few cases, usually when taken a few hours after the onset, although he was successful in recovering the organism as late as six days following crisis in a case of apparently delayed resolution. Wolf[10] reports similar results, obtaining positive cultures after crisis or lysis in six out of fifteen cases. In three of his cases there was delayed resolution, but in the other three there were no clinical complications.

The present series consists of the cases coming under my observation during the season 1911-1912 in the routine bacteriologic work at the Long Island College Hospital. Only those cases which at the time of culture or subsequently could be definitely diagnosed clinically as pneumonia are included in this report. Cases were unilateral lobar pneumonia unless otherwise noted.

## TECHNIC

The patient's arm was cleansed, and disinfected at the elbow as follows: The surface was shaved, scrubbed with green soap and sterile water, followed by bichlorid of mercury, alcohol and ether. Preparation was done, preferably, at least an hour before the time for taking the culture and the arm wrapped with a sterile bichlorid compress in the meantime. A Bier's bandage was wound around the arm above the elbow, sufficiently tight to produce a moderate venous stasis, and a small cut made through the skin directly over and parallel with the median cephalic or basilic vein. In making the incision the skin was drawn to one side to avoid the possibility of cutting into the vein. A Luer all-glass syringe of 15 c.c. capacity was used and a Number 18 or 19 needle. The needle was plunged into the vein in the direction of the blood-current. Ten c.c. or more of blood were withdrawn and immediately transferred to a tube containing an equal volume of Epstein's[11] ammonium oxalate solution and shaken to prevent clotting. This was taken to the laboratory and the mixture of blood and oxalate planted in suitable media for observation.

## MEDIA

All media used, whether solid or liquid, were neutral to phenolphthalein, which, apparently is the

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* From the Department of Bacteriology, Hoagland Laboratory.

[1] Rosenow: Studies in Pneumonia and Pneumococcus Infections, Jour. Infect. Dis., 1904, i, 280.

[2] Prochaska: Bacteriologische Blutuntersuchungen bei Pneumonien, Zentralbl. f. inn. Med., 1900, xxi, 1145.

[3] Silvestrini and Sertoli: Sulla presenza del diplococco di Fraenkel nel sangue circolante degli pneumonici, Riforma Med., 1899, ii, 483.

[4] Sittman: Bacterioskopische Blutuntersuchungen. Deutsch Arch. f. klin. Med., 1894, liii, 323.

[5] Kuhnau: Ueber die Resultate und die Leistungsfähigheit der bacteriologischen Blutuntersuchung im Dienste der klinischen Diagnostik, Ztschr. f. Hyg. u. Infektionskrankh., 1897, xxv, 492.

[6] White: Blood Cultures in Septicemia and Other Diseases, Jour. Exper. Med., 1899, iv, 26.

[7] Schottmüller: Zur Actiologie der Pneumonia croupesa, München. med. Wchnschr., 1905, lii, 1425.

[8] Cole: Blood Cultures in Pneumonia, Bull. Johns Hopkins Hosp., 1902, xiii, 135, 136.

[9] Strouse and Clough: Blood Cultures in Pneumonia. Bull. Johns Hopkins Hosp., 1910, xxi, 233, 235.

[10] Wolf: Latent Pneumococcemia, Jour. Infect. Dis., 1906, iii, 446. For more complete bibliography see Rosenow, Wolf and Strouse and Clough.

[11] Epstein: Hiss and Zinsser's Text-Book of Bacteriology, p. 178.

optimum reaction for the growth of pneumococci and streptococci. All liquid media contained a small piece of calcium carbonate (as recommended by Hiss[12]) in order to neutralize any free acid formed and thus prevent any acid inhibition of growth. For plating, plain and 1 per cent. dextrose agar were used and plain ascitic, dextrose ascitic and dextrose broth without the addition of any enriching fluid were used for flask cultures. The flasks contained from 150 to 200 c.c. of broth and therefore represented a dilution of the blood of from 1 in 20 to 1 in 50, according to the amount of blood used. The medium which gave the best results was the dextrose-calcium-carbonate broth without the addition of any enriching fluid. Apparently the amount of blood adde furnishes enough enrichment to allow the pneumococcu to grow abundantly without exerting any inhibitin effect. The advantage in the use of liquid media ove the plate method was marked. In almost every case i which the broth cultures were positive the plates faile to show any growth. This occurred in several cases i which a profuse growth was obtained in broth in fro twelve to twenty-four hours. The most reasonabl explanation seems to be that the higher dilution presen in the broth culture allows better diffusion and conse quent dilution of the bactericidal or other inhibitin substances present in the blood.

TABLE SHOWING RESULTS OBTAINED IN A SERIES OF 45 CULTURES MADE FROM THE BLOOD OF 42 PATIENTS SUFFERING FROM PNEUMONIA *

| Culture No. | Day of Disease | Result of Culture | Recovery | Inulin | Bile | Remarks |
|---|---|---|---|---|---|---|
| 1 | 2 | 0 | + | .. | .. | |
| 2 | 7 | 0 | + | .. | .. | Double pneumonia, less than twenty-four hours before lysis. |
| 3 | 3 | + | 0 | .. | .. | |
| 4 | 7 | 0 | + | .. | .. | |
| 5 | 5 | 0 | + | .. | .. | Culture taken after crisis had begun; double pneumonia. |
| 6 | 6 | 0 | + | .. | .. | |
| 7 | 7 | 0 | + | .. | .. | After beginning of crisis. |
| 8 | 4 | 0 | + | .. | .. | Very mild case. |
| 9 | ? | 0 | + | .. | .. | After beginning of crisis; second culture, eighteen hours later, also negative. |
| 10 | 4 | 0 | + | .. | .. | After beginning of crisis. |
| 11 | 5 | + | 0 | .. | .. | 100 colonies per c.c. of blood; ½ c.c. of 24-hour culture killed mouse in 18 hrs. |
| 12 | 2 | 0 | + | .. | .. | |
| 13 | 7 | 0 | + | .. | .. | Case 12 at crisis. |
| 14 | 2 | 0 | + | .. | .. | Very mild. |
| 15 | 6 | + | + | .. | .. | Crisis four days after culture. |
| 16 | 2 | + | 0 | + | .. | Culture five days before death; typhoid suspected; patient delirious. |
| 17 | 7 | 0 | + | .. | .. | After crisis had begun, very mild case. |
| 18 | ? | 0 | + | .. | .. | Twenty-four hours before crisis. |
| 19 | 5 | 0 | + | .. | .. | At time of crisis. |
| 20 | 5 | + | + | 0 | 0 | Streptococcus; clouding of ascitic-dextrose-agar; 2 c.c. failed to kill rabbit; suspected tuberculosis. |
| 21 | 5 | 0 | + | .. | .. | Mild case, central. |
| 22 | 10 | + | + | + | + | Typhoid suspected; long chains in original culture, subsequently lost (2 c.c. killed rabbit in 18 hours; encapsulated diplo cocci at autopsy). |
| 23 | 4 | 0 | + | .. | .. | Twenty-four hours before crisis, mild case. |
| 24 | ? | 0 | + | .. | .. | After crisis had begun. |
| 25 | 10 | 0 | + | .. | .. | During crisis. |
| 26 | 5 | 0 | + | .. | .. | Just previous to beginning of crisis. |
| 27 | 5 | 0 | + | .. | .. | At time of crisis. |
| 28 | 3 | + | + | + | + | |
| 29 | 5 | + | + | + | .. | |
| 30 | 5 | 0 | 0 | .. | .. | |
| 31 | 5 | 0 | 0 | .. | .. | Delirium tremens. |
| 32 | †¾ | 0 | 0 | .. | .. | Subsequent culture positive. |
| 33 | 3 | + | 0 | + | + | Case 32. Patient seven months pregnant. |
| 34 | 8 | + | 0 | + | + | Complicated by pregnancy; patient had apparent crisis but developed pneumonia of other lung. |
| 35 | 3 | + | + | 0 | 0 | Clouding in dextrose-ascitic-agar. |
| 36 | 10 | + | 0 | 0 | 0 | Clouding in dextrose-ascitic-agar; hemolysis marked. |
| 37 | 3 | + | 0 | + | + | Patient developed delirium tremens. |
| 38 | 1 | + | 0 | + | + | Patient developed delirium tremens. |
| 39 | 4 | 0 | + | .. | .. | |
| 40 | 5 | + | 0 | + | + | |
| 41 | 3 | 0 | + | .. | .. | |
| 42 | 10 | + | + | + | + | Subsequent culture. |
| 43 | ? | + | 0 | + | + | Died after apparent crisis; delirium tremens. |
| 44 | 5 | 0 | + | .. | .. | Case 41. Two days before lysis set in. |
| 45 | 4 | 0 | + | .. | .. | Slight involvement upper lobe. |

* Number of cases, 42; positive, 17; percentage of positive cases, 40.5 per cent.; number of cultures taken during crisis or lysis, 10; deducting cultures taken during crisis or lysis, percentage of positive cultures, 53 per cent.; total death-rate, 26.2 per cent.; death-rate in positive cases, 53 per cent.; in negative cases, 8 per cent.

† Eighteen hours.

Ordinarily, growth was apparent within twenty-fou hours, as indicated by a clouding of the medium and change in the color of the blood. This varied from slight discoloration to a brownish-black. Hanging-dro and stained preparations were made in order to obser morphology, and subcultures made on hydrocele-agar an calcium-carbonate-hydrocele broth to facilitate study the colonies and chain-formation. The organis obtained were then identified by means of the inulin, bi and hemolytic tests. A few strains were tested for vir lence by inoculation into rabbits. The appearance of t growth in dextrose-hydrocele-agar was also instructi when there was the possibility that the organism in que tion might be a streptococcus. The streptococci inva ably produce a distinct clouding of this medium, where no change is noticed in the case of the pneumococci.

The accompanying table shows the results obtained the series of forty-five cultures.

Although it is not to be expected that any defini conclusions can be drawn from the above table, rep senting, as it does, such a small number of cases, some points may be emphasized. It is apparent that are not dealing with a series in which the total dea rate is high, as compared with some of those report Of the seventeen positive cases, one-half of that num of patients died, so that it would appear that the findi of organisms in the blood is not absolute as far as prognostic value is concerned. The fact that of negative cases only three patients died might seem indicate that positive findings bear some relation to severity of the disease. In ten cultures taken at time of or during crisis or lysis, uniformly negat results were obtained; in no case was any organi recovered from the blood. Just what the relation between crisis and the disappearance of the organ from the blood, whether it is dependent on the accu lation of antibacterial substances which influence viability of the organism when transferred to artifi media, or on other factors, the mechanism of wl we do not fully understand at present, cannot be nitely stated.

In cases in which positive results were obtained i hard to see wherein the time at which the culture taken, in relation to the progress of the disease, had influence. In one case in which the exact time nature of the chill could be observed, owing to the that the patient developed the disease while in the pital, the culture taken eighteen hours after the in chill remained sterile, whereas one taken two days showed an abundant growth of pneumococci. It is t regretted that more subsequent cultures were not ta The above is the only one in which a second culture positive where the first was sterile. The three cases in which a subsequent culture was taken negative results each time.

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[12] Hiss: Hiss and Zinsser's Text-Book of Bacteriology, p. 126.

It is of interest to note that in three cases organisms were isolated which, by all differential tests, would be classed as streptococci. None of these organisms fermented inulin or were dissolved by bile. All produced a clouding in dextrose-ascitic agar. Two were nonpathogenic for rabbits in doses of 2 c.c. of a twenty-four-hour broth culture, a dose which is invariably fatal with pneumococci.

As to the value of blood cultures as an aid to diagnosis, the field appears to be rather limited. As a rule, the clinical symptoms are sufficient to warrant a positive diagnosis. In three cases of the above series, the blood culture was of distinct advantage in the differential diagnosis, in two suspected cases of typhoid fever, and in one of suspected miliary tuberculosis.

### SUMMARY

The points which seem to be of greatest interest are:

1. In this series, characterized by a low total death-rate, blood cultures were positive in only 40 per cent.

2. The total number of cases was forty-two, of which seventeen, or 40.5 per cent., were positive, and twenty-five, or 59.5 per cent., were negative. The total mortality was eleven, or 26.19 per cent.; five patients who died were alcoholics. The positive cases showed a mortality of eight, 53.5 per cent., among which were four alcoholics. The negative cases showed a mortality of three, 8 per cent.; one patient who died was an alcoholic. On account of the incidence of alcoholism, it is difficult to draw any definite conclusions as to the relation between positive findings and prognosis.

3. All cases at the time of, or after, crisis or lysis gave uniformly negative results.

4. Calcium-carbonate broth seems to furnish a most suitable medium for the growth of pneumococci and streptococci and possesses an additional advantage over solid mediums of securing a sufficiently high dilution of the blood.

5. In three cases organisms which are to be classed as streptococci were obtained in pure culture. These did not show any of the characteristics of *Streptococcus mucosus capsulatus*.

I desire to express my sincere thanks and appreciation for the hearty cooperation shown by the visiting and house staffs at the Long Island College Hospital.

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# AN ESSAY OF HEALTH AND LONG LIFE, PUBLISHED A. D. 1725 *

WILLIAM H. CRISP, M.D.
DENVER

The science of medicine may be considered as just passing from infancy into childhood. The art of medicine is a trifle older. The fond relatives of the former young gentleman, who is only beginning to feel steady on his legs, are already disposed to look condescendingly down on the other youth, who had his birthday back in those dark ages before the dawn of human civilization, and has been growing very slowly, but very steadily, ever since. The study of history develops a sense of perspective, which in its turn encourages tolerance, breadth of view and hope of future growth. In such a society as this it would surely be both interesting and profitable if we could now and then turn aside from regarding the deeds of the present and give a little time to the study of those of the past.

The leading physicians of the seventeenth and eighteenth centuries devoted a good deal of energy to an attempt to construct complete theoretical systems on which to base all their understanding and treatment of the human body and its ailments. In the light of the modern accumulation of accurate scientific observations, these dead systems often furnish much amusement to those who read them; and their foundations and conclusions are often equally ludicrous. Fortunately there were also brilliant practitioners and students who, like Sydenham, saw and taught that one may profitably study individual processes and organs without making the facts acquired fit in with any preconceived hypothesis. This attitude is well presented in the following passage from a letter by John Locke, physician and philosopher, to W. Molyneux:

> "You cannot imagine how far a little observation carefully made by a man not tied up in the four humours, or sal, sulphur, and mercury, or to acid and alcali, which has of late prevailed, will carry a man in the curing of diseases though very stubborn and dangerous; and that with very little and common things, and almost no medicine at all."

It seems that our so-called therapeutic nihilists are not the first of their kind.

George Cheyne, with one of whose writings this paper will deal, was born in Aberdeenshire, Scotland, in 1671, the year in which Isaac Newton published his "Theory of Light." He died at Bath, England, in 1743. In his earlier years he was a follower of the iatromechanical school, so named because it attempted to explain all disease processes on a mechanical basis. He tells us that the first time he adventured in print was in a work on the theory of fevers, which he completed in a few days, and which was done in defense of his "great master and generous friend" Dr. Pitcairn. This was at the age of 31. He later sallied into a "book of abstracted geometry and algebra," entitled "Methodus Fluxionum Inversa." When 54 years old, or in 1725, he issued the fourth edition of the work with which this paper is more directly concerned, "An Essay of Health and Long Life." The date of the first edition I have not ascertained. The book is a curious mingling of abstract hypothesis with the common-sense results of a life of practical experience. It is dedicated to Sir Joseph Jekyll, Master of the Rolls, one of Cheyne's patients for whom it was originally written, and at whose request, says Cheyne, it was given to the public. It is an octavo volume of 232 pages, plus twenty pages of preface and a table of contents of the same length.

As regards the literary style and historical associations of the book, it is interesting to recall that Defoe's "Robinson Crusoe" was published in 1719, and Jonathan Swift's "Gulliver's Travels" in 1726; and that Cheyne was contemporary with the poet Pope, whose classic translation or English version of Homer's "Odyssey" was issued between 1723 and 1725. In the year of publication of this fourth edition of Cheyne's essay, Samuel Johnson was a mere youth of 16 years, and his famous dictionary first saw the light twenty years later. David Hume's charming but inexact history of England, and the foundation of the modern novel in the stories of Richardson, Fielding, Smollett and Sterne did not appear until from 15 to 35 years later. It was about 100 years since, in the dissecting-room and through the printing press, that William Harvey first taught his theory of the circulation.

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* Read before the Medical Society of the City and County of Denver, March 19, 1912.

Turning to the western shores of the Atlantic, Philadelphia received from William Penn its first city charter in 1701. The same city built so fast that it reached its first financial panic in 1728. New York's first newspaper was started in 1725, and the first dramatic performances in New York were given in 1732; this year being also distinguished by the birth of George Washington.

In his preface Cheyne declares: "I have been often contented with plain and obvious Facts to account for Appearances; when, according to the Humour of the present Age, I might have run into refined Speculations of Metaphysicks, or Mathematicks. . . . I have consulted nothing but my own Experience and Observation on my own crazy Carcase and the Infirmities of others I have treated." The essay opens with the oft-quoted sentence, in this country frequently attributed to Benjamin Franklin: "It is a common Saying That every Man past Forty is either a *Fool* or a *Physician;*" and continues with this other, "Most Men know when they are ill, but very few when they are well." The place where many of Cheyne's observations must have been made is revealed in the phrase, "this universal Infirmary, *Bath.*"

Chapter I, "Of Air," lays down principles for selecting a site for a house, and as to the rooms that are to be slept in by "tender People" in wet or dry weather. It suggests that "valetudinary, studious, and contemplative Persons," who have been "much exposed, or long abroad, in a Northerly or bleakish Easterly Wind," should "drink down, going to Bed, a large Draught of warm Water-gruel, or of warm small Mountain-wine Whey, as an Antidote against the nitrous Effluvia, suck'd into the Body, and to open the Obstructions of the Perspiration made thereby." We are warned that "from the beginning of November till towards the beginning of February, London is covered over with one universal nitrous and sulphurous Smoak, from the Multitude of Coal Fires, the Absence of that material Divinity the Sun, and the Consequence thereof, the falling of the Dews, and Vapours of the Night." We learn how the new-born infant, as soon as it is exposed to the element air, "has the little Bladders, whereof the Lungs consist, blown up into a perpendicular Erection on the Branches of the Windpipe." whereon "these little Bladders press upon and grind the grosser Particles of the Blood into more sizeable ones, that they may become small enough to circulate through the other capillary Vessels of the Body. This elastick Air, pressing equally every Way round, . . . shuts close the Scales of the Scarf-skin of healthy and strong Persons; . . . But in sickly, studious, and sedentary People, . . . the nitrous and watery Particles of the Air get a ready and free Entrance . . . into the Blood. . . . And thus begets all these Disorders of the Body, that Air thus and thus poison'd, was shewn capable to produce."

Chapter II discourses "Of Meat and Drink"; and this subject our author clearly and repeatedly shows as the greatest of all. His reasons for preferring certain foods above others are at times ingenious: "The Spring Vegetables, as Asparagus, Straw-berries, and some sorts of Sallading, are more easily digested than Pears, Apples, Peaches, and Nectarines; because they have less of the Solar Fire in them; their Parts are united by a weaker Heat." "The common Poultry, Hares, Sheep, Kids, Rabbits, etc. . . . are much more tender and readily digested than Cows, Horses, or Asses." As regards cookery, "Plain Roasting and Boiling is as high, as valetudinary, tender, studious, and contemplative Persons, or those who would preserve their Health, and lengthen out their Days, ought to presume on." The neurologist of to-day may take inspiration from the reference to the "History of the Milk Doctor of Croydon, who by living on Milk only, cured himself of an otherwise incurable Distemper, viz., the Epilepsy, and lived in perfect Health for sixteen Years after"; and the surgeons from the dictum that "the grand Maxim in the Cure of all Ulcers is, by Diet to bring them to the State of a Wound, and then they will cure of themselves."

Cheyne's estimate of the amount of "Food, sufficient to keep a Man of an ordinary Stature, following no laborious Employment, in due Plight, Health, and Vigour" is "8 Ounces of Flesh Meat, 12 of Bread, or vegetable Food, and about a Pint of Wine, or other generous Liquor in 24 Hours." The valetudinary and sedentary must lessen this quantity. "Most of all the chronical Diseases, the Infirmities of old Age, . . . are owing to Repletion. . . . Evacuation of one Kind or another is nine Parts in ten of their Remedy: For Cupping, Bleeding, Blistering, Issues, Purging, Vomiting, and Sweating, are manifest Evacuations, or Drains to draw out what has been superfluously taken down." "But," continues Cheyne, "any one may lose a Pound of Blood, take a Purge, or a Sweat; by dropping the great Meal, or abstaining from animal Food and strong Liquors, for four or five Days as effectually as by opening a Vein, swallowing a Dose of Pills, or taking a sudorifick Bolus." The frequent use of "some gentle domestick Purges" is repeatedly advised. Thus, "Tender Persons ought to use as much Abstinence, as they possibly can: And, if they neglect it, their only Relief is from frequent stomachick and Family-Purges." Bacon of Verulam is quoted to the like effect, and a prescription given, of which the main ingredient is rhubarb, there being added wormwood, orange-peel, nutmeg, cochineal and arrack.

It was a decidedly alcoholic age; but Cheyne, being well beyond the half of his allotted three-score years and ten, is strongly against alcoholic indulgence. For those who have suffered by erring in this regard he favors sudden abstinence; and he scoffs at the idea that this course may be dangerous. "It were," he says, "as reasonable for him that is fallen into the Fire or Water to li there, because of the Danger of removing him suddenly." Yet he would not "discourage the innocent Means o enlivening Conversation, promoting Friendship, comforting the sorrowful Heart, and raising the droopin Spirits, by the cheerful Cup and the social Repast" and admits that perhaps he may like "the harmles Frolick, the warm Reception of a Friend," more tha he ought. "Next to Drams, no liquor deserves more t be stigmatized and banished the Repasts of the Tende Valetudinary, and Studious, than Punch." "I coul never," he says, "see any Temptation, for any one i their Senses, to indulge in this Heathenish Liquor, bu that it makes its Votaries the soonest, and all of a su den the deepest Drunk, holds them the longest in th Fit, and deprives them the most intirely of the Use their Intellectual Faculties, and Bodily Organs, of an Liquor whatsoever." The author regards most ma liquors as hurtful; coffee as likely to be "of some Servi to watry Stomachs"; green tea as a "good Diluter the Food"; chocolate as "heavy and hard of Digestion" and smoking, chewing and snuffing as "useful to fle matick Constitutions; but to dry and lean Habits . . . pernicious."

In the short chapter "Of Sleeping and Watching" t word "watching" is evidently used in the sense of "wa ing." We are told that "the Valetudinary, Sedenta and Studious, ought carefully to avoid evening Dews, nocturnal Studies, and unseasonable Watching; go to Bed by eight, nine, or ten; and rise proportionably by four, five, or six."

As regards "Exercise and Quiet," which are the subject of another chapter, it is remarked that "Whether we were so made before the Fall, as to live in intire Health, in a rigidly sedentary and contemplative Life, is a speculation of no great Consequence, . . . as there happened an intire Revolution in the Complexion and Qualities of the Minds of the First Pair." "The Passage where God tells Adam, That in the Sweat of his Brow he shall eat Bread, seems to be the Injunction of a salutary Penance, . . . not merely a Punishment." The author, who did not live in the days of street-cars and nickel fares, comments on the absolute necessity of "due Labour and Exercise," without which, he says, "the Juices will thicken, the Joints will stiffen, the Nerves will relax, and on these Disorders, Chronical Distempers, and a crazy old Age must ensue." The exercises which may be used for health include "Walking, Riding a Horse-back, or in a Coach, Fencing, Dancing, playing at Billiards, Bowls, or Tennis, Digging, Working at a Pump, Ringing a Dumb-Bell." "To the Asthmatick, and those of weak Lungs," he would "recommend Talking much and loud, even by themselves, walking up an easy Ascent." "To those who are troubled with the Stone or Gravel, to ride much over rough Cause-ways in a Coach." "To those that have weak Arms or Hams, playing two or three Hours at Tennis, or at Football, every Day. Temperance is to be joined to exercise, and the greater appetite obtained by it must not be indulged to the full. Cheyne is surprised "that Cold-bathing should ever have come into such Disuse, especially amongst Christians"; which reminds one of Ingersoll's reply to the preachers "that, with soap, baptism is a good thing." To the cold bath, in many cases, Cheyne would add the use of the flesh brush for a half hour night and morning. Indeed, he would extend the employment of these two therapeutic measures to those animals which are kept to be killed for human food.

About two years ago the Provident Life Assurance Company of New York issued a pamphlet in which it was shown that in Massachusetts, from the year 1880 to the year 1907, the death-rate between the ages of 40 and 50 had increased 35 per cent. The writer, who regarded the decade referred to as including the most valuable years of a man's life, concluded that this increase in the death-rate at a time of life when communicable diseases played a small part was due to the early wearing out of vital organs as the result of excesses in eating, drinking, working and playing — in short, to intemperance in the broad and general sense of the word. The remedy for such a state of things is well anticipated by Cheyne, who devotes a whole chapter of his book to "our Evacuations, and their Obstructions"; but also repeatedly insists on the need for temperance in all things, and particularly in the supply of fuel to the human economy. "The perpetual Gripes, Colicks, Loosenesses, hard Bellies, Choakings, Wind, and Convulsive Fits, which torment half the Children of England, are intirely owing to the too great Quantities of too strong Food, and too rank Milk, thrust down their Throats." Again: "There is nothing more ridiculous, than to see tender, hysterical, and vapourish People, perpetually complaining, and yet perpetually cramming." And further, "that of those born sound here in England, the Headaches, Stomachaches, Colicks, and nervous Pains and Disorders, universally proceed from Idleness and Fulness of Bread." In Cheyne's opinion, chronic diarrheas are commonly the penalty of too much eating and drinking. In this connection, he quaintly declares that "he, who without firm Bowels, thinks to cure a nervous Distemper, labours as much in vain as he who would keep a Fiddlestring soaking in Oil and Water, to make it vibrate or play off a fine Composition of Musick."

The modern advertiser of kidney medicines should find an antidote in the statement that "though some People are frightened when they find their Water turbid, broken, and full of Brick-dust Sediment"; yet "that is the best Symptom it can have." To stop the "Flux of pale Water," which is attributed to food too heavy or labor too little, the patient is recommended "to take a little Gascoign's Powder, Confection of Alkermes, or Sir Walter Raleigh's Cordial at Night, and drink liberally of small warm Sack Whey, with a few Drops of Spirits of Hart's-horn, to set the Perspiration in order again." "Coffee-colour'd, Bloody, Wheyish, or Purulent Water, or that with White Gravel, Films, Rags, or Bits of broken Membranes," we are told, "are well known to be Nephritick, or Symptoms of an Ulcer somewhere in the Urinary Passages."

Chapter VI, entitled "Of the Passions," has a decidedly metaphysical and religious bent, and its medical bearing is somewhat remote. The author aims to show that violent and sudden passions dispose to acute maladies, while "the slow and lasting Passions, bring on chronical Diseases; as we see in Grief, and languishing hopeless Love." Religion is declared to be the cure for the passions and the disorders they produce.

The concluding chapter contains a miscellany of observations, most of which the author had probably forgotten to incorporate in his earlier chapters. He laments that "it is become the Reproach of Physick and Physicians, that acute Cases cure themselves and chronical Cases are never cured." The word "scurvy" apparently had a much wider meaning then than now. Thus we read that "There is no chronical Distemper whatsoever, more universal, more obstinate and more fatal in Britain, than the Scurvy, taken in its general Extent. Scarce any one chronical Distemper but owes its Origin to a scorbutic Cachexie, or is . . . complicated with it." How true is the remark "That fine Folks use their Physicians, as they do their Laundresses, send their Linen to them to be cleaned, in order only to be dirtied again." The author plainly considers nerve fibers as being identical in structure with whalebone, ivory, horn, cartilage and hair. In another place he refers to the lacrimal gland as being at the corner of the eye next the nose. He argues strongly against the use of bleeding as a preventive against miscarriage. A superstition that is still with us is advocated in the statement that "Neither Sydenham nor Fuller, have been able to tell the Half of what obstinate Exercise will do, in low, cachectick, consumptive Cases." The profession of to-day would partly approve and partly scorn the idea that "The Custom of wearing Flanel, is almost as bad as a Diabetes." There is food for both thought and laughter in the statement that "Another Means of Health, to the Tender, Studious, and Sedentary, is much and often shaving Head and Face, and washing, scraping, and paring their Feet and Toes."

As his conclusion of the whole matter, Cheyne declares that "The Grand Secret and Sole Mean of Long Life, is to keep the Blood and Juices in a due State of Thinness and Fluidity." "No voluptuous or lazy Person, unless he has had an original Constitution of Brass, was ever a long Liver. And even, as his Life has been more Misery and Pain, than ever a sober Gally Slave endur'd, his End, and the latter Part of his Days has been Rack and Torture, Horror and Despair." "The Ground-work must be laid, carried on, and finished in Abstemiousness. . . . And this alone will suffice to carry on Life, as long as by its natural Frame it was made to last, and will make the Passage easy and calm, as a Taper goes out for want of Fuel."

530 Metropolitan Building.

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# A PECULIAR STATE OF ASTHENIA OF SHORT DURATION, ENDING IN RECOVERY

DAVID RIESMAN, M.D.
PHILADELPHIA

About ten years ago I reported a strange case of myasthenia before the Philadelphia Neurological Society. As this report has never been published and as it is germane to my present subject, I shall reiterate the chief features of the case before speaking of the others that have come under my observation.

Case 1.—The patient was a physician, aged 35, a native of Pennsylvania, engaged in an arduous country practice in the western part of the state. His family history and his personal history were good. For the last fifteen years he had used tobacco moderately and alcohol occasionally. He had had gonorrhea but never syphilis. About Christmas time he had a mild attack of influenza, for which he stayed in bed less than two days. On the day he resumed work he was drenched by a rain and caught a cold, which was, however, not severe enough to interfere with his practice. Several days later, on January 10, he felt somewhat weak on arising from bed. During the day the weakness steadily increased and by evening he had to have assistance in getting into his phaeton. By night he could rise from a chair only with great difficulty, and on the following morning it required much effort to get out of bed. By January 13 he could not leave his bed without help. When in bed he could not put one foot over the other or flex the knees as long as the covers rested on the limbs. The weight of the bed-clothes was sufficient to neutralize what little power he had. If the arms were extended underneath the bed-covers he could not directly raise them but had to slide them up over the chest until they were clear of all weight. On one occasion a pillow toppled over on his face and it was only with supreme effort that he succeeded in tossing it off. One night he had turned with considerable difficulty on his side, but in a little while overbalanced himself and rolled over on his face. While in this position he almost smothered before he succeeded in regaining sufficient leverage to turn on his back. The patient did not think himself paralyzed but felt as though his muscular strength were utterly exhausted, as it might be from overfatigue. There was an entire absence of pain; appetite, digestion, the bladder and bowel functions were all normal. Mastication was somewhat difficult, but deglutition was not affected. Vision and hearing were not disturbed. As regards tactile sensibility, I am informed by Dr. J. M. Thorne, of McKeesport, who attended the patient, that it was normal. The knee-jerk was also normal. The mental processes were active, and, contrary to what might be expected, the patient was in a serene frame of mind, although he thought at different times that he was going to die. The temperature was persistently subnormal, not over 97; the pulse was as low as 45, and the respirations from 10 to 12. This low level of pulse, respiration and temperature was maintained for three or four days. Any physical effort was attended by profuse perspiration. At the end of ten days, when recovery from the general muscular weakness was almost complete, a left-sided facial palsy developed. It was unattended by pain and lasted ten days. When I saw him, which was two months after the beginning of his trouble, he still complained of being weak in the knees. I found nothing of moment on physical examination. The pupils were equal and reacted to light. There was no sway; the knee-jerk was exaggerated; there was no ankle-clonus and no Babinski reflex. The tactile and the thermic senses were undisturbed. The heart and lungs presented nothing abnormal. The blood-count showed 5,632,000 red cells, 10,500 white cells and 78 per cent. hemoglobin. No electric tests were made.

In the last note I had from him, dated April 2, he remarked that his strength had returned to him, but there was still a tendency to a feeling of nervousness after undue exertion or after holding his limbs in one position for any length of time.

To recapitulate: A man in good health, suffering only from a cold, is suddenly seized with profound weakness involving apparently all the voluntary muscles, causing no psychic, sensory or sphincteric disturbance and being marked by bradycardia, subnormal temperature and bradypnea. A facial palsy ensued ten days after the onset of the myasthenia. Recovery was complete in about two months.

In endeavoring to explain this quite extraordinary case, which did not fit into the category of myasthenia gravis pseudoparalytica, periodic palsy or Landry's palsy, and which was evidently not hysteria, I took refuge in a theory that at that time seemed somewhat fanciful, namely, that the myasthenia was due to temporary functional insufficiency of the adrenals. This theory was in keeping with the facts of animal experimentation as they were available at that time and seemed to me to explain the muscular prostration and the hypothermia. The facial palsy could not be explained on the basis of this hypothesis and had to be considered an accidental complication. This view is the more plausible as the palsy appeared suddenly during convalescence.

From time to time this case recurred to my mind, especially in 1908, when Dr. Lavenson had his able article on suprarenal insufficiency in preparation and discussed it with me. But not until recently did I see any case that bore a resemblance to it.

Case 2.—In February, 1912, a physician, 49 years old consulted me on account of a feeling of great exhaustio which made every muscular act an effort. He dragged himself to his work with difficulty and was listless and depressed There was no lack of control over the muscles, but the seemed to be fatigued before they were used. The pulse wa small and feeble—98; the temperature, 96.1. The systoli pressure, which had been taken a few days before, had bee found to be from 98 to 100. The urine was normal. Th patient could not account for his prostration. He had ha no acute illness, no shock; digestion and bowels were norma As far as he knew he was otherwise in good health. His onl complaint was that for several years he had had occasiona attacks of precordial pain of mild type, lasting for half a hour or an hour and unaccompanied by a sense of anxiety—i short, not bearing the characters of an angina pectoris. Th heart seemed to lack what I would call snap; the tones we soft but there were no murmurs. Finding no definite sig by which this condition could be explained, I decided th there must be some fault on the part of the organs of intern secretion, most probably the adrenal; and on the strengt of this theory, which strongly appealed to the patient him self, I prescribed suprarenal extract. Recovery was promp whether *propter hoc* or merely *post hoc* I cannot say.

Case 3.—H. L., aged 37, married, began in April, 1909, have epileptiform convulsions. Though a history of syphil was not obtainable, the convulsions ceased under antisyphilit treatment, and three disfiguring excrescences of the sk promptly melted away. Since then the man has been w except for occasional headaches and attacks of indigesti brought on by imprudent eating. Feb. 10, 1912, without asc tainable cause he felt chilly and had a little nausea. rapidly became weak and found that even slight exerti exhausted him. His color was pale and sallow; temperatu 96.1; pulse 48; the systolic pressure 92. Otherwise examin tion revealed nothing abnormal; the urine was negative. ordered suprarenal extract, 5 grains three times a day, a advised the patient to go home. When I saw him again few days later he felt well, though his pulse was still slow

Case 4.—Another instance remains to be cited. During second year in the medical school I had an experience tha remember with great vividness. I was seated one evening my books, feeling as well as usual, when rather suddenly I found myself growing cold and weak, and had a sense as if my life-forces were ebbing away. I had no pain, only a sense of approaching dissolution. My temperature I found to be 96, and my pulse 46. One who knows the psychology of the medical student can imagine the workings of my mind. I do not recall whether I made any attempt at self-treatment, nor how long I was ill, if ill I was. But I remember distinctly that, contrary to my expectations, I survived. Since then I have not had a similar attack.

Leaving out for a moment the first case, the three others, including my own, have in common a sense of physical weakness amounting to actual prostration, a feeling of coldness, a subnormal temperature, and in two cases slow pulse and low blood-pressure. Recovery was prompt — in the two recent cases within three or four days.

How are we to explain this condition? To say that there was an infection brings the solution no nearer, for what infection is accompanied by persistently subnormal temperature, bradycardia and muscular exhaustion? It is true, during convalescence from typhoid fever, pneumonia, influenza, tonsillitis and perhaps malaria, one sees at times subnormal temperature and bradycardia; but none of these diseases had preceded the asthenia in my cases. The first patient did have, two weeks before his myasthenic symptoms set in, a febrile attack of two days, but that there was any direct connection between this trivial attack and the other illness is unlikely.

It seems to me that these cases find their readiest explanation in the assumption of some disturbance in the functions of the organs of internal secretion, through which the sympathetic nervous system and the voluntary muscles suffered a change. The chief controller of these two systems, as far as we know at present, is the adrenal, or better the chromaffin system. The functions of this are manifold and complicated, but at this moment two particularly concern us, namely, the angiotonic and the antitoxic. Through the former, vascular tone and blood-pressure are maintained; through the latter, the fatigue products of muscular activity are neutralized. No definite clinical picture has as yet been established of mild temporary insufficiency of these functions. Treatises on diseases of the suprarenal gland hitherto have dealt only with such affections as are fatal in their consequences. By far the largest share of attention has been given to Addison's disease, which nearly all authorities attribute to destructive changes in the adrenal, although a few admit a merely functional disturbance of the gland or of the entire chromaffin system as a basis for the Addisonian symptom-complex.

In the more recent literature, however, in addition to Addison's disease, cases are recorded in which various acutely fatal conditions were at autopsy found associated with destructive changes—hemorrhagic, necrotic, inflammatory—of the adrenals. The latter conditions are distinguished from Addison's disease by the absence of pigmentation and by the shortness of their course. The cases may be classified[1] into several groups:

1. Those characterized by shock, gastro-intestinal symptoms, bradycardia, lumbar pain and death in a few days—a clinical picture somewhat resembling that of acute pancreatitis.
2. The asthenic type, in which the predominant feature is profound asthenia, ending in death within a few days.
3. Cases of sudden death, in which the autopsy shows as the only adequate morbid change a destructive lesion, usually hemorrhagic, of the suprarenal gland.
4. A nervous type, marked by convulsions, coma or delirium, with muscular twitchings.

Another type of doubtful nature is one characterized by hemorrhage into the suprarenal glands with hemorrhagic eruptions in other abdominal viscera and the skin.

In some cases of so-called acute suprarenal insufficiency, as for instance the interesting one reported by Cooke,[2] the termination only is acute. With a progressively destructive lesion of the glands, tuberculosis for example, there exists no doubt for a long time an insufficiency of mild type which goes unrecognized. Finally, and with apparent suddenness, the function of the gland becomes wholly inadequate and an acute catastrophe ensues. We meet with an analagous condition in Bright's disease, in which a mild uremic state may for days and weeks precede the convulsive explosion.

In Biedl's exhaustive work on internal secretions,[3] I have not found any reference to transitory adrenal insufficiency. Sergent[4] and other French writers believe that such a condition may occur in the course of acute infectious diseases. It cannot be doubted that the glands of internal secretion are affected in acute disease, but the present methods of investigating their function do not give us an adequate insight into the subject. It seems to me highly probable that the postfebrile hypothermia, bradycardia and exhaustion which may follow even diseases of very short duration are in part due to disturbed function of the hormonogenic organs.

I believe that the cases I have reported, especially Cases 2, 3 and 4, are best explained on the view that there was a functional insufficiency of the adrenals by which the body was temporarily deprived of its proper meed of adrenal secretion. Theoretically we might conceive, instead of a deficiency of the hypertensive epinephrin, an accumulation in the blood of hypotensive substances, the existence of which has been predicated by Abelous and Langlois, Pearce and others. But in doing so we increase rather than lessen our difficulties. It is much simpler to blame the adrenals, or perhaps the entire chromaffin system, the *fons et origo* of the substances maintaining the general vascular and muscular tone.

The symptoms of non-fatal hypoadrenalism may be described as those of mild shock — subnormal temperature, great muscular weakness, coldness of surface and low blood-pressure. The pulse is usually slow; the duration variable—from a few days to a few weeks. It is doubtful whether our present tests for epinephrin in the blood are delicate enough to determine the existence of such a state as I have described, but where laboratory facilities are at hand such tests might readily be made. Rest and the administration of suprarenal extract — 5 grains two or three times a day — is the treatment that naturally suggests itself for temporary hypo-adrenalism.

It is more than likely that the first case, in which the myasthenia reached a grave degree, was also dependent on adrenal insufficiency. The "glandular" theory of myasthenia gravis has been advanced by several writers in recent years (Zudemans, Raymond and Massolongo); the tendency at present is to look on the condition as dependent on disturbances not only of the adrenal, but also of other glands of internal secretion. There is still, to be sure, much theory and little fact, but the hypothesis is attractive and may prove fertile.

1715 Spruce Street.

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[1] Lavenson: Arch. Int. Med., August, 1908, ii, 70.

[2] Cooke: Observations on the Blood-Pressure-Raising Substances of the Adrenals in Acute Adrenal Insufficiency, Arch. Int. Med., January, 1912, ix, 108.

[3] Biedl: Innere Sekretion, 1911.

[4] Sergent: Rev. de méd. int. et de thérap., 1909, p. 807.

# THE CHICAGO EPIDEMIC OF STREPTOCOCCUS SORE THROAT AND ITS RELATION TO THE MILK-SUPPLY *

JOSEPH A. CAPPS, M.D., and JOSEPH L. MILLER, M.D.
CHICAGO

In the latter part of December, 1911, Chicago was visited by an epidemic of sore throat, which for wide-spread distribution and severity was unique in the history of the city. The greatest number of cases appeared about Christmas and New Year's Day, but during the months of January and February there were lesser outbreaks of new cases and a notable number of relapses and complications from an earlier infection. Some of the cases were at first mistaken for diphtheria, which had been quite prevalent in November. During the latter month the health department received for diagnostic purposes 637 cultures that contained Klebs-Loeffler bacilli and 1,045 cultures that were negative. In the month of December, although the positive diphtheria cultures fell to 379, the negative cultures increased to 1,234.

### CLINICAL FEATURES

The onset was usually abrupt and was characterized by chilliness or rigor, general muscular soreness, a dull headache, and in some instances, by nausea and vomiting. At first a diffuse congestion of the throat was present and the patient complained of pain on swallowing. In a few hours discrete patches of exudate appeared on the tonsils or pharynx that occasionally simulated a diphtheritic membrane. The temperature was high and the leukocytes were increased in number. The prostration was extreme. The pulse was often relatively slow, a peculiarity ascribed by Preble to a toxic irritation of the vagus nerve. The cervical glands were usually enlarged and tender. The fever subsided in two or three days and in mild cases the patient complained only of weakness and lassitude. Very frequently, however, within a week or ten days a second attack of sore throat set in, marked by swelling of the tonsils and cervical glands. The edema was at times so great that it was impossible to swallow liquids or even saliva. Peritonsillar abscess or suppuration of the lymph-nodes were comparatively uncommon, but when they did occur and were drained, recovery was hastened. In unfavorable cases the germs invaded the blood-stream and gave rise to numerous complications.

One group of 173 typical cases, in which the symptoms were carefully recorded, shows that suppuration of the cervical glands occurred sixteen times and peritonsillar abscess eight times. There were only six instances of otitis media, four of conjunctivitis and eleven of bronchitis. Arthritis was a remarkably common complication, being present in seventeen cases, once with pus in the joints. A skin eruption was noted in seven cases, four resembling erysipelas. The other three were of a purpuric nature, two developing into the clinical picture of Henoch's purpura. Bronchopneumonia was found in eight patients and often led to a fatal result, especially in old people. Pleurisy was observed three times. Nephritis came on in five patients and, as a rule, ended in recovery. Five cases showed an endocarditis of the mitral valve. One of the most peculiar and dangerous complications was peritonitis, which was responsible for many deaths. There were nineteen fatalities in this series. The cause of death in nine cases was attributed to idiopathic peritonitis, in four cases to pneumonia, in three cases to endocarditis and in three to septicemia.

### BACTERIOLOGY

Examination of smears taken directly from the throat showed cocci growing in short chains or pairs and surrounded by a capsule. On this account they were at times mistaken for pneumococci. But cultures made clear a true streptococcus growing abundantly in blood-agar, somewhat less hemolytic than the ordinary *Streptococcus pyogenes*. This organism, which has been fully described by Davis and Rosenow,[1] was recovered in twenty-eight cases of this series.

### DISTRIBUTION

That this epidemic type of sore throat was entirely new and different from the ordinary tonsillitis was generally agreed on by physicians. It was also a subject for comment that the north and south sides of the city were equally affected and at the same time. An impression gained ground that a pandemic of sore throat was sweeping over this section of the country after the manner of the great influenza outbreak in 1889. By correspondence with physicians in seventy counties of Illinois, we found that tonsillitis was unusually prevalent this winter throughout the state, but that in only one locality was the epidemic similar to ours in severity and extent, namely, in the village of Batavia. The significance of this fact will be considered later.

### RELATION TO MILK-SUPPLY

During the height of the epidemic no satisfactory explanation was found for the sudden outbreaks of new cases in widely separated parts of the city. But a suspicion of the milk as a carrier of the infection was kept alive by the direct causal relationship which had been established in Boston a year before between th milk-supply and the epidemic of sore throat.[2]

Early in March we decided to investigate this question.[3] Very soon it became apparent that most of th victims of sore throat were consumers of milk from single dairy which will be hereafter designated a Dairy X.

Because of the extent of the epidemic a complete house-to-house canvass of the city was not feasible. We, therefore, divided our investigation into four differen methods of inquiry, which would tend to control th results. The first study was limited to severe and typica cases; the second to a comparison of morbidity betwee the customers of Dairy X and other dairies; the third, comparison of the morbidity among the nurses in ho pitals supplied by Dairy X with that of nurses in ho pitals supplied with milk from other dairies; finally house-to-house canvass of the village of Batavia whic is partly supplied by Dairy X.

*1. Milk-Supply in a Series of Severe and Typic Cases.*—This series comprises 173 cases which we originally collected on account of their severity and co formity to the epidemic type of throat infection. Abo forty of this group had been diagnosed by the finding streptococci in smears from the throat, while in twent eight the organisms had been grown in culture. Most these cultures were studied by Davis and Rosenow a were identified as the type peculiar to the epidemic. the total of 173 cases, 147, or 85 per cent., were users Dairy X milk at the time of their illness. Of the tot of nineteen fatal cases, fifteen, or 79 per cent., were definitely known to have used Dairy X milk at the time they were stricken.

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* Read in the Section on Practice of Medicine of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

[1] The Journal A. M. A., March 16, 1912, p. 773.

[2] Winslow: Boston Med. and Surg. Jour., Dec. 16, 1911.

[3] The Journal A. M. A., April 13, 1912, p. 1111.

2. *Comparison of Morbidity in Various Milk-Routes.*—It should be stated that Chicago grants a license to 2,700 milk-wagons and that Dairy X controls 100, or less than 4 per cent. of these wagons. Since, however, their distribution is chiefly in the better residence district of the north and south sides, which are the districts investigated, their proportionate supply is much greater. It is estimated that about 10 to 12 per cent. of the residents in these districts use Dairy X milk. Hence, we should expect to find in any group of cases occurring in these districts that approximately 12 per cent. were users of Dairy X milk, in case milk was not a cause of the disease. If the milk is guiltless, then the percentage of morbidity along a Dairy X route and a control route in the same neighborhood should be nearly the same. A comparison was made by different investigators of the incidence of sore throat along a Dairy X route and a route of another dairy on the north side, the Twenty-Second street district and in Hyde Park.

By glancing at the column of totals in Table 1 it is seen that 51 per cent. of the households using X milk were affected, as contrasted with 7.2 per cent. of those using other milk. Another interesting record is that the average morbidity for each affected household supplied by X milk is 2.3 persons as compared with 1.2 for each affected household supplied by other milk. The ratio of morbidity among users of Dairy X milk to the morbidity among users of other milks is as 14 to 1. That is to say, in an equal number of households supplied, fourteen times as many individuals contracted sore throat among the X milk consumers as among consumers of other milk. This ratio was almost identical in the three districts canvassed.

TABLE 1.—MORBIDITY IN DAIRY X ROUTES COMPARED WITH THAT IN OTHER DAIRY ROUTES

| Locality | Dairy | No. Houses Investigated | No. Houses Affected | Per Ct. Houses Affected | No. Persons Attacked | Ave. No. Cases to Houses Affected | Ave. No. Cases to Houses Investigated | Ratio of Morbidity |
|---|---|---|---|---|---|---|---|---|
| Hyde Park ..... | X.... | 75 | 38 | 50 | 97 | 2.6 | 1.3 | 14.2 :1 |
| | A.... | 98 | 10 | 9.8 | 11 | 1.1 | .09 | |
| 22d Street ..... | X.... | 83 | 39 | 47 | 81 | 2.1 | .98 | 14 : 1 |
| | C.... | 116 | 6 | 5 | 8 | 1.3 | .07 | |
| North side ..... | X.... | 94 | 52 | 55 | 125 | 2.4 | 1.3 | 13.9 :1 |
| | G.... | 118 | 8 | 6.8 | 11 | 1.4 | .093 | |
| Total........ | X.... | 252 | 129 | 51 | 303 | 2.37 | 1.1 | 14 : 1 |
| | Others | 332 | 24 | 7.2 | 30 | 1.27 | .084 | |

3. *Comparison of Morbidity Among the Nurses in Different Hospitals.*—It is matter of common knowledge that sore throat prevailed to an alarming degree among the patients of certain hospitals, but statistical evidence on this point is difficult to obtain. The nurses in the large hospitals furnish excellent material for study, because they take their meals in one place and a careful record is kept by the superintendent of the day of onset of any illness, when the nurse is relieved from duty. In several of the hospitals cultures are made, as a matter of routine, from all nurses with sore throat.

As indicated in Chart 1, two of the hospitals obtain their milk-supply from Dairy X. The others use milk from several other dairies (indicated by capital letters). Of the total 230 nurses in the Cook County Hospital, nine or 4 per cent., were ill with sore throat. Of St. Elizabeth's forty-six nurses and Policlinic's twenty, none were ill. Of St. Luke's 150 nurses, eleven or 7.3 per cent.; of Mercy's 150 nurses, six or 4 per cent.; of Presbyterian's 125 nurses, nine or 7.2 per cent. In contrast to these figures, Henrotin hospital reports sixteen cases of sore throat out of a total of thirty-three nurses, or 48 per cent., and Michael Reese, out of a total of 120 nurses, sixty-four cases or 53 per cent. The two last named use milk from Dairy X.

The total number of nurses using X milk in both hospitals was 153, of whom eighty or 52 per cent. were attacked. The total number of nurses using milk from other daries was 721, of whom thirty-five or 4.8 per cent. were attacked. Comparing the two groups, a ratio of eleven cases of sore throat developed among the users of X milk to every one that developed among the users of other milk.

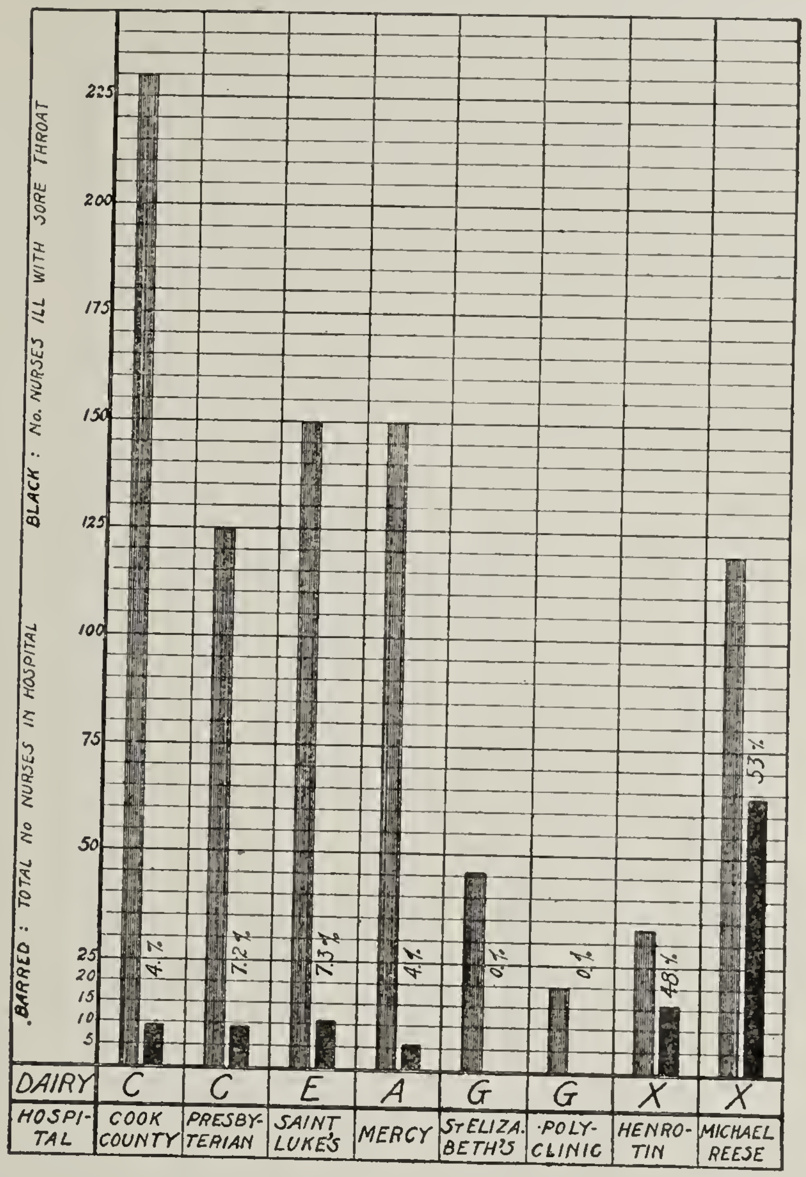

Chart 1.—Comparative prevalence of sore throat among the nurses in Chicago hospitals and the milk-supply of each hospital. Note the high percentage of morbidity in the two hospitals supplied by milk from Dairy X.

Two striking situations should be related which present all the details and convincing results of carefully planned experiments. The Henrotin and Policlinic hospitals are not far apart and both are supplied with nurses from one training-school. The nurses occupy a common dormitory and have continuous service in one or the other hospital where all meals are taken. The Henrotin uses Dairy X milk, while the Policlinic uses Dairy G milk. During the months of December, January and February, ten of the twenty-three nurses who were working and eating at Henrotin had sore throat (as well as six of the ten additional graduate nurses). None of the twenty nurses on duty at the Policlinic had sore throat during this period, although they were living in close intimacy at the dormitory with the Henrotin nurses.

At Michael Reese Hospital the seventy occupants of the children's wards passed through the epidemic without one case of sore throat. This was remarkable when one considers that a very large number of nurses and interns attending them were attacked. All the hospital supply of milk comes from Dairy X, but the milk for the children is delivered in a raw state and is especially pasteurized in the hospital by the holding method, while the milk for the rest of the hospital and nurses is pasteurized at the Batavia plant. No stronger proof could be furnished of the value of thorough pasteurization.

These incidents also indicate that proximity or prosodemic infection was not responsible for a single case of sore throat in these two large groups.

*4. The Batavia Epidemic and Its Relation to the Milk-Supply.*—Examination of the reports from physicians in seventy counties of Illinois shows that while many localities have suffered from the prevalence of tonsillitis and enlarged glands, Batavia has experienced an extraordinary epidemic in respect both to the number of cases and to the severity of complications, especially of arthritis. Since Batavia is the center of the Dairy X herds and the place where the pasteurization is done, we decided to make a house-to-house canvass of the village.

TABLE 2.—PREVALENCE OF SORE THROAT IN BATAVIA AMONG USERS OF X MILK, COMPARED WITH THAT OF USERS OF MILK FROM OTHER DAIRIES

| Dairy | No. Houses Investigated | No. Houses Affected | Per Ct. Houses Affected | No Persons Attacked | Ave. No. Cases to Houses Affected | Ave. No. Cases to Houses Investigated | Ratio of Morbidity |
|---|---|---|---|---|---|---|---|
| X .................... | 50 | 33 | 66 | 73 | 2.2 | 1.45 | 3.6:1 |
| All others ............ | 160 | 43 | 27 | 66 | 1.5 | .4 | |

A comparison of the figures in the Dairy X column shows that seventy-three persons were attacked in the fifty households investigated, or an average of 1.45 person to each household. This is a higher rate of morbidity than was found in any locality in Chicago. The returns from patrons of other dairies, however, is much higher than was found in control routes in Chicago. These cases of sore throat occur among the customers of three small dairies that sell only to the local trade.

It seems probable that in Batavia not only the milk from Dairy X, but also the milk from other small local dairies is responsible for the sore throat outbreak.[4]

We would emphasize the fact that the X milk consumers in Batavia developed 3.6 times as many cases in proportion to the number of households supplied as the consumers of milk from all other dairies, and that the morbidity-rate of the Batavia users of X milk exceeds that of the Chicago consumers of the same.

### EXTENT OF EPIDEMIC

On the basis of our returns we estimate conservatively that a minimum of 10,000 persons were affected in Chicago. The comparative freedom of the west side from sore throat is probably explained by the fact that very little X milk is marketed in that section. The evidence presented, we believe, is conclusive that the great majority of the cases were direct infections from drinking the milk of Dairy X. Our attention was then directed to the source of contamination of this milk.

### INVESTIGATION OF THE CONTAMINATION OF MILK

This inquiry was directed along three lines:

1. The search for any unusual prevalence of mastitis among the cows in the X Dairies.

2. The search for any cases of sore throat among the farmers and milkers.

3. The study of the pasteurizing efficiency.

*1. Mastitis Epidemic.*—Mastitis or garget is often caused by a streptococcus which is not pathogenic to rodents or to man. Under certain conditions and environment, however, this bovine streptococcus may acquire virulency to man. According to Savage[5] the proportion of cows with mastitis is decidedly higher in the herds implicated in a milk epidemic than in other herds. In the London district the average percentage of mastitis for six years was less than 1 per cent.; the maximum was 2.2 per cent. In the report to the Chicago Health Department on eighty-four herds, including about 1,848 cows, which furnish Dairy X milk, there were eighty-five cases of mastitis in December, January and February, or about 4.6 per cent. The farmers commented on the unparalleled number of cases and their severity. They said the first symptom was a redness or rawness at the end of the teat; then a creeping inflammation up the duct that ended in caking of the udder. Such a description strongly hints at the possibility of the introduction of human infection through the hands of the milker.

*2. Sore Throat on Dairy Farms.*—Sore throat among the farmers and milkers at the time of the mastitis outbreak furnishes an important link in the evidence. But the simultaneous existence of mastitis in the cows and sore throat among the farmers on the same farm fulfils all the conditions necessary for the contamination of the milk. A history of sore throat of the epidemic type was established on eleven farms supplying Dairy X, with a total of twenty-nine cases of illness. On nine of these farms there was also mastitis among the cows. One cow had a chronic abscess of the hind quarter of the udde that began late in December. The pus milked from thi teat was thrown away, but the milk from the othe quarters was used continually and at the time of ou examination contained pus in large quantity. Abou December 18, a sixteen-year-old girl on this farm wa very ill with sore throat.

On another farm supplying Dairy X, milk was take by Dr. Davis from a cow with typical mastitis of fiv weeks' duration and streptococci were found. At th same time a culture was obtained from the throat of girl on the same farm who had five weeks before bee afflicted with sore throat and acute arthritis. This als showed streptococci. Dr. Davis found that both bovin and human strains were fatal to guinea-pigs and rabbit A third farm showed the coincidence during the latte part of December of eleven cases of mastitis in the cow and of sore throat among all three milkers. The mil from these diseased cows was sometimes thrown awa sometimes saved, "depending on how it looked."

From these data we may assume that a rather consta flow of streptococci was taking place from certain farn to the pasteurizing plant at Batavia during the wint months.

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[4] Space does not permit a detailed presentation of the data concerning these local dairies. We hope to include this and other pertinent matter in a later paper.

[5] Savage: Diseases of the Cow Affecting the Milk in Th Relationship to Human Disease, Royal Soc. Proc., 1911, iv, 73.

3. *Inefficient Pasteurization.*—The pasteurization of practically all milk delivered by Dairy X during the winter was done at the Batavia plant. The process used is the so-called "flash" method, by which the milk is supposed to be heated momentarily to 160 F. An automatic device makes a written record of the temperature.

The chart constructed from these records is intended to show the percentage of failure or inefficiency of pasteurization day by day. If, for example, the temperature is too low for one hour of a total of four hours' pasteurization on a given day, the record shows a fall of 25 per cent. for that day. The fluctuations of temperature were often pronounced, a minimum temperature of 130 F. occurring on several days. · These fluctuations are not represented on the chart.

A perusal of Chart 2 brings out most pronounced failures of pasteurization on December 17, 19, 28, 30 and on January 7 and 11. One should compare with the first two dates the explosive outbreak which began December 21, reached its climax Christmas day and rapidly subsided The second explosive outbreak was on January 1 and 2. A smaller eruption of cases occurred from January 10 to 17. The pasteurized milk was delivered the following morning and consumed on the second and third day from pasteurization. Allowing thirty hours to four days for the incubation period of the sore throat, we see that the explosive outbreaks of cases corresponded in point of time to the breaking down of pasteurizing efficiency.

In spite of the contamination of the milk by means of sore throat infection of the milkers and mastitis of the cows, there is every reason to believe that the final responsibility for the epidemic rests on inadequate and unreliable pasteurization. The absolute protection of the children at Michael Reese Hospital from the contamination by means of efficient pasteurization demonstrates this point. Pasteurization by the "holding" method, maintaining a temperature of 145 F. for twenty minutes, is considered by experts to be the only reliable means of destroying pathogenic bacteria.

SUMMARY

1. It is conservatively estimated that over 10,000 persons in Chicago were victims of epidemic sore throat.

2. Of a total of 622 cases that were investigated, 539 or 87 per cent. were users of milk from Dairy X. Of nineteen fatal cases investigated, fifteen or 79 per cent. were users of this milk.

3. A comparison of the prevalence of sore throat among consumers of Dairy X milk with that of consumers of milk from another dairy in the same neighborhood showed that the morbidity ratio was fourteen times as great among the former as among the latter. This ratio prevailed in three widely separated districts of the city.

4. Of a total of 153 nurses in hospitals using X milk, eighty or 52 per cent. were attacked with sore throat, while of a total of 721 nurses in hospitals using other milk, only thirty-five or 4.8 per cent. were affected.

5. Returns from seventy counties in the state of Illinois indicate in many communities a prevalence of tonsillitis, but only one locality reports an epidemic comparable to the Chicago outbreak in extent and severity. This locality is Batavia, where the X milk is collected from the dairy farms and pasteurized. Batavia is partly supplied with X milk.

6. An epidemic of mastitis involving 4.6 per cent. of the cows supplying milk to Dairy X occurred during the winter months, and was worst about the Christmas holidays

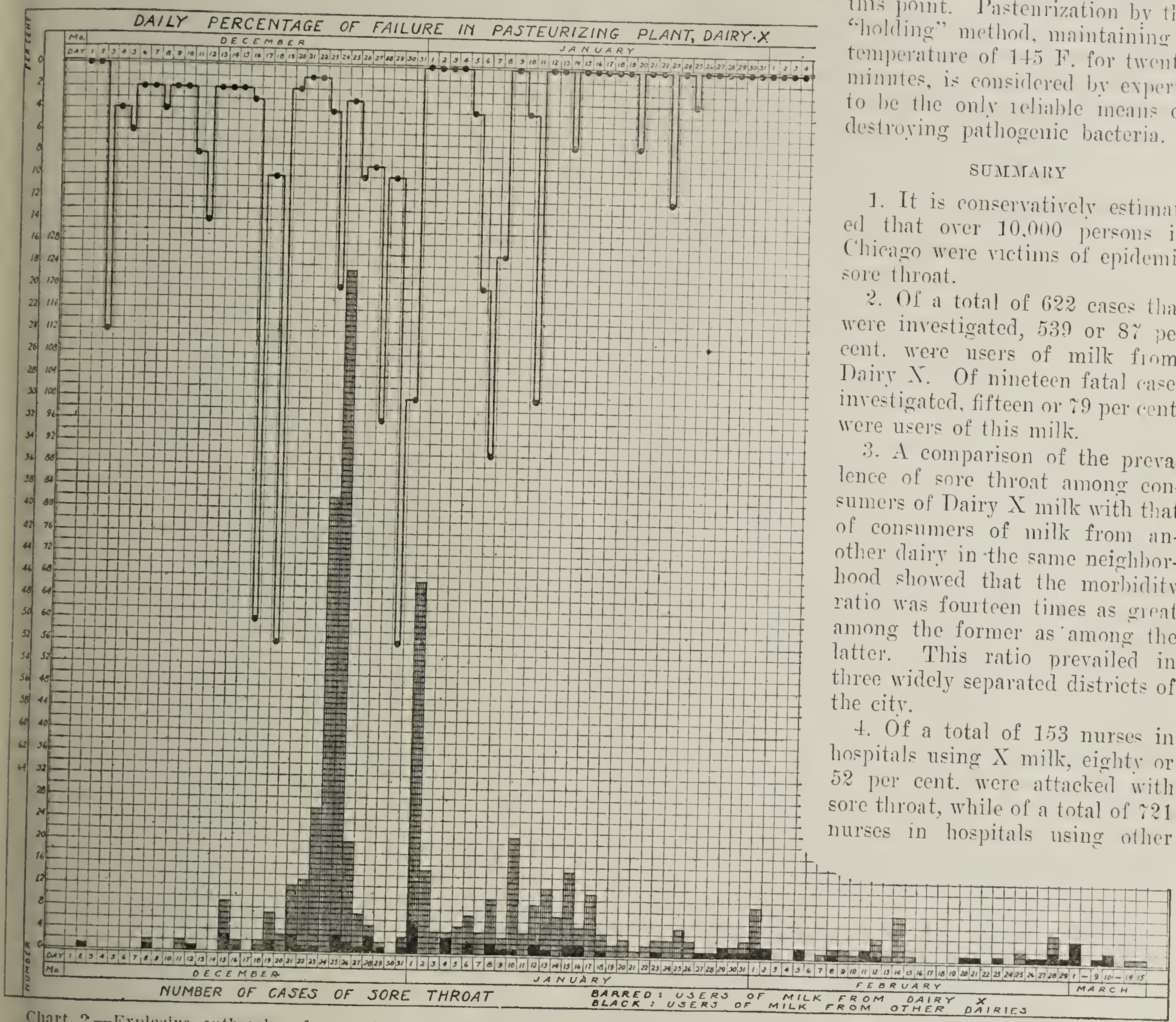

Chart 2.—Explosive outbreaks of sore throat cases in Chicago, by days, compared with the failures in pasteurizing efficiency at the plant of Dairy X.

7 Sore throat of the epidemic type was prevalent among the farmers and milkers supplying Dairy X. Often bovine mastitis and human sore throat prevailed on the same farm at the same time.

8. A virulent streptococcus was isolated by Dr. Davis from the milk of a cow with chronic mastitis and from the throat of a girl on the same farm who had been ill with sore throat and arthritis.

9. The pasteurization records reveal a remarkable degree of failure to maintain a proper temperature. The days on which the most striking failures of pasteurization occurred shortly preceded the great outbreaks of sore throat.

10. The remedy is to be found in more careful inspection of cows and milkers, and, most important of all, in efficient pasteurization by the holding method.

We wish to acknowledge our indebtedness to the Chicago Department of Health for its active interest and cooperation in obtaining much of the important data on which this investigation is based.

122 South Michigan Boulevard.

# BACTERIOLOGIC STUDY OF STREPTOCOCCI IN MILK IN RELATION TO EPIDEMIC SORE THROAT *

DAVID J. DAVIS, M.D.
CHICAGO

The epidemic of sore throat that prevailed in Chicago during the past winter, especially late in December and in January, was revealed in its more serious aspects by the marked increase in the number of complicating infections of various kinds. This was especially noticeable at many of the hospitals and was also commonly noted by physicians in their regular practice. My interest was especially aroused by the occurrence of a number of deaths at St. Luke's Hospital, and autopsy on three such cases revealed, among other lesions, acute septic peritonitis, from all of which a streptococcus was isolated in pure culture.

These deaths occurred late in the month of January within a period of about ten days and the histories in all cases revealed the fact that the infection began as a sore throat or an acute tonsillitis. A number of other fatal cases occurred at about the same time in various parts of the city, from a number of which cultures were made; they showed similar streptococci as the infective organism.[1]

During what may be termed the epidemic period about forty-five strains of streptococci were isolated from such cases, including a variety of complications as well as a number of autopsies. In studying these cocci it was noted that practically all the strains that came from the varied complications, those isolated from the autopsies and also some, but not all, from sore throats had certain peculiarities by which they were quite readily differentiated from ordinary streptococci. Commonly, however, from sore throats, even from cases which were typical clinically, the ordinary *Streptococcus hemolyticus* was found.

The streptococcus, as it appears in smears of the exudates, occurs in pairs or very short chains and may be slightly lanceolate in form. In the chains, when present, the cocci are arranged in twos. They are strongly Gram-positive and surrounded by a definite capsule. The capsular substance is distinct but less abundant than that surrounding the *Streptococcus mucosus*. It is also less abundant than that about pneumococci and does not indent, or only very slightly so, between the pairs as does the pneumococcus capsule.

On artificial cultivation of this streptococcus certain more or less characteristic features appear, especially on blood-agar plates. The colonies are larger and more moist than are those of the ordinary type (*S. pyogenes*). They are raised and tend to spread on the upper or under surface of the media. A distinct zone of hemolysis is always present, which is clear with often a faint greenish tint when viewed by transmitted light. This zone is usually but not always narrower than that produced by the ordinary *Streptococcus hemolyticus*. It begins immediately about the colony and its outer margin may be indistinct. All the blood-corpuscles in this clear zone have been dissolved.

On blood-agar slants the growth is abundant, raised and moist but does not have the mucoid appearance of the *Streptococcus mucosus*. There is much less tendency for the colonies to remain discrete than is the case with ordinary *Streptococcus pyogenes*. In broth, uniform turbidity is produced. The growth is very abundant in sugar broth especially if a few drops of serum are added. Milk is always acidified and usually coagulated. These cocci ferment glucose, lactose, saccharose, dextrin and maltose, but not inulin, mannite or raffinose. They are readily killed by heating to 60 C. for thirty minutes. The cocci are only slightly bile-soluble and autolyze very strongly in salt solution. These latter tests, their failure to ferment inulin and their hemolytic property on blood-agar, serve clearly to differentiate them from pneumococci and to place them definitely in the streptococcus group.

These organisms are very highly pathogenic fo animals, killing guinea-pigs in relatively small doses i from twenty-four to forty-eight hours. They are eve more virulent in rabbits. Intravenous injection of smal doses causes a generalized infection with death followin in from twenty-four to thirty-six hours. If very smal doses be given the organisms, like ordinary streptococc tend to localize in the joints, causing multiple arthritis also there may be infection of serous cavities generall and local abscesses in the myocardium. Vegetativ endocarditis with hemorrhages may occur but is rare.

As stated above, hemolytic streptococci, apparently c the ordinary type, were common, especially in the throa and tonsils. These streptococci do not have a capsule the colonies on blood-agar possess wide clear zones c hemolysis; they tend to spread less on the surfaces, an are smaller and less moist than the organism abov described. On sugars, milk and other mediums these tw varieties of streptococci grow practically alike. Th relation of these two types of streptococci is undoubted a very close one and certain facts would seem to indica that the one is simply a modified form of the othe When grown on ordinary mediums the encapsulat coccus—at least some strains—loses its capsule and t growth on slants is less profuse and moist. By anim passage the capsule and the other properties mention return. The profuse moist appearance of the colonies, may be stated, seems to be dependent on the capsular su stance. While this seems to be true of some strains oth strains maintain their peculiar characteristics for a long time (several months) with little or no change.

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* Read in the Section on Practice of Medicine of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

* From the Pathological Laboratory of St. Luke's Hospital.

[1] It was about this time that, in discussing the matter with Dr. E. C. Rosenow, I learned that he had had a similar experience as regards the unusual number and peculiar character of cases of streptococcus infections. This led to our publication of a statement on this subject, which appeared in THE JOURNAL A. M. A., March 16, 1912, p. 773

Buerger[2] has called particular attention to such encapsulated streptococci. These cocci, he states, are not uncommonly found in exudates and one can predict the presence of capsules from the profuse watery growth on glucose-serum agar. They usually lose their watery growth after a few transplantations. He further states that the colonies may look like those of *Streptococcus mucosus* immediately after isolation from the blood, but later they cause distinct hemolysis like the ordinary streptococci. Bail and Kleinhans,[3] in a study of encapsulated streptococci, state that in the animal body certain strains of streptococci readily acquire capsules, while others do not, there being evidently considerable variation in this regard. I think that there can be no doubt but that these encapsulated streptococci found in the epidemic cases belong to the type spoken of by these workers. The fact that the ordinary hemolytic streptococci were quite commonly found in the throats, while from the blood, abscesses, empyema, autopsy material, etc., the encapsulated organisms were obtained undoubtedly indicates, I think, that the capsules were acquired in the body of the infected individual and were probably either directly or indirectly related to the virulence of the strain.

It would seem, then, that these streptococci appear in capsulated and non-capsulated forms depending on certain environmental factors and probably do not differ essentially from the ordinary streptococci with which we are commonly familiar, except perhaps in the matter of virulence.

The work of Capps and Miller concerning the relation of this epidemic of sore throat to the milk-supply opened a field for bacteriologic investigation along the lines of milk contamination. The facts which they obtained indicated clearly that the epidemic was milk borne and that the infected milk came from one particular dairy (Dairy X) which obtained its milk-supply from the territory about Batavia, Ill. Furthermore, it was shown that an unusual number of cases of mastitis occurred in the dairy herds in this region during the winter and associated with the mastitis were many cases of sore throat in the families of those who owned the herds. As was shown, however, the latter infections were usually preceded by the appearance of the mastitis in the cows. Unfortunately, the epidemic had long passed before the investigation had pointed to the possibility of this region being the source of the trouble. There still occurred in May, occasional cases of mastitis in the herds though nearly all were old chronic lesions or lesions practically healed. It was thought that one might possibly throw some light on the nature of the causative organism by an examination of milk from the udders of cows so affected.

Ten cows on seven different farms in this territory were found which during the past few weeks or months had udder disease in some form. Only four of these, however, had lesions which could be considered active. They were all on farms supplying milk to the dairy under suspicion. Three of these cows, all giving gargety milk, had been suffering for a long time, some indeed for four or five months. They were on three different farms at considerable distances apart. In the milk of each of these cows was obtained a practically pure growth of a small Gram-positive bacillus which undoubtedly belonged to the diphtheroid group. They occurred in large numbers in the ropy milk together with many pus cells; in one cow, they were also found in the pus from an abscess which had broken open on one of the udder quarters. This organism is pathogenic for guinea-pigs in moderate doses but does not produce in the guinea-pig hemorrhages in the adrenals or other lesions which simulate those caused by the diphtheria bacillus. No streptococci were found in any of the samples from these three cows. A fourth cow, in another herd, had a diseased udder for four or five weeks which appeared shortly after calving. The right hind quarter was hard and somewhat tender, and thick, ropy milk or rather pus was obtained from the teat. According to the farmer, this diseased quarter was milked on the floor, the milk from the other three quarters being used. On a subsequent visit one week later, three quarters were found affected, all of which were caked, and the milk was ropy and stringy. The farmer still continued to use one quarter. On examination smears made from the affected milk on both occasions revealed myriads of streptococci and pus cells in immense numbers were also found in the material. Cultures made on blood-agar plates revealed a pure growth of streptococci from all the affected quarters.

The streptococcus at the time it was isolated conformed in every way morphologically and culturally with the ordinary hemolytic streptococcus. It was Gram positive, distinctly hemolytic, grew in moderately short chains, acidified milk and did not possess a capsule. It fermented dextrose and lactose but not raffinose or mannite. One blood-agar slant growth injected intravenously into a rabbit caused purulent arthritis of the left knee and death on the fourth day from septicemia. Guinea-pigs succumbed usually in twenty-four hours after intraperitoneal injection of the same amount. An interesting point is the fact that after three animal passages the cocci in the peritoneal exudate of the guinea-pigs acquired distinct capsules and their growth on blood-agar slants and plates became more watery and mucoid. These properties were again readily lost on ordinary media. In other words after animal passage it simulated in every respect the encapsulated streptococci described above in the exudates of the epidemic cases. Before animal passage it simulated the hemolytic streptococci commonly found in the sore throats.

It might be stated also that on this same farm one member of the family, a young girl, was suffering at the time and for about the last five weeks with sore throat, associated with acute articular rheumatism. Swab cultures from the inflamed and enlarged tonsils gave an abundant growth of a hemolytic streptococcus which seemed to be identical with the milk streptococci. On animal passage it readily acquired capsules. This girl, however, denied having drunk any milk and gave a history of having had acute arthritis and sore throat in previous years. It may be that there existed no relation in this instance, but the circumstances at least seemed suspicious.

So far as could be learned, this case of mastitis was a typical one and clinically was like the infections which were so prevalent in this region throughout the winter. I therefore think it reasonable to assume that at least some of these cases occurring during the winter were also streptococcal in origin.

It was stated above that a number of outbreaks of sore throat occurred in families of the owners of herds affected with mastitis. In some instances the milkers were severely ill and continued to milk the cows regularly. It may very well be that in some cases the milk was again contaminated by such infected milkers through coughing, sneezing, handling, drinking from milk-cans and the like. Drinking fresh milk from cans or can covers in the barns was found to be a common custom of milkers on some farms. One farmer who was obliged to insert a tube into the teat, following mastitis, in order to empty one quarter of the udder admitted that he put the tube regularly in his mouth to blow out the contents and never cleaned the tube otherwise. This same farmer admitted too that only a short time previously he had had sore throat for several days but paid little attention to it and continued to milk his cows as usual. It is difficult to prove how much contamination actually does occur under such conditions or indeed whether any at all occurs, but surely one must admit that the possibilities are ample. It seems, therefore, not unlikely that assuming that the epidemic was chiefly caused by the prevalent mastitis in the cows, the milk contamination was further increased through carelessness.

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[2] Jour. Infect. Dis., 1907, iv, 426.

[3] Ztschr. f. Immunitätsforschung u. Exper. Therap., 1, Teil; Orig., 1912, xii, 199.

The literature on the subject of mastitis in cows in certain respects is somewhat confusing. Authors quite generally agree that milk from such cows is dangerous and that many of these infections are caused by streptococci. As to the character of the streptococci, however, there is much difference of opinion. The question is confused owing to the fact that normally in milk there are found many cocci which come from the ducts, skin of the udder, fecal dirt, etc., and which may possess some pathogenic power for animals. As shown by Heinemann[4] and others, *Streptococcus lacticus*, which was formerly mistaken for a bacillus, has some pathogenicity for lower animals and is very similar in many respects to the ordinary *Streptococcus pyogenes*. Ruediger[5] in a recent study maintains, however, that the *Streptococcus lacticus* can readily be differentiated from *Streptococcus pyogenes* by means of blood-agar plates, the former organism producing green or grayish colonies with little or no hemolysis, while the latter produces a wide clear zone of hemolysis about the colonies. He also states that "*Streptococcus lacticus* has no sanitary significance as it is found in nearly all samples of clean, soured or fresh milk and often in the healthy milk ducts. *Streptococcus pyogenes*, on the other hand, seems to occur but rarely in milk and is indicative of the existence of an inflamed condition of the udder of the cow furnishing the milk." This I regard as undoubtedly an accurate expression of the relation of these organisms.

That epidemics, especially of tonsillitis, can be caused by milk from infective mastitis in cows there is little doubt. Winslow[6] and Savage[7] have recently analyzed the literature on this subject and it is not necessary here to repeat further than to make some general remarks. In many respects the Boston epidemic of sore throat last year was similar to the Chicago epidemic, especially in its clinical manifestations. The evidence seems clear that the milk-supply was contaminated, but the exact source of the infection was not clearly determined. I may state that through the kindness of Dr. Fabyan of Harvard I obtained four strains of streptococci isolated from human patients during the Boston epidemic and they appear in every respect to be identical with the Chicago streptococci. They readily form capsules when passed through animals and show a profuse moist growth on blood- or serum-agar.

Epidemics of tonsillitis bearing a more or less definite relation to the milk-supply have been common in Great Britain. Usually the exact connection is not clear, but especially in three epidemics the evidence in favor of udder contamination is very strong. At Colchester[8], for example, in 1905, an explosive outbreak appeared which was confined almost entirely to persons supplied by a single dairy in which was found a cow suffering from a streptococcal mastitis. On removal of this cow the epidemic ceased. Again at Glasgow[9], in May, 1904, an epidemic of sore throat appeared suddenly and it was found that some cows in the dairy supplying milk to the hospital were suffering from a teat eruption which also appeared on the hands of four of the milkers. An epidemic also at Woking[10], in 1903, was typical and was associated with many serious complications. The source of the infection was traced to a farm on which four cows were affected with streptococcal udder inflammation. The farmer and his family were suffering at the time, or had suffered previously, from sore throat. The streptococci were virulent for mice.

## CONCLUSIONS

The epidemic of sore throat in Chicago in the winter of 1911-12 was caused by an organism belonging to the streptococcus group. In the exudates and in the body it was usually encapsulated, but not infrequently in the throats a capsule was not present. It was highly pathogenic for animals, readily producing arthritis in rabbits, and occasionally, endocarditis. The work of Capps and Miller shows clearly that the infection was largely milk-borne and that an epidemic of mastitis in cows and sore throat in farmers prevailed during the winter in the vicinity of Batavia, Ill., the territory which supplied the contaminated milk. From a typical case of mastitis in a cow from a farm in this region a streptococcus was obtained pure which was pathogenic to animals, became encapsulated on animal passage and agreed in all essential respects to the human epidemic streptococcus. A coccus identical in morphology in culture and in pathogenicity was obtained from a human case of tonsillitis and arthritis on the same farm. The relation of these streptococci to the common hemolytic variety, *Streptococcus pyogenes*, is certainly very close. They may be identical, the differences noted being caused by environmental factors. The fact should be emphasized that streptococci which cause mastitis in cows may be pathogenic for animals and virulent to man.

[THE DISCUSSION ON THIS AND THE PRECEDING PAPER WILL APPEAR NEXT WEEK.]

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[4] Jour. Infect. Dis., 1907, iv, 87.
[5] Science, 1912, xxxv, 223.
[6] Jour. Infec. Dis. 1912, x, 73.
[7] Savage, W. G.: Milk and the Public Health, London, Macmillan & Co., 1912.
[8] Savage, W. G.: Public Health, 1905, xviii, 1.
[9] Chalmers: Public Health, 1904, xvi, 769.
[10] Pierce: Jour. State Med., 1904, xii, 595.

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**Sewage-Polluted Water-Supplies in Relation to Infan Mortality.**—Contact is probably one of the greatest factors i the transmission of diarrhea and enteritis. It is also the facto responsible for the persistence of the disease from year year. In the winter the contact factor is reduced, but operate at a low rate which increases in the hot months. Flies and oth factors augment the increased rate due to contact in the ho season. It is because of the contact factor that the breast-fe infant does not escape. The greatest prevalence in bottle-fe babies is probably due to greater opportunities for infectio Young infants drink little water, and the effect of pollute water on infant mortality is probably most active throug being mixed with milk.—Allan J. McLaughlin in *Public Healt Reports*.

# MORPHINISM IN SOME OF ITS LESS COMMONLY NOTED ASPECTS

C. C. WHOLEY, M. D.
Physician in Charge, Department for Inebriety and Other Drug Addictions, and Assistant in Psychiatry, St. Francis Hospital
PITTSBURGH

In this communication I shall touch briefly and somewhat empirically on certain conclusions arrived at as a result of my work with the morphinist. Some of these, I believe, are not generally noted in writings on the subject of drug habit. In dealing with the morphinist, we find an individual very different from the alcoholic. For while we may fall back on the neuropathic constitution to explain many cases of alcoholism, if we attempt to apply the same argument in morphinism it will be found not to work in nearly so many instances. Unlike the poet, the morphinist may be made, not born such; there need be neither special neuropathologic constitution nor hereditary taint. I am inclined to say that some neurotic element is necessary for the evolution of the well-developed inebriate; but this original, native nervous feature is by no means always present in the morphinist; it is not essential for his maturing.

The average individual can take alcohol in ordinary doses for long periods and still maintain his independence; no individual may do this with morphin. It is not a rare occurrence for an alcoholic of some length of habit to take a brace and the pledge and remain sober ever after. But after a corresponding period with morphin — a period much less in point of duration — it is almost unheard of that an habitué is able voluntarily to break away from his habit. The physiologic and psychic effects of the two drugs are very different. Morphin begins to leave distressing bodily and mental withdrawal-symptoms after a very short period of continuous usage — a period often of but a few days. Cramps, nausea, a feeling of drawing and pulling about the joints, and an indescribable sense of general discomfort begin to make their appearance; and frequently it is the desire to escape these that enables the drug to get its first firm hold.

In the study of morphinism the question naturally arises as to how the organism can adapt itself to the large doses individuals often habitually take. Perhaps the idea is rather prevalent of regarding idiosyncrasy as referring to a peculiar susceptibility to small doses of a drug. But we have to bear in mind that the term "idiosyncrasy" applies as well when an individual requires more than the ordinary dose to obtain a reaction. It is to an acquired tolerance that I wish to call attention rather than to this congenital tolerance, or idiosyncrasy. It is not uncommon for a morphinist to take 2, 4, 6, 8 and even 10 grains of morphin hypodermatically at a dose. One of my patients had been taking, for a month or six weeks, 25 grains daily by the needle. Another frequently took 60 grains daily by mouth. One woman was accustomed to inject daily one hundred 1/6 grain heroin tablets for some time before she underwent treatment. Such examples serve to illustrate to what extent tolerance may grow. Reid Hunt[1] quotes Faust as finding that the establishment of tolerance for morphin is accompanied by an increased power on the part of the organism to destroy (oxidize) morphin; and he attributed the tolerance to this power of increased oxidation. Hunt found, by experiments on animals, that tolerance for alcohol was due to this same increased power of oxidizing the drug.[1] Arguing that there would probably be an increased tolerance for other drugs belonging to the same chemical group as that of the tolerated drug, Hunt found that certain animals, while on small doses of alcohol, acquired the power of oxidizing a definite poison, acetonitril. This is in accord with what one notices in the morphin habitué.

We all know how recklessly certain drug addicts dose themselves with the various narcotics; these practically all belong to the same chemical series, namely, the methane series including alcohol and chloroform. The addict appears to become tolerant of unusually large doses of any member of this group. I have become accustomed, by necessity, in treating these cases to administer hypnotic doses which would neither be given nor required in the normal individual. Just as we account for the fact that chronic drunkards are particularly resistant to the action of chloroform, so the above conditions of tolerance are partly explained by the fact that many of these act on the same nerve-cells in the same direction, and probably produce the same changes in the protoplasm.[2] At the same time, I believe that part of the increased tolerance is due to the fact that the nerve-cell has become exhausted from continued reaction and the accumulation of waste products, and for these reasons calls for a continued increase in dosage to bring about an adequate reaction. On the other hand, tolerance is sometimes aided by the action of antagonistic drugs. One of my patients took her morphin in ¼ grain doses each combined with 1/150 grain of atropin. She was using from 20 to 30 quarters daily; therefore, from 1/7 to 1/5 grain of atropin during the same time. Here the tolerance for each drug was enhanced by the other. I will cite one further instance which seems to have a distinct bearing on the subject of tolerance. A morphinist of long standing arrived at the stage where, as he put it, "I got hell when I took it and worse hell when I tried to leave it off." After months of this blind-alley misery, he decided to end the struggle. Having heard that strychnin was a deadly drug, he procured one hundred 1/40-gr. tablets, and counting out forty of them at bed-time lay down, as he thought, to his last long slumber. In the morning he was disappointed to find himself awakening as usual; but undaunted he gulped down the remaining sixty the next evening. Then awakening the next morning, even a little refreshed, he abandoned the effort with a contemptuous regard for strychnin.

A phase of drug habit worthy of observation is the relationship of alcoholism to morphinism. I have seen it stated that delirium tremens is sometimes caused by the use of morphin. There is no doubt that hallucinations and delusions may arise as a result of the use of morphin; but when they so arise they certainly do not, in my experience, bear the stamp of the alcoholic delirium. Whenever a typical delirium tremens has arisen in my cases, I have always been able to find a history of alcoholism. In one case a delirium tremens occurred during the withdrawal of morphin. But, though the patient had been abstinent for several weeks, alcohol had been taken steadily and copiously before this. The mania *a potu* arose as it would have arisen in a fractured bone; the withdrawal of the morphin corresponded to such a trauma. A similar case was that of a young man, a morphinist, who developed a delirium during a pneumonia. His pneumonic symptoms did not seem sufficient to warrant the delirium, and at first the morphin was suspected. But his delirium being typically one of alcohol, further inquiry was made and it was found that the man had been drinking for some time, especially hard just previous to his illness. In men it is common to find this devotion to both morphin and alcohol. I have had patients whose morphinism was begun by its administration for the nervousness following an alcoholic debauch. When the morphin has been once begun the alcohol is almost invariably dropped. Thereafter, if the alcohol be resumed there is usually an alternation of devotion, but the veteran habitué rarely uses the two drugs simultaneously.

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[1] Studies in Experimental Alcoholism, U. S. P. H. and M.-H. S., Bulletin No. 33, p. 12.

[2] Cushney: Pharmacology and Therapeutics, Lea & Febiger, Philadelphia, 1910, Ed. 5, p. 29

A bypath of interest in working with the morphinist is the study of the difference in effect on the sexes. I do not know that the incubation period for the formation of the habit is shorter in women, but they usually quickly outstrip the male in the amount of the drug being used. The man is more provident in the use of his newly found treasure; he calls on its resources more cautiously. The woman is more reckless; she tolerates less patiently any failure in her dosage to produce all its first charm, and rapidly increases the amount in order to obtain her original relief. Constitutional and psychic differences, dependent on difference in sex, must be advanced to explain such differences of reaction. But there is one very important respect in which the drug affects both men and women in much the same way. This is the matter of the reduction of the libido. Amorousness subsides and is lost altogether in many instances. There are individual variations in this as in other symptoms which arise. Impotence and sterility are accompaniments of this sexual indifference. A feature especially noticeable in women is that shortly after the withdrawal of the drug there is a rather tumultuous return of sexual feeling. In women we find frequently a cessation of menstruation and an atrophy of the breasts. These return to normal when the morphin is discontinued. A point worth noticing here is that if a woman taking morphin in large amounts bears a child, the child is apt to be seriously dependent on the immediate continuance of the drug. Having obtained it through the mother's blood, he must now have it to prevent death from heart collapse. A case came to my notice lately in which such an outcome seems without doubt to have occurred.

A peculiar psychic condition exists in the drug addict which, I believe, is not always recognized. An amnesia may arise in the user of opium similar to that seen in certain alcoholics. One of my patients was for three weeks in such a state, having passed during this time through a particularly distressing period of withdrawal. To all appearances her suffering was intense at times; but at the end of the three weeks she gave no evidence of remembering the incidents or discomfort through which she had passed. It seems intelligible to regard this phenomenon as a result of a splitting of consciousness; and I am satisfied that in this particular instance, the memories which constituted the personality who reigned for the three weeks were a grouping of all the patient's most objectionable associations, traits and reflexes. Normally this woman was docile, sweet-tempered and immaculate as to person and habits; during this amnesic state she was intractable, vicious and filthy in her habits. Allied to such clear-cut phases of memory groupings with resulting amnesia, we find lesser phases of the same condition evidenced in such expressions as: "Doctor, I am just beginning to see things right again; everything appears so different to me now. I feel as if a veil had been drawn off my brain." Such expressions may not be heard for weeks after the withdrawal of the drug. Here the clouding of consciousness has not proceeded to the extreme of a splitting off, but I have interpreted it as due to a similar but slighter mechanism.

One of the practical conclusions which these amnesic or clouded states continuing after withdrawal has forced on me is the necessity of keeping patients under the strictest surveillance and best hygienic conditions until their mental clearness and character-assertiveness have manifestly returned. I would like to emphasize the fact that, almost invariably, clouding of consciousness still persists, though the morphin has been withdrawn, continuing sometimes for weeks, or until physical rehabilitation has taken place. The fact that this clouding, or amnesia, exists and persists must be taken into account if we expect permanent results in treating morphinism. I regard this fact as an irrefutable argument against the possibility of success, in the majority of cases, with any "three-day" or set-time cure.

As to symptoms of withdrawal, we find a great similarity running through the majority of cases. The word "cramps," I suppose, is used more than any other by the patients to describe what they feel when the drug is being withdrawn, or immediately after its withdrawal. These may be in the abdomen, low down, or in the stomach. More frequently the legs suffer — the calves, or the region about the knees. Distress in the back is often spoken of. Wherever the distress may be in the early stages of withdrawal, it rarely fails to be most prominently felt, and for the longest time, in the legs. This fact may be accounted for in the same way in which we explain the action of the virus of syphilis; namely, that it affects most prominently that part of the nervous system which is subjected to the most usage; and as we get tabes and paresis from syphilis, so the poison of morphin affects the lower spinal centers and higher brain processes most prominently. As in alcoholism or syphilis, so in morphinism we see on the mental side the most lately acquired faculties affected first. It is often the long-lasting withdrawal-symptoms and not a craving for the drug which brings about relapses. Even though the craving be removed, if these sequelæ be not properly cared for and the individual physically restored the danger of relapse is great. This is readily understood because the memory of the relief which the drug gave has not been and cannot be abolished. Strength of character has to be truly herculean to resist further resort to the drug under the distressing withdrawal symptoms which often arise.

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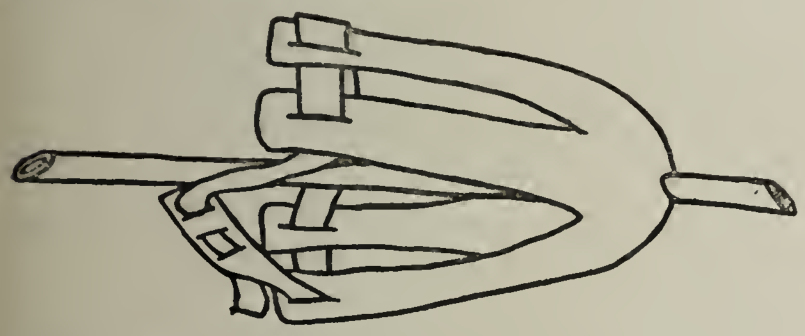
**The Canal Zone and the Health Officer.**—That the Cana Zone has been transformed from a pestilential region into on comparable with the United States in healthfulness has serve as a text for every writer and lecturer on sanitation fo several years. Yet we seem slow to see here a suggestio that this victory, won almost solely along the line of sanitar inspection of the modern type, has a lesson for us all. Sim larly, the great results obtained in Havana and New Orlea seem to have been accepted by municipal health officers a classic instances of notable achievements in sanitary scien rather than as examples of what we ourselves should be doing and as fine material for our boasts from the platform rath than as an irresistible incentive to work along similar lines- modified, of course, to suit our own respective communities- and thereby secure for them, not the conquest of impendi disaster of colossal proportions, but a large measure of reli from constant needless sacrifice of human life, which in t aggregate exceeds every year any loss of life which even t most fatal of yellow fever itself has ever occasioned.—Levy *Am. Jour. Public Health*, January, 1912.

## SIMPLE DEVICE FOR HOLDING RETENTION CATHETER

William S. Ehrich, M.D., Evansville, Ind.

The finger of a thick rubber glove is divided lengthwise into four parts, up to about ½ inch of the tip. One-eighth inch from the end of each strip a slit about ¾ inch long is made. A very small hole is made in the center of the tip through which the catheter is to pass.

From some other part of the glove is then cut a strip, 5 to 6 inches long, and ⅜ inch wide except at one end which is ½ inch wide and has three slits cut crosswise, through which the other end is passed after having been threaded through the four strips of the first piece. This can be drawn fairly snugly behind the corona and will hold the catheter in position.



It can be made in about a minute and has the advantage over the adhesive straps in that it can be removed, tightened or loosened without trouble to the physician or discomfort to the patient.

## ACRANIAL MONSTER WITH ENCEPHALOCELE AND POLYHYDRAMNIOS

H. A. Sharpe, Ph.C., M.D., Mount Vernon, Wis.

While a number of cases of a teratocephalic fetus are reported in the literature, I find none with an associated hydramnion of this size. I am also desirous of bringing out a point in regard to this case which I have not seen mentioned, and which may well be borne in mind in dealing with hydramnion, i. e., in making a digital examination through a small cervix, care should be taken not to mistake an encephalocele with acrania for placenta prævia. Edgar states that hydramnion is associated with monsters in 10 per cent. of all cases.

*History.*—The patient, a woman aged 38, was always healthy and had had six previous pregnancies without dystocia. Her family history was negative. I saw the patient June 10, 1911, at 11 p. m. She was eight and one-half months pregnant and had had pains for thirty-six hours, which had not become severe until 6 p. m. At the onset, the pains were an hour apart and lasted from ten to twenty minutes. Patient said that the pains came on so slowly that she could not tell when they started or ended. This continued for twenty-four hours, when the pains became more severe and the uterus continued in a state of tonic contraction. At irregular intervals there was an acute exacerbation of her pains, but at no time since 6 p. m. had they "let up." Previous to my arrival she had been under the care of a midwife.

*Examination.*—External: After catheterization, I found an mmensely pendulous and distended abdomen, and palpation evealed nothing relative to fetal parts except the possibility of a cephalic presentation. Internal: This revealed a well-ffaced cervix and an os admitting one finger. Completely overing the os was a "placenta-like" structure. Palpation hrough the effaced cervix revealed the bony structure of he fetal head above the pelvic brim. With threatened rupture f the uterus and the patient becoming rapidly exhausted, I ecided on immediate delivery.

*Delivery.*—I had the patient anesthetized and prepared for manual delivery, the cervix yielding readily to manual dilataion. Careful examination revealed the fetal membranes etween the examining finger and the placenta-like structure hich proved to be an encephalocele. On rupturing the bag f waters, quantities of amniotic fluid rushed out and collected. light traction brought forth a dead fetus. The amniotic fluid ollected measured exactly 24½ quarts. An adherent placenta as removed and the patient made an uneventful recovery.

*Description of Fetus.*—The trunk and extremities were normal. The cranium showed an encephalocele, covered by a thin transparent membrane, and absence of the occipital and both parietal bones.

# New and Nonofficial Remedies

The following additional article has been accepted by the Council on Pharmacy and Chemistry of the American Medical Association. Its acceptance has been based largely on evidence supplied by the manufacturer or his agent and in part on investigation made by or under the direction of the Council. Criticisms and corrections are asked for to aid in the revision of the matter before publication in the book "New and Nonofficial Remedies."

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that, so far as known, it complies with the rules adopted by the Council.

W. A. Puckner, Secretary.

**BISMUTH BETA-NAPHTHOLATE.—Bismuthi Beta-Naphtholas.**—Bismuth beta-naphtholate, a bismuth salt of beta-naphthol.

Bismuth beta-naphtholate occurs in the form of a brownish or grayish powder without odor, almost tasteless and insoluble in water. It is slightly soluble in alcohol.

One to 2 Gm. of bismuth beta-naphtholate is shaken in a separator during one hour with 25 Cc. of chloroform and 25 Cc. of concentrated hydrochloric acid, and then 50 Cc. of water added and the mixture again shaken. The chloroform solution is then drawn off and the acid mixture extracted with three more portions of 10 Cc. each of chloroform and the combined extracts evaporated and dried to constant weight over sulphuric acid. A residue should remain, weighing at least 15 per cent. of the material used, which should respond to tests of identity for beta-naphthol.

If bismuth beta-naphtholate be examined as given below the bismuth oxide found should weigh not less than 60 per cent. of the material taken.

The acid solution from which the naphthol has been extracted is transferred to a beaker, diluted to 200 Cc., heated to boiling, ammonia water added till turbidity appears, then sufficient hydrochloric acid to clear up the turbidity, and then 50 Cc. of 10 per cent. ammonium phosphate solution is added to the boiling liquid. The precipitate is allowed to subside, the clear liquid decanted through a tared porcelain Gooch crucible, the precipitate washed with hot water by decantation and finally transferred completely to the crucible. The precipitate and crucible are dried, placed in a nickel crucible, and exposed to the full heat of a Bunsen flame till the weight is constant. The weight of the resulting bismuth phosphate multiplied by 0.6869 should yield a figure (representing bismuth, Bi) equal to not less than 60 per cent. of the material taken.

If bismuth beta-naphtholate be examined as given below the weight of residue should indicate not more than 1 per cent. of matter soluble in chloroform.

One to 2 Gm. of bismuth beta-naphtholate is weighed to a small asbestos plugged percolating tube. 5 Cc. of chloroform added, the mixture stirred by means of a glass rod, and allowed to percolate into a tared dish. When the liquid ceases to drop, a further portion of 5 Cc. of chloroform is poured into the percolator and also allowed to percolate into the tared dish. The stem of the percolator is washed with a little chloroform, and the combined washings and percolates allowed to evaporate spontaneously and the residue brought to constant weight over sulphuric acid. The residue should not exceed 1 per cent. of the material taken.

*Actions and Uses.*—Bismuth beta-naphtholate is decomposed into its constituents in the intestines, where it exerts the effects of bismuth salts and of beta-naphthol. Hence it is used in catarrhal and fermentative gastro-enteric disorders, such as gastritis, dysentery, diarrhea, etc. (See note under Betanaphthol Benzoate).

*Dosage.*—For children 0.1 to 0.3 gm. (1½ to 5 grains) and for adults 1.5 to 5 gm. (22 to 75 grains) daily.

A mixture of beta-naphtholate with acacia should be avoided as a viscid precipitate rapidly becoming hard is likely to be formed.

Non-Proprietary Preparations:

*Bismuth Beta-Naphtholate, Mulford.*—Bismuth beta-naphtholate, Mulford, is bismuth beta-naphtholate obtained by precipitating a solution of sodium beta-naphtholate with an acetic-acid solution of bismuth nitrate, with addition of sodium hydroxide solution.

Manufactured by H. K. Mulford Co., Philadelphia. U. S. patent 985,559 (Feb. 28, 1911; expires 1928). Not trademarked.

*Tablets Bismuth Beta-naphtholate, Mulford 5 grs.*—Each tablet contains bismuth beta-naphtholate, Mulford, 0.3 Gms. (5 grains).

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[*For other information see second page following reading matter*]

SATURDAY, JUNE 15, 1912

## ANURIA AND THE KIDNEY EPITHELIUM

The correlation between the structure and the function of a tissue or organ is a theme which frequently has not received the attention which it deserves. In the domain of pathology there has too often been a tendency to determine the gross or minute anatomy of a part more for the sake of the morbid "picture" which was presented than in recognition of the light which changed histologic features might throw on the perversions of function involved — on the so-called pathologic physiology of the tissue. There are few organs which present more extensive alterations of activity than the kidneys. The physiologist at once notes the effects of pathologic changes in these organs on the composition and output of the urine. He is likely to concentrate his attention on the strictly chemical or circulatory disturbances. The pathologist examining the minute structure of the diseased kidney forgets, for the time, the bearing of these histologic changes on the excretory work of the organ. Finally, the clinician extends his observation to even more far-reaching effects and notes symptoms of renal disease remote from the kidneys themselves. The ideal attitude is one which unites these diverse points of view into a harmonious interrelationship.

An interesting suggestion of what may be gained by such a comprehensive consideration is offered in MacNider's studies on nephritis.[1] Recognizing the disproportion in the relative importance attributed by various clinical and experimental observers to the vascular and the epithelial changes in leading to a condition of anuria, MacNider has attempted to ascertain carefully to what extent the total output of urine may be correlated with changes in the renal epithelium, especially those of an obstructive nature. Heretofore the most consideration, perhaps, has been devoted to the part played by the vascular or glomerular factor. As MacNider says, "one fact is certainly established, that whatever urine there is formed makes its exit from the kidney by passing through tubules lined by epithelium, and that this epithelium, colloidal in nature, is competent to swell and partly or completely block the channel through which the urine is passing." Hence the desirability of further study of the tubular changes in anuria.

The outcome of these investigations on experimental acute nephritis induced by the use of diverse chemical agents, such as chromate, arsenate, uranium salts and cantharidin, emphasizes the significance of degenerative alterations in the tubules in blocking the passage of urine and leading to suppression of the secretion. The study indicates that in the experiments which show either a pronounced decrease in the output of urine or an anuria, there have constantly been associated epithelial changes, which would produce in various degrees obstruction of the lumina of the tubules. "In those experiments in which the output of urine has not been decreased and in those in which it has been increased beyond the normal, such epithelial changes either did not exist or they were histologically slight. Those nephrotoxic substances which have the most marked affinity for the tubular epithelium are the substances which most rapidly cause either a reduced output of urine or anuria, while those nephrotoxic substances, such as arsenic, which cause an early and a pronounced vascular injury, with late epithelial involvement, are the poisons which have least tendency to produce an anuria." In the instances in which polyuria has arisen, as occurs often in the early stages of nephritis, the vascula changes present constitute the sole anatomic evidence o altered function.

The results of obliteration of the lumina of the kidne tubules are conspicuous experiences of daily practice. I is helpful to have these interesting investigations, fre from the element of surmise so often attending clinica deductions relative to kidney pathology and based on th more convincing evidence of carefully controlled anima experimentation.

## THE TEETH AND THE SKULL

It occasionally happens that physiologic forces whi are active in the organism are not adequately recogniz until some pathologic condition makes their norm presence suspected. The teeth are ordinarily looked merely as organs for mastication exerting a purely loc influence in the mouth and unsuspected as agents who proper development is of considerable significance f the growth of the entire skull. In the course of t development of the teeth within the jaws from th delicate beginnings as tooth-sacs until their final evol tion into perfect dental organs they must inevitably demanding more and more room and accordingly exerting a certain degree of tension or pressure on t parts within which they are growing. Does this exp sion exert any directive influence on the development the jaws as a whole, or is the evolution of the te merely a localized incident in the changing form of jaws with the progress of age? The question is which is amenable to experimental treatment.

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[1] MacNider, W. de B.: A Study of the Renal Epithelium in Various Types of Acute Experimental Nephritis and of the Relation Which Exists Between the Epithelial Changes and the Total Output of Urine, Jour. Med. Research, 1912, xxvi, 79.

Landsberger of Berlin has watched the effects produced by the extirpation of the tooth-sacs of both the permanent and the milk teeth before they have developed sufficiently to exert any influence on their bony environment.[1] In this way he was able to distinguish between the inherent growth impulse in the jaws themselves and the possible contribution of the teeth to the contour and enlargement of the bony parts.

Such extirpations of the tooth-sacs, made on young dogs, were always undertaken on one-half of the jaw, so that comparisons could be made with the side unoperated on. An entire year was allowed to elapse before the skulls were prepared for examination. The changes observed were typical and constant. The direction of growth in the jaw was always altered so that a twisted or one-sided effect difficult to describe adequately in words was obtained; there were also evidences of inadequate development in certain parts of the bony skull; and a marked hypertrophy of certain parts about the nostrils was prominently in evidence.

The "twist" in the upper jaw occasioned by the absence of growing teeth calls for some comment. With the lack of tension or pressure ordinarily exerted by the developing tooth-sacs on one side, nothing interferes to oppose the strain on the other side. A distortion of skeletal form ensues as a consequence. This does not make itself manifest on the lower jaw, because it is equalized by the movability of the attachments of this part.

The interference with the well-proportioned development of the skull as a whole—a distortion in the vertical direction of the half operated on and a spreading in a horizontal way of the side not operated on—points to influences on growth exerted far beyond the immediate locality of the teeth. This unanticipated interruption of perfect skull development as the result of imperfect organization of the teeth may have wider import for medical problems than appears at first glance. If, as Landsberger remarks, improper development of the teeth can influence the skull in a pathologic way, as these animal experiments clearly indicate, it is not beyond the bounds of reason to suppose that the brain functions may also become involved more or less. Nervous upsets associated with the difficulties of dentition are not unknown in practice; and the apparent correlations between teeth and skull may have a bearing for both the psychiatrist and the rhinologist. Traction devices applied by dental surgeons in cases of defects in dental development are reputed to have improved both the mental and physical condition of children.

Perhaps we have, in the past, failed to recognize the importance of the growing teeth in lending appropriate stimulus to the correct anatomic development of the head. Stomatology must become an experimental science —something more than an odd-sounding name of vague import.

## THE PROBABLE CAUSE OF BERIBERI

At the recent meeting of the Far Eastern Association of Tropical Medicine at Hongkong, an entire day was devoted to the consideration of beriberi, and in view of the numerous contributors to the subject, the views concerning it were so nearly unanimous as perhaps to occasion surprise. Americans, English, French and Japanese presented the results of their work, and with one exception all endorsed the theory of the dietetic, as opposed to the infections, nature of its origin.

Following the work of Frazer and Stanton, to which we referred some time ago,[1] a number of investigators have busied themselves with the study of the alcohol-extractible matter in rice-polishings, which in the hands of the former had sufficed to prevent the peripheral neuritis of fowls. Much of the work consisted of investigations of the chemical character of this substance, and in no case was it found possible to isolate it with certainty; indeed, some diversity of results was found in regard to its precipitibility, and it is to be assumed that little definite progress has been made along this line. Working from the clinical side, however, Chamberlain and Vedder reported the results of the administration of rice-polishing extract to children nursing from mothers suffering with beriberi. Such children, it has been found, become ill with a disease somewhat resembling the beriberi of adults, but chiefly characterized by the occurrence of dyspnea and tachycardia, and sometimes terminating fatally. When these infants were given small doses of the extract, rapid amelioration of their symptoms was observed, not infrequently progressing to complete recovery. Unfortunately, it has so far been impossible to find any efficient and innocuous preservative for the extract, which in the climate of Manila undergoes rapid decomposition. Work on adults, therefore, could not be reported.

The suggestive character of these results, taken in conjunction with the work of Fraser and Stanton, would seem to demonstrate almost decisively the importance of rice-polishing in the causation of beriberi. But on the other hand, a paper presented by Davis of Shanghai, and based on observations by the health department there, lent strong evidence toward the infectious theory of the disease. Summarized briefly, his facts were as follows: Prisoners in the Shanghai jail at one time suffered severely from beriberi, which diminished, it is true, with a change in diet, but again reached a high figure when the improved sanitary conditions due to coincident occupancy of a new jail had in time deteriorated. When steps were taken to overcome infestation with vermin, notably bedbugs, the incidence of the disease again diminished markedly. Similarly, one squad of native Shanghai policemen showed a high morbidity with beriberi, which disappeared when their quarters were rid of bedbugs. Unfortunately, in this latter case no satisfactory account was obtained of the dietary of the patients, so that this factor cannot be eliminated as in the former. To these facts may be added the occurrence of epidemics of peripheral neuritis in restricted geographical areas in and about Shanghai, where the native diet varies little from one quarter to another, and where polished rice is supplemented quite largely by other foods. Of course, no accurate conclusions can be deduced from a report of this character, but it must be admitted that it apparently indicates the necessity of further work, particularly along lines of animal experimentation, in ruling out an infectious origin for some cases of oriental peripheral neuritis. The view is by no means new that by beriberi we at present describe more than one disease, and it is perfectly conceivable that while true beriberi is purely dietetic in origin, there may be another disease so closely simulating it clinically as to be indistinguishable.

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[1] Landsberger, R.: Der Einfluss der Zähne auf die Entwicklung des Schädels, Arch. f. Physiol., 1911, p. 433.

[1] The Etiology of Beriberi, THE JOURNAL A. M. A., Oct. 7, 1911, p. 1213

In view of the preponderance of evidence in favor of the dietary cause of beriberi, resolutions were brought before the association to the effect that legal restrictions be recommended on the sale of polished rice containing less than 0.4 per cent. of phosphoric anhydrid, it having been found that this substance gives an index of the safety of rice for consumption, although not itself the factor of importance. After much debate, however, it was decided that, for the present at least, such a measure, implicating as it would the principal food of millions of people, would be inadvisable, and the congress finally adopted a resolution simply endorsing the dietetic theory of the causation of the disease, and recommending international action toward its suppression.

## THE DISEASES OF THE EARLY EGYPTIANS

On several previous occasions we have referred to the interesting studies on the pathology of ancient Egypt, as disclosed by the studies of mummies and skeletons from tombs and excavations which are being made in the medical school at Cairo, especially by Drs. Elliott Smith and Marc Armand Ruffer.[1] These have disclosed many points of identity of the diseases of from two to four thousand years ago and the diseases of the present day, as well as noteworthy differences. Renal and vesical calculi were common, and evidence of bacterial infections has been made out in some bodies. Malignant disease, gout, leprosy, infantile paralysis and appendicitis seem to have existed in the days of the Pharaohs, while arteriosclerosis was common then as now.

An extensive study of a large collection of osseous remains is now reported by Ruffer,[2] this material being, of course, the most abundant and most satisfactory of all for historic study. The most striking result is the confirmation and amplification of the previously demonstrated fact that arthritis deformans was remarkably prevalent in the Nile valley, both during the earliest times and also in the Roman period, about 200 A. D., and later. That is, the skeletons of persons dying in Egypt during a period of more than three thousand years very commonly show lesions characteristic of chronic arthritis. The spinal column was most often the seat of the disease, the alterations varying from slight overlapping of the vertebræ to complete ankylosis, sometimes accompanied by lesions of the sacro-iliac articulation and the long bones of the lower, more seldom by changes in the long bones of the upper extremities. The phalanges were also often affected, especially in the foot. As yet no clue has been found to explain the frequency of this disease in the early Egyptians, as well as in the soldiers of invading and domiciled foreign armies, whether Roman, Greek or their slaves and captives. That chronic infections caused arthritis then as well as now is hardly to be questioned, but apparently these infections, whatever they were, prevailed more in ancient than modern Egypt, and in hieroglyphic writings the "determinative" of old age is the picture of a man deformed from chronic arthritis. Even pet animals seem to have suffered from the same condition. It is of much significance that as yet no evidence of syphilis, rickets or osseous tuberculosis has been found in old Egyptian remains, although the skeletons of soldiers from invading armies, representing many parts of the ancient world, have been studied in considerable numbers.

Dental disease was prevalent, and, as now, the molars suffered most, especially the third. Evidently abscesses frequently occurred, yet there is no evidence that any dental manipulations were ever performed to relieve such conditions. One of the most popular traditions concerning the ancient Egyptians is that they were skilled in dentistry, but the tombs fail to substantiate this idea. Ruffer says that he has never seen the slightest evidence that they knew anything about filling teeth or making artificial ones. He has seen a number of teeth bound together with gold wire, but this was from a Roman tomb, and the device was evidently for cosmetic purposes only, as it could not possibly have been used for mastication. The teeth were usually clean and in good condition, and apparently the food was soft, for the crowns are not worn down as they are now by the coarse vegetable food of the fellah.

## GERMANY AWAKENED TO THE NOSTRUM NUISANCE

Whoever has followed the advertising pages of th German medical press during the past two decades mus have been struck by the change which has come over th announcements inserted therein by ambitious sellers o medicinal wares. At a time when the situation i American advertising columns was notorious, when discrimination between good and bad, between quacker and therapy, between honest claims and palpable frau scarcely entered into the routine of the business offices of our medical journals, our contemporaries on the continent showed no symptoms whatever of the infection with frenzied advertising then epidemic and still sporadic in this country. Great are the changes which have come about of late. While the situation in the United States has improved and is manifestly improving, and a higher standard of advertising claims is making itself felt widely, one is surprised to find in the columns of some of Europe's foremost medical weeklies advertisements which have long been barred from our own pages. It appeared a short time ago almost as if Germany and England were to become lands of refuge for rejected advertisements of a certain type.

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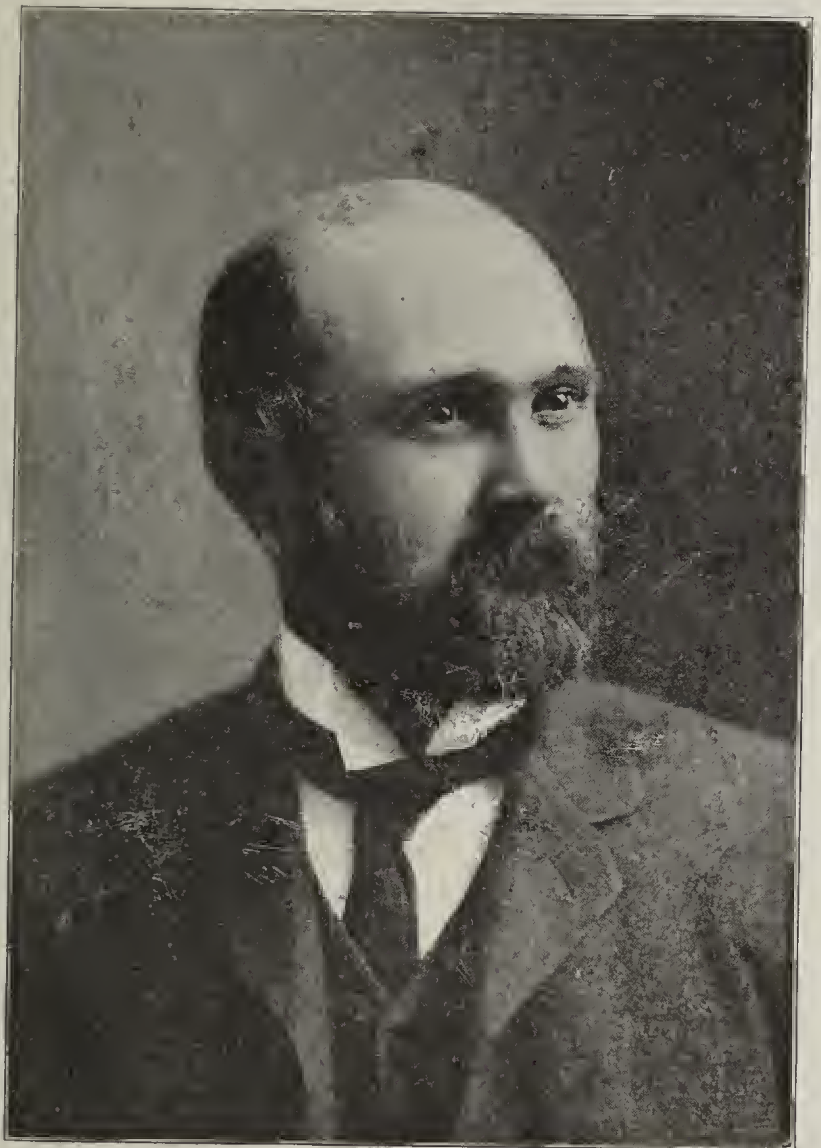
[1] The Journal A. M. A., May 16, 1908; April 10, 1909; April 15, 1911; July 22, 1911.

[2] Ruffer, M. A.: Jour. Path. and Bact., 1912, xvi, 439.

The medical profession in the land of ideas and ideals has awakened to the situation in its midst. In the last issue of the well-known *Therapeutische Monatshefte,* one of its editors, the Göttingen pharmacologist Professor Heubner,[1] has written very frankly of the situation in his country. The wide-spread advertisement of "body-builders" and "tissue-tonics" so familiar to the American public is assumed to cater to a desire to eliminate the physician as a cause of expense in the household. There are, however, many medicinal products which cannot be dispensed without the intermediation of the physician. Here lies the necessity of appealing to the practitioner by every means and through every channel calculated to yield revenue. Think of journals instituted solely for advertising ends in Germany! Clinical reports distributed as leaflets from supposedly prominent laboratories or the hospitals of famous investigators have become an international nuisance in the mails of professional men. And the substitutions, the false claims, the psychologic deception in name and label—all of these have permeated the land which the foreigner once regarded with sacred awe as the typical home of truth.


THE PRESIDENT-ELECT

Professor Heubner expects no serious improvement to follow from a mere conscientious attention on the part of physicians to the character of their prescriptions. The latter, he believes, is dependent on the fashions of the day. The essential reforms required are: (1) revised legislation respecting the naming of medicinal agents; (2) an insistence that medical publishers shall be guided less by the demands of the manufacturer and more by the interests of the readers, in acceptance of advertising matter; (3) the establishment of a bureau for the investigation and testing of medicinal agents which cannot be prepared in the apothecaries' shops. The efforts of THE JOURNAL of the American Medical Association in the direction comprised in the second recommendation receive due appreciation. Heubner lays considerable stress on the last recommendation. Now that the drug industry has largely eliminated the earlier manufacturing function of the dispensing druggist, the responsibility for efficient products is no longer easily fixed by the physician who prescribes them. A governmental bureau by which the conflicting claims and varied needs would be settled precisely as standards are now fixed for the antitoxins and related products would, in Heubner's belief, create a healthy and harmonious interrelation between manufacturer, druggist and physician. It is to be hoped that whatever efforts are devoted to these ends will be based primarily on the most prominent factor in the problem, namely, the vital interests of the suffering public.

## Current Comment

### THE PRESIDENT-ELECT, DR. WITHERSPOON

The Association, in its choice of leader for the next year, has honored a son of the south and has done honor to itself in the selection. Dr. John A. Witherspoon ranks at the head of the medical profession of the south. He has always stood for high ideals and has been foremost in the campaign for higher educational requirements. He was born in Columbia, Tenn., and received his medical education at the medical department of the University of Pennsylvania, where his proficiency in anatomy was so markedly displayed that he was made assistant demonstrator in anatomy in his third year. He received his degree in 1887 and returned to Nashville, where he has practiced ever since. He soon became connected with Vanderbilt Medical College and has been professor of medicine and clinical medicine since 1895. Dr. Witherspoon has been for many years a member of the American Medical Association, has been a constant attendant at its meetings, and has always been depended on to give wise counsel when needed. For nine years he served as a member of the Council on Medical Education of the A. M. A. He has been a member and president of the American Medical College Association, the Tennessee State Medical Association, the Southern Medical Association and the Mississippi Valley Medical Association. At the International Medical Congress at Budapest Dr. Witherspoon was selected to deliver the oration in the ceremonies at the unveiling of the statue of George Washington. Dr. Witherspoon is a man of strength, whose power impresses every one with whom he comes in contact, but, withal, he is a soft-spoken, courteous, chivalrous, typical southern gentleman. No man is more beloved in the south than he, and yet no man has done so much to stir up the physicians of his section or to encourage them to higher standards, ethical and educational. The wisdom of the choice of Dr. Witherspoon as President-Elect of the Association is unquestionable. His lovable personal characteristics, his strength and ability, his broad grasp of the advanced medical problems of the day, all combine to make him a welcome leader for the coming year and acceptable to the profession the country over.

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[1] Heubner, W.: Allerlei Heilmittel-Unheil, Therap. Monatsh., 1912, xxvi, 185.

## THE PRIZE CARTOON CONTEST

In accordance with the custom inaugurated last year at the Los Angeles session, the Council on Health and Public Instruction offered a first prize of $200 and a second prize of $100 for the best series of cartoons on various important phases of public health and hygiene to be exhibited at the Scientific Exhibit at the Atlantic City session. In accordance with this offer, the first prize of $200 was awarded to Mr. H. C. Gregg, cartoonist of the Atlanta *Constitution*, Atlanta, Ga. The second prize of $100 was awarded to Mr. Wood Cowan of Chicago. The cartoons receiving the prizes will appear in The Journal in the near future.

## POLITICS AND QUACKERY

C. W. Mixer of Hastings, Mich., has for some years conducted a fraudulent cancer cure concern under the name of Drs. Mixer.[1] A fraud order was finally issued against Mixer — who, by the way, is not a physician — and mail addressed to "Drs. Mixer" is returned to the sender marked "Fraudulent." At the time the Post-Office investigated this fraud, C. W. Mixer called on his friend, Congressman E. L. Hamilton, to use what influence he could in preventing the postal authorities interfering with his lucrative but villainous business. At the hearing, Congressman Hamilton did what he could for his constituent. Since the fraud order was issued, Mixer has continued to carry on his trade by the simple expedient of changing the name of his concern from "Drs. Mixer" to "Mixer Medicine Co., successor to Drs. Mixer." This change is effected by means of a rubber stamp on the old stationery of the company. The cancer cure swindlers in various parts of the country who have had their business interfered with by the issuance of fraud orders have apparently brought sufficient pressure to bear at Washington to engineer an attempt at crippling the splendid work the postal authorities have done in protecting the public against this particularly cruel form of swindling. A committee has been appointed from the House of Representatives "to investigate the Post-Office Department." Judging from its actions thus far, this body might be more properly named "the committee to whitewash the 'cancer-cure' fakers." In fairness, it must be said that some of the members of this committee — of whom Congressman R. W. Austin of Tennessee is the most active — are anxious to uphold the Post-Office in its good work; other members, particularly the chairman, W. A. Ashbrook of Ohio, and W. I. McCoy of New Jersey, are apparently determined to give these "cancer cure" swindlers all the license they desire. C. W. Mixer has, under the date of June 10, sent out the following letter to his prospective Chicago victims:

> *Dear Sir:*—Some months ago I received a communication from you making inquiry with reference to treatment. I wrote you promptly but have not received any reply from you regarding conditions, etc.
>
> I anticipate being in Chicago for the convention next week as I have been appointed assistant sergeant-at-arms and if you care to have a personal interview or anyone else, you could address me a letter in care of K. Hoyt Stone, Boyce Building, Chicago, Illinois, or you may write me by return mail addressing me here at Hastings, Michigan.
>
> Yours very truly,
>
> C. W. Mixer.

Here we have a pretty example of the community of interest between certain politicians and quacks. C. W. Mixer, cancer-cure faker and fraud, is appointed assistant sergeant-at-arms to the Republican National Convention and desires to mix in a little business — rotten as it is — with his trip to Chicago. A delightful state of affairs indeed! When we feel like blaming the officials whose duty it is to enforce the law against medical and other fakers, let us not forget what *Collier's* said in a case similar to the one we have just recounted: "If you were an obscure subordinate in the Department of Agriculture or the Department of Justice, if you had no motive to proceed against a swindling patent medicine or an adulterated food except your own conscience, if your first move met with personal protests from the congressmen who controlled your salary your promotion and your official existence, how soon would you grow tired?"

## THE ATLANTIC CITY SESSION

The session of the American Medical Association a Atlantic City last week, from every point of view, mus be regarded as a most successful one. So far as number are concerned, the registration, which was 3,600, cam within 113 of being as large as that of the remarkabl meeting of 1907. The registrations of the precedin meetings in that city were: 1900, 2,019; 1904, 2,894 1907, 3,713; and 1909, 3,273. Of course these numbe were exceeded when the Association met in large citie for instance, Boston, 4,722; Chicago, 6,446; St. Loui 4,084. The registration at Los Angeles last year w

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[1] This fraud was exposed in The Journal, May 21, 1910; the matter appears in an elaborate form in "Nostrums and Quackery;" it also is issued in pamphlet form, price 4 cents.

2,153. The scientific work was unusually good, each section having a splendid program — all were above the average. Two new sections held their first meetings this year: that on Genito-Urinary Diseases, and that on Hospitals. The social functions were all that could be desired. While the Association has met in Atlantic City five times within the last twelve years, the hospitality of the profession seems unexhaustible, and this year Atlantic City did all that was possible to make the visiting members feel that they were most heartily welcome.[1]

### NEEDLESS SACRIFICE OF LIFE

Much time and space are being devoted these days to educating the people on the prevention of disease and the reduction of the death-rate from contagious diseases. On many of these subjects the public certainly needs to be instructed for its own protection. Yet there is to-day a large loss of life that results not from ignorance, but from carelessness — not from the carelessness of some other person, but from the carelessness of the one who suffers. Kansas City has recently adopted a new ordinance for the control of travel, not only on wheels, but also on foot. The heedless or foolhardy person who will not profit by the traffic regulations to protect himself, but who strays all over the street, who crosses in the middle of the block, or who attempts to save time by a diagonal route instead of by adhering to the beaten path, is to be regulated. Kansas City has even invented an appropriate name for these individuals. They are called "jay walkers." They are a danger not only to themselves, but to others, and this effort on the part of Kansas City to regulate the pedestrian as well as the driver and the chauffeur is a step in the right direction. The needless loss of life through personal carelessness is hardly realized. Living conditions and surroundings, especially in large cities, are becoming more complex each year. The path of safety lies in obedience to wise restrictions. As we learn to be more law-abiding we shall learn that within the restrictions of the law there is safety and without, there is danger.

## Medical News

### COLORADO

**Hospital Incorporated.**—Articles of incorporation of the American Baptist Tuberculosis Hospital Association have been filed with the Secretary of State. The plan of the association is to build hospitals throughout the United States where patients suffering from tuberculosis may receive care. It is planned to establish the first of these institutions in Denver. All Baptist churches may be admitted to membership, and it is proposed to assess the church members 10 cents each, annually.

**Doctor of Ophthalmology.**—At the recent meeting of the regents of the University of Colorado, on the recommendation of the medical senate, it was resolved hereafter to confer the degree of doctor of ophthalmology on properly qualified candidates. This degree can be secured two years after taking the degree of doctor of medicine. Candidates are required to take one year of practical clinical work in diseases of the eye, doing in connection therewith systematic reading, after which they must take the special course in ophthalmology at the University of Colorado, in Denver, and submit an acceptable thesis.

### ILLINOIS

**New Hospital.**—The Whiteside Public Hospital has been taken over by the city of Sterling and will hereafter be a municipal hospital with accommodations for between forty and fifty patients. Dr. S. S. Kehr is chairman of the medical board.

**Tent City at Oak Forest.**—Cook County has planned to install hundreds of tents for tuberculosis patients at the County Institution, Oak Forest. The health authorities of the county are making a systematic canvass for patients in the early stage of the disease in order to increase the effectiveness of prompt treatment.

**Personal.**—Dr. Jennie Lyons, Champaign, was elected secretary of the County Secretaries Association at its recent meeting in Springfield.——Dr. James A. Clyne, Joliet, who has been under treatment at Mercy Hospital, Chicago, is reported to be improving.——Dr. A. M. Hill, Genoa, sailed for Europe, June 1.——Dr. E. P. Cook, Mendota, who has been ill with typhoid in St. Luke's Hospital, Chicago, is reported to be convalescent.——Dr. H. F. Litchfield, Kankakee, has assumed his duties as physician at the Soldiers' Home, Quincy.

### Chicago

**Off for Europe.**—Dr. and Mrs. M. L. Harris and family, Dr. and Mrs. John B. Murphy and family, Dr. and Mrs. E. Wyllys Andrews and family, Dr. and Mrs. Arthur D. Bevan and Dr. Lewis L. McArthur sailed for Europe, June 11.

**New Hospital Opened.**—The Lake View Hospital Association announces the completion of its new hospital at 4424 Clarendon Avenue, with a capacity of fifty-five beds. The staff consists of Drs. Gilbert H. Wynekoop, Charles I. Wynekoop and Emil E. Torell, surgeons; Drs. Anders Frick, F. Eldridge Wynekoop, Seth Wicks, physicians; Dr. Alfred N. Murray, eye, ear, nose and throat; Dr. E. O. Benson, diseases of children; Dr. John W. Birk, obstetrics and gynecology, and Clyde H. Warner, D.D.S., dental surgeon.

### MARYLAND

**Personal.**—Dr. Timothy Griffith has been elected president of the Minors Hospital, Frostburg, for the establishment of which the legislature has appropriated $25,000.——Rev. Wm. B. Everett, Chevy Chase, who graduated from the University of Maryland in 1862, celebrated the fiftieth anniversary of his graduation by being present at the commencement exercises of his alma mater.——Dr. Joseph Collins, Calvert, was thrown from his buggy in a runaway accident June 3, and seriously injured.

### Baltimore

**Typhoid Vaccine Ready.**—The health department of Baltimore announces that it has already vaccinated about five hundred persons against typhoid and is prepared to issue antityphoid vaccine to dispensaries and to any resident physician who makes application.

**Foreign Visitors in Baltimore.**—Among recent visitors to Johns Hopkins Hospital were Dr. Thomas Fiachi, Sydney,

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[1] The report of the General Meeting is given on page 1913; the minutes of the House of Delegates, which were begun last week, are continued on 1893. These minutes will be concluded next week. As the portion held over till next week contains the election of officers, it is of interest to note here the result:

President, Dr. Abraham Jacobi.

President-Elect, Dr. John A. Witherspoon, Nashville, Tenn.

First Vice-President, Dr. Philander A. Harris, Paterson, N. J.

Second Vice-President, Dr. John L. Heffron, Syracuse, N. Y.

Third Vice-President, Dr. H. H. McClanahan, Omaha.

Fourth Vice-President, Dr. Henry D. Fry, Washington, D. C.

Secretary, Dr. Alexander R. Craig, Chicago.

Treasurer, Dr. William Allen Pusey, Chicago.

Trustees: Dr. M. L. Harris, Chicago; Dr. C. A. Daugherty, South Bend, Ind.; Dr. W. T. Councilman, Boston.

Member of the Judicial Council: Dr. George W. Guthrie, Wilkes-Barre, Pa.

Member of Council on Health and Public Instruction: Dr. Walter B. Cannon, Boston.

Members of Council on Medical Education: Dr. James W. Holland, Philadelphia; Dr. W. D. Haggard, Nashvile, Tenn.

Next meeting place, Minneapolis, June, 1913.

Australia; Major M. Miyate, Surgeon Imperial Japanese Army; Prof. R. Wreden, St. Petersburg; Dr. M. V. Silbermarck, Austria, and Dr. J. A. de Oliveria, Botelho, Rio de Janeiro.

**Sanatorium for Eastern Shore.**—In accordance with a law passed by the last legislature, the commission appointed to purchase a site on the eastern shore, for an institution for cases of incurable consumption, met at Salisbury and decided to buy the land and buildings formerly known as the Pine Bluff Sanitarium for $15,000. The property consists of twenty acres on the southern bank of the Wicomico River, near Salisbury, densely wooded with pines and has a large building equipped with modern improvements. The bill also provided $5,000 for the erection of shacks and a like sum for maintenance for one year.

**Personal.**—Dr. George B. Reynolds, chief surgeon of the police department, was held up, beaten and robbed, May 10.——Dr. Alexander T. von Schulz was struck in the head by a brick thrown by a negro, June 3, and, while seriously injured, is reported to be improving.——Drs. Harvey W. Cushing and John M. T. Finney sailed for Europe, June 11.——Dr. Daniel W. Smith has succeeded William H. Davenport as chief tenement inspector of Baltimore.——Dr. William B. Wolf was operated on recently in St. Agnes Hospital.——Dr. Elliott H. Hutchins has been appointed police surgeon, vice Dr. Thomas J. O'Donnell, term expired.——The following appointments of police surgeons have recently been made: Dr. J. M. Craighill, chief surgeon, and Drs. Walter F. Sowers, Thomas P. McCormick and Hubert C. Knapp.——Dr. John Turner has been appointed physician to the Lock Raven Construction Camp.——The following fellows have been appointed at Johns Hopkins University: Gardner C. Basset, psychology, and Henry C. Schmeisser, pathology.

## MASSACHUSETTS

**New Officers.**—Franklin District Medical Society at Springfield: president, Dr. C. F. Canedy; secretary-treasurer, Dr. W. K. Clark, both of Greenfield.

**Personal.**—Dr. Samuel Green, Boston, who has been confined in the Boston City Hospital on account of injuries sustained in a fall, is reported to be greatly improved.——Dr. Charles Sturtevant, Hyde Park, has been appointed associate medical examiner of Suffolk County.

**Honorary Medical Staff.**—The following list of physicians is announced as the honorary medical staff of the Lawrence Tuberculosis Hospital: Dr. John B. Bain, chief of staff; and Drs. Joseph Howard, Albert W. Hancock, Henry F. Dearborn, Alphonse H. Petit, Francis A. Cregg, James A. Hogan, Anthony Fleming, Bernard J. Mulholland, Carl H. Eidam, Ernest P. Fuller, John J. McAidle, Maurice Fishman and Abdulnassch Massawir.

**Suggest Names for Health Chief.**—The committee of Suffolk County Medical Society has suggested the names of the following five physicians as chairman of the Board of Health of Boston, to succeed Dr. Samuel H. Durgin, who retires next month: Dr. William J. Gallivan, Boston, chief of the Bureau of Child Hygiene of the Boston Health Department; Dr. Charles O. Probst, Columbus, secretary of the State Board of Health of Ohio; Dr. Hibbert W. Hill, Minneapolis, treasurer of the Boston City Laboratory for seven years; Dr. Edward B. Beasley, Baltimore, and Dr. Francis G. Curtis, secretary of the Newton Board of Health for nineteen years.

## MICHIGAN

**Personal.**—Dr. R. J. Hutchinson has been reelected chief-of staff; Dr. G. L. McBride, vice-chief-of-staff, and Dr. Reuben Mauritz, secretary of the staff of Butterworth Hospital, Grand Rapids.

**School for the Deaf Burned.**—The Michigan School for the Deaf, Flint, burned May 22. A meeting of the board of trustees was held two days later at which plans were made for the early rebuilding of the institution.

**Alumni Clinics.**—During the nine days' meeting of the Alumni Society of the Detroit College of Medicine, three hundred and forty members registered. Clinics were held during each day and evening of the reunion.

**Blue Star Day.**—The State Society for the Study and Prevention of Tuberculosis and the Detroit Tuberculosis Sanatorium benefited by Blue Star Day, which was held June 11, in Detroit. On this day collections were taken up by "tagging" for the benefit of these organizations.

**Deportation of Leper Suspect.**—On May 24, Herman Hirschfield, the leper suspect of Bay City, who has been isolated for several weeks at Centerville, Ia., was returned by automobile to his home in Bay City. The local authorities have decided to permit Hirschfield to remain in his own home, but he will be required to keep off the front porch and will not be allowed to go out on the street. His malady has been decided to be typical leprosy.

**Clean-Up Day in Michigan.**—To the end that concerted activity covering the entire state might be established, the governor of Michigan designated May 15 as Public Health and Clean-Up Day. In accordance with the spirit of the proclamation, the State Board of Health, through Dr. Robert L. Dixon, its secretary, asked that May 15 be made a day of general cleaning up of insanitary surroundings and of the establishment of sanitary, healthful conditions.

**State Board of Health to Inspect Resorts.**—The Michigan State Board of Health is securing a list of the summer resort associations and of the owners of property used for resort purposes and will make sanitary investigations of these places. The board has formulated rules to be observed by cottagers and visitors of the summer resorts, including the use of dry-earth closets, the covered garbage can, the prohibition of cleaning of fish on beaches, the proper care and removal of refuse from lunch counters, pavilions, etc., and the prohibition of throwing refuse of any kind into the lakes.

## MISSOURI

**Personal.**—Dr. George C. Boteler, St. Joseph, has been appointed city physician.——Dr. R. S. Magee, Fulton, senior assistant physician at the Fulton State Hospital, has resigned.

**Doctors' Day.**—May 24 was set aside by the school authorities of Sedalia as "Doctor's Day," and on that day two physicians visited each school in the city and spoke to the children of the importance of sanitation, the dangers of the house-fly, etc.

**New Officers.**—Pan-Missouri Medical Association, in St. Louis, May 29-June 1: president, Dr. J. M. Harris, Sedalia; secretary, Dr. J. F. Shannon, Kansas City.——Fourteenth District Medical Society, in Marshall, May 9: president, Dr. C. T. Ryland, Lexington; secretary-treasurer, Dr. John R. Hall, Napton.

**Health Work by Districts.**—The State Board of Health has organized the state into seven health districts which are to be a unit in the fight against communicable diseases. The board will call meetings in each of these districts at which the local and state health authorities will cooperate in plans for a betterment of health conditions. The first of these meetings is to be held in St. Louis, June 26.

**State Association Meeting.**—The fifty-fifth annual meeting of the Missouri State Medical Association was held in Sedalia May 21-24, and the following officers were elected: president Dr. Robert M. Funkhouser, St. Louis; vice-presidents, Drs. J. S Wallace, Brunswick, H. S. Crawford, Harrisonville, J. N Baskett, Hannibal, C. C. Conover, Kansas City, and J. H Timberman, Marston; secretary and editor, Dr. E. J. Goodwin St. Louis; treasurer, Dr. J. F. Welch, Salisbury; and councilors—eighth district, Dr. L. W. Cape, Maplewood; thirteentl district, Dr. F. E. Murphy, Kansas City; twentieth district Dr. F. J. Lutz, St. Louis; twenty-third district, Dr. T. C. Aller Bernie; twenty-fourth district, Dr. J. B. Wright, Trenton twenty-second district, Dr. J. S. Cannon, Fornfelt; and twenty seventh district, Dr. J. H. Elliott, Westplains; orator on medicine, Dr. Albert H. Hamel, St. Louis; orator on surgery, D E. F. Yancey, Sedalia; delegates to the American Medical Ass ciation, Drs. C. R. Woodson, St. Joseph, H. L. Reid, Charlestor and A. W. McAlester, Kansas City; and member of the con mittee on public health and legislation, Dr. B. B. Parrisl Kirksville.

## NEW JERSEY

**Sanitarium Opens.**—The Philadelphia Sanitarium for Chi dren at Red Bank opened for the summer June 8. Two riv steamboats make hourly trips between Philadelphia and tl sanitarium. There is a resident physician at the institutic and two nurses are constantly on duty.

**New Jersey Alumni of University of Pennsylvania Meet.** Members of the New Jersey State Medical Society who a graduates of the University of Philadelphia held a reuni at Spring Lake May 29, during the meeting of the Sta Society. The following representatives of the alumni address the meeting: H. Genet Taylor, Camden; E. Hollingshead, Pe berton; B. W. Hoagland, Woodbridge; Hyman I. Goldste Camden; J. J. McGuire, Trenton; Alexander McAlister, Ca den; C. J. Craythorn, Trenton; Alexander S. Ross, Camde Alexander Marcy, Jr., Riverton, and J. Frances De Silv Atlantic City.

## NEW YORK

**Personal.**—Dr. M. D. Graham, Utica, has returned from Europe.——Dr. DeVere M. Hibbard, Olean, is reported to be seriously ill as a result of a cerebral hemorrhage.——Dr. A. Miller, Jordanville, celebrated his ninety-third birthday anniversary, May 21.

**Fly Crusade Ordered.**—The State Department of Health has sent out notices to the health officers throughout the state urging a vigorous campaign against the fly. It is pointed out that the same expenditure of effort at the beginning of the season will accomplish much more than it possibly can at the height of the summer.

**New Officers.**—Steuben County Medical Society at Bath, May 15: president, Dr. John A. Conway, Cornell; secretary-treasurer, Dr. W. W. Smith, Avoca.——Medical Society of the County of Albany, May 8: president, Dr. L. H. Neuman; secretary, Dr. Edwin L. Draper, both of Albany.——Rochester Public Health Association, May 13: president, Dr. Henry T. Williams; directors, Drs. John M. Lee, G. I. Bidwell and Mary E. Dickinson.——Schuyler County Medical Society, at Watkins, May 14: president, Dr. A. H. Jackson, Odessa; secretary-treasurer, Dr. F. B. Bond, Watkins.

**State Charities Aid Association.**—A leaflet has been issued by this organization in celebration of its fortieth anniversary showing that among the important accomplishments of this organization either alone or in conjunction with other agencies are the following: First training school for nurses established at Bellevue Hospital; tenement house reform; legislation providing for the state care of the insane; establishment of the Craig Colony for Epileptics; campaign for the prevention of tuberculosis begun; and laws enacted defining the powers and duties of health officers, and authorizing the establishment of general hospitals in cities, towns and villages.

**Hospital Notes.**—The energy and enthusiasm of the residents of Flushing in their efforts to raise $100,000 for a hospital in that place, are evidenced by the fact that on June 7, $75,000 had already been pledged.——It is planned to abandon the present building of the Frances Elliott Austin Maternity Hospital and Infant Home, Albany, and to erect a new building which will contain a maternity department, a department for infants of Roman Catholic parentage, and one for children between the ages of two and five. The hospital is to be nonsectarian. The state has made an appropriation of $40,000 toward the building and a campaign is being conducted among the citizens of Albany to raise the balance required.——The State Board of Health has approved the selection of the George Hobbs Farm, near Cranesville, as a site for the Montgomery County Tuberculosis Hospital. The site includes 120 acres of which twenty-five acres are in hard wood.——Martin Woodbury, Hornell, has donated a site for the Steuben County Tuberculosis Hospital. The site is in the town of Greenwood and comprises seventy-one acres of ground.——Arnold Gregory, a farmer living near Albion, has provided for a hospital to be known as the Arnold Gregory Memorial Hospital.——Contributions to the Ellis Hospital (Schenectady), tag day on May 18, amounted to $2,623.57.

### New York City

**Small-Pox on Steamer.**—The Russian steamship *Kursk*, which arrived in the harbor, June 2, from Libau, was quarantined on account of two cases of small-pox, one in the first cabin and one in the steerage.

**The Cartwright Lectures.**—The subjects of the Cartwright lectures to be delivered by Prof. Ludwig Pick in the Academy of Medicine during the second week in November will be as follows: 1. Some pathologic-anatomic findings of hypophysis diseases and their practical value. 2. Modern views of the tumors of the nervous tissue. 3. Pathologic anatomy of true and false hermaphroditism in man.

**Personal.**—Dr. Philip F. O'Hanlon, who for the past fifteen years has been coroner's physician, has been appointed police surgeon.——Dr. Isaias A. Lehman of the Bronx was injured on June 1 in a collision between his automobile and a trolley car.——Dr. W. Grant Hague sailed for Europe, June 8.——Dr. Harry T. Summersgill has been appointed superintendent to the New York Post-Graduate Medical School and Hospital, succeeding Dr. Frederick Brush, who resigned to take charge of the Burke Foundation.——Dr. Francis Calavia was called from his home May 23, and shot down by men supposed to be "Black Hand" blackmailers.

**Measles Epidemic Due to Too Few Inspectors.**—There is an unprecedented epidemic of measles in the congested districts of this city which is attributed to the shortage of inspectors to carry out the necessary fumigation of infected premises. It has been pointed out that delay in fumigation for a period of three or four weeks after the inception of the disease instead of two weeks confines already depleted children to close dark rooms for far too long a period and predisposes them to subsequent infection, especially that of tuberculosis. The Department of Health urges that influence may be brought to bear on the Board of Estimate to grant a sufficient appropriation for the appointment of more inspectors.

**Endowment for Cancer Study.**—The endowment fund of the General Memorial Hospital has been increased by a contribution of $100,000 from a scientist whose name has not been made public, for the maintenance of twenty beds for cancer patients. The hospital was chartered for the study and treatment of cancer and allied diseases and is supported by the Collis P. Huntington fund. This institution has been placed at the disposal of Cornell Medical College and a great deal of research work has been done. An opportunity is given to trained men to study the disease at the bedside and, for the first time, New York has an institution similar to those established in Berlin, Heidelberg, Paris, London, Boston, Buffalo and St. Louis.

**Cancer Research.**—With the appointment of Prof. Francis Carter Wood to the position of director of cancer research under the George Crocker Research Fund of Columbia University, the final step in the organization of the work which is to be carried out under this immense gift has been taken by the trustees of Columbia University. The construction of the laboratories and the organization of the staff will probably consume another year, so that it will be some time before much effective research will be under way. The Crocker fund will also obtain by this appointment certain additional resources which will be of great advantage as Prof. Wood is already director of the laboratories of St. Luke's Hospital, and has a clinical service there for the scientific study of special cases. This will permit the workers under the fund to investigate the claims of alleged cancer cures with speed and certainty, and if fortune should favor Columbia so that any of its workers should discover a remedy for this disease, the necessary preliminary tests could be made easily in Prof. Wood's service in St. Luke's.

## PENNSYLVANIA

**New Appointments to Anatomic Faculty.**—The University of Pittsburgh School of Medicine announces the following new instructors in the department of anatomy: Dr. Edgar Davidson, Congdon, instructor in anatomy in Cornell Medical School, New York City, vice Dr. E. S. Edgerton, resigned, and Dr. Otto Frederick Kampmeier, fellow in comparative anatomy at Princeton University.

**Personal.**—Dr. W. Rowland Davies, Scranton, was operated on for appendicitis May 19, at the West Side Hospital.——Dr. William F. Randall, Dushore, sustained a fractured leg, severe burns about the face and hands and contusions of the body in an accident, May 20, in which the gasoline in his automobile tank ignited and he was forced to leap into the waters of Lycoming Creek twelve feet below, to save his life.——Dr. Z. C. Myers, York, has returned after being under treatment in a Philadelphia hospital.

### Philadelphia

**Jefferson College Honors.**—At the annual commencement of Jefferson Medical College, June 3, honorary degrees were conferred on three famous graduates, Drs. J. Solis-Cohen, Joseph S. Neff and William W. Keen.

**New Hospital.**—A new infirmary, to be known as the Babies' Hospital, will be opened at Parkside Ave and Wynnefield, June 10, and will remain in commission until October. This hospital is intended for the care of infants under three years of age, suffering from diarrheal diseases.

**Personal.**—Dr. William H. Walsh has succeeded Dr. J. William Morgan, resigned, as superintendent of the Philadelphia Hospital for Contagious Diseases.——Dr. Joseph S. Neff, director of health and charities was given the honorary degree of LL.D. at the forty-second annual commencement of Ursinus College, Collegeville, June 5.

**Campaign for Infant Life.**—Besides the Babies' Hospital at Wynnefield, the regular baby-saving campaign of the city was inaugurated June 15, when the recreation piers along the river front were thrown open to the public. Visiting nurses are sent to the congested districts of the city and every effort is being made to carry on the work of saving the babies.

**Public Asked to Aid in Mosquito War.**—The Department of Public Works and the Bureau of Health have planned to cooperate in a crusade against mosquitoes. By filling stagnant ditches on dumping grounds and by issuing bulletins, educating and appealing to the public to exterminate the breeding places of the insects, they hope to eliminate them, and look forward to a reduction in disease.

**Honor Memory of Local Physician.**—"A Heidelberg Students' Night" was celebrated by the Carl E. Vischer Medical and Surgical Association, June 4. Dr. Carl E. Vischer, of this city, in whose memory this society was formed, was a graduate of Heidelberg, so the room was decorated in the colors of that university. Dr. J. H. Closson, president of the association, presided.

**Jefferson Alumni Officers Elected.**—At the annual business meeting of Alumni Association of the Jefferson Medical College, June 1, the following officers were elected: president, Dr. S. Makuen Smith; vice-presidents, Drs. J. W. West and M. B. Dwight; recording secretary, Dr. Henry Gaskill; corresponding secretary, Dr. E. J. Klopp, and treasurer, Dr. Alfred Heineberg.

**Baby Show.**—The Baby-Saving Show closed a four-day exhibit, June 2, with a record attendance of 25,000. The show will be given in three other sections of the city—from June 6 to 9, it will be held in the Boys' Club at Howard and Somerset Streets; June 13 to 16, Young Men's Christian Association, Fifty-Eighth and Germantown Avenue, and from June 20 to 23, Lochheim Hall at Main and Rector Streets, Manayunk.

**Pier Camp Opened.**—The day camp for tuberculosis sufferers on the city pier at the foot of Bainbridge Street was opened with a goodly attendance, June 8. Dr. Albert P. Francine, who is in charge of the camp, has sent out an appeal for funds. Last year the camp was open from July until December and had an average of twenty-five patients a day. More than $1,800 was raised by popular subscription and $300 of this sum was left over to begin the work this year. However this amount is sufficient for only a very short time.

**Housing Commission to Enforce New Law.**—The law providing that each dwelling must have at least one water fixture for its own use, except in the cases of houses in the rear courts, where there are no yards, and in which case there must be a hydrant for every three persons, went into effect, June 8. The Philadelphia Housing Commission is prepared to prosecute in cases in which landlords neglect to comply. Failure to provide the proper fixtures subjects an owner to a fine of $10 per month for each month or part of a month after the law became operative.

**Plans for Sane Fourth.**—At a meeting of the Reconstructed Fourth Association at the Mayor's office on June 5, programs for neighborhood celebrations of the Fourth of July were discussed and for this purpose the city is to be divided into seventeen sections. Resolutions were adopted that requested that public or semi-public institutions be opened on Independence Day, and as further incentive to the public to take advantage of an opportunity to visit them, the Philadelphia Pageant Commission was requested to appoint committees to be at these institutions and to give brief talks of their history and purpose.

**Citizens Approve Owen Bill.**—A petition has been sent to Senators Boise, Penrose and George T. Oliver and Representative John H. Rothermel, by citizens of Reading, Burks County, respectfully requesting favorable consideration for the Owen bill which provides for the establishment of a United States Health Service. The bill appeals to the petitioners "as embodying many features that stand for health and the purity of the nation and the various bureaus and divisions which shall be coordinated in the service, to wit: public health and marine-hospital; food and drugs; vital statistics; general conservation; sanitary engineering; personnel and accounts, and publications."

**Medical Chief's Report.**—Dr. Walter S. Cornell, chief of the corps of medical inspectors, in a report presented to Dr. Joseph S. Neff, Director of the Department of Health, states that the grade of work being performed in the schools has bettered to a material degree since 1910, with a decrease in the cost of examination per child of more than 1 cent, the average in 1910 being 26 cents, and for the current year, 25 cents, remarkable because of the added expenditures caused by the large increase in school nurses. In April, 1910, 11,800 children were examined, while in April, 1912, this number increased to 13,600. The defects discovered reached 15,500, an increase of 11,000. Dr. Cornell states that the eye dispensaries are so crowded with applicants that it is impossible to obtain great results.

## SOUTH DAKOTA

**Railway Surgeons Hold Meeting.**—The annual meeting of the South Dakota Academy of Railway Surgeons was held in Mitchell, May 25, and the following officers were elected: president, Dr. W. R. Ball, Mitchell; vice-president, Dr. Fred Treon, Chamberlain; secretary-treasurer, Dr. J. L. Foxton, Huron. The next annual meeting will be held in Huron in September.

**Annual Meeting of State Society.**—The South Dakota State Medical Society held its thirty-first annual meeting in Mitchell, May 22-24, under the presidency of Dr. W. G. Smith, Sydney, and elected the following officers: president, Dr. C. E. McCauley, Aberdeen; vice-presidents, Drs. F. A. Spafford, Flandreau, and Fred Treon, Chamberlain; and secretary-treasurer, Dr. R. D. Alway, Aberdeen (reelected). The next meeting will be held in Vermillion.

## WISCONSIN

**Hospital Dedicated.**—The new St. Mary's Hill Hospital, Milwaukee, conducted by the Sisters of St. Francis, was dedicated May 12.

**Asks for New Maternity Hospital.**—The Milwaukee Maternity Hospital and Free Dispensary Association has sent out several thousand letters in its attempt to raise $50,000 for a new hospital.

**Councilor District Election.**—The Ninth Councilor District Medical Association met in Stevens Point, April 30, and elected Dr. L. H. Pelton, Waupaca, president, and Dr. R. P. Potter, Marshfield, secretary-treasurer.

**Medical Club Banquet.**—About seventy were present at the annual banquet of the Oshkosh Medical Club, May 8. Dr. W. N. Linn was unanimously reelected secretary of the club, and Drs. Brockway, Hogan and Schneider were placed in charge of the program for the coming year.

**State Society Meeting.**—The sixty-fifth annual meeting of the Wisconsin State Medical Society was held in Wausau, May 21-24. Dr. Arthur J. Patek, Milwaukee, was elected president; Dr. Charles A. Armstrong, Boscobel, vice-president; and Dr. H. E. Dearholt, Milwaukee, delegate to the National Legislative Council.

**Medical Women Meet.**—At the third annual meeting of the Wisconsin Medical Women's Association, held in Milwaukee, May 30, the following officers were elected: president, Dr. Luella E. Axtell, Marinette; vice-president, Dr. Julia Riddle, Oshkosh; secretary, Dr. Minnie M. Hopkins, Oconto; treasurer, Dr. J. M. Droppers, Milwaukee; and censor, Dr. Irene G. Tomkiewicz, Milwaukee.

**Personal.**—Dr. G. C. Ruhland, city bacteriologist of Milwaukee, sustained an infection of the hand while examining the brain of a cat, supposed to have rabies, recently.——Drs. E. S Hays, J. V. R. Lyman and H. Midelfart, have been elected directors of the board of health of Eau Claire.——Dr. G Windesheim has been reelected chairman of the board of healt of Kenosha.——Dr. G. L. Bellis, Antigo, has been appointed member of the staff of the State Sanatorium for Tuberculosis Wales.——Dr. A. G. Sullivan has been appointed medica supervisor of the public schools of Madison.——The physician of Ashland have agreed to give free medical examinations t the school children of the city.——Dr. Sara I. Morris has bee appointed medical adviser of the Women's Department of th University of Wisconsin, Madison, vice Dr. Helen Dobson Den niston, resigned.

## GENERAL

**Interstate Practice.**—A concurrent resolution was submitte to the House of Representatives of Louisiana, May 17, pe mitting physicians within six miles of the Texas and Arkansa frontiers of the state to practice in Louisiana without securin a state license.

**Meeting of Sanatorium Association.**—The seventh annua meeting of the American Sanatorium Association was held i Washington, May 29, Dr. V. Y. Bowditch, Boston, was electe president; Dr. Lawrason Brown, Saranac Lake, N. Y., vic president, and Dr. Harry Lee Barnes, Wallum Lake, R. I secretary-treasurer.

**Pellagra Conference.**—A National Conference on Pellag will be held in Columbia, S. C., October 3 and 4. Among t speakers already announced are Surgeon-General Rupert Blu Dr. C. H. Lavinder and Dr. R. M. Grimm, U. S. P. H. & M.-H Service; Dr. P. E. Garrison, U S. Navy; Dr. J. F. Silver, U. Army, and Carl S. Gesberg, of the National Bureau Pla Industry.

**Meeting of Tuberculosis Experts.**—At the eighth annu meeting of the National Association for the Study and Pr vention of Tuberculosis held in Washington, May 30-31, t following officers were elected: president, Homer Folks, N York City; vice-presidents, Drs. Robert H. Babcock, Chica and Edwin R. Baldwin, Saranac Lake, N. Y.; and secreta H. B. Jacobs, Boston.

**Baltimore and Ohio Surgeons Meet.**—At the twenty-third annual meeting of Baltimore and Ohio Association of Railway Surgeons, held in Philadelphia, May 29 to June 1, the following officers were elected: president, Dr. C. J. Wintin, Cincinnati; vice-presidents, Dr. John Palmer, Jr., Wilmington, Del., and Page Edmunds, Baltimore; secretary-treasurer, C. E. Johnson (reelected). and members of the executive committee, Drs. W. F. Morrison, Philadelphia, H. S. Hedges, Brunswick, Md., and J. W. Hays, Albion, Ind.

**Gynecologists Meet.**—The American Gynecological Society held its thirty-seventh annual meeting in Baltimore, May 28 to 30, under the presidency of Dr. Howard A. Kelly, Baltimore, and the following officers were elected: president, Dr. Henry C. Coe, New York City; vice-presidents, Drs. George H. Noble, Atlanta, Ga., and George Gillhourn, St. Louis; councilors, Drs. Howard A. Kelly, Baltimore, George Ward, New York City, and Palmer Findley, Omaha, Neb.; secretary, Dr. LeRoy Broun, New York City, and treasurer, Dr. J. Wesley Bovée, Washington, D. C.

**Annual Meeting of Academy.**—The thirty-seventh annual meeting of the American Academy of Medicine was held in Atlantic City, May 31 to June 1. The academy adopted resolutions expressing "its sense of the extreme importance of the early establishment of a Department of Public Health as a part of the national government." The following officers were elected: president, Dr. Roy Lyman Wilbur, San Francisco; vice-presidents, Drs. H. A. Tomlinson, St. Peter, Minn., W. Edgar Darnall, Atlantic City, Alice Wells Tallant, Philadelphia, and J. E. Tuckerman, Cleveland; secretary, Dr. Charles McIntire, Easton, Pa. (reelected), and assistant secretary, Dr. W. L. Estes, Jr., South Bethlehem, Pa.

**Personal.**—Dr. Edward H. Hume, for several years a medical missionary in China and in charge of the work carried on by Yale University in that country, is visiting in the United States.——Dr. George Converse, U. S. P. H. & M.-H. Service, San Francisco, has been given leave of absence for two years in order to take charge of an inclusive work for sanitary improvement in the city of Iquites, Peru, for which the Peruvian government has appropriated one million dollars.——Capt. Joseph H. Siler, M. C. U. S. Army, Passed Assistant Surgeon Phillip E. Garrison, U. S. Navy, and Ward C. McNeal, New York City, making up the Thompson-McPhadden Pellagra Commission, left New York, May 27, to spend five or six months at Spartanburg, S. C., in investigations into the causes of pellagra.

**Bequests and Donations.**—The following bequests and donations are announced:

St. Louis Maternity Hospital, $5,000, by Adolphus Busch, for the building and endowment funds.

New York Post-Graduate Hospital, $50,000, by the late John Torrance Banneck.

New York Society for the Relief of Ruptured and Crippled, $10,000, by the will of Henry Idem, Pelham Manor.

St. Christopher's Hospital, Brooklyn, $5,000, by the will of Henry C. Hulbery.

Missouri Baptist Sanitarium, St. Louis, $100,000, by A. D. Brown, contingent on the raising of $50,000 additional before Aug. 24, 1913.

Nassau Hospital, New York, $17,000 annually guaranteed toward the maintenance fund by Mrs. Charles Steele.

Mount Sinai Hospital, New York City, $10,000; Montefiore Home, $5,000; New York Association for the Improvement of the Condition of the Poor, $5,000; Home for Aged and Infirm Hebrews, $5,000, and St. John's Guild Floating Hospital, $5,000, by the will of the late Benjamin Guggenheim.

Tuberculosis Preventorium, Farmingdale, N. J., $5,000, from Jacob Schiff, New York City, toward the construction of two additional open-air camps.

New York Skin and Cancer Hospital, one-half of the residuary estate of Mrs. Cornelius Storrs, amounting to about $1,000,000.

## FOREIGN

**The Isolation Hospitals at Guayaquil.**—Guayaquil, Ecuador, is called in the newspapers the "pesthole of the Pacific," but under the new administration of President Plaza, who has lived for many years in New York, introduction of modern sanitary methods is being planned and pushed, our Secretary of State encouraging the Guayaquil authorities in the task. A member of the profession, Prof. L. Becerra, has recently been appointed a member of the cabinet. The *Public Health Reports* for June 7 states that since the beginning of 1912 Guayaquil has had 147 cases of yellow fever and 124 of plague. The last number of the *Boletin de Medicina y Cirugia* of Guayaquil brings an illustrated description of the isolation hospitals for bubonic plague, yellow fever and small-pox, in charge of W. Pareja, who publishes in the same number a study of albuminuria during yellow fever. The buildings are constructed according to modern principles, spacious and airy. The small-pox hospital has been closed for two years as there has been no case of small-pox during this period, it is stated. The bubonic plague boarding pavilion *(pabellon de pensionistas)* contains twenty-eight apartments, fourteen for the sick and the others for their families which may wish to accompany them. The plague pavilion proper has eighty beds. Pareja reports that the alarming albuminuria found on examining 300 yellow-fever patients soon subsided without leaving a trace, even when 5 or 10 or even 20 gm. of albumin per liter had been eliminated at the height of the disease.

## LONDON LETTER

*(From Our Regular Correspondent)*

London, May 25, 1912.

### The Parliamentary Committee on Nostrums

The parliamentary committee on nostrums has held another sitting. Evidence was given by the principal clerk of the government department which deals with patent medicines that no control was exercised over advertisements. Proceedings for fraud on the ground that nostrums could not effect the cures claimed were practically unknown. The onus to prosecute was on people who thought they had been defrauded. The difficulty in proving fraud had been found almost insuperable. Thus, in the notorious case of Harness' so-called "electric belts," proceedings were taken by private persons on the ground that they had been defrauded by the false advertisements. Physicians gave evidence that the belts could not possibly cure the diseases they were said to cure. But the defense called a number of persons of respectability who declared that they had been cured, and the result was that the case was dismissed. Dr. Nestor Tirard, medical expert to the British Pharmacopeia Committee of the general medical council, stated that the council was the censor of the standard and purity of drugs employed by physicians. The last edition of the pharmacopeia was issued in 1898, and another was about to be issued. The interval was longer than usual, as the new remedies introduced had not been considered of sufficient importance to justify a new edition before. Remedies had to gain general acceptance before they were admitted to the pharmacopeia. The attitude of the general medical council with regard to nostrums was this: If on analysis an extensively used nostrum was found to contain a scheduled poison, such as morphin, strychnin or mercury, when an edition of the pharmacopeia was issued a formula for a substance analogous to this was introduced, so as to safeguard the public against any change of strength. Thus a formula equivalent to chlorodyne was introduced. Dr. Tirard was asked whether, if a person devised and advertised a new combination of drugs of a perfectly legitimate character, the council proceeded to analyze it and used a combination which was the discovery of an individual. He replied that there was no great discovery in putting together drugs and that the genesis of nearly every nostrum was the prescription of a doctor. The council had no wish to suppress proprietary medicines, some of which—the synthetic preparations—were the result of advancing knowledge. The ascertaining of the value of the new drugs was left to private enterprise. The body to which the compilers of the pharmacopeia were chiefly indebted was the Therapeutic Committee of the British Medical Association.

### The Congress of the Universities of the Empire

On July 2 a Congress of the Universities of the Empire will be opened in London; fifty-two universities will each be represented by four delegates. The London committee includes the chancellors of the universities in the United Kingdom, the Prime Minister, the leader of the opposition and the high commissioners of the dominions. The subjects to be discussed are: (1) specialization among universities; (2) interuniversity arrangements for postgraduate and research students; (3) the relation of universities to technical and professional education and to education for public services; (4) interchange of university teachers; (5) the problem of the universities in the east in regard to their influence on character and moral ideals; (6) residential facilities in connection with universities; (7) conditions of entrance to universities and mutual recognition of entrance tests; (8) action of the universities in relation to the after-careers of their students; (9) university and tutorial class work; (10) the establishment of a central university bureau, its constitution and functions; (11) the position of women at universities; and (12) representation of teachers and graduates on the governing body of a university.

### Boric Acid in Butter

An experiment has been made by the Food Export Department of Victoria (Australia), which must help to confirm the use of boric acid as preservative in butter. Victorian butter factories were asked to submit four boxes from one churning, to two of which boric acid in the amount permitted by the Australian Commonwealth (0.5 per cent.) had been added, while the other two were free from preservatives. One of each was shipped to England while the duplicates were retained in the local cool stores. Cable messages have been received from London that the trade is strongly in favor of the retention of the preservative, and that the butter containing the boric acid has a market preference of $2 per hundredweight, mainly on the score of flavor.

### Sir David Bruce

Col. Sir David Bruce, F.R.S., has received special promotion to the rank of surgeon-general, in consideration of his eminent services in the cause of science. Since his earliest years he has been an enthusiastic naturalist. After entering the Army Medical Service he turned his attention to pathology. While quartered at Malta he discovered the micrococcus of Malta fever. Until 1894 he was assistant professor of pathology at the Army Medical School at Netley. On leaving Netley he went on duty in Zululand, where for two years he investigated nagana (the tsetse-fly disease of animals), which he found was due to a trypanosome conveyed by the tsetse fly. This discovery laid the foundation of most of the work which has been done in regard to the part played by insects in the propagation of malaria and other diseases. In 1903, following up Castellani's observations, he showed that sleeping-sickness is also due to a trypanosome conveyed by the tsetse fly. In 1911, he proceeded to Nyassaland as director of the Royal Society's commission to study the connection between the diseases of wild animals and of stock and human diseases. The results have already been reported in previous letters to The Journal.

### The New Building of the Royal Society of Medicine Opened

The new building of the Royal Society of Medicine, which has recently been formed by the amalgamation of almost all the principal medical societies of the metropolis, has been opened by the king. The parent society of the new organization was the Royal Medical and Chirurgical Society, which was founded in 1805. For more than 100 years attempts were made to bring about amalgamation with other societies but without success. The new building, in Wimpole street, is architecturally an imposing example of the Greek revival in England. Its principal feature is the library on the first floor, which is 110 feet long, 27 feet wide and 18 feet high. The design of the building provides for another story with an annex for periodicals. On the ground floor are a spacious vestibule, two meeting halls, holding 500 and 250 persons respectively, patients' rooms, cloak rooms and cashiers' and porter's rooms. On the second floor are the council room and two committee rooms. On the third floor are a museum and laboratory. The basement is a store-room for books, capable of holding 100,000 volumes. The ceiling lamps in the library are so arranged that light is reflected first upward and then downward by the white ceiling. For the writing tables there is a novel lighting device suggested by Mr. MacAlister, the secretary. Realizing the inconvenience of the flexible cord hitherto in use he invented an apparatus which abolishes the old form of standard lamp attachment. It consists of a socket in the floor connected with the source of electric supply and plug in the leg of the table which fits into the socket. The plug is kept in position by a spring, the resiliency of which is overcome by the weight of the table. Thus the table always stands level when used in any other place than that in which it generally stands.

### Tuberculosis and the National Insurance Act

It may be remembered that the national insurance act provides a large sum ($7,500,000) for the establishment and maintenance of sanatoriums for tuberculosis. The government appointed a committee of specialists and health officers to report at an early date on the prevention and treatment of tuberculosis and to make recommendations on sanatoriums and other means of defense. The committee has just issued a unanimous report, in which the following principles are laid down: 1. Any scheme which is to form the basis of an attempt to deal with the problem of tuberculosis should be available by the whole community. 2. Those means which experience has proved to be most effective should be adopted for the prevention of the disease. 3. A definite organization should exist for the detection of the disease at the earliest possible moment. 4. Within practicable limits the best methods should be available by all suffering from the disease. 5. Concurrently with the measures for the prevention, detection and treatment, provisions should be made for increasing the existing knowledge of the disease and of the methods for its prevention, detection and cure by way of research. The committee recommends a scheme consisting of two closely connected units, the first being the tuberculosis dispensary and the second sanatoriums, hospitals, etc., in which institutional treatment is given. These are to be related to the general public health and the work of health officers and carried on in harmony with the general practitioner. The dispensary is to be a receiving house, a center of diagnosis and a general information bureau, as well as a center of curative treatment. It is calculated that one tuberculosis dispensary will be required for every 150,000 or 200,000 of the population in an urban center. In rural neighborhoods, where the population is scattered, the dispensary can serve only a smaller number. On this basis the number of sanatoriums required will be some 225 to 300. To the tuberculosis officer at the dispensary will come or be sent patients in every stage of the disease. As the work of the dispensary becomes better understood, persons with comparatively slight symptoms will be sent in greater numbers in order to ascertain whether or not they are tuberculous. Thus the possibility of early diagnosis will be much increased. When the diagnosis has been made, the dispensary will serve as a "clearing house" through which persons suffering from the various types of tuberculosis will be passed. They will be classified by the tuberculosis officer, who will have some beds at his disposal for the purpose of observation, and sent on to the appropriate institution. It is recommended that for the senior appointments in connection with the dispensaries and sanatoriums, preference be given to doctors who have held house appointments for at least six months in a general hospital in addition to a similar period at a special institution for the treatment of tuberculosis. The committee holds that the capital outlay on a dispensary when an existing house can be obtained should not exceed $1,250. Dealing with the second unit of the scheme—sanatoriums, hospitals and other institutions—a large proportion of cases of both pulmonary and non-pulmonary tuberculosis will require treatment for a longer or shorter period in an institution. It is estimated that one bed in a sanatorium should be available for every 5,000 of the population and the cost of maintaining it $6 or $7 a week. Great importance is attached to the proper treatment of children, since the more the resistan power of children is increased the lighter will be the burden of tuberculosis in the next generation.

## PARIS LETTER

*(From Our Regular Correspondent)*

Paris, May 24, 1912.

### Treatment of Typhoid Fever by Rectal Injection of Kille Cultures of Eberth's Bacillus

After proving that the introduction into the large intestin of killed cultures of Eberth's bacillus at 56 C. renders ma and animals immune to typhoid it occurred to Dr. Jules Cou mont, professor of hygiene in the Faculté de Médecine de Lyo and to Dr. Rochaix to treat typhoid in the same manner. I a meeting on May 17, they reported the results obtaine by this treatment. Of 171 typhoid patients treated in th usual way, twenty died, a mortality of 11.6 per cent. O thirty-nine patients who received daily until defervescence tw injections of 100 c.c. of culture only two died—a mortality 5 per cent. Moreover, many cases were materially shortene defervescence occurring prematurely and unexpectedly. Eigh patients relapsed, but all were cured.

### An Institute of Hydrology at Toulouse

The Université de Toulouse has undertaken the establis ment of an institute of hydrology, in which all questions rel tive to mineral waters will be studied. The city of Toulou has presented to the university the ground on which the futu institute will be built. A circular, signed by the rector of t university and by the dean of the Faculté de médecine Toulouse, has just been sent to all the mayors of the regi asking them to indicate in what way the municipalities wou be willing to participate in the construction and operation the new institute.

### Pathology of Prehistoric Man

At the last meeting of the Académie des Sciences, Dr. Mar Baudouin, former general secretary of the Societé préhistoriq de France, gave an interesting report on the pathology of p historic man as shown on bones uncovered in the neolit sepulture of Vendrest (Seine-et-Marne). These bones sh characteristic osteo-arthritis deformans. On the verteb column in women the lesion is located at the center of t cervical region, more often to the left than to the right. In men, on the contrary, it is observed usually at the base of the dorsal portion and at the center of the lumbar portion, located almost always to the right.

Deforming osteo-arthritis seems to be the oldest of all known diseases. Its existence has been proved in a non-domestic animal, the cave bear, in the very beginning of the eldest quaternary period. It is known, moreover, that it has been found recently in the Egyptians and the Nubians of the prehistoric period.

### The Protection of Childhood

Since 1874, the laws concerning the protection and relief of infancy and adolescence have increased. The superior council of the Public Charities (Assistance Publique) and the societies for the study of charity have many times expressed the desire that this large collection of obscure and mutually contradictory laws might be methodically codified. The President of the Republic has just appointed an extraparliamentary commission for the purpose. The commission will not only collect and classify the existing laws, but also propose new and complemental provisions.

### The Value of Antitetanus Serum

The Société de chirurgie has spent several meetings in discussing the value of antitetanus serotherapy. Dr. Riche reported the case of a little girl of 8, whose left hand was punctured by a pitchfork. The wound was small, uncomplicated, not inflamed or suppurating and painful only on pressure. A dressing of hydrogen peroxid was applied; then a subcutaneous abdominal injection of 10 c.c. of antitetanic serum was made. On the same evening the condition of the little girl became extremely critical. She was attacked with headache, diarrhea, vomiting and was in a state of increasing torpor; the body was covered with profuse, cold perspiration and the child was insensible to moderate stimulation. The abdomen was soft, neither sunken nor distended; the respiration was of the Cheyne-Stokes type; the pulse was soft and so rapid that it could not be counted. In spite of injections of caffein, of hot wrappings and of an injection of salt water the little girl died. Anaphylaxis was out of the question, for there had been no previous injection of any serum. The inevitable conclusion, then, is that death was caused by intoxication through antitetanic serum.

In reply to Professors Schwartz and Kirmisson, who declared that a single observation of this kind could scarcely discredit antitetanic serum, Dr. Riche mentioned the observation of Drs. Vennat and Micheleau regarding a colleague of Saint-Martin-de-Ré who, in attending a tetanic woman, received some drops of saliva on the face and in particular on a little excoriation of the nose; fearing infection, this physician, consequently, on the following day, made an injection of 10 c.c. of antitetanic serum and, a fortnight later, died of tetanus.

On the other hand, Dr. Delbet, professor of clinical surgery of the Faculté de médecine de Paris, has reported that he also has observed a case of death immediately following a preventive injection of antitetanic serum. The case was that of a man admitted to the hospital in the morning with a complicated fracture of the bone of the leg, dating from the evening of the preceding day. In the morning he showed some symptoms resembling those of delirium tremens. An injection of 50 c.c. of serum was given and, some minutes later, he was attacked by a crisis of excitement with tonic and clonic contractures. These symptoms were quieted, the patient regained consciousness and it was learned that he was subject to similar crises. At 3 p. m., however, he died suddenly without giving any indications of morbid symptoms.

Dr. Robineau, although declaring himself wholly convinced of the efficacy of antitetanic serum, has also reported observation of toxic symptoms due to this serum. This was the case of a colleague who had received a contused wound on the knee. He applied a dressing of tincture of iodin and, fearing tetanus, gave an injection of antitetanus serum. At the end of thirty-six hours, he was seized with chills, nausea, headache and presented some tachycardia. The symptoms persisted the following days with a temperature of 38 to 39 C. (100.4 to 102.2 F.) in addition. On the eighth day, at the site of injection, appeared a spot of urticaria and the patient was seized with rheumatic joint pains. On the twentieth day, the symptoms disappeared, but, on the following day, inflammation of the left saphenous vein developed and, some days later, of the right saphenous vein. The wounds were healed in fifteen days and have always had a good appearance. The serum was fresh, delivered the evening before by the Pasteur Institute, but it was labeled veterinary serum.

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, May 24, 1912.

### Personal

Professor Bach, director of the eye clinic at Marburg, died in that city, May 10. He was for many years a pupil of the Berlin ophthalmologist, v. Michel.

Professor Bernhard Naunyn, the well known clinician, celebrated the semi-centennial of his doctorate, May 23.

Prof. Carl Fraenkel, director of the hygienic institute of Halle, a pupil of Robert Koch, has changed his name to Fraenken with the consent of the government. Such changes of name are not very unusual in Germany. One of the most remarkable cases concerned the Nobiling family, whose members, on the occasion when Emperor William I was severely wounded in an attack by a man named Nobiling, preferred to abandon their former name and select another. In many cases changes of name occur among the baptized Jews, who seek in this way to conceal their former religion and race. It may be that such a reason is effective in Professor Fraenkel's case. It is remarkable that although he changed his religion many years ago, he has only now decided to change the "l" into an "n." The delay is possibly connected with the death of his uncle Bernhard Fraenkel, the noted laryngologist, in that he did not care to change his name during the lifetime of the latter.

### Twenty-Five Years of Official Medical Organization in Prussia

The Prussian Aerztekammern (medical chambers) celebrated their twenty-fifth anniversary May 25. The ministerial edict which provided for the organization of the medical chambers twenty-five years ago, stated that physicians wish for a recognized national representation of their profession because they appreciate that, as a rule, it has not been possible for the medical profession to meet by unofficial organization the dangers which the advance of commercial life in late years has brought with it for the prestige and honor of the medical profession. On the other hand it is expected that the authoritative position which the national recognition of a representation of the medical profession will confer, will make it possible to connect with this organization institutions which are suited to meet the long cherished wishes of physicians, as for example, the desire to provide for the care of the widows and orphans of physicians. In addition to this, the growing importance of the public health service has made it more and more felt that there is need of an organization by means of which the rich experiences of unofficial physicians may be directly utilized in solving the national problems in the field of public health. Without doubt the activity of the Kammern has corresponded to the purposes just sketched. They have been effective in the service of the public health as well as for the uplifting of the professional conscience and the promotion of true fellowship. Particularly, by the later establishment of the courts of honor an institution was created by which the ethical standards of physicians in Prussia have been materially promoted. Especially in the struggle of the physicians with the Krankenkassen, the medical chambers have exerted a favorable influence. Finally the Aerztekammern by the establishment of the bureaus of relief for needy colleagues and their survivors have rendered great service in the field of professional philanthropy.

### Opening of the Haeckel Museum for the Study of Phylogeny

The Phyletic Museum founded by Haeckel at Jena was formally inaugurated May 21. The idea of founding such a museum occurred to Haeckel in 1904, and he made the first contribution by devoting to it the royalties for his book "Welträtsel" (The Riddle of the World), of which hundreds of thousands of copies were published. By contributions from friends and admirers, he succeeded in pushing his plan so far that on the occasion of the 350-year jubilee of the university of Jena a few years ago, the building for the museum was ready. The outfitting of the building with material was undertaken by his successor and pupil, Professor Plate, after Professor Haeckel had resigned his professorship on account of his health. The museum which is open to the public contains extraordinarily valuable material for the exposition of the theory of development. By numerous specimens and objects the variability of species, the geographical distribution of varieties, polymorphism, the questions of heredity, the effects of inbreeding and cross-breeding and Mendel's law are demonstrated in an instructive way.

### Left-Handedness in the German Army

The question of the importance of left-handedness, so far as the condition of the nerves is concerned, has repeatedly been discussed by German physicians in the literature of late years. As a rule this peculiarity is regarded as a sign of degeneration, although this view has been opposed by some. In the last number of the *Klinisches Jahrbuch*, Dr. Stier, staff surgeon to the Kaiser Wilhelm Academy in Berlin, published the results of official investigation of the left-handed recruits in October, 1909. The entire number of recruits examined was about 260,000. Among them 10,300 left-handed persons were found. Those entering as one-year volunteers showed by far the fewest and the reserves (*Ersatzrekruten*) by far the largest number, a difference which, as is seen from other statistics, must be interpreted as an indication of the inferior efficiency of left-handed people. Comparison of the male and female left-handed relatives of our soldiers shows that left-handedness is nearly twice as common among males as among females, a fact that is readily explained by the assumption of a greater unilateral differentiation of males and of the increased difficulty with which they change their habits in childhood. Left-handedness is decidedly a hereditary peculiarity, being found nearly five times as frequently among the relatives of left-handed soldiers as among others. The number of those who have left-handed relatives and the number of such relatives per person, is greatest in southern Germany and least in northern Germany. The influence of the mother in heredity seems to be greater than that of the father. The number of physical stigmata of degeneration was found twice as great among the left-handed as among the right-handed. Present and past difficulties of speech are found in left-handed soldiers four times as often and among their relatives three to four times as often as among right-handed men. The proportions of the sexes among the stammering relatives shows that stammerers are found four times as often among men as among women. A small but still notable percentage of left-handed soldiers could write with the left hand better or nearly as well as with the right, an indication of the superiority which the right side of the brain may attain.

### Berlin Radium Institute

May 13 the new institute for biologic and therapeutic investigation of radium, attached to the Charité, was opened by the director of the institution, Professor His, who delivered the inaugural address. The institute has been founded solely by private enterprise, contributions to the extent of $5,000 (20,000 marks) a year having been guaranteed by the Kaiser Wilhelm Association for the Advancement of Science (Gesellschaft zur Förderung der Wissenschaften) and by two radium firms. The two industrial firms are also prepared to furnish the necessary material and measuring apparatus. Naturally, with these slender means, the institute has not been able to erect its own building, but is installed in a rented house in Luisenplatz, in the neighborhood of the Charité. A policlinic is connected with the institute, in which representatives of the related specialties will hold clinics, so that by mutual consultation the most appropriate methods of treatment may be determined for each individual case. Fifteen work places are provided in the laboratory, which are also placed at the disposal of foreign physicians. There are two assistants to the director of the institute.

### Recognition of an American Dental Degree

The question as to how far a dental degree obtained in America may be used in Germany has lately been again the subject of attention by the court and officials. The superior court (*Oberlandsgericht*) of Hamburg has decided that a person who has received a license to practice dentistry in America may not be forbidden to designate himself as "a dentist licensed in America" (*in Amerika approbierter Zahnarzt*), for this title contains no incorrect statement calculated to mislead. In northwestern Germany everyone will understand by this title merely that the advertiser is an educated dentist who has been admitted to practice in America on the basis of legal evidence of his qualifications, but no one would understand that he was a person who had been educated in America in the German manner and according to the requirements established in Germany. The opinion of the Prussian superior court expressed some time ago with reference to American dentists, was less favorable. A dentist was required by the police to remove from his sign the expression "Dr. of dent. surg." He declined to do this, with the claim that he had obtained this title from a reputable college in America. The court decided on the evidence presented that the institute in question was not a fraudulent institution, but must be regarded as inferior as compared with the German scientific institutes, and that for this reason the action of the police was justified, but that the matter would be different if the American college had stood approximately on the same scientific level as the German institutions of the kind.

## VIENNA LETTER

*(From Our Regular Correspondent)*

VIENNA, May 24, 1912.

### The Problem of the Locum-Tenens and the Assistant in the Clinic

Two important questions, which have often been a source of much dissatisfaction in the profession, are now nearing a solution acceptable to all concerned. The organization of practitioners in Lower Austria has resolved to regulate the difficulties arising from a locum-tenens not being available in urgent cases. For a certain district of the country, containing about 1,000 physicians, there will be appointed five physicians, preferably those with good hospital experience, who will receive a fixed salary of 200 kronen a month, besides, of course, free board and lodging and all traveling expenses. They will be prepared to substitute, at a day's notice, for any physicians requiring them. Heretofore, it has been impossible at times and in certain places for a physician to leave his duties for any length of time; hence, he had no holiday. By means of this institution at least fifty physicians will be able to get a month off each year, if the *loca tenentes* are engaged for ten months each year. Of course, if the length of holidays are cut down and if the arrangements work well over double the number of physicians may enjoy a vacation of a fortnight free, heretofore an unknown thing to many country practitioners. The physicians serving as *loca tenentes* will be eligible after three years to fill any vacancies as district officers of health. The funds necessary for the payment of these physicians will be raised by a slight increase of the yearly subscription for the organization premium.

The other question, now regulated, deals with the abuse o appointing clinical assistants *ad libitum*. In this country titles are much valued and many a physician is eager to becom assistant to one of the clinics or to one of the eminent pro fessors. The public believes that a physician who holds suc an assistantship is superior to one who has no such position The title of assistant was given originally only to those me who really assisted a clinical teacher in his scientific researche and, therefore, had no time for private practice. Recently professor created fifteen assistants at a time. Of course, th profession protested against the wholesale fabrication o superior doctors. The *Collegium* of the clinical professors o Vienna has dealt with these conditions and resolved that i the future no increase of such titles should be granted excep in really necessary cases; furthermore, that all assistant should be paid after a uniform scale, so that the fictitio assistant would die out. The latter men will be called aspi ants; men who aspire to become assistants by due work a scientific nature, requiring their full time to be spent hospital work, and who may or may not prove themselv worthy of obtaining the title formerly so honored and covete By this plan, it is thought, the production of titles will restricted.

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## *Marriages*

William Shepherd Hall, M.D., Baltimore, to Mrs. Kat erine Turner Kurtz, Roland Park, Md., at Philadelphia, June

William T. Gocke, M.D., Adamstown, W. Va., to Miss Cla Agnes Boyle, Johnston, Pa., at Baltimore, May 29.

John M. Wheeler, M.D., New York City, to Miss Jul Warren Smith, at Burlington, Vt., May 15.

Earl Houston Hunt, M.D., Clarksville, Ark., to Miss T Hutchinson, at Van Buren, Ark., June 1.

Jesse Solomon Spillyards, M.D., Shreveport, La., to M Alline Frey, Nashville, Tenn., Feb. 22.

James Walter Wells, M.D., Waltonville, Ill., to M Bertha Hartley, Ina, Ill., recently.

Clarence C. Rogers, M.D., to Miss Jennie Minerva Ro both of Rittersville, Pa., June 1.

Estill Victor Wedding, M.D., to Miss Eva Frances Ba both of Kansas City, May 21.

Milton Sumner Marcy, M.D., to Miss Jessie Leora Cull both of Peoria, Ill., May 21.

William Williams, M.D., to Miss May Marie Gale, both Chicago, May 29.

John Alfred Graham, M.D., to Miss Beatrice Felt, both Chicago, June 4.

# Deaths

**Beverley MacMonagle, M.D.** Harvard Medical School, Boston, 1876; a member of the American Medical Association and of the Massachusetts Medical Society; for thirty years a practitioner of San Francisco and one of the surgical staff of the Woman's Hospital of that city; an instructor in the University of California for ten years; a member of the staff of the Children's Hospital at San Francisco; died in Paris, France, May 22, aged 58.

**Albert Moore Shoemaker, M.D.** University of Pennsylvania, Department of Medicine, Philadelphia, 1900; a member of the American Medical Association and the Medical Society of the State of Pennsylvania, of the National Association for the Study and Prevention of Tuberculosis and of the Luzerne County Medical Society; a member of the visiting staff of the White Haven Sanatorium; died at White Haven, Pa., May 18, from tuberculosis.

**Myron W. Robinson, M.D.** Berkshire Medical College, Pittsfield, Mass., 1861; a member of the American Medical Association and of the Massachusetts Medical Society; resident physician of the Soldier's Home at Noroton Heights; a veteran of the Civil War and Medical Director of the Department of Connecticut, G. A. R.; died at his home in Noroton Heights, Conn., May 27, from heart failure, aged 72.

**John Cowan Bogle, M.D.** University of Louisville, Medical Department, 1878; a member of the Kentucky State Medical Society and the American Medical Association; for fourteen years physician for the Deaf and Dumb Institute at Danville; surgeon for the Cincinnati Southern Railway Company; for thirty years a practitioner of Danville; died at his home in that city, May 26, aged 63.

**George F. Foster, M.D.** Starling Medical College, Columbus, 1873; a member of the American Medical Association, of the Ohio State Medical Association and Delaware County Medical Society; for twelve years a member of the board of censors of the Columbus Medical College; died at his home in Olive Green, O., from apoplexy, aged 65.

**George Fletcher MacDonald, M.D.** Western Reserve University, Medical Department, Cleveland, 1886; a member of the American Medical Association and of the Medical Society of the State of Pennsylvania; an active worker in the Cambria County Medical Society; died at his home, in Gallitzin, Pa., May 22, from cancer.

**R. Y. McLeod, M.D.** Medical College of the State of South Carolina, Charleston, 1861; a member of the South Carolina Medical Association; first lieutenant Company E, 19th South Carolina Volunteer Infantry, C. S. A., and since the war a practicing physician at Bishopville; died in that city, May 17.

**Thomas E. Moorman, M.D.** Medical College of Virginia, Richmond, 1860; a member of the Medical Society of Virginia; who retired from active practice a number of years ago because of feeble health; died at his home in Theta, Va., recently, aged 78.

**Josiah R. Bromwell, M.D.** University of Maryland, School of Medicine, Baltimore, 1871; a member of the American Medical Association and of the Medical Society of the District of Columbia; died at his home in Washington, D. C., May 25, aged 70.

**Thomas S. Terrell, M.D.** Missouri Medical College, St. Louis, 1869; a member of the Southwestern Kentucky Medical Association; a veteran of the Civil War; of Mayfield, Ky.; died at the home of Dr. George T. Fuller, in that city, May 3, aged 69.

**Gail Samuels, M.D.** Baltimore University School of Medicine, 1897; formerly a practitioner at Bartlesville, W. Va.; a member of the West Virginia State Medical Association; died at his home in Parkersburg, W. Va., recently.

**H. M. Sherman, M.D.** American Medical College, St. Louis, 1878; a veteran of the Civil War and for nearly forty years a prominent physician in Peoria, Ill.; died at the Proctor Hospital, May 16, from Bright's disease.

**John A. Wood, M.D.** College of Physicians and Surgeons, Keokuk, Ia., 1858; a pioneer physician of Coffeyville, Kan.; died at the home of his daughter in that city, May 23, from heart disease, aged 78.

**Richard E. McVey, M.D.** Rush Medical College, Chicago, 1861; a member of the Kansas Medical Society; died at his home in Topeka, Kan., May 23.

**Dexter R. Belding, M.D.** Cleveland University of Medicine and Surgery, 1869; died at his home in Malone, N. Y., May 18, aged 66.

**Mercer W. McCrary, M.D.** Vanderbilt University, Medical Department, Nashville, 1905; health officer for Cannon County for six years; died at Louisville, Ky., April 23, after a surgical operation, aged 34.

**James O. Ray, M.D.** Medical Department of the Tulane University of Louisiana, 1885; of Opelousas, La.; a member of the Louisiana State Medical Society; died at his home, May 21, aged 57.

**Charles B. Trigg, M.D.** St. Louis College of Physicians and Surgeons, 1898; a member of the Johnson County Medical Society; died at his home in Ozark, Ill., April 12, from appendicitis, aged 44.

**Howard Parker, M.D.** Kentucky School of Medicine, Louisville, 1897; of Edgar, Ill.; a member of the Illinois State Medical Society; accidentally shot himself and died, May 23, aged 38.

**Elizabeth J. T. Gould, M.D.** Woman's Medical College of the New York Infirmary for Women and Children, 1873; died at her home in East Orange, N. J., May 25, from nephritis, aged 69.

**Gardner Cox, M.D.** University of Michigan, Department of Medicine and Surgery, 1868; died at his home in Holyoke, Mass., May 2, from heart disease, aged 68.

**Walton Bancroft, M.D.** Homeopathic Medical College of Missouri, St. Louis, 1860; died at his home in Keokuk, Ia., May 16, from pneumonia, aged 74.

**Harvey D. Borts, M.D.** State University of Iowa, College of Homeopathic Medicine, Iowa City, 1896; died at his home in Iowa City, May 21, aged 46.

**George A. Underhill, M.D.** New York University Medical College, 1883; died at his home in Nashua, N. H., April 1, from edema of the brain, aged 55.

**William J. Whiteford, M.D.** University of Vermont College of Medicine, Burlington, 1889; died at his home in Schenevus, N. Y., April 19, aged 55.

**George W. Weisel, M.D.** University of Pennsylvania, Philadelphia, 1865; died at his home in Williamsport, Pa., May 20, from paralysis, aged 58.

**Joseph William Dwyer, M.D.** College of Physicians and Surgeons, 1900; died at the Passaic General Hospital, Passaic, N. Y., May 27, aged 52.

**W. W. Newsome, M.D.** College of Physicians and Surgeons, Keokuk, Ia., 1863; of South English, Ia.; died in Corpus Christi, Tex., May 24.

**Joseph N. Johns, M.D.** University of Pennsylvania, Department of Medicine, 1870; died at his home in Seaford, Del., May 1, aged 68.

**William D. T. Ferguson, M.D.** Medical Faculty of McGill University, 1888; died at his home in Hamilton, Can., from heart disease.

**William M. Houf, M.D.** Missouri Medical College, St. Louis, 1884; a retired practitioner of Farmersville, Mo.; died May 20, aged 60.

# Correspondence

## The Control of the Clinic Patient

*To the Editor:*—There is no clinical worker who has not at some time during his experience as an investigator had the misfortune to be unable to locate some particular patient in whom he is scientifically interested. At times this is a serious drawback in regard to the administration of new remedies (salvarsan being a good example), the effects of operative procedure, obscure cases for diagnosis or unusual cases seen only at the clinics, and so forth. In order to locate such cases, dependence must be placed in some hospital employee to look up the address given by the patient or the address of the nearest relative, if given, when he has failed to find that of the patient. The results by postal service are about as unsatisfactory, letters being promptly returned to the sender. These means failing, the physician himself takes up the hunt. If fortune smiles on him, he may by interviewing many neighbors in the immediate vicinity of the first address find that the person whom he seeks has removed, possibly to the opposite side of the town. Joyously, the scientifically inclined man rushes off on the new trail, only, in many instances, to be again disappointed. After untiring efforts and the expenditure of valuable time and money, he at last resorts to advertising in one or more of the daily newspapers, with more expense and most frequently no favorable returns.

To mention business in any relation to medicine is veritable heresy, but it must be a very dull man indeed who cannot see that active business methods are being used by every one but the physician. The hospital in which he labors is run by business men; insurance companies are run by business men who formulate questions of a very searching nature for the physician to answer when he has any dealings with them through the decease of one of his patients. The local board of health in his own city or town demands very business-like answers to many important questions when he has to deal with a case of infection or contagion, and woe betide him if he does not answer in a very business-like way! In these things there is system, and the medical man is made to abide by it; but when it comes to devising anything to lighten the burdens of the medical man he finds that there is very little system that he can call on for his own aid or benefit. This is to be deplored, as many interesting cases are lost sight of which, if reported, would be of interest not only to the one so reporting the case, but to the medical profession, and possibly of value to humanity at large.

The great handicap—in this country, at least—is the absence of a systematic record of any patient, no matter in what walk of life he may be. The insurance companies, no doubt, have better records than any business concerns. They are vitally interested in preventive medicine, and are only too glad to further any scheme to increase the longevity of any who are insured by them. Though their motives may not be entirely humanitarian, the fact remains that the removals of all those insured by them are accurately recorded, as at regular intervals certain moneys must be paid in order to keep up the insurance. It is really surprising to learn how many hospital patients carry life, health or accident insurance policies, or combinations thereof. Would an insurance company give a physician the address of a patient in whom he is interested if they had it? This would necessitate asking such patients whether or not they were insured. If the answer is in the affirmative and the name of the company is obtained, the doctor could then communicate with the company, giving his reasons for doing so; or, if he prefers, he may wait, and if at any time he loses the address of the patient he may then seek the aid of the company. The former method is the more rational, as then the company would have an interest in the proceedings, and in the event of death could notify the physician, who might not hear of it for a long time after and who in the meantime may have reported favorably on the case, as he would not have done had he known the full course of the condition. This is very important, as statistics are beyond a doubt misleading, not owing to the fault of the compiler, but to erroneous facts honestly given. The insurance companies, if they would, could be of great aid to the physician in these matters, for once a person is insured and pays his premiums he can be located, no matter in what part of the country he may live.

Our medical brethren of the German-speaking countries have their work in this particular direction greatly facilitated by their wonderful police system. Any one who has lived in or even traveled through these countries can attest to this system. Even the tourist is compelled to give a fairly good account of himself, but when one remains for any length of time (especially if living in a pension or with a private family), he then becomes an inhabitant of that particular town in which he resides, and a complete record of him is made. Therefore, when a person changes his place of abode the police department is not only notified of the arrival at the new address, but is also notified of the departure from the old one. On application to the police department, when giving a good reason, any one may obtain the address of another. This is of very practical use to the physician in following up important cases when it becomes necessary to do so. Inhabitants of these countries know that they can be located quickly, and are therefore more easily controlled.

To utilize the local board of health with its police powers seems to be the rational method of handling the problem in this country. This may seem a wide divergence from the functions of the board, but as the reporting of all cases of so-called social diseases is now being contemplated it would not materially increase the burdens of the board to have a few names added to the list. The method of compelling such patients to keep the board informed of their places of residence would, no doubt, be similar to the method of handling struggling or busy physicians—fine or imprisonment when failing to report one of the many reportable diseases. In fact, a new branch of the board of health might be formed—namely, a sort of hospital clearing-house. If a person, whether in medicine or not, would examine the annual reports of two or more hospitals and, selecting any common condition, add up the total number of such cases treated by each hospital, he might be appalled at the number. This is due to the fact that probably more *cases* than *patients* exist suffering from that particular condition. The explanation of this is easy. There are a great number of wandering clinic patients who patronize one hospital and then another, as the whim moves them. In fact, one clinic patient, while removing the clinic card from his pocket, inadvertently removed another one for a similar clinic at another hospital, and on being questioned admitted that he was being treated at two hospitals for the same condition, thus receiving treatments daily. This instance goes to show how fallacious are hospital reports regarding patients unimproved, improved or cured. It also shows that those who support hospitals and those who are giving their time to the hospitals are having their good efforts negatived to a great extent by the very ones who are the recipients of these kindnesses.

If the hospitals were required to report daily to the clearing-house branch of the board of health all new charity patients treated by them, and this rule were rigidly enforced, the public would soon learn to abide by the ruling. In this way thousands of dollars could be saved out of the millions that are annually spent in the larger cities. Not only this, but the pauperization of the public would be reduced to a minimum. That hospital abuses exist, out of proportion to the amount spent for real charity, is known to all who are actively engaged in clinical work. Laboring under such unsystematized efforts puts the medical profession in the rear ranks for up-to-date methods. If a new department of the board of health were feasible, much could be done in certain localities. The problem is not going to be solved this year, nor possibly next, but it is high time some concerted action is taken to better the conditions.

To inject a little system, not to say business method, into the following up of the after effects of treatment or operative procedures, or the keeping track of interesting cases, cannot be a terribly unethical departure.

Francis W. White, M.D., New York.

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## Strasburg

Berlin, April 20, 1912.

### THE UNIVERSITY OF STRASBURG

*To the Editor:*—The University of Strasburg under th German régime has taken a new lease on academic life and i surpassing in brilliancy its career as a French school. Th German government is on its mettle to demonstrate tha Prussian direction means no decadence for the old Frenc university, and has consequently picked out many of the mos brilliant minds of Germany to guide the destiny of this mos recent offshoot of Teutonic learning. The medical departmen of the university has been built up with special care. Madelung holds the chair in surgery, Erich Meyer in internal medicine, Czerny in pediatrics, Wollenberg in neurology, Fehling i gynecology and obstetrics, Wolff in dermatology, Adrian i genito-urinary diseases, Hertel in the eye, Manasse in ea nose and throat. Other well-known names are Bethe i physiology, Schmiedeberg in pharmacology, and Schwalbe an Weidenreich in anatomy.

### THE PATHOLOGIC INSTITUTE

The work of the modern hospital centers about the pathologic institute. The position of pathologist in the modern university is perhaps the most important and difficult properly to fill. In the case of Strasburg, the German government was unable to find the right man in Germany, and was forced to select an Austrian, the famous Professor Chiari of Prague, for the post.

The university hospital is located about a mile from the university in the poorer section of the old town. It is built on the pavilion plan. Many of the older buildings have steep roofs, with two or three tiers of dormer windows, and date back to French times, when dormer windows were much in vogue in order to escape the high governmental window tax. The pathologic institute lies in the center of the hospital grounds, where it is readily accessible from all the clinics. The institute averages 1,100 to 1,200 post-mortems annually, a thoroughly adequate material for gross, microscopic and bacteriologic purposes. The hospital now contains 1,300 beds.

The pathologic museum dates practically from Professor Chiari's arrival in Strasburg, but is already one of the features of the institute. It is arranged according to anatomic structures. A complete card-catalogue, cross-indexed, according to both organs and diseases, is kept in the room, together with the corresponding history file. The entire clinical and pathologic report of any case in the museum can be obtained by referring to this index. The museum is open to the workers and students of the institute at all times.

The autopsy room looks more like an operating-room than the usual morgue. The amphitheater for demonstrations to the students will compare favorably with the amphitheater in most surgical clinics. It is not unlike the new gynecologic amphitheaters in Vienna, though not so large. The lighting and seating arrangements are much the same.

A separate *Sektions-Saal* or autopsy room for contagious diseases and for cases requiring particular bacteriologic examinations is another source of pride to the professor. This is a valuable addition to the institute, and I do not see why this feature is not more in vogue in foreign institutions, to say nothing of those of our own country. The animal rooms are in the basement; the animal operating-room is also there—not an ideal location, but the only one at present available. Most of the professor's microscopic sections are cut and stained by his own *Dienerin*, a young woman whom he trained for the work; and who, so he says, can do the work better than he himself. The government has been very generous with the institute, and Chiari has never been hampered seriously in his work by lack of funds. Two new clinical buildings are to be added to the hospital in the course of the coming year. They will increase the capacity of the hospital by about 250 beds, and presumably increase the annual autopsies by approximately 200, as the professor naïvely remarked, with perhaps some satisfaction, for, like all others of the Vienna school, he loves to work on a big material.

### PROFESSOR CHIARI

The *Diener*, who met me at the door of the pathologic nstitute, told me that he knew the professor would be glad to meet an American doctor. Did I want to see him? Of course I did, but I expected much aloofness, after the style of Vienna and Berlin. I was very agreeably surprised. Pro-fessor Chiari received me in his private laboratory and addressed me in very excellent English. When he found that I knew Frank Billings of Chicago, I had an established status at once, for Billings worked with Chiari in his student days n Vienna, when Chiari was assistant to the great Kundrat, and hey have been fast friends ever since. When he found that knew, also, Ludwig Hektoen, Robert Preble, H. G. Wells and other American students of former days, he had to get all he latest news about them before proceeding further. Then e took me through the institute. It is as large a place as the athologic institute at Vienna, but more modern in its arrangement. Everything was spick and span. The professor declares hat his only extravagance is cleanliness, and a surgical clinic could not be more immaculate than his institute.

His private library, which long ago outgrew the capacity of his home, has been installed at the institute for the use of the workers there, as well as for himself. He pointed out with particular pride his copy of the *Index Medicus*, something which one rarely sees in European libraries. It is sent to him annually gratis, a compliment he much appreciates. He thinks that he could not work without it now that he has become accustomed to it. If some of the other research workers abroad were more familiar with it, they might save themselves much time in hunting down literature, and might make their references easily more accurate than at present.

The professor cherishes particularly a little black notebook which dates from his recent American trip. It contains the names of those whom he met on his recent American trip, chiefly physicians and former students. It reads like a medical "Who's Who in America." There is scarcely a big name missing in the cities he visited on his trip. If he had done nothing else in his lifetime, he says, he would still feel satisfied when looking over that list, in feeling that he had played a part in making those careers.

### FACILITIES FOR POSTGRADUATE WORK

Each of the assistants at the institute has a roomy private laboratory, and there are other laboratories for the various *voluntär Assistenten*, many of whom are foreigners. Chiari has only one American working with him at present, but wishes he had more. He almost invariably finds them hard and earnest workers and intelligent observers.

There is a splendid opportunity here for pathologists, young and old, to come for a longer period of study. In a year one could see about as many autopsies as in a decade in America. He could see them worked up in an almost ideal fashion, and get a most practical training in actual post-mortems and all the laboratory branches connected with them. In a year's time a careful study of the museum's preparations could be carried through, and much could be learned from the collection of microscopic specimens. Time would still be left for a *tuechtige Arbeit*. Clinicians can arrange readily to work half a day at the institute and a half day in one of the clinics, where they would be very welcome. An additional advantage of study in Strasburg for a longer time is that one has a good chance to learn both French and German while working on the patients, for both nationalities are well represented, though the *Elsässer Dietsch*, as they are called, predominate. The cost of living is half to two-thirds of that in Berlin or Vienna, and there is nothing to pay for courses.

ROGER T. VAUGHAN, Chicago.

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## Bismuth Paste in Acute Suppurations

*To the Editor:*—The casual reader of Dr. Emil G. Beck's "Warning Against the Indiscriminate Use of Bismuth Paste in Acute Suppurations" (THE JOURNAL, May 25, p. 1622) might infer that I had reported two cases of bismuth poisoning following intra-abdominal drainage by this method. I wish to clear up any ambiguity in this connection and to point out that the only case of serious poisoning was that following curettage of a lumbar sinus of considerable size, in which a large quantity of paste was injected immediately after operation; no provision had been made for drainage and the bloodvessels and lymphatics were still exposed. The case of slight poisoning was a fecal fistula opened retroperitoneally through the lumbar muscles.

In the eleven intra-abdominal sinuses there were no symptoms of poisoning or other untoward effects and while I am prepared to admit that there may be an element of danger in using the paste too soon in acute intraperitoneal sinuses, through the breaking down of newly formed adhesions, this objection is not worthy of consideration in localized intraabdominal abscess cavities in which adhesions have been forming for months or years.

Every surgeon has encountered cases of secondary abscesses following our present-day methods of intraperitoneal drainage and it is just because these methods are not entirely satisfactory, either as regards painlessness or efficiency, that bismuth paste drainage suggests itself.

It requires very little pressure to inject the paste through a soft rubber tube—certainly not sufficient to break down adhesions of six or seven days' growth (four days in my cases) and such an accident is practically impossible in old abscess cavities. Where reasonable precaution as to the quantity, means of exit and gentleness in injecting is used, I believe the element of danger is negligible.

My results in chronic ulcers with ordinary bismuth paste were not encouraging. It has no advantages over other forms of treatment.

I have never applied dry bismuth to burns, hence cannot answer Dr. Beck's assertion with regard to poisoning in these cases, but it seems rational that, in any extensive burn, in which the area for absorption is great, other forms of treatment should be used.

F. McKelvey Bell, Ottawa, Can.

# *Queries and Minor Notes*

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

## THE METRIC SYSTEM IN PRESCRIPTION WRITING

*To the Editor:*—A ready and easily remembered method of writing prescriptions in the metric system is often desirable and very useful to one not thoroughly familiar with that system, or to one accustomed to using the apothecaries' system. If it will be remembered that 2 fluidounces are equivalent to 60 c.c. and that in each teaspoonful there are approximately 4 c.c., it is easily seen that there are fifteen teaspoonful doses in 2 ounces (or 60 c.c.), the amount most frequently prescribed. As there are approximately 15 grains in each gram (or each c.c. if liquid), it may readily be seen that for every gram (or c.c.) of the drug or medicine placed in a 60 c.c. mixture, each teaspoonful dose will contain 1/15 of 1 gm. or 1 grain of the drug or medicine. In this way it will be easy to compute quickly any desired dose. For instance:

| ℞. | gm. or c.c. |
|---|---|
| Sodii bromidi .............................. | 1 |
| Aquæ dest. q. s. ad............................ | 60 |

M. ft. sol.

Sig. One teaspoonful in water t.i.d. p.c. Or, if a 2- or 5-grain dose is desired we would write for two or five times the 1 gram, which would read as follows:

| | gm. or c.c. |
|---|---|
| Sodii bromidi ....................... | 2 (or 5) |
| Aquæ dest. q. s. ad.................. | 120 (or 300) |

M. ft. sol.
Sig. One teaspoonful in water t.i.d. p.c.

Or should a fraction of a grain be desired at each dose we take, for example, ¼ of 1 gm. (written 0.25 gm.) for a quarter-grain dose, or ½ of 1 gm. (written 0.50 gm.) for a half-grain dose, in the same total mixture of 60 c.c. Should it be desirable to write for more than 2 ounces (or 60 c.c), it is only necessary to double the figures in the prescription, writing 2 gm. for the drug and 120 c.c. for the menstruum, for a 1-grain dose. In brief, this method may be expressed in the following rule: In a 2-ounce mixture prescribe as many grams as the number of grains desired in a teaspoonful dose.

This system is especially desirable in making up percentage solutions, it being much easier to weigh out and place 1 gm. of a drug in 100 c.c. of liquid for a 1 to 100 solution, or 1 gm. to 1,000 c.c. for a 1 to 1,000 solution, than to compute and weigh out the amounts in grains and fluidounces or pints. The metric system is, after once being understood, so easy and accurate that I believe it would become more universally used, from choice, if it were more commonly taught in our colleges and more generally understood by the profession.

Alfred G. Farmer, Gatun, Canal Zone, Panama.

Answer.—The method proposed by our correspondent is not altogether new; in fact, the relations are so obvious that the method must have occurred to many minds. We believe that it was published some years ago in some of the works on materia medica. It will do very well as a makeshift in learning to prescribe in the metric system, but such a makeshift is open to some serious objection. In the first place, the convenience of the method itself tends to hinder the person who is using it from becoming familiar with the metric system. A perfectly safe and easy use of the metric system is possible only to one who has learned his dosage in that system and who thinks in grams and milligrams rather than drams and grains. One who is not thoroughly familiar with the metric system runs the liability of serious errors in trying to convert one system into the other, and a misplaced decimal point may work so much harm that it is somewhat doubtful whether it is wise for the physician of the old school to attempt to make the change. We may hope that the present generation of physicians will adopt the metric system, but the use of the older system will probably continue long enough for those who are now using it to retire.

## VASOSTOMY

*To the Editor:*—A number of times recently I have seen reference made in medical literature to the "Belfield operation." Am I correct in believing that it is an operation on the vas deferens? If so, please describe it or refer me to literature describing it.

B. E., Oklahoma.

Answer.—The openings of the ejaculatory ducts into the prostatic urethra are so minute that injection of solutions into the vesicle through them, even with the aid of the urethroscope, is not practicable. Hence the frequent gonorrheal and other infections of vas and vesicle were formerly beyond the possibility of local treatment, except by "stripping" the vesicle from the rectum (a procedure of limited benefit) and by incision through the perineum, an operation too formidable to secure general adoption.

Belfield found that though the front door to the vesicle—the ejaculatory duct—could not be opened for medication, the back door—the vas—could be utilized for this purpose. Experiments on the cadaver show that, if the vas be opened in the scrotum above the testicle, a watery solution injected toward the body flows without resistance into the vesicle, which it fills before escaping through the ejaculatory duct. In the living subject the filling of vas and vesicle was found to be equally easy, the injected fluid remaining until expelled by seminal emission. Thus if the injected fluid be an argyrol solution, the next ejaculation is black. By attaching the vas to the skin, the vesicle can be injected daily so long as desired.

This little operation, called "vasostomy" by its originator, requires only a half-inch incision in the scrotum, painless through local anesthesia. There is no difficulty in its performance if, before the skin is incised, the vas is found and fixed against the skin by two stitches a half-inch apart, each passed under the vas and tied above the skin. If this precaution be neglected, the vas is apt to slip from the fingers and may be recaptured with great difficulty, if at all. In this neglect is the explanation of failure in the performance of the operation.

Details may be found in The Journal A. M. A., April 22, 1905, p. 1277; *Surg., Gynec. and Obst.*, November, 1906; Watson and Cunningham: "Genito-Urinary Diseases," i, 292; White and Martin: "Genito-Urinary Diseases," p. 716.

## UNRUPTURED HYMEN IN A MARRIED WOMAN

*To the Editor:*—We wish to report the following case: Patient is a married woman, aged 17, a twin. Her menstrual history was negative. She had been married six months, and when seen by us was having an abortion of a six weeks' pregnancy. Digital examination revealed an unruptured hymen, which was ruptured by introducing the finger into the vagina to ascertain the condition of the uterus. Her husband admitted that he had never been able to make entrance during coitus.

She weighs about 200 pounds, is of masculine build and features, with some hair on her face. Her labia majora and minora and he hymen were very much hypertrophied, and we believe that she ha been an excessive masturbator before her marriage.

W. E. Box, M.D., and B. P. Evans, M.D., Quitman, Miss.

Answer.—The persistence of the hymen after marriage i occasionally observed. In many cases the membrane is distensible so that it escapes rupture in spite of coitus.

## ANOTHER METHOD OF TONSIL DISSECTION

*To the Editor:*—Dr. Marquis (The Journal, June 1, p. 1683) ha recognized a difficulty in the use of most of the tonsil-forceps an is entitled to credit for the ingenious device in the shape of movabl rings that enables the snare wire to be passed over the handle o the forceps. I have overcome quite satisfactorily the same difficult in the use of two forceps, first using the Dean forceps to grasp th tonsil and pull it from its bed while making the dissection and the without letting the tonsil drop back into its bed, using a modifie White forceps, over which the snare wire has been placed, to ge the most advantageous hold of the tonsil possible, after which release the tonsil from the grasp of the first forceps. As a rul an excellent hold can be obtained with the second forceps, and the the first forceps can be removed without trouble. The White forcep did not please me on account of the size and I had a new one mad which is much smaller, being about 2 inches from the lock to th mouse-toothed extremity and 5 inches from the lock to the end of th handles. My offset, however, is still too great and in anoth forceps I would not have it exceed about ¼ inch.

J. C. McAllister, Ridgway, Pa.

Journal Announcements, Knocks and Boosts, Books Received ar changes in the Public Service will be found in the advertising se tion, commencing on the second page following reading matter.

# Medical Economics

This Department Embodies the Subjects of Post-graduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

## THE FORWARD MOVEMENT IN MICHIGAN FOR HEALTH CONSERVATION

D. E. McClure, Detroit, Mich.

Assistant Secretary, Michigan State Board of Health

"Education is to know for the sake of living, not to live for the sake of knowing." This is the shibboleth of the Michigan State Board of Health under the leadership of Dr. Robert L. Dixon, Secretary.

What are we doing in Michigan? First and foremost, we are fertilizing public sentiment to a point where it will appreciate the tremendous importance of sanitary living, and this public sentiment, responding to the fertility, is enforcing sanitary regulations, environments and laws. Health conservation sentiment is better than specific law, since it is a law unto itself. How are we creating sanitary sentiment? Our venture, like that of the merchant of Venice, is not in one bottom, but we hope it will come into the haven of good health with one cargo—sanitary environments.

In Michigan we have eighty-three counties, each county having a county commissioner of schools who is at the head of the county school interests. A plea was made to each commissioner of schools by letter, asking his cooperation in establishing sanitary environments for rural schools, a pure supply of drinking-water and the individual drinking-cup, well-ventilated schoolrooms, sanitary outhouses (about 50 per cent. of the outhouses were found insanitary) and pleasant school grounds. The commissioners enlisted at once, and form now a cooperative committee in the work of sanitary education with the State Board of Health, and great progress has already been made in this direction.

In Michigan are 1,000 granges, with a membership of 70,000. Our next move was to enlist the grangers in the work of sanitary education; to constrain them to see the sanitary problem through the eyes of their commissioners of schools, and to have a common point of view. The results in this phase of our forward movement have been marvelous. Many of the granges appointed a committee on health, and the lecturers of the granges incorporated health topics in their programs. The lecturer of the state grange, Miss Jennie Buell, has prepared a special program for her quarterly bulletin. We have focused the eyes of the rural folk on the dangers threatening our civilization through insanitary environments.

Our next movement was to enlist the women's clubs. It is unnecessary to say that the response from this great force was almost spontaneous. The sociologic uplift, the appeal to mothers, the environmental value of preventive measures, enlisted the warm, hearty cooperation of the guardians of home and purity.

An appeal was made to the managers of railways to cooperate with the State Board of Health in providing sanitary coaches, sanitary closets on trains and at depots and the abolition of the common drinking-cup, and this part of the movement is going forward successfully.

We have enlisted the United Commercial Travelers in a campaign for better environments for hotels; outdoor and indoor closets, abandonment of the common roller-towel (Michigan, as yet, has no law against its use), better environments of railway depots and on railway coaches. Well, these boys are our flying squadron in sanitary education. They are getting results. We have enlisted the newspapers and the ministers of all the churches in the work.

Recently there has been organized an enthusiastic, efficient, active state health officers' association. This organization is the regular army of the forward movement for sanitary education. Such is the outline, in brief, of the work for health conservation in Michigan.

# Medical Education and State Boards of Registration

## COMING EXAMINATIONS

Alabama: Capitol, Montgomery, July 9. Chairman, Dr. W. H. Sanders.

Arizona: Phœnix, July 1-2. Sec., Dr. Ancil Martin.

Colorado: State House, Denver, July 2. Sec., Dr. David A. Strickler, 612 Empire Building.

Connecticut: Regular, City Hall, New Haven, July 9-10. Sec., Dr. Charles A. Tuttle, 196 York Street; Homeopathic, Grace Hospital, New Haven, July 9. Sec., Dr. Edwin C. M. Hall, 82 Grand Avenue; Eclectic, Hotel Garde, New Haven, July 9. Sec., Dr. T. S. Hodge, 19 Main Street, Torrington.

Delaware: State Society and Homeopathic Examining Boards, Dover and Wilmington, June 18-20. Secretary of Medical Council, Dr. Henry W. Briggs, Wilmington.

Indiana: Room 57, State House, Indianapolis, July 9-11. Sec., Dr. W. T. Gott.

Maine: State House, Augusta, July 16-17. Sec., Dr. Frank W. Searle, 776 Congress Street, Portland.

Missouri: Gymnasium of the St. Louis University, St. Louis, June 24-26. Sec., Dr. Frank B. Hiller, State House, Jefferson City.

New Hampshire: State House, Concord, July 9-10. Regent, Mr. H. C. Morrison, State Library.

New Jersey: State Capitol, Trenton, June 18. Sec., Dr. H. G. Norton.

New Mexico: The Capitol, Santa Fé, July 8-9. Sec., Dr. J. A. Massie.

New York: June 25-28. Chief of Examinations Division, Mr. Harlan H. Horner, Department of Education, Albany.

North Dakota: University of North Dakota, Grand Forks, July 2. Sec., Dr. G. M. Williamson, Grand Forks.

Ohio: Columbus, June 18-21. Sec., Dr. George H. Matson, State House, Columbus.

Oklahoma: Oklahoma City, July 9. Sec., Dr. J. W. Duke, Guthrie.

Oregon: Portland, July 1. Sec., Dr. E. B. McDaniel, 704 Electric Building.

Pennsylvania: Philadelphia, Pittsburgh and Harrisburg, June 24-27. Secretary of Bureau of Medical Education and Licensure, Nathan C. Schaeffer, Harrisburg.

Rhode Island: State House, Providence, July 11. Sec., Dr. Gardner T. Swarts.

South Dakota: Deadwood, July -10. Sec., Dr. L. G. Hill, Watertown.

Texas: Austin, June 27-29. Sec., Dr. J. D. Mitchell, Fort Worth.

Utah: Salt Lake City, July 1-2. Sec., Dr. G. F. Harding, 310 Templeton Building.

Vermont: Burlington, July 9-11. Sec., Dr. W. Scott Nay, Underhill.

Virginia: Richmond, June 18-21. Sec., Dr. R. S. Martin, Stuart.

Washington: High School, Tacoma, July 2. Sec., Dr. F. P. Witter, Traders' Block, Spokane.

West Virginia: Capitol Bldg., Charleston, July 8-10. Sec., Dr. H. A. Barbee, Point Pleasant.

Wisconsin: Madison, July 9-11. Sec., Dr. John M. Beffel, 3200 Clybourn Street, Milwaukee.

## West Virginia April Report

Dr. H. A. Barbee, secretary of the West Virginia State Board of Health, reports the written examination held at Parkersburg, April 8-10, 1912. The number of subjects examined in was 16; total number of questions asked, 170; percentage required to pass, 80. The total number of candidates examined was 15 of whom 11 passed and 4 failed. The following colleges were represented:

| College | Year Grad. | Per Cent. |
|---|---|---|
| PASSED | | |
| University of Louisville............(1909) 82; | (1910) | 80 |
| College of Physicians and Surgeons, Baltimore.... | (1911) | 80, 85 |
| Maryland Medical College...................... | (1911) | 80 |
| University of Maryland........................ | (1906) | 82 |
| Detroit Homeopathic College................... | (1911) | 80 |
| Jefferson Medical College..(1906) 82; (1907) 86; | (1911) | 85 |
| University of Virginia........................ | (1910) | 86 |
| FAILED | | |
| University of Louisville.............(1909) 67; | (1911) | 72 |
| Maryland Medical College...................... | (1911) | 75 |
| Leonard School of Medicine.................... | (1911) | 70 |

The following questions were asked:

### ANATOMY AND EMBRYOLOGY

1. Name the germ layers from which the following structures develop: skeleton, lungs, nervous system, blood, pancreas and hair. 2. Describe the venous system between placenta and right auricle. 3. Describe the tibia. 4. Describe the hip-joint. 5. Describe the femoral artery. 6. Describe the colon. 7. Give the origin, insertion and nerve-supply of the following muscles: psoas, subscapularis, pronator quadratus. 8. Describe the pneumogastric nerve. 9. Describe the left subclavian vein. 10. Name the cartilages composing the larynx and describe the vocal cords.

### CHEMISTRY AND MEDICAL JURISPRUDENCE

1. What element composes over half the matter of the earth and is the common supporter of combustion? 2. What is the difference between analytic and synthetic methods in chemistry? Illustrate

each. 3. What pathologic conditions produce bile in the urine? 4. Mention several tests for sugar. 5. How does diet affect the elimination of urea? 6. What is methyl alcohol? What are its properties and uses? 7. Name some of the abnormal chemical constituents of urine. 8. In a case of infanticide how would you determine if the child was born alive? 9. If in a dead body rigor mortis has disappeared and hypostatic congestion is marked, what conclusion would you draw concerning the time that had elapsed since death? 10. What findings would lead you to conclude that a skeleton was that of a female?

### PHYSIOLOGY AND HISTOLOGY

1. Describe the physical factors concerned in the production of blood-pressure and blood-velocity. 2. Give the physiology of the heart-beat and explain the cause of heart-sounds. 3. Describe the mechanism of respiration and give the innervation of the respiratory movement. 4. Discuss physiologically bacterial action in the alimentary tract. 5. Name the ductless glands and give the physiology of internal secretion. 6. What is the function of oxygen relative to the fluids and tissues of the body? 7. Give the function of the fifth, tenth and twelfth cranial nerves. 8. Give the histology of a lobule of the lung. 9. Give the histology of serous and mucous membranes. 10. Describe the histology of the skin.

### BACTERIOLOGY AND HYGIENE

1. Bacteriology and hygiene: give definition. 2. Pasteur and Koch: who were they and what did they do for the study of bacteriology? 3. Describe phagocytosis, and what is meant by opsonic index? 4. Bacterial poisons: name three and describe them. 5. What is meant by infection and auto-infection? Give examples. 6. Water: name some of the impurities found in it, and how rendered pure and wholesome. 7. Describe the hygiene necessary in a tuberculous patient. 8. Give method of disinfecting bedding and clothing after small-pox, diphtheria and scarlet fever; and how soon should children be returned to school after having said diseases. 9. Which is to be preferred in vaccination, animal or humanized lymph? Why? 10. Venereal prophylaxis: what is being done to prevent venereal diseases?

### OBSTETRICS AND GYNECOLOGY

1. Describe development of the placenta. What are its functions? 2. Give the dimensions of the pelvic inlet and outlet. 3. When and where are the fetal heart-sounds best heard? Describe them and give their rate. 4. How would you differentiate pregnancy, ovarian disease, ascites and gaseous accumulations? 5. What is a "head last" labor? Give cause and management. 6. Describe Alexander's operation for shortening the round ligaments. Under what conditions is it justifiable? 7. What complications may arise in a twin labor and how may they be overcome? 8. To what dangers in pregnancy and labor does gonorrhea of the mother expose her and her offspring? Give treatment of ophthalmia neonatorum. 9. Give the pathology, symptoms, causes and treatment of eclampsia. 10. Name the important forms of hemorrhage occurring in obstetric practice.

### SPECIAL PRACTICE

1. State four local and four general causes of epistaxis. 2. What structures are involved in hypertrophic rhinitis? Give symptoms and treatment. 3. Define ptosis, strabismus, diplopia, myopia, hypermetropia, presbyopia and chalazion. 4. Define, give etiology and treatment of pink-eye. 5. Define aphonia and give its common cause. 6. Give the most important points in differential diagnosis between follicular tonsillitis and diphtheria. 7. What is the condition in apoplectic coma and what reflexes are commonly affected? 8. Define and give etiology of neuritis. 9. On what signs and symptoms would you make an early diagnosis of pulmonary tuberculosis? 10. Describe the methods of physical diagnosis.

### SURGERY

1. Name the different kinds of wounds. 2. Give symptoms and treatment of hemorrhage at base of the brain following injury. 3. Define fracture and give the causes. 4. Describe in detail the operation for hemorrhoids. 5. Define hematocele, meningocele and encephalocele. 6. Give the treatment of empyema. 7. Describe in detail the operation for varicocele. 8. Give the methods and dangers of dealing with adhesions. 9. Give the indications and methods of stretching the great sciatic nerve. 10. Describe in detail the method of skin-grafting.

### MATERIA MEDICA AND THERAPEUTICS

1. What are the therapeutic uses of iron? 2. Define: (a) cardiac stimulants; (b) cardiac sedative; (c) cardiac tonic. Give examples and dose of each. 3. Give origin of podophyllin, its action and dose. 4. Give the physiologic action of digitalis. Differentiate the action of digitalis and strophanthin on the circulation. When indicated? 5. Give the physical properties and antidote of oxalic acid. With what drug may it be confounded? 6. What is the physiologic action of opium and toxic effect? 7. Name four drugs of the vasomotor group. 8. What is a hypnotic? Specify three in common use and dose of each. 9. Name the official preparations of arsenic and give the dose of each. 10. Give the physiologic effects of aconite and treatment of poisoning.

### PRACTICE OF MEDICINE AND PEDIATRICS

1. Acute pleurisy: give the physical signs and symptoms. 2. Give cause and symptoms of biliary colic and differentiate from appendicitis. 3. Give treatment with prescription for a case of acute articular rheumatism. 4. Differentiate organic and functional heart murmur. 5. In acute indigestion resulting in cholera morbus, what would be your first plan of treatment? 6. How would you diagnose and treat a case of gastric cancer? 7. Describe the most important symptoms of cerebrospinal meningitis. 8. Name causes for infantile convulsions. 9. Give diagnosis and treatment of hereditary syphilis. 10. Give cause and treatment for intestinal worms.

### MATERIA MEDICA AND THERAPEUTICS (HOMEOPATHIC)

1. Give the physiologic effects of belladonna, hyoscyamus and stramonium, and tell wherein they differ. 2. Give the tissues and organs of the body on which the following remedies especially act: (1) chelidonium; (2) croton tiglium; (3) sabina; (4) cannabis indica, and (5) esculus. 3. Describe the action of lycopodium on the digestive organs and on the urinary organs. 4. Give the aggravations of arsenicum, belladonna, pulsatilla, natrum muriaticum, nux vomica and podophyllum. 5. Describe the coughs of phosphorus and bryonia. 6. Differentiate between cinchona, arsenicum and natrum muriaticum in intermittent fever. 7. Give the chest symptoms of antimonium tart., the indications for aurum metallicum in syphilis, the gastric symptoms of antimonium crudum. 8. Mention four remedies especially useful in early morning diarrheas and give indications for each. 9. Differentiate between mercurius corrosivus and esculus in dysentery. 10. What remedies are especially useful for bad results from vaccination?

### PRACTICE OF MEDICINE AND PEDIATRICS (HOMEOPATHIC)

1. Give symptoms and treatment of renal colic due to renal calculus. 2. Goiter: give varieties, symptoms, pathology and treatment. 3. Give pathology, diagnosis and treatment of diabetes mellitus. 4. Given a number of cases of acute desquamative nephritis among infants, what cause would you expect and how treat? 5. Epileptiform convulsions in a man of 68 years. Give probable cause and pathology. 6. Define and give etiology and treatment of hiccough. 7. Give symptoms and treatment of chronic valvular insufficiency with regurgitation. 8. Give pathology, symptoms and treatment of enterocolitis in children. 9. Give pathology, diagnosis and treatment of cerebrospinal meningitis. 10. Diagnose tetanus. Give treatment.

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## Book Notices

Report of the International Plague Conference, Held at Mukden, 1911. Paper. Pp. 483, with illustrations. Manila: Bureau of Printing, 1912.

This report is in the form of a well-printed book of about 500 pages, covering the full transactions and includes all of the papers, and the discussions and other proceedings stenographically taken at that conference. Probably nowhere else has a more distinguished body of scientists gathered together to study an epidemic disease; and the findings as set forth in the papers and discussions of this report, though not conclusive, still have greatly cleared up our knowledge concerning plague.

The form of plague existing in Manchuria was the pneumonic form. The interim report of this conference, of which this is a final report, was discussed in the editorial columns of Th Journal, July 29, 1911, p. 399, and the conclusions of the conference were briefly summarized. The report is edited by Dr Richard P. Strong, who with Dr. Teague, both of Manila, constituted the delegation from the United States to th conference. A number of experiments, conducted by variou members during the conference, and not concluded at tha time, were completed by Drs. Strong and Teague, and thei conclusions are also embodied in the report. There are number of charts and colored plates and much tabulate matter.

Milk Modification Card. A Rapid Calculation Device. B J. H. Young, M.D. Price, $0.50. Boston: F. H. Thomas, 69 Boylston Street, 1912.

This is an ingenious card designed to facilitate the modification of milk, which consists of a celluloid envelope labeled f the quantities of fat, proteid, sugar and whey to make th milk mixture. The envelope has a number of little window cut in it, corresponding to the various quantities which it i desired to determine. Two cards designed to show the amount for a 20-, 32-, 40 and 48-ounce mixture, respectively, are place inside the envelope. The apparatus is employed as follows. the desired percentage of proteid be brought to the correspond ing window, one sees through the other windows the numb of ounces of cream, skimmed milk and whey to be used and th percentage of fat, proteid and sugar obtained, together wit the number of calories produced by each constituent. In similar way the desired percentage of fat can be brought the window and the amounts and percentage of the oth ingredients will be designated at the other windows. Th apparatus is evidently well suited to the routine modificatio of milk and intelligently used ought to be serviceable to th general practitioner, especially to the busy pediatrician.

Infantile Paralysis in Massachusetts During 1910. Togeth with Reports of Special Investigations Made in 1911 Bearing on t Etiology of the Disease and the Method of Its Transmission. Pap Reprinted from the Monthly Bulletins of the Massachusetts Sta Board of Health for 1911.

Massachusetts is one of the states in which infantile par ysis has been quite prevalent, and a thorough investigation it has been conducted by the state board of health for the pa four or five years. This pamphlet represents the results an intensive study of the disease during the year 1910, wi report of special investigations made in 1911, bearing on the etiology and method of transmission. It includes a historical account of the disease and studies of its various aspects by Lovett, Sheppard, Rosenau, Amoss, May, Hennelly, Brues, Hammond, Lucas, and the secretary of the State Board of Health, Mark W. Richardson. The disease has been studied and reported on in all its aspects, and the pamphlet includes a great many case reports from epidemics in different districts, together with maps, charts, tables, etc. The prevailing theories and experimental findings are discussed and an attempt is made to apply these findings to the disease as it occurred throughout the state. While it cannot be said that definite conclusions have been reached from these studies, yet the general knowledge of the disease has been distinctly furthered. The pamphlet is a valuable collection of information concerning infantile paralysis.

Theorie und Praxis der inneren Medizin. Von Dr. Erich Kindborg. Second Volume. Die Stoffwechselstörungen, Die Krankheiten des Bewegungsapparates und der Verdauungsorgane. Cloth. Price, 10 marks. Pp. 634, with 74 illustrations. Berlin: S. Karger, 1912.

The subjects included in the second volume of Kindborg's work afford an excellent opportunity for the application of the distinguishing principle on which the book is founded, viz., the presentation to the student of enough of the fundamental sciences to enable him to understand their application to the pathology and treatment of the individual disease under discussion.

The volume includes disturbances of metabolism, diseases of the locomotive apparatus and disease of the digestive system. The physiology and chemistry of digestion and metabolism are first considered; directions are given for the quantitative determination of sugar and other processes of urinalysis concerned in diabetes. The section on diseases of the digestive system includes a chapter on the teeth and what is an unusual arrangement, one on diphtheria. At this place in connection with antitoxin the author takes occasion to explain Ehrlich's side-chain theory. In a similar way the subject of typhoid fever is discussed in connection with diseases of the small intestine. This arrangement seems to have a drawback, inasmuch as the septicemic character of typhoid is apt to be lost sight of. Dysentery is also included among diseases of the large intestine.

These various affections particularly those of the digestive organs give ample opportunity to review the salient facts of physiology and chemistry and to apply them to pathogenesis and diagnosis. The treatment of the individual subjects is satisfactory and the author is to be congratulated on his success in carrying out his plan.

Autobiography of a Baby. Told to Thomas Lindsley Bradford, M.D. New Revised and Enlarged Edition. Cloth. Price, $0.50. Pp. 107. Philadelphia: David McKay, 604 South Washington Square, 1912.

In the form of a baby's biography is given excellent advice to mothers and nurses on infant management. A variety of formulas covering milk modification, barley water, foods, etc., are included in an appendix. The book is one to be commended to mothers.

Modern Methods of Nursing. By Georgiana J. Sanders. Cloth. Price, $2.50 net. Pp. 881, with 228 illustrations. Philadelphia: W. B. Saunders Company, 1912.

This is one of the best books on nursing published in recent years. If the introduction could be published as a separate pamphlet it would be of great help to young women thinking of taking up nursing, as it discusses the various kinds of training-schools and considers in detail their advantages and disadvantages.

Diagnose und Therapie der Magen- und Darmkrankheiten. Anhang: Die Chemische und Mikroskopische Untersuchung des Mageninhaltes und der Faeces. Von Priv.-Doz. Dr. Walter Zweig, Abteilungsvorstand am Kaiser-Franz-Josef-Ambulatorium in Wien. Second Edition. Paper. Price, 16 marks. Pp. 502. Berlin: Urban und Schwarzenberg, 1912.

This well-known work of Zweig appears in its second edition in a much enlarged form. It has been brought up to date by the inclusion of the most important therapeutic and diagnostic advances, which have been brought about through our constantly increasing knowledge of the physiology and pathology of digestion. The incorporation of a short, but adequate, section on the chemical and microscopic examination of the gastric and intestinal contents makes the work much more acceptable to the general worker. The book is to be recommended especially to the general practitioner as a thoroughly reliable guide.

# Medicolegal

## Constitutionality of Practice Act—Occupation Tax and Taxation of Itinerant Physicians

*(State vs. Doran (S. Dak.), 134 N. W. R. 53)*

The Supreme Court of South Dakota reverses the judgment against the defendant, who was convicted of practicing medicine as an itinerant physician without first having obtained a license from the State Board of Medical Examiners as required by section 19 of chapter 176 of the Laws of South Dakota of 1903, and it directs that the complaint be dismissed, because of the unconstitutionality of the exemption of certain physicians by section 22.

The enactment of laws regulating the practice of medicine the court says is clearly within the police power of the state, and is sustained by judicial decisions of the highest authority. It is well settled that the state may prescribe qualifications which persons must possess lawfully to practice medicine and surgery, and may require persons desiring to enter such practice to obtain a license or certificate of proficiency. The method or means by which these qualifications are to be evidenced is very largely, if not wholly, within the exercise of legislative discretion.

The legislature may permit those practicing in the state at the time the act is passed to continue without diploma or other evidence of competency on the theory that the fact that they have been engaged in the practice within the state is sufficient evidence of proficiency, and equivalent to an examination and license by the tribunal established by law for that purpose, and such a law will not be held unconstitutional as discriminating between persons or classes.

The legislature may also lay an occupation tax on physicians and surgeons, as on other professions and occupations.

Section 19, which provides that any physician attempting to practice as an itinerant physician shall, in addition to the ordinary physician's license required under the act, procure an itinerant's license from the state board of medical examiners, for which he is required to pay $500 a year, it is perfectly clear is not, and does not pretend to be, legislation involving the exercise of police power. It contains nothing requiring special fitness or qualifications for practicing medicine as an itinerant physician, nor does it pretend to be regulatory of such practice. It is plainly an occupation tax, and involves only the exercise of the taxing power, and it is subject to the provision of the state constitution that "all taxation shall be equal and uniform."

Licensed medical practitioners are divided by this act into two classes, the basis of the classification being the mode in which the business is carried on, namely, those who practice in the mode defined by the statute as itinerants, and those who follow other methods. That such a classification is neither arbitrary nor unreasonable, and is within the legislative discretion, the court has no doubt. The constitutional rule that taxes shall be equal and uniform does not deprive the legislature of the power of dividing the subjects of license or occupation taxation into classes, and of taxing some and omitting others, when the classification itself is proper. Substantial differences in the mode of carrying on a business or profession may be made the basis of classification. But the constitution does require that an occupation tax shall be equal and uniform as to all persons embraced within the same class.

Section 22 of the act under consideration undertakes to exempt certain classes of physicians from the operation of the act, both as to the requirement of an examination and the payment of examination fees, and from payment of an itinerant's license tax. The exemption includes all "resident physicians and surgeons of this state regularly licensed and practicing in this state at the time of taking effect of this act." All others are required to pay the itinerant's tax. It may be observed that all resident licensed physicians, although not practicing as itinerants when the act became operative, may take up that mode of practice at any time, and still be exempt from the tax. If this section be viewed as an attempt to exempt a portion of a class conducting a professional practice as itinerant physicians in identically the same manner, it requires no argument to demonstrate its unconstitutionality. The exemption of resident licensed practitioners from the examination fee and other requirements as to qualifications is clearly valid as a proper exercise of legislative discretion within the police power. But residence within, or residence outside of the state, cannot be made the basis of discrimination in the taxation of persons engaged in the same occupation or profession. And if the section be regarded as an attempted classification of itinerant practitioners, the classification rests solely on the fact of residence and practice in the state prior to the date when the act became operative, which discriminates against citizens of other states, and is in violation of article 14 of the federal constitution.

The exemption of every resident licensed practicing physician within the state at the date of the act from payment of the itinerant license tax, while requiring all others in the same class to pay the tax, is such an integral part of the act establishing the system of occupation taxation on itinerant medical practitioners as to render the act, so far as it relates to itinerant physicians, wholly void. It is also clear that, if section 22 of the act exempting resident practicing physicians from payment of the tax be stricken out as unconstitutional, the remaining provisions of the act relating to intinerant physicians are incapable of being executed according to the legislative intent, and are likewise rendered inoperative and void. The remaining portions of the act, however, relating to examination and examination fees and other matters incident thereto, in themselves constitute a complete law capable of enforcement, and such as the legislature, it may be presumed, would have passed without the provisions relating to the occupation license tax. The act with the unconstitutional provisions eliminated is therefore valid and enforceable as an exercise of the police power of the state.

## Liability of Railroad for Malpractice—Evidence of Incompetence of Surgeon

(*Atlantic Coast Line R. R. Co. vs. Whitney* (*Fla.*), *56 So. R. 937*)

The Supreme Court of Florida, Division A, reverses for error in the admission of evidence on the competence of a surgeon a judgment against the railroad company for $20,000 damages for the plaintiff Whitney for the loss of his right leg. The court says that the cause of action was twofold: First, for the original injury, and then for the subsequent alleged malpractice of the surgeon for the railroad company. To make out the second cause of action it was charged that the surgeon was unskilful and incompetent, and that the company knew it.

The plaintiff exhibited to the jury several witnesses, too much in the nature of exhibits, who testified, over proper objections, that they had been injured by this railroad and subsequently had received maltreatment at the hands of this surgeon, and one surgeon testified that a certain operation by the railroad surgeon was not successful, but could not say from an examination of the wound whether the treatment was proper or not; while another surgeon testified to finding a piece of gauze in a wound that should have been removed. It further appeared that the chief surgeon of the railroad hospital knew of a treatment by this surgeon which it was claimed was improper. But it also appeared that the surgeon complained of was a graduate of reputable medical schools, and there was no evidence as to his general reputation as to skill and competence being bad, nor that the president or other executive head of the railroad company had actual knowledge that he was unskilful or incompetent in his profession.

This case demonstrated to the mind of the court the wisdom of adhering to the general reputation, rather than isolated instances, to bring home to the principal guilty knowledge of incompetence. Every witness exhibiting his injuries before the jury tended to inject new issues which the company could not in reason be prepared to meet. It must provide competent engineers, not merely exercise some care in selecting them, and a different rule as to those servants engaged in operating the trains, in performing its duty as a common carrier, might well obtain; but the company was not responsible for the negligent work of its surgeon, if not negligent in selecting or retaining him, and knowledge of his failings must be brought home to it. His general reputation might be so bad that the law would impute knowledge; but nothing short of that would make it liable. This rule forbidding particular instances is in direct accord with previous rulings of this court on somewhat similar conditions, and is the ruling of the only direct adjudication to which this court's attention has been directed. In Lacy vs. Kossuth County, 106, Iowa, 16, it is held that evidence of particular acts is not admissible to prove the competency of a physician. His general reputation for skill is alone relevant, which can be proved only by persons knowing such reputation in the community where he is engaged in practice. Wherefore it was error in this case to permit to be shown specific acts of unskilfulness not brought home to the knowledge of the company, such as those above stated.

## Compensation for Expert Services in Criminal Cases

(*People ex rel. Manley vs. Board of Supervisors of Chenango County* (*N. Y.*), *132 N. Y. S. 868*)

The Third Appellate Division of the Supreme Court of New York holds that the action of the board in allowing the relator but $5 a day for expert services must be annulled, with $25 costs and disbursements, and the matter remitted for further audit. The court says that the relator was a physician and surgeon whom the district attorney consulted with and employed as an expert witness in a murder case. No specific compensation was agreed on. The claim made out against the county was for $10 a day for three days' services, the district attorney indorsing thereon: "Dr. Manley attended the case as charged, and his bill would seem proper." After consultation with the district attorney concerning it, the board allowed the bill at but $15.

The district attorney had the power, the court goes on to say, to obligate his county to pay a reasonable sum for the services of an expert witness in the criminal trial about to be had. While his agreement was subject to review and audi as to amount by the board of supervisors, which would not be bound by any specific sum which he had agreed to pay, th county was compelled to recognize his agreement to pay th relator for his services as an expert witness, and bound to audit a reasonable sum therefor. The only proof appearin in the record was that $10 a day for such services was th minimum charge prevailing at the time in the county o Chenango, and the record disclosed that that amount wa allowed to other witnesses in the same case. The board allowe only $5 a day, which under the facts appearing was wholl unreasonable. It was not seriously contended that the relato was not employed as an expert witness. If he was not employed as an expert, he was entitled to nothing aside from his ordinary fees. Having been employed as an expert, h should have been allowed at least the minimum rate therefo The fact that other bills were allowed to him could not affec the bill under consideration. Those audits must be presume to have related to the precise services for which the bil were presented, and it was to be assumed that the board supervisors properly audited them.

While the amounts demanded by physicians for expert se vices in criminal matters are often the subject of just criticis they are entitled to fair and reasonable compensation, a justice would often miscarry if juries did not have the bene of their expert testimony.

# Current Medical Literature

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### Journal of Kansas Medical Society, Kansas City

*May, XII, No. 5, pp. 167-208*

1 Cholecystitis With and Without Stones. T. Jager, Wichita.
2 Renal Calculus. M. Hagan, Wichita.
3 "Appendix, Gall-Bladder & Company." What Is Their Relation? H. Wilkinson, Kansas City.
4 *Patent Medicines or Nostrums. L. E. Sayre, Kansas City.
5 Acute Osteomyelitis. J. E. Oldham, Wichita.

4. **Patent Medicines or Nostrums.**—It is a well-known psychologic phenomenon among medical students, says Sayre, that during the course of their medical study of diseases and their symptoms they are usually affected with the belief that they are themselves afflicted with the particular disease under consideration. The same principle of psychologic influence is illustrated in the reading of the newspaper advertisements of patent medicines. The adroit and skilful manipulator of words in ordinary advertising practice can make a man believe that he has every disease there presented, and, in addition, that the nostrum advertiser can supply the exact specific for these diseases.

Since the enactment of the Food and Drugs Law and the administration of this law in the various states, the patent medicine and nostrum business has become a subject of scrutiny on the part of scientific men, and those who are interested in public welfare. Those who are studying the question carefully are surprised at the extravagant claims made on the labels and wrappers of these nostrums and the almost total lack of merit of the preparations thus advertised. Such medicinal preparations have been exploited in Kansas. One of these has been advertised to cure about thirty different diseases, from consumption to Bright's disease, by dropping the medicinal liquid into the eye. This liquid when analyzed at the University Drug Laboratory was found to consist of a watery solution of salt and sugar. The foxy proprietor of this preparation knew that the dear public would, by suggestion, be influenced to have the various diseases enumerated and be led to believe the brazen statements made; that this alleged remedy (salt and sugar), was the one reliable remedy for the long list of diseases enumerated.

Another one of the so-called patent medicines, calculated to allure public patronage is known as Fruitola and Traza. This compound is alleged to be a system cleanser, to remove gallstones and to positively cure all stomach trouble. On analysis, this alleged wonderful remedy is found to contain ordinary olive oil as the principal medicinal substance. It is unnecessary to enumerate the results of analyses of scores of these nostrums in the drug laboratory of the University of Kansas. Suffice to say they are composed of ordinary medicinal agents, for which absurdly extravagant claims are made. The history of the patent medicine and nostrum business will show that originally they claimed to be inventions or discoveries in therapeutics. In process of time these so-called discoveries were found to be compounds of well known simple remedies. One who can put together rhubarb and senna or calomel and jalap is certainly no discoverer, but merely a mixer of well-known remedial agents. It is true, that if these were mixed without ordinary professional skill they might be a mere jumble of things, but the mixing of them with proper skill cannot claim for them an invention worthy of protection as a patent.

What shall we have to take the place of patent medicines? asks Sayre. For minor ailments, every home should be provided with well known household remedies. With these it should be the duty of the family provider to become not only well acquainted, but, with some careful attention, to become intelligent in their use. This should be the duty of the mother, who is naturally, from her position, the nurse of the family. These household remedies should contain ingredients about which there should be no suggestion of secrecy nor be even seemingly protected by so-called misnamed patents. They should be composed of well recognized medicinal agents, about which the physician or pharmacist should be able and willing to furnish reliable and trustworthy information without remuneration. This information should be given freely, as it is common property, contributed by pharmacists and physicians and published in standard medical works. If physicians, pharmacists and the public would combine and cooperate with each other along indicated lines, it would not be long before the days of the nostrum fakers would be numbered.

### New York Medical Journal

*May 25, XCV, No. 21, pp. 1073-1124*

6 Hysterical Dreamy States, Their Psychologic Mechanism. A. A. Brill, New York.
7 Training of the Urologist. H. Cabot, Boston.
8 Research in Psychiatry. B. Holmes, Chicago.
9 Application of Psycho-Analysis to Insanity. C. M. Campbell, White Plains, N. Y.
10 Diagnosis and Treatment in Surgery of Stomach. G. Woolsey, New York.
11 Organacidia Gastrica, Diagnosticated by Inspection. M. I. Knapp, New York.
12 Old Age in Its Medicolegal Relations. I. L. Nascher, New York.
13 Results Obtained from Addition of Lactalbumin to Modified Cow's Milk in Feeding of Infants. E. M. Sill, New York.
14 Burn of Urethra with Lunar Caustic, Followed by Complete Cast of Urethra. V. C. Pedersen, New York.

### Archives of Internal Medicine, Chicago

*May 15, IX, No. 5, pp. 525-640*

15 *Diagnosis of Complete Absence of Pancreas Secretion from Intestine with Results of Digestion and Absorption Experiments. W. Tileston, New Haven, Conn.
16 *Value of Absorption Methods in Wassermann Test. C. H. Bailey, New York.
17 *Production of Experimental Chronic Nephritis in Animals by Administration of Uranium Nitrate. E. C. Dickson, San Francisco.
18 *Experimental Study of Changes in Blood Following Splenectomy. J. H. Musser, Philadelphia.
19 *Frequency of Experimental Glycosuria Following Injections of Extracts of Hypophysis. J. L. Miller and D. Lewis, Chicago.
20 *Occurrence of Native Antisheep Amboceptor in Human Serum and Its Importance in Performance of Wassermann Reaction. R. Dexter and C. L. Cummer, Cleveland.
21 *Leukocytes in Pulmonary Tuberculosis and Pneumonia. J. A. Miller and M. A. Reed, New York.

15. **Absence of Pancreatic Secretion from Intestine.**—The complete absence of pancreatic juice was found by Tileston to interfere greatly with the absorption of fat and of nitrogen. The fat-splitting in this condition is usually normal, sometimes decreased. The saponification is almost always much diminished, and the fatty acids always exceed the soaps. Exclusion of both the bile and pancreatic juice causes a considerably greater loss of fat, and a somewhat larger nitrogen loss than where the pancreatic juice alone is excluded. In the absence of icterus, a fat loss of 40 per cent. or over, and a nitrogen loss of over 30 per cent., according to Tileston's findings, point almost with certainty to pancreatic disease, provided the following conditions are excluded: diarrheal diseases, amyloid disease and tuberculosis of the intestine, tuberculosis of the peritoneum and mesenteric lymph-nodes. If icterus is present, a fat loss of more than 50 per cent. favors pancreatic disease, and the greater the loss, the stronger the probability. The value of the nitrogen determination is but slightly impaired by the presence of jaundice, for in simple icterus the nitrogen loss is but slightly above the normal. The amount of the fat-splitting has usually but little diagnostic importance; a very great reduction, however, is suggestive of pancreatic disease. An excess of soaps over fatty acids renders the diagnosis of complete absence of the pancreatic juice extremely improbable. By the administration of raw pancreas or of pancreatic preparations in pancreatic disease the absorption of fat and nitrogen, as a rule, can be greatly improved. In a case in which both the gastric and the pancreatic secretions were deficient, the absorption of nitrogen was considerably increased by the administration of hydrochloric acid and pepsin, though not to the same extent as by pancreatic preparations.

16. **Absorption Methods in Wassermann Test.**—From the observation of cases and experiments Bailey concludes that it is possible for antisheep amboceptor in human serum to affect the Wassermann reaction, but that when an antigen of high

titer is used this is possible only with serums of very low antibody content and several units of antisheep amboceptor. As these two conditions, in his experience, occur but rarely in practical work, he feels that, when a strong antigen is used, the importance of antisheep amboceptor in human serum as a cause of negative reactions in syphilitic cases is not great. As a routine procedure, the absorption of amboceptor is unnecessary. Its removal is, however, advisable from serums which give a negative or doubtful reaction, and which contain a large amount of antisheep amboceptor. This is easily accomplished by digestion with sheep cells. It is immaterial whether this is done at 0 C., 37 C., or at room temperature.

17. **Production of Experimental Chronic Nephritis.**—By the administration of uranium nitrate Dickson was able to produce a chronic diffuse nephritis in guinea-pigs, rabbits and dogs. The histologic picture of the lesions is characteristic, and is analogous to, but not identical with, that found in chronic diffuse nephritis in man. The chronic lesions, even in the most severe cases, are not associated with demonstrable arterial lesions, although the mode of development suggests that there must be some functional vascular damage. After prolonged administration in guinea-pigs a terminal attack of acute nephritis is frequently accompanied by more or less marked anasarca. Associated with the more severe kidney lesions there is frequently a more or less marked hypertrophy of the left ventricle of the heart.

18. **Blood-Changes Following Splenectomy.**—Musser found that splenectomy causes in the dog secondary anemia, lasting about two and a half months: a postoperative leukocytosis, most marked twenty-four hours after operation and lasting a variable time, longer indeed than these counts have been carried—138 days; a total absence of eosinophils from about the third to the eleventh week followed by an eosinophilia of a rather pronounced degree; a decrease and later an increase in the number of large mononuclears and transitional forms, the lymphocytes and polynuclears being proportionally increased and later decreased. On account of the secondary anemia, pronounced at times, and seen both in man and animals, the operation of splenectomy must be considered more seriously than it has been heretofore; at least, measures for the conservation of the general health of the patient and the regeneration of the blood must be kept in mind.

19. **Frequency of Experimental Glycosuria.**—Miller and Lewis found that intravenous or intraperitoneal injections of saline extracts of either the anterior or posterior lobe of the hypophysis will occasionally produce a transitory glycosuria in dogs. They consider it as doubtful whether or not this is due to the specific action of the extract on sugar metabolism. The tremor, marked respiratory symptoms, and intestinal disturbance following the injection are sufficient to account for it.

20. **Native Antisheep Amboceptor in Human Serum.**—Of the twenty-eight positive reactions obtained by Dexter and Cummer which were altered by the addition of artificial amboceptor, eight were changed to frankly negative reactions and eight became plus-minus reactions, which could not be considered positive. Thus it is interesting to note that out of the seventy-seven serums observed, there were sixteen positive reactions (21.8 per cent.) which became either entirely negative or ambiguous and for practical purposes could only be considered negative. The authors believe that it seems justifiable to conclude that while the presence of a native antisheep amboceptor in human serum is by no means constant, it is essential to take note of its presence or absence in performing the complement fixation test for syphilis by the Wassermann method, and that if this precaution be not taken, a certain and by no means very small percentage of positive reactions will be recorded as negative. By following this simple method of controlling the reaction, this error will be obviated to a large degree.

21. **Leukocytes in Pulmonary Tuberculosis and Pneumonia.**—The study of the leukocytes is believed by Miller and Reed to give valuable information in the prognosis and clinical course of pulmonary tuberculosis. In diagnosis of incipient cases it is of no assistance but in differential diagnosis of whether more acute pulmonary lesions are due to tuberculosis or some other infection it is sometimes helpful. Arneth's differential neutrophil count is important in tuberculosis. In general, the following changes in the leukocytes occur in cases of pulmonary tuberculosis which are progressively doing badly or are in an exacerbation of the disease: (a) a leukocytosis; (b) an increased percentage of neutrophils; (c) a diminished percentage of small lymphocytes; (d) a diminished percentage of eosinophils; (e) a marked shifting to the left of Arneth's blood-picture. Conversely, changes in the opposite direction in any of the above factors are favorable.

With regard to pneumonia, leukocytosis occurs as frequently in fatal cases as in those of recovery. This leukocytosis is due to the increased number of neutrophils. When this increase of neutrophils is excessive a very severe infection is indicated. Arneth's differential neutrophil count shows a constant shifting to the left in pneumonia, but it bears no relationship to the clinical course of the disease.

### Medical Record, New York

*May 25, LXXXI, No. 21, pp. 973-1018*

22 Luetin Test for Syphilis. R. B. H. Gradwohl, St. Louis.
23 Gonorrheal Arthritis: Methods of Diagnosis and Treatment. G. K. Swinburne, New York.
24 Case of Typhoid with Unusually Long Duration of Seventy-Eight Days of Primary Attack. M. Manges, New York.
25 Auto-Intoxication Direct Result of Mechanical Defects Which Produce Stasis in Colon. C. E. Coon, Syracuse, N. Y.
26 Sitophobia: Digestive Phantasm. G. M. Niles, Atlanta, Ga.
27 Surgical Treatment of Exophthalmic Goiter. M. B. Tinker, Ithaca, N. Y.
28 Diverticulum of Cecum. J. F. Baldwin, Columbus, Ohio.
29 Sea Sickness and the Pneumogastric. A. Maverick, San Antonio, Texas.

### Boston Medical and Surgical Journal

*May 23, CLXVI, No. 21, pp. 759-798*

30 Causes for Failures in Treatment of Chronic Joint Diseases, and Some Suggestions How Greater Successes Can Be Attained. H. W. Marshall, Boston.
31 *Eradication of Typhoid. A. J. McLaughlin, Washington, D. C.
32 *Control of Typhoid. M. W. Richardson, Boston.
33 Importance of Milk Stations in Reducing City Infant Mortality. A. E. Howard, Boston.
34 *Hypodermic Injections of Iron and Arsenic in Secondary Anemia. J. H. Musser, Philadelphia.
35 Treatment of Fracture of Clavicle. F. E. Peckham, Providence, R. I.
36 *Prevention of Occupational Diseases. H. Linenthal, Boston.

31. **Eradication of Typhoid.**—Typhoid is considered by Laughlin as being in the same category as Asiatic cholera. After water and milk supplies have been made safe, the fight against typhoid, to be successful, must be made with the same vigor and along the same lines as a successful campaign against cholera. The difficulty of getting rid of the last vestiges of infection when the rate is below two deaths per 100,000 is conceded, but with a rate above ten, Laughlin says there is little excuse for failure to wage an active eradication campaign against typhoid as a dangerous contagious disease. With a wider use of the laboratory, he says that a greater control is possible over those who handle food and drink in public places. These are matters of public hygiene, and no matter how perfect official control over water and milk supplies may be, the citizen is still exposed to infection from individuals who infect his food and drink in restaurants and hotels, on steamboats o trains. Some official control is possible under the license system of those who handle food and drink in public places, bu the greatest hope for reducing the menace from this source lie in education of the individual in personal hygiene.

32. **Control of Typhoid.**—The education of the individua citizen, Richardson says, is, after all, in this as in so man other situations, the main hope of salvation. What can th State Board of Health do in this regard? The annual report of the board reaches a very small and generally a professiona circle of readers. The *Monthly Bulletin* offers an excellen medium for the diffusion of health knowledge, but here agai the circulation is small; but it is hoped to increase the infl ence of this publication by sending advance press sheets eac month to about one hundred daily and weekly newspapers the state. Public health articles are readily reprinted by suc journals. Indirectly, something has been accomplished throug relation to the dairymen of the state, who are being advise constantly as to the conditions under which they produce mil

the proper handling and placing of manure, the location and care of privies and the disposition of refuse in general. These facts are being hammered into the farmer constantly and are bound in the end to produce results.

Nearly all the fly agitation has had for its object the elimination of the ordinary house fly. Richardson urges, however, that in the future we must pay more attention to the various biting flies, which are much more numerous than one suspects, until he begins to look for them. We have only just begun to realize that our domestic animals, although apparently in perfect health, may be infested with a considerable variety of parasites, and what the relation of these parasites may be to human disease is largely unknown. Some of these are known to be transferred to other animals and to human beings by biting insects, and further study will, doubtless, bring out increased evidence as to such an interrelation between human and animal affections.

34. **Hypodermic Injections of Iron and Arsenic in Secondary Anemia.**—Musser has had the opportunity to observe the general condition and to make repeated blood counts on a series of fourteen patients who received, hypodermically, injections of iron and arsenic. The difficulty and expense of securing foreign preparations led to the use of a solution of ferric citrate prepared locally. This was used in various doses, but on the whole the results were not such as would indicate a continuation of the treatment. The ferric citrate in doses sufficiently large to give good results was found to be so irritating, and the injection so painful, that the patients for the most part rebelled against the treatment. Also in a few cases there were attacks of vertigo, fainting and in some cases vomiting after the injection. Then the present formula was secured and so far has given most satisfactory results.

The iron is used in conjunction with arsenic and sodium glycerophosphate. Of the iron and arsenic, of each .06 gm., and of the sodium glycerophosphate, .10 gm., are dissolved in 1 c.c. of distilled water. This makes a slightly alkaline, reddish tinged solution, clear, without sediment. It is placed in small glass ampules, sterilized and when sealed is ready for instant use. Each ampule contains a sufficient quantity for one dose. The few minutes necessary to sterilize the syringe and needle are all the time required to give the injection. It may be given in any muscle, but in the treatment of ambulatory cases the most satisfactory site of injection is directly into the muscles of the thigh or into the deltoid muscle. The solution is so free from irritating qualities that it has not been found necessary to give the injections deep into the gluteal or lumbar muscles.

The treatments, as a rule, were given twice a week, though in some cases as often as daily for a short time. In several cases the injections were only given once a week. With the iron and arsenic, treatment was usually given for the local condition causing the anemia. In some of the cases treatment of the local condition had been carried on for some time without any definite improvement. On the addition of the iron and arsenic, the results were usually most pronounced. The increase of hemoglobin and erythrocytes brought with it freedom from the troublesome symptoms. The amelioration of the symptoms and improvement in the primary trouble usually resulted in such improvement that in most cases the treatment could not be carried as long as was desirable. In most of the cases the treatment was simply the correction of dietetic and hygienic faults.

In the fourteen cases treated in this manner, only one failed to respond promptly. This patient, a young married woman, was found later to be pregnant and the treatment was discontinued.

36. **Prevention of Occupational Diseases.**—For the prevention of the ill-effects on health from industrial processes or conditions the author says the following measures should be adopted: 1. To collect complete and accurate data about industrial processes and about conditions under which the various industries are carried on. 2. To obtain more accurate and detailed information relative to occupation on morbidity and mortality records. 3. To instruct the medical student in this important field of preventive medicine by a course of lectures on the more important industrial processes and the diseases to which they give rise. 4. To place the specific industrial diseases on the list of diseases notifiable to the central health authority. 5. To examine periodically all workers in certain industries, these industries to be named by the central health authority. 6. To exclude minors and women from certain industries which are designated by the central health authority as injurious to health. 7. To have adequate laws regulating sanitary conditions and protective devices in industrial establishments, and to have such laws intelligently enforced. 8. To have the central health authority issue regulations for certain dangerous trades with instructions to employers and employees how to guard themselves against the ill-effects of their work and to have such instructions posted in the workrooms. 9. To carry on an extensive educational campaign among both employers and employees as to the value of protective measures and good sanitary conditions.

### Washington Medical Annals, Washington, D. C.

*May, XI, No. 2, pp. 85-133*

37 Tonsillectomy. Consideration of Its Complications. C. W. Richardson, Washington, D. C.
38 Lesions of Nervous System in Pernicious Malaria and Neurologic Sequelæ of Malarial Cachexia. S. R. Lafora, Washington, D. C.
39 Epidemic Cholera. Specimens in Army Medical Museum. D. S. Lamb, Washington, D. C.
40 Sarcoma of Left Frontal Lobe Without Symptoms Until Shortly Before Death. B. M. Randolph, Washington, D. C.
41 Burns. W. A. Jack, Washington, D. C.
42 Specimens in Army Medical Museum from Prehistoric Peoples. D. S. Lamb, Washington, D. C.
43 Unusual Case of Tabes with Toxic Complications in Etiology. T. A. Williams, Washington, D. C.

### Therapeutic Gazette, Detroit

*May 15, XXVIII, No. 5, pp. 305-380*

44 Treatment of Various Forms of Ocular Syphilis with Salvarsan. G. E. deSchweinitz, Philadelphia.
45 *Action of Different Agents on Secretion of Milk. I. Ott and J. C. Scott, Philadelphia.
46 Dangerously Poisonous Snakes of United States. H. Tucker, Philadelphia.
47 Scarlet Red for Granulation. S. B. Kositchek, Chicago.

45. **Influencing Milk Secretion.**—The authors' experiments were fifty in number, and were made on lactating goats. They made experiments with boiled thymus and boiled pineal body. They found both increased the secretion of milk. They also found that boiling the mammary gland did not prevent its galactagogue action, which has been shown by Mackenzie to increase the flow of milk. They then tried the effect of a dose of atropin, 1/50 of a grain by the vein, before the injection of the corpus luteum, infundibulin, and pineal gland, but they still increased the milk secretion, although not to as great an extent as before the atropinization. In the lactating goat they tried several successive injections by the vein of 0.5 c.c. of infundibulin. The normal milk secretion was four drops every five minutes. The first increase was 101 drops, the second thirty-two drops, the third twelve drops, the fourth twenty drops, the fifth ten drops and the sixth seven drops. The mammary gland is very sensitive to infundibulin; even 1/1,000 of a drop increased the milk secretion a drop, while 1/100 of a drop increased it five drops.

They found pilocarpin, 1/20 grain by the vein, to increase the milk secretion to a marked degree. If, however, 1/50 grain of atropin was given just previous to the injection, then the pilocarpin was without effect. If they waited forty-eight hours after the venous dose of atropin (1/50 gr.) and then injected 1/3 grain of pilocarpin intravenously, then the flow of milk increased to a small extent. Digitalin increased the secretion of milk. Caffein citrate, eserin, nicotin and muscarin had no effect in augmenting the milk secretion. Atropin arrested the milk secretion. Antipyrin reduced the flow one-half. They also studied the effect of proto-albumose and deutero-albumose. They caused a considerable increase in the secretion of milk. Peptone increased the secretion, but not so much as the albumoses. Glucose (gr. 20) caused a marked increase. Sodium chlorid increased it to a marked degree. Potassium chlorid also increased it, while calcium chlorid only slightly augmented it.

### Kentucky Medical Journal, Bowling Green

*May 1, X, No. 9, pp. 369-424*

48 Pellagra. M. W. Steele, Corbin.
49 Idem. S. B. Snyder, Jellico, Tenn.
50 Serum and Vaccine Therapy. O. P. Chapman, Port Royal.
51 Idem. S. D. Taylor, Beaver Dam.
52 Early Diagnosis of Tuberculosis. J. O. McKenney, Taylor Mines.
53 Idem. W. M. Hyatt. Springfield.
54 Idem. E. Morris, Sulphur.
55 Tubercular Pleurisy. A. D. Willmoth, Louisville.
56 Influenza or La Grippe. T. H. Hardesty, Paynesville.
57 Lobar Pneumonia. C. T. Riggs, Upton.
58 Skin Tuberculosis. D. C. Donan, Three Springs.
59 Chyluria. F. Dunlap, Danville.
60 Diagnosis of Poliomyelitis with Misleading Symptoms. T. A. Williams, Washington, D. C.
61 Cesarean Section; First in America. E. S. McKee, Cincinnati.
62 Relation of Renal Activity to Surgical Operation. E. O. Smith, Cincinnati.
63 Cyst of Mesentery. A. H. Barkley. Lexington.
64 Deformities of Children. W. A. McKenney, Falmouth.
65 Fibro-Adenoma. Report of Case. C. R. Garr, Flemingsburg.
66 How Do We and How Should We Treat a Brother Physician? R. T. Hocker, Arlington.
67 Modern Technic of Obstetric Case, Including Use of Forceps. C. B. Van Arsdall, Harrodsburg.
68 Similar Cases of Extreme Ages. J. Y. Welborn, Evansville, Ind.
69 Atypical Case of Peritonitis with Obscure Origin. W. S. Gabhart, Mackville.
70 Case Report of Quadruplets. C. T. Ricketts, Bright Shade.

### Pennsylvania Medical Journal, Athens

*May, XV, No. 8, pp. 597-678*

71 *Surgery of Kidney. W. W. Babcock, Philadelphia.
72 *Traumatic Surgery of Hand and Foot. J. Jefferson, Johnstown.
73 *Secondary Repair of Perineum by Emmett Method. H. D. Beyea, Philadelphia.
74 *Herpes Zoster; Report of 286 Cases. F. C. Knowles, Philadelphia.
75 Mucomembranous Colitis. C. C. Mechling, Pittsburgh.
76 Adenoids; Their Effects on General System. J. J. King, New York.
77 Delivery and Treatment of Obstetric Patient. C. C. Turner, Wilkes-Barre.
78 Reason for Medical Organization and Benefits of Membership in County Medical Society. V. M. Reichard, Fairplay, Md.
79 County Society Bulletin; Its Benefits and Some of Work It Should Cover.. J. B. Carrell, Hatboro.

71. **Kidney Surgery.**—As indicating renal tolerance of surgical intervention, Babcock cites seven cases, in each of which five or more operations were performed on the kidneys. Case 1. Recurrent nephrolithiasis. Six nephrotomies or nephrolithotomies and a nephrectomy with recovery. Case 2. Recurrent nephrolithiasis. Seven operations on the kidneys including nephrectomy. Recovery. Marriage and pregnancies. Case 3 Recurrent nephro- or ureterolithiasis and pyelitis. Six nephrolithotomies or nephrotomies with recovery. Case 4. High-grade parenchymatous nephritis with uremic attacks progressing despite treatment. Bilateral decapsulation, marked improvement, enabling the patient to resume her work. Return of the symptoms nine months later, with progressive loss of sight, and death. Case 5. Chronic high-grade parenchymatous nephritis with many uremic convulsions. Decapsulation of one kidney, followed by improvement for nearly two years, and of second kidney with improvement for two additional years. Recurrence of symptoms, and death. Case 6. Acute parenchymatous nephritis with marked anasarca. Transient improvement after bilateral decapsulation. Case 7. High-grade acute parenchymatous nephritis with marked anasarca. Uninfluenced by bilateral decapsulation.

72 and 73. Abstracted in THE JOURNAL, Nov. 4, 1911, p. 1558.

74. **Herpes Zoster.**—Zoster occurred 286 times in 21,337 cases of skin disease studied by Knowles. A great majority of the cases developed in the male sex, 205 out of 286 cases. But three instances were noted of the appearance of the disease under the age of one year; two in males of four and ten months and one in a female of six months. More cases occurred in the male sex between the ages of six and thirty years than in all of the other periods put together; 117 out of 208 cases. More were noted between the ages of twenty and thirty years, fifty-two cases, than for any like period. In the female sex, the greatest number, nineteen cases, were observed between the ages of ten and twenty years and the next, seventeen, between six and ten years. Twelve cases were seen in the negro race. Nationality and occupation did not help in the etiology. The left side of the body was attacked in 125 of the cases and the right in 148. The location was unspecified in thirteen. The chest and back showed the greatest liability to attack. Ulceration, pustulation, abscess formation and a hemorrhagic or gangrenous condition of the vesicles were noted in a few instances. Pain was markedly present in twenty-five of the cases. It was comparatively slight in early life. In a few instances it preceded the outbreaks by a few days or some hours. In a few cases itching, pain, and burning persisted for some weeks after the attack. A markedly hyperesthetic condition of the skin, at the site of the original zoster, persisted for some months in three of the cases. The zoster was associated with other eruptions of the skin in thirty-two of the cases. Besides the usual location of the groups of herpes a few instances of lesions unusually located were noted, such as on the hands, the palms, the fingers, the soles of the feet, the scrotum and the penis. The mucous membranes were attacked in four cases, the lips, the cheeks, the tongue, the palate, the tonsil, the bulbar conjunctiva and cornea. Traumatism was apparently the cause in one case and the administration of arsenic in another. None of the cases of the author were of the bilateral or general distribution. More cases occurred in August than in any other month, thirty-four, while but thirteen appeared in December.

### Journal of Indiana State Medical Association, Fort Wayne

*May 15, V, No. 5, pp. 195-246*

80 Gall-Bladder Infections and Gall-Stones, from Study of One Hundred Cases. M. A. Austin, Anderson.
81 Early Diagnosis of Pulmonary Tuberculosis. W. A. Gekler, Rockville.
82 *Diagnosis of Syphilis. W. P. Garshwiler, Indianapolis.
83 *Sociologic Aspect of Syphilis. C. E. Barnett, Fort Wayne.
84 *Treatment of Syphilis. D. C. Ridenour, Peru.
85 Value of Medical Society. G. F. Keiper, La Fayette.

82, 83 and 84. Abstracted in THE JOURNAL, Oct. 21, 1911, p. 1390.

### Delaware State Medical Journal, Wilmington

*May, III, No. 6, pp. 1-27*

86 Two Hundred and Fifty Consecutive Operations. W. M. Priest, Wilmington.

### Old Dominion Journal of Medicine and Surgery, Richmond, Va.

*May, XIV, No. 5, pp. 285-344*

87 Preventive Surgery. G. P. LaRoque, Richmond.

### Journal of Ophthalmology and Oto-Laryngology, Chicago

*May, VI, No. 5, pp. 140-174*

88 Infectious Suppurative Keratitis. E. La Mothe, Chicago.
89 Nervous Vestibularis. W. G. Reeder, Chicago.

### American Journal of Urology, New York

*May, VIII, No. 5, pp. 229-286*

90 Hematuria of Nephritis and Renal Papillitis from Surgical Standpoint. B. S. Barringer, New York.
91 Profuse Unilateral Renal Hemorrhage. Nephrectomy. Pathologic Report. H. A. Fowler, Washington, D. C.
92 Prophylaxis and Treatment of Postoperative Anuria. E. O. Smith, Cincinnati.
93 Fragment of Glass Irrigating Nozzle Removed from Bladder Without Open Operation. V. C. Pedersen, New York.
94 Burn of Urethra with Lunar Caustic Followed by Complete Cast of Urethra. V. C. Pedersen, New York.
95 Elephantiasis Cutis Penis. M. L. Heidingsfeld, Cincinnati.

### Journal of Medical Association of Georgia, Augusta

*May, II, No. 1, pp. 1-33*

96 Powers of State Board of Health. S. C. Benedict, Athens.
97 Examination of County School Children. A. G. Fort, Atlanta.
98 Medical Milk Commission and Its Relation to Public Health. C. A. Rhodes, Atlanta.
99 Possibilities of Laboratory and Bacteriologic Work in Medium and Small-Sized Towns. W. W. Brown, Athens.
100 Unusual Cases of Nystagmus. A. W. Stirling, Atlanta.
101 Operative Treatment of Recent Fractures. F. K. Boland, Atlanta.

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## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### Practitioner, London

*May, LXXXVIII, No. 5, pp. 625-760*

1 *"Floating" or Movable Kidney Considered from Practitioner's Standpoint. Sir M. Abbot-Anderson.
2 What Adenoids Really Mean to Children. M. Yearsley.
3 *Treatment of Tuberculous Glands of Neck in Children. W. G. Sutcliffe.
4 Epidemic Gastro-Enteritis. S. Sheill.

5 *Anemia Associated with Rickets and Gastro-Intestinal Disturbances, Including Splenic Anemia in Children. H. T. Ashby.
6 Rôle of Eye-Strain in General Practice. A. S. Cobbledick.
7 Practical Points in Diagnosis of Exanthemata and Allied Diseases. M. Young.
8 *Treatment of Various Types and Stages of Eczema. G. N. Meachen.
9 Diagnosis in Diseases of Joints. S. Boyd.
10 Appendicular Abscess in Pouch of Douglas. V. St. John.
11 Thoracoplasty for Chronic Empyema. J. R. Kerr.

1. **"Floating" or Movable Kidney.**—In Abbot-Anderson's experience the results of operation for floating or movable kidney have been very satisfactory. At the same time, he has heard of cases in which the kidney has become detached from its moorings, with consequent recurrence of the trouble. On the other hand, a kidney truss has been necessary to keep the organ in position, and in spite of its discomfort, owing to the considerable pressure necessary, thé patients have got used to the instrument and have derived benefit therefrom. Other patients seem to do perfectly well by using a pad stitched into the corset; the important point in this matter is, he believes, that the pad should be made of the shape of an inclined plane, thickest below and narrowing above. Some patients seem to get perfectly well by undergoing a rest cure, lasting for some six weeks, and being fed with the idea of increasing the fat of the patient and so anchoring the kidney in a normal fashion. A great many patients prefer to make this the initial treatment, and Abbot-Anderson thinks it is wise, especially in those (the majority) patients who are very thin. When they get up it is advisable, at any rate for the first month or so after treatment, to let them wear some form of support, and if at a future date the symptoms return, the support must be looked on as indispensable.

3. **Treatment of Tuberculous Glands.**—The greater number of the infections of childhood follow tonsillar and pharyngeal disturbances and, though it is doubtful if more than a small proportion of these are primarily tuberculous, Sutcliffe says it is quite certain that the enlarged glands, which follow an attack of tonsillitis, furnish a very suitable soil for the propagation of tubercle, and that, unless the child is removed to healthy surroundings, and the possibility of further infection diminished by the removal of the infected tonsils and clearing the nasopharynx, they will soon be typically tuberculous. It is at this stage, before caseation has taken place, that the traditional treatment, by rest, fresh air and diet, produces its best results, and in by far the greater number of cases operative or vaccine treatment can be dispensed with. On the other hand, if the glands have existed for more than six months it is probable that caseation has already begun, and that operation will sooner or later be called for.

The essential point in the treatment of these patients is that sufficient rest should be given to the patient. The cases in which apparent benefit has resulted from the use of tuberculin, that is to say, when the glands have quickly disappeared, are those that would have recovered equally well without it, and certainly the observation of children, treated with and without tuberculin, has revealed no perceptible difference in the rate of absorption of affected glands, whatever its effect on the opsonic index may have been. If given, it must be used with caution, as too large a dose in children will produce a very serious reaction. The appropriate dose for each child can only be determined by experiment on the patient himself. Except in those few children who show extraordinary susceptibility to tuberculin, a dose of one fifty thousandth of a milligram, increased after two weeks to one twenty-five thousandth of a milligram, does not seem to be followed by any bad symptoms. Dietary considerations must be dealt with on common-sense principles. Where sinuses exist, as the result of the bursting of a superficial collection of pus, an operation is usually called for to remove the deep-seated gland that is the cause of the trouble. In the after-treatment of these cases, especially if the dissection has been an extensive one, a considerable amount of rest is required. Sutcliffe usually keeps the child lying down for at least a ortnight, the neck being bandaged with a fairly voluminous ressing to act as a splint. It is especially after the glands ave been removed that tuberculin is of some slight service. Sutcliffe usually waits at least a month after operation before giving it, and then uses the doses, previously referred to, for about three months. His impression is that the thickening, if present, clears up more rapidly, and infection in neighboring areas takes place less frequently, when tuberculin is used.

5. **Anemia Associated With Rickets.**—Ashby believes that splenic anemia is simply a secondary anemia, due to some cause common to these anemias, such as a toxin absorbed from the intestinal tract. In support of this view, he says, is the fact that we can trace cases starting from a simple slight anemia in mild rickets up to the severe anemia, with enlarged spleen seen in splenic anemia. There is no hard-and-fast line between these anemias, and it is impossible to say exactly just where one type passes into the next. On these lines it is much more rational to ascribe the anemia, known as splenic anemia in children, as a secondary anemia, pure and simple. Some physicians have described splenic anemia as being connected with congenital syphilis, but in none of his cases has Ashby been able to find any history or signs of the disease.

8. **Treatment of Eczema.**—For acute weeping erythematous eczema Meachen uses a calamine lotion applied on lint to relieve the irritation and smarting, thus:

| ℞. | gm. or c.c. | | |
|---|---|---|---|
| Calaminæ | 8 | | ʒij |
| Zinci oxidi | 4 | | ʒj |
| Glycerini | 2 | or | ʒss |
| Aq. calcis ad | 180 | | ℥vj |

Misce. ft. lotio.

On the leg, lead lotion is often best, and it may be combined with the calamine lotion in equal parts. When the exudation has practically ceased, apply powders or ointments. Of the former the oleopalmitate of zinc is useful, and it may be mixed with one-half its weight of powdered starch. A zinc cream is a favorite with Meachen:

| ℞. | gm. or c.c. | | |
|---|---|---|---|
| Zinci oxidi | 30 | | ℥j |
| Adipis lanæ | 8 | or | ʒij |
| Oleii olivæ, aq. calcis, ana partes æquales ad | 120 | | ℥iv |

Misce. ft. cremor.

In papular and vesicular eczema Lassar's paste finds application in many cases, especially on the legs. To it may be added salicylic acid, ichthyol, etc., according to the effect to be obtained. Should a more drying, supporting and resolving effect be desired, as in eczema of the lower limbs, perhaps associated with varicose veins, then Unna's paste is a capital application. Meachen uses the following formula:

| ℞. | |
|---|---|
| Gelatini | partes iij |
| Aquæ | v |
| Zinci Oxidi | ij |
| Glycerini | v |

Misce. Fiat Pasta.

Ichthyol and salicylic acid are both useful in eczema of the palms, while in the case of the fingers, Unna's zinc and sulphur paste is often most beneficial kept constantly applied. The formula is as follows:

℞. Zinci Oxidi, Sulphuris Praecipitatis.
Cretae Praeparatae, Olei Lini,
et Aq. Calcis, "Equal parts by weight of each."

This should be rubbed in at night, the hands being covered up with gutta-percha tissue, and the whole fixed with a bandage. For chronic eczema the following ointment may be applied continuously on lint:

| ℞. | gm. or c.c. | | |
|---|---|---|---|
| Liq. carbonis deterg. | 2 | | ʒss |
| Hydrargyri ammonii chloridis | | 66 | or gr. x |
| Petrolatum mollis ad | 30 | | ℥j |

Misce. fiat unguentum.

Or the lenigallol ointment can be used, gradually increasing the strength up to one dram to the ounce. If little or no reaction be obtained by these remedies, an ointment containing carbolic and salicylic acids may be employed, thus:

| ℞. | gm. or c.c. | |
|---|---|---|
| Acidi carbolici | | |
| Acidi salicylici ana | 0.66- 1 | 33 gr. x-xx |
| Adipis lanæ ad | 30 | or ℥i |

Misce. fiat ung

Success in the treatment of eczema, Meachen says, can only be achieved by a patient and persistent trial of the remedy that is decided on, the local effects being carefully watched and the application varied accordingly, while the fact must ever be borne in mind that it is the whole patient that is being treated, and not his skin alone.

### Clinical Journal, London

*April 24, XL, No. 3, pp. 33-48*

12 Dangers and After-Effects of Anesthesia. D. W. Buxton.
13 Intestinal Obstruction. S. Taylor.

*May 1, XL, No. 4, pp. 49-64*

14 Visceroptosis and Its Treatment. R. M. Leslie.

*May 8, XL, No. 5, pp. 65-80*

15 Acidosis. A. P. Beddard.
16 *Swellings of Chest-Wall. H. M. Davies.
17 Oral Sepsis, Metastatic Infection and Vaccine Therapy. D. W. Carmalt-Jones.

*May 15, XL, No. 6, pp. 81-96*

18 Diabetes. W. P. Herringham.
19 Common Mistakes in Diagnosis of Diseases in Women. F. J. McCann.
20 Some Common Disorders of Nutrition in Infancy. H. C. Cameron.

16. **Swellings of Chest-Wall.**—The following points are emphasized by Davies: (1) It is of the utmost importance not only to diagnose the nature of the tumor, but also to localize the primary seat of the lesion; that is to say, the diagnosis must be complete both on the negative and positive side. To ensure this a skiagram must be taken, and possibly several from different aspects. (2) A tumor that has an impulse on coughing does not necessarily communicate with the interior of the chest-wall. (3) Pressure on, or displacement of intrathoracic organs may be produced by tumors originating from the chest-wall as well as from tumors of the mediastinum and lungs.

### Australian Medical Journal, Melbourne

*April 13, I, No. 39, pp. 429-440*

21 Infant-Feeding at Ashfield Home for Infants. A. E. Mills.
22 Hydatidiform Mole and Chorea in Pregnancy. H. S. Bush.
23 *Curious Surgical Coincidence. D. A. Greenham.

23. **Surgical Coincidence.**—Two cases are cited by Greenham. A man, aged 24 years, was admitted to hospital complaining of severe abdominal pain. The onset had been sudden, and he had in fact been awakened out of sleep by its occurrence about midnight. A tentative diagnosis was made of perforated duodenal ulcer, and the patient was operated on at 7 o'clock the same morning, an interval of about seven hours having elapsed between the probable moment of perforation and operation. On opening the abdomen a perforation was found on the anterior surface of the duodenum just beyond the pylorus. The perforation was sutured over, and a posterior gastro-enterostomy performed. The abdominal cavity was freely drained by tubes passing through both flanks into the renal fossa, and a third into the pelvis. The patient recovered gradually without any complication, the pulse-rate never exceeding 90 per minute after the second day. Three days prior to the discharge of this patient his brother, aged 18 years, was admitted to the same ward also suffering from severe abdominal pain. He had been in to visit his brother at midday and was then apparently in the best of health. An hour and a half later he was seized with acute pain, and returned at once to the hospital. About an hour and a half after admission his abdomen was opened and a perforation of the duodenum was found almost in precisely the same spot as had occurred in the brother's case, except that here it was a little further to the right. A posterior gastro-enterostomy was done after suturing over the perforation. The abdomen was drained by a metal tube in the right flank, followed by a right-sided decubitus, and the patient made an uninterrupted recovery.

### Australasian Medical Gazette, Sydney

*April 13, XXXI, No. 15, pp. 378-404*

24 Significance of Intermediate Hospitals. J. W. Barrett.
25 Treatment of Hydatid Cysts. P. T. Thane.
26 Doctrine of Complexes. C. G. Jung.
27 Psycho-Analysis. S. Freud.

### Archives Générales de Chirurgie, Paris

*April, VI, No. 4, pp. 373-496*

28 *Ankylosis of the Jaw. (Trismus par ankylose osseuse temporo-maxillaire.) M. Donati.
29 *Diffusion of Urine Through Lesion in Prostate. (2 cas d'infiltration d'urine d'origine prostatique.) L. Thévenot and E. Michel.
30 *Operative Treatment of Gastro-Intestinal and Peritoneal Tuberculosis. (Traitement chirurgical de la tuberculose abdominale en général et des tuberculoses gastro-intestinale et péritonéale en particulier.) P. Mauclaire.

28. **Ankylosis of the Jaw.**—Donati reports a case in which he cured a 9-year-old boy of trismus resulting from bilateral bone ankyosis of the temporomaxillary joint. There has been no tendency to recurrence during the two years since, and the rectangular linear scar in the edge of the hair and in front of the ear on each side is scarcely perceptible now. Extensive resection of bone is indispensable for success, as he describes in detail. The experiences with the technics used by others are reviewed.

29. **Diffusion of Urine Through Lesion in Prostate.**—In the two cases reported subacute inflammation of the prostate modified the tissues until they permitted the sudden diffusion of urine into the cellular tissue in the perineal region. Thévenot and Michel think that this infiltration of urine occurs more commonly than is generally recognized. Palpation through the rectum will generally reveal the primary process in the prostate, and in operations to cure the infiltration the primary process should be treated without fail. Conditions in the prostate must be restored approximately to normal to ensure against recurrence of trouble.

30. **Operative Treatment of Gastro-Intestinal and Peritoneal Tuberculosis.**—Mauclaire reviews his experiences in forty-one cases, comparing them with the records of operative treatment that have been published by others. The evidence shows the great progress realized from surgical measures in tuberculous processes in the digestive tract and peritoneum in the last twenty years, but the responsibility for the success of operative measures rests on the attending physician's diagnosis of the process in time. Mauclaire remarks that a simple laparotomy alone may sometimes improve and cure quite extensive tuberculous lesions in the ileocecal region, although the reason for the benefit is still a mystery. Alglave has reported fourteen survivals and seven with postoperative fistulas in twenty-seven such cases. In tuberculous peritonitis, reports of benefit from a simple laparotomy are conflicting. Some recent statistics report 50 per cent. of the patients cured, while Küttner's latest figures show after a three-year interval 26 per cent cured of twenty-nine patients with the ascitic form; 10 per cent. with the form without effusion. He regards fever as a contraindication to operative treatment. In a few cases Mauclaire drained the ascites into the subcutaneous tissue by having the patient wear permanently a T drain, the stem pushe into the pelvis, the short crosspiece resting in the cellular tissue, and the soft parts sutured together above. In one cas suppuration developed in the soft parts after six months, an the drain was removed, but by that time the patient wa cured of the tendency to ascites.

### Lyon Médical, Lyons

*May 5, XLIV, No. 18, pp. 961-1004*

31 *Indications for Isolation in Treatment of Neurasthenia. (Indications de la cure d'isolement.) Feuillade.

31. **Isolation in Neurasthenia.**—Fatigue, Feuillade declares that worm in the ripe fruit, is the enemy with which man ha to contend in our civilization. Fatigue, especially when accompanied by emotional reactions, leads to a general depression—exhaustion. This is the source of all neurasthenia. It is b no means purely psychic; a neurosis is merely a nervous affection with lesions which still escape detection. He advocat the Weir Mitchell treatment in every case of neurastheni for ten days in the mild cases, and from two to six weeks i the more severe, and insists that the course should never b attempted in the home. Persons who have been overworke those deficient in will power and those who are unduly irr table, especially those with some chronic constitutional diseas diabetes, exophthalmic goiter, etc.—in short, all who get ne vous and irritable at home or who need a firm hand to gui

them in a rational course of treatment—such patients benefit amazingly from relative isolation, that is, an occasional change of air and scene away from their family, traveling or at a sanatorium for a time. Attempts to isolate such patients in the home have always failed in his experience. The patients can return home for a weekly visit, gradually lengthening it, or can stay at some relative's, thus returning by degrees to the home environment.

### Presse Médicale, Paris

*May 8, XX, No. 38, pp. 405-412*

32 Technic for Resection of Male External Genital Organs. (Emasculation totale.) E. Juvara.

*May 11, No. 39, pp. 413-424*

33 Infant Consultations. (La consultation obstétricale de nourrissons.) E. Bonnaire.
34 Pathogenesis of Typhoid Intestinal Lesions. (Pathogénie de l'entérite typhique.) C. Richet, Jr., and F. Saint Girons.

*May 15, No. 40, pp. 425-432*

35 Treatment of Syphilis. E. Gaucher.

### Revue de Gynécologie, Paris

*April, XVIII, No. 4, pp. 353-464*

36 *Uterine Tumors in Hermaphrodites. (Fibrome utérin chez une femme pseudo-hermaphrodite, accompagné d'une tumeur d'une des capsules surrénales.) Auvray.
37 *Treatment of Stab and Firearm Wounds of the Liver. (Traitement des blessures du foie dans les plaies pénétrantes de l'hypocondre droit.) M. Patel and R. Loacc.

36. **Uterine Tumors in Hermaphrodites.**—In Auvray's case a female pseudohermaphrodite had a fibroma in the uterus and a tumor of embryonal origin in one adrenal. He has found records in the literature of five cases of uterine cancer in hermaphrodites, six of a benign uterine tumor and thirty-six cases of a malignant tumor in the adrenals and fourteen of a cyst. He summarizes them all, calling attention to the frequent coexistence of tumors in the adrenals with a special type of hermaphrodite with female internal and male external genital organs. Apert reported in 1911 ten cases in which hyperplasia of the adrenals was accompanied by deformities or dystrophies, the character of which varied with the age at which the adrenal hyperplasia developed. If early embryonal, this special hermaphroditism results; Auvray's case is a typical example of this class. He advocates the transperitoneal route of access to the adrenals. In the nine lumbar operations the outcome was fatal in five.

37. **Stab and Firearm Wounds of the Liver.**—Patel and Loaec discuss the proper technic for simple penetrating injuries of the liver, reporting a case in which they successfully sutured the wounds made by a bullet, thus arresting threatening hemorrhage. They compare this experience with thirty-seven similar cases on record and ninety-three cases of stab wounds, devoting ten pages to tabulation of this material.

### Revue Médicale de la Suisse Romande, Geneva

*April, XXXII, No. 4, pp. 281-336*

38 *Sunlight in Treatment of Primary Tuberculosis of the Conjunctiva. (Héliotherapie de la tuberculose primaire de la conjonctive.) Rollier and G. Borel.
39 Correction of Rachitic Deformity by Osteotomy and Fixation by Screws. (Redressement des déviations rachitiques invétérées des membres supérieurs et inférieurs par Osteotomie et Osteosynthèse—fixateur de Lambotte.) A. Machard.

38. **Light in Treatment of Tuberculosis of the Conjunctiva.**—Rollier and Borel give a colored plate of the findings in a case f a primary tuberculous process in the upper lid of the right eye of a young man. He was a medical student from Argentina and the eye had become infected at a necropsy, pus squirting into this eye as a tuberculous cavity was incised. After curetting twice, systematic exposures to the direct sunlight were begun, the patient turning back first the upper and then he lower lid and exposing them in turn to the direct sunlight or a few minutes and then for a time with the eyes closed. The sittings were gradually lengthened until six of ten minutes ach were given during the day, supplemented by a local sun bath for a secondary cervical lymphadenitis. In three months he tuberculosis seemed to be entirely cured, and there has been no sign of further trouble during the six months since. At the Finsen Institute in Copenhagen the conjunctiva was ound more tolerant even than the skin to phototherapy in our cases of primary tuberculous conjunctivitis. The sunlight in the above case caused no disturbance in the circulation or photophobia, and the conjunctiva is now smooth and thin, absolutely normal. Heliotherapy, they remark, is the only method of treatment which heals without leaving any trace of the former lesion.

### Semaine Médicale, Paris

*May 15, XXXII, No. 20, pp. 229-240*

40 *Acute Dilatation of the Stomach. (Les formes médicales de dilatation aigue de l'estomac.) L. Cheinisse.

40. **Medical Forms of Acute Dilatation of the Stomach.**—Cheinisse remarks that acute dilatation of the stomach not due to pyloric obstruction may occur from a number of causes, as he shows by citations from the literature. The most important point is the early recognition of the trouble. In a case even within the last six months, he says, postoperative distention following a few days after an appendix operation was taken for beginning typhoid fever, and its true nature was not recognized in time to save the patient. Most often the acute dilatation simulates peritonitis and is treated only as such, but the absence of fever should exclude this diagnosis. The stomach may stretch far downward and the distention thus be most marked in the lower abdomen. The surgeons are on the alert for postoperative trouble of the kind, and countless patients have been relieved and saved by a change to the ventral or knee-chest position when signs of acute dilatation of the stomach have followed an operation. But physicians generally are not aware that the same trouble can occur under purely medical conditions, that is, during the course of or convalescence from typhoid, pneumonia, puerperal fever, cholera or other infectious diseases, or from errors in diet alone, as after drinking a large amount of carbonated water. In the earlier recorded cases the dilatation always proved fatal, as its mechanism was not understood and combated. The stomach pump will decide the question by siphoning out a large amount of stomach content, mixed with gas, and giving immediate relief. Even in the most apparently desperate cases one should never hesitate to use the stomach pump, and it will often prove the means of cure. In one case on record the acute dilatation developed after an amusing entertainment in the hospital, during which a young man under treatment for gonorrhea had laughed long and heartily. This case sustains Mathieu's opinion that air getting into the stomach is an important factor in the acute dilatation. As the condition is becoming better recognized, the number of cases encountered is on the increase. Fussell last year reported five, and found records of six other cases in which acute dilatation occurred during convalescence from pneumonia.

### Beiträge zur Klinik der Tuberkulose, Würzburg

*XXII, No. 3, pp. 265-349. Last indexed May 4, p. 1404*

41 *Immunity to Tuberculosis. (Ueber Immunität gegen "natürliche" Infektion mit Tuberkelbazillen.) P. H. Römer.
42 *Origin of Tuberculosis. (Kritisches und Antikritisches zur Lehre von der Phthiseogenese.) P. H. Römer.
43 *Circumcision in Origin of Tuberculosis. (Zur Frage über die Ansteckung an Tuberkulose judischer Kinder während der Beschneidung.) I. M. Arluck and I. J. Winocouroff.

41. **Immunity to Tuberculosis.**—Römer's extensive research confirms anew the fact that an experimental or naturally acquired tuberculous process seems to render the individual immune to further infection with the tubercle bacilli.

42. **Origin of Tuberculosis.**—Römer discusses the importance of massive infection with tubercle bacilli in childhood as the cause of phthisis in later life. Protection of children against tuberculosis is the keynote struck by all the new data learned in regard to the nature and origin of tuberculosis. The new tuberculin tests provide the means for intelligent control of conditions in children.

43. **Tuberculosis Acquired at Circumcision.**—In the case reported there was no tuberculosis in the environment and the healthy Jewish mother nursed the infant. It died of tuberculosis at the age of 6 months; besides the ulcerated condition of the entire external genitals, ulceration was found at six points in the small intestine and one in the large. The lymph-nodes, up to the neck, also showed tuberculous changes. There seems to be no doubt that the tuberculosis in this case developed from the rite of circumcision, performed by outsiders.

### Berliner klinische Wochenschrift

*April 29, XLIX, No. 18, pp. 825-876*

44 Affinity of Cancer Tissue for Certain Drugs. (Chemotropismus in neoplastisches Gewebe.) R. von den Velden.

45 Roentgenotherapy of Uterine Myomas. E. Falk and E. Gräfenberg.

46 *Blunders in Diagnosis of Sciatica. (Fehldiagnosen bei Ischias.) W. Alexander.

47 Metastatic Mammary Cancers. (Fall von Beckensarkom mit Metastase in der linken Mamma. Zugleich ein Beitrag zur Lehre von der lokalen Kalkmetastase.) H. Plew.

48 Rat Bite Sickness. (Zur Kenntnis der Rattenbisskrankheit.) F. Proescher.

*May 6, No. 19, pp. 877-924*

49 *Congenital Tuberculosis. A. Dietrich.

50 Iodized Bacillary Substance in Treatment of Tuberculosis. (Zur Chemotherapie der Tuberkulose.) G. Kapsenberg.

51 Action of Hormonal. (Ueber Hormonalwirkung.) W. Kausch.

52 Physiologic Importance of the Normal Intestinal Flora. (Bedeutung der normalen Darmflora.) M. Klotz.

53 Histologic Findings After Fatal Methyl Alcohol Poisoning. (Ueber histologische Befunde im Auge und im centralen Nervensystem des Menschen bei akuter tödlicher Vergiftung mit Methyl-Alkohol.) L. Pick and M. Bielschowsky.

54 Colloidal Gold Precipitation Test of Cerebrospinal Fluid. (Ueber die Ausflockung von Goldsol durch Liquor cerebrospinalis.) C. Lange.

55 *Abstention from Carbohydrates Powerful Aid in Eradication of Oxyuris. (Zur Behandlung der Oxyuriasis.) H. Stettiner.

56 Elephantiasis. H. Coenen.

46. **Blunders in Diagnosis of Sciatica.**—Alexander has found in the course of his experience with hundreds of cases of sciatica that blunders in diagnosis were comparatively frequent, physicians sending patients to him with this diagnosis who in reality had some other affection, such as disease of the pelvis or vertebræ, intermittent limping, adhesions left from appendicitis compressing the nerve, tuberculosis of the ureter, myomas, rectal cancer, flat-foot, etc. With neurasthenic pain the lack of objective symptoms and the facts that the pain is constant rather than paroxysmal, while it fluctuates with the mood and with insomnia, and that the attention cannot be diverted from the pain, and that the patient begins to groan when the foot is grasped for the Lasègue test, while in true sciatica pain is not experienced until the leg is raised to an angle of 45 or 60 degrees—these features exclude true sciatica. Alexander has encountered only one case of sciatica with a history of preceding attacks of gout or kidney colics, and he has rarely found any objective signs of gout with sciatica. He has been impressed by the absence of neuritis in gouty patients in contrast to its common occurrence in other constitutional toxic affections, such as diabetes. It would be interesting, he remarks, to study in an extensive series of sciatica cases the frequency of objective manifestations of disturbances in the purin metabolism. Spondylitis, sacroiliac disease or stretching of the symphysis in a wasting disease or pregnancy, and senile hip-joint disease frequently develop sciatic pain as the first symptom, but the insidious course, the roentgenoscopic findings and the pain in the hip joint when the flexed leg is passively moved, differentiate the affection. In one case a large sarcoma in the femur was the cause of the supposed sciatica, but it had been overlooked, as no one had thought of palpating the femur its entire length. Osteomyelitis was the trouble in another case, in which no one had taken the temperature, and the tender point was interpreted as a Valleix point, and the pain as the leg was raised was taken for the Lasègue sign. With sciatica the pain is generally worse on rising and at the first steps, while the reverse of this is observed with intermittent claudication. In one case the trouble proved to be intermittent limping, and this in turn was traced to an aneurysm in the popliteal artery. With tabes the pain is generally bilateral and independent of active or passive movements; instead of the Lasègue sign, there is hypotonicity without pains. He has never encountered sciatica in a tabetic nor a case of sciatica traceable to flat-foot alone. The sacral form of multiple sclerosis is hard to distinguish from true sciatica. Flat-foot disturbances are generally in the muscles, especially at their points of attachment, and they subside during repose, as also the pain from varicose veins. In one case a young woman had been under treatment for a year with all kinds of remedies for the supposed sciatica but without effect. The Wassermann test was then applied, with a positive reaction, and four days of iodid treatment banished the "sciatica" permanently. The only means to avoid blunders in diagnosis of sciatica is by repeated examinations. This is especially important in the cases of a relatively harmless and transient neuritis affecting the sciatic nerve and other spinal nerves and suggesting for a time a serious spinal affection.

49. **Congenital Tuberculosis.**—Dietrich reports a case which he thinks must be accepted as an instance of congenital tuberculosis. A moribund woman with miliary tuberculosis was delivered of a child that was removed to another environment at once and never came in contact with the mother. The child thrived for a time but general tuberculosis developed, to which it succumbed at the age of three months. Tubercle bacilli had been found in the placenta.

55. **Diet in Treatment of Helminths.**—Stettiner found it impossible to exterminate the oxyuris in a number of cases, especially in one patient who had been treated perseveringly for oxyuriasis for years but never with more than transient benefit. Finally the patient developed diabetes and the diet was regulated to exclude carbohydrates. Under the influence of this change in the diet the oxyuris disappeared. Since this experience Stettiner orders an antidiabetic diet as an adjuvant to the usual measures in seeking to expel the oxyuris, and reports the prompt cure of four patients under this régime. Another patient, a child, did not conform to the directions and success has not been attained in this case as yet. His experiences suggest that the oxyuris or its eggs require some special medium for their development which is lacking when carbohydrates are not supplied in the food.

### Deutsches Archiv für klinische Medizin, Leipsic

*CVI, Nos. 3-4, pp. 219-410. Last indexed May 25, p. 1647*

57 Residual Nitrogen in Urine (Der Reststickstoff in seinen Beziehungen zur Urämie und zur Prognose von Nephritiden.) H. Strauss.

58 Hemolytic Jaundice; Four Cases in One Family. (Ueber familiären hämolytischen Ikterus. Vorkommen von Gallenfarbstoffen im Blut und im Harn.) L. Pel.

59 Scleroderma with Calcification. (Ueber diffuse Sklerose von Haut und Muskeln mit Kalkablagerung.) C. Oehme.

60 Extensive Focus of Acute Myelitis from Abscess in Prostate, with Necropsy. O. Gross.

61 Streptococci in Scarlet Fever. (Streptokokken bei Scharlach.) P. Jungmann.

62 Perforation of Stomach Into the Colon. (Die klinische und radiologische Diagnose der Fistula gastro-colica.) N. Voorhoeve.

63 Myeloblasts in Leukemia. (Myeloblastenleukämien und Vorkommen von Myeloblasten bei gewöhnlichen Myelämien.) E. Steffler.

64 Cholesterin in Bile. (Der Gehalt der menschlichen Galle am Cholesterin und Cholesterinestern.) S. J. S. Peirce.

65 *Pathology of Chronic Nephritis. W. Frey.

66 The Blood Plates. (Klinische Untersuchungen über Blutplättchen.) Port and Akiyama.

67 General Infection with Colon Bacilli; Seven Cases, All with Recovery. (Ueber Allgemeininfektion durch Bacterium coli commune.) O. Brian.

68 Facial Paralysis of Rheumatic Origin. (Bemerkungen zur Aetiologie der rheumatischen Facialislähmung.) K. von Ketly.

65. **Chronic Nephritis**—On the basis of his study of the pathology of different forms of nephritis, Frey says that the power of concentration possessed by the kidney is by far the most important element for the diagnosis. If there is stagnation of urine with hypertrophy of the heart and high blood-pressure, the trouble is a vascular affection of the kidney. Pronounced hypertrophy of the heart renders less probable a parenchymatous affection. With vascular contracted kidney, restriction to a milk diet is advisable merely as a general measure to spare the organism as a whole and ward off new circulatory disturbances; it is not necessary from the standpoint of the kidney alone. The principles for treatment are the same here as for arteriosclerosis and plethora in general.

### Deutsche medizinische Wochenschrift, Berlin

*May 9, XXXVIII, No. 19, pp. 881-928*

69 *Epilepsy. (Der Status epilepticus.) P. Jödicke.

70 Antigens for the Wassermann Reaction. (Beitrag zur Biologie der Lipoide.) F. Munk.

71 Anaphylaxis from Organ Extracts. (Ueber die anaphylaktische Vergiftung durch Organextrakte.) J. Bauer and F. Wüsthoff.

72 *Tubercle Bacilli in the Blood. (Ueber den Nachweis von Tuberkelbazillen im Blute bei Lungentuberkulose und seine prognostische Bedeutung.) R. Hilgermann and J. Lossen.

73 Functioning of Diaphragm After Section of Phrenic Nerve. (Experimenteller Beitrag zur "Zwerchfellbewegung nach einseitiger Phrenicusdurchtrennung.") Stuertz.

74 Urobilin and Bilirubin in Human Serum. (Vorkommen von Urobilin und Bilirubin im menschlichen Serum.) L. Syllaba.

75 Apparatus for Artificial Respiration. (Ein Apparat für künstliche Atmung.) K. A. Fries.
76 Immunization Against Hay Fever. (Immunisierung gegen Heufieber.) T. Albrecht.
77 Importance of Drinking More Water. (Gesteigerter Wasserverbrauch in der Diätetik.) L. Stanowski.
78 *General Spinal Anesthesia. (Die allgemeine Rachianästhesie.) T. Jonnesco.

69. **Status Epilepticus.**—Jödicke introduced over a year ago in the Stettin asylum a combined method of treating status epilepticus, and has not lost a patient from it since. He reports the details of the nine cases in which it was applied, calling attention to the almost epidemic occurrence of the status during the period of intense heat last summer. The aim of the treatment is to exclude all exciting causes and reduce the auto-intoxication, the influence of which on the abnormally excitable brain is causing the succession of attacks and fever. The patient is put to bed at once in a quiet, darkened room, and one or several tepid enemas are given, followed by introducing into the rectum 3 gm. amylene hydrate with 10 drops of strophanthus to sustain the hart. If the discharges of motor nerve force keep up in undiminished intensity, he repeats this dose after half an hour to an hour. He then draws from 50 to 150 c.c. of blood from a vein at the elbow and infuses from 100 to 500 c.c. of salt solution (Ringer's formula) into the subcutaneous tissue below the pectoralis muscle. Some of the patients in the cases recuperated as if by magic under this treatment when they seemed actually moribund from exhaustion, temperature 40.9 C. (105 F.). The spasms gradually ceased and the patient dropped into a quiet sleep with profuse perspiration, like the crisis in pneumonia. One of the patients nine months later had a recurrence of the status epilepticus. Jödicke's experience teaches the dangers of suppressing bromids in epilepsy. In each of his nine cases the status epilepticus developed when the dosage of bromids was being reduced. He adds a table to show that there has not been previously for ten years a twelve-month period free from a death in status epilepticus, and the total in the ten years has been thirty-seven of the 340 deaths. The asylum has sheltered from 330 to 386 epileptics each year during this time.

72. **Tubercle Bacilli in the Blood.**—Tubercle bacilli were found in the blood of seventeen out of sixty-four patients with pulmonary tuberculosis examined. No connection between them and the fluctuations in temperature could be determined, but the course of the disease seemed less favorable with the positive findings in the series reported.

78. **General Spinal Anesthesia.**—Jonnesco reiterates that his technic is "the method of the future," and states that it has now been applied in 5,151 cases, all but 206 in his country, Roumania. He adds that no fatality from it occurred last year. (This method was described in THE JOURNAL, 1909, liii, 1831).

### Medizinische Klinik, Berlin

*May 12, VIII, No. 19, pp. 767-808*

79 Arteriosclerosis and Digestive Disturbances. (Arteriosklerose und Verdauungsstörungen.) A. Piek.
80 Climatic Factors in Treatment of Cardiovascular Disease. (Klimatotherapie bei Herz- und Gefässkrankheiten.) H. Determann.
81 Treatment of Fracture from Standpoint of Function. (Das funktionelle Moment in der Frakturenbehandlung.) P. Jottkowitz.
82 Tuberculous Erythema Nodosum. (Die ominöse Form des Erythema nodosum.) A. M. Kober.
83 Serodiagnosis of Syphilis. (Die Wassermannsche Syphilisreaktion mit aktiven Seren.) H. Hecht. (Zur Frage der verfeinerten Wassermannschen Reaktion—Kromayer und Trinchese.) A. Alexander.
84 Acute Otitis Media. E. Barth.

### Monatsschrift für Kinderheilkunde, Leipsic

*May, XI, No. 1, pp. 1-48*

85 Favorable Action of Cod-Liver Oil in Rachitis Not Annulled by Long Heating to Boiling Point. (Zur Frage vom Wesen der günstigen Wirkung des Lebertrans bei Rachitis. Ist das wirksame Agens des Lebertrans ein Ferment?) J. A. Schabad and R. F. Sorochowitsch.
86 *Favorable Action of Forced Feeding with an Exclusive Milk-Egg Diet in Children with the Exudative Diathesis from Mild Tuberculosis. (Zur Diätetik der Skrofulose.) E. Moro.
87 Digestion of Wheat Flour and Oatmeal. (Ueber den differenten peptischen Abbau von Weizen und Hafer.) M. Klotz.
88 *Passage of Hexamethylenamin Into Cerebrospinal Fluid. (Zur Kenntnis der Urotropin-Sekretion und Resorption im Liquor cerebrospinalis und die Bedeutung derselben für die Hydrocephalus-Frage.) E. Weinrich.

86. **Diet in "Scrofula."**—Moro found that the manifestations of the exudative diathesis subsided when the children were put on an extra abundant exclusive milk and egg diet. The manifestations of the "scrofula" are not of alimentary origin, as in the true exudative diathesis, but are the work of the tuberculosis, and thus when the tuberculosis itself subsides under tuberculin treatment or out-door living or forced feeding, then the child gradually outgrows the exudative diathesis. Weichert's research has confirmed the empirical observation that fats have a favorable action in tuberculosis while carbohydrates have an unfavorable influence. This explains why potato is bad for the "scrofulous," and why among the poor this condition is more prevalent.

88. **Hexamethylenamin and the Cerebrospinal Fluid.**—Tests revealed the presence of hexamethylenamin even in as small amounts as 1 to 480,000 parts of the fluid. Its passage into the fluid seemed to follow the laws of osmosis. Quantitative color tests are the only reliable technic, Weinrich says, and reports .the findings in three cases of serous meningitis or chronic pneumonia, with a case of hydrocephalus following epidemic meningitis.

### Münchener medizinische Wochenschrift

*May 7, LIX, No. 19, pp. 1025-1080*

89 Immunity and Anaphylaxis. J. Traube.
90 *Syphilis and the Nervous System. (Nervöse Spätreaktionen Syphilitischer nach Salvarsan.) G. L. Dreyfus.
91 *Comparative Measurements of Heart with Reference to Size of Chest. (Ein neues Verfahren der Herzmessung—Bestimmung von Lage und Grösse des Herzens im Verhältnis zum Thorax.) S. Kreuzfuchs.
92 *Therapeutic Pneumothorax. II. (Die seröse Pneumothoraxpleuritis.) A. Fagiuoli.
93 *Importance of Laceration of Tentorium in the New-Born. (Bedeutung der Tentoriumrisse für das neugeborenen Kind.) A. Bauereisen.
94 Diagnosis of Arthritis from Local Temperature. (Zur Diagnostik von Gelenkerkrankungen vermittels Messung der lokalen Hauttemperatur.) E. Melehior and H. Wolff.
95 Biologic Tests of Extract of Skin. (Ueber einen biologischen Nachweis der Wirkung von Hautextrakten.) E. Meirowsky.
96 Operative Treatment of Chronic Articular Rheumatism. (Zur chirurgischen Behandlung des chronischen Gelenkrheumatismus.) L. Heusner.
97 The Transverse Fascia Incision in Laparotomies. (Zur Beurteilung des Pfaunenstielschen Faszienquerschnittes.) M. v. Holst.

90. **The Cerebrospinal Fluid in Syphilis.**—Dreyfus has been examining systematically the cerebrospinal fluid of patients in the secondary stage of syphilis free from any objective findings in the nervous system and who had had no treatment. In no instance was the fluid found normal; in seventeen of the patients it contained albumin, and in five it was under very high pressure. These findings confirm those of Ravaut who in thirty-three cases found the fluid pathologic in nineteen before treatment and in all but four after salvarsan. The data presented suggest that syphilis in the secondary stage is a septicemia, affecting by predilection the skin and nervous system. Dreyfus commends the practice of systematic control by lumbar puncture of conditions in the nervous system during and following treatment, saying that this in connection with other symptoms may afford a reliable guide to therapeutics and permit the warding off of nervous affections in a later phase of the disease.

91. **Measurement of the Heart.**—Kreuzfuchs gives what he thinks is an instructive formula for estimation of the comparative size of the heart. He first centers the chest by roentgenoscopy; a scrap of lead wire fastened on the median line in front and another opposite it on the back are focused in a single line, and the extreme outline of the heart on the right and left sides is marked where it crosses a horizontal line drawn through the right diaphragm-heart angle. The horizontal line is thus divided into three parts, the width of the heart forming the center stretch. The proportionate length of the three parts averaged in ten persons examined, from right to left 4.2/12; 5/12 and 2.8/12. Dropping the 12, we have 4.2; 5 and 2.8 as a standard for comparison.

92. **Pleurisy with Effusion in Connection with Therapeutic Pneumothorax.**—Fagiuoli noted a pleurisy with effusion developing in ten among his twenty-three patients in whom he had immobilized the lung by inducing pneumothorax. The pleuritis seemed to be in causal connection with the tuber-

culous process in the lung, but it always ran a brief and mild course without interfering ultimately with the outcome of the treatment although rather debilitating the patients for a time.

93. **Injury of Meninges in the New-Born.**—Bauereisen remarks that with the usual method of opening the skull, we overlook the laceration of the tentorium, which closer examination has disclosed to be a comparatively common source for intrameningeal hemorrhage during delivery. He reports the details of eleven cases of the kind found at necropsy of forty-seven infants among 667 born at the Kiel maternity. Delivery had been instrumental in each of the laceration cases and the children had all been asphyxiated at birth; only two could be revived and these died the second day. He comments on the peculiar dangers of swings à la Schultze when the child already shows symptoms of pressure on the brain. Ahlfeld has recently warned against them in all cases saying that all children born deeply asphyxiated, who are capable of being restored to life, do equally well, after the respiratory passages have been cleared, by being immersed in warm water, with other reflex stimuli to the skin. His words apply with special emphasis to children with intracranial hemorrhage. Swinging may even in itself lacerate the tentorium by the pressure on the sides of the head; Bauereisen has seen this occur in an infant cadaver. The clinical laceration of the tentorium may be the manifestation of mechanical injury of certain parts of the brain even when there is no noticeable hemorrhage. Hemorrhages below the tentorium have the least favorable prognosis; death soon occurs from paralysis of the respiration center. But hemorrhage above the tentorium, developing slowly after birth, is amenable to surgical measures. The symptoms are restlessness, screaming, protrusion of the fontanelles, pallor of the skin, deviation of the tongue and head toward the side affected, cortical convulsions and later paralysis. He operated in a case of the kind, relieving the pressure, but the child soon died of meningitis. Beneke has found laceration of the tentorium in a number of infants dying from other affections, emphasizing anew the frequency of this injury and the great liability, even with spontaneous delivery, to injury of the dura at this its weakest point when the skull is compressed from the sides. It should not be forgotten, moreover, that this injury is liable to occur for a time after birth if the skull is roughly handled.

### St. Petersburger medizinische Zeitschrift

*April 28, XXXVII, No. 8, pp. 119-134*

98 Myopia. (Behandlung der Kurzsichtigkeit.) T. Kubli.
99 Pathology of the Gait in Children. (Störungen des Bewegungs-Apparates im Kindesalter.) C. Sarfels.
100 Pathology of Nuclein Metabolism. (Gicht. Uratsteindiathese.) R. Schütz. Commenced in No. 7.

### Therapie der Gegenwart, Berlin

*May, LIII, No. 5, pp. 193-240*

101 *Cold Packs in Treatment of Fever. (Kussmauls Kaltwasserbehandlung fieberhafter Krankheiten.) A. Cahn.
102 Salvarsan in Scarlet Fever. (Behandlungsversuche mit Salvarsan bei Scharlach.) F. Klemperer and H. Woita.
103 Digitalis Preparations. (Die hohe Bedeutung der Folia Dig. titrata und ihre Vergleichung mit andern Digitalispräparaten.) Focke.

101. **Kussmaul's Cold Packs in Treatment of Fevers.**—Cahn pays tribute to Kussmaul as the model internist, dwelling in particular on his tendency to draw a favorable prognosis. He brought cold packs into vogue anew in treatment of febrile affections, and Cahn mentions a number of minor points in the technic, neglect of which detracts from the success. Cold sponging off was always done by two persons, one sponging off the limb and the other wiping it dry at once, beginning each sponging off always with the face and neck, and working downward, repeating this from two to four times. All unnecessary movement of the patient was avoided, as an elderly pneumonia patient is liable to dyspnea and collapse if moved much. The physician should aid or superintend the first sponging to note how the pulse, respiration and temperature behave under it. Cold water, frequently renewed, is used for robust patients, but for the weak and elderly, water at room temperature. In applying a cold pack no space must be left where hot moist air can accumulate. The wet cloth must envelop every surface, being tucked around each leg separately. The arms should be drawn up while the pack is applied to the trunk. In typhoid Kussmaul did not apply the Brand baths so cold or so often as most others. The temperature of the water was 25 or 30 C. (77 or 86 F.) and the baths were given every two or four hours from the late forenoon till late in the evening, but not at night. With severe cerebral symptoms he sprinkled cold water from a watering pot on the head and neck, placing the patient across the bed, face downward, the outstretched arms resting in a bath tub, with a rubber sheet fastened at the back of the neck. This roused the patient from his stupor, he swallowed, and fluid could then be given him and he breathed better thereafter. This sprinkling in connection with warm baths has proved useful also in sporadic cerebrospinal meningitis.

### Wiener klinische Wochenschrift, Vienna

*May 9, XXV, No. 19, pp. 691-734*

104 Cancer in Cold-Blooded Animals. (Geschwülste bei Kaltblütern.) M. Plehn.
105 Reasons for Predisposition of Lung Tissue to Tuberculosis. (Biochemische Grundlage der besonderen Disposition des Lungengewebes zur tuberkulösen Erkrankung.) M. Weiss.
106 Paradysentery. (Zur Frage der Paradysenteriebazillen—Deycke-Kruse.) D. Natonek.
107 Vaccination Against Typhoid. (Schutzimpfung gegen Typhus.) F. M. Hartsock (U. S. Army).
108 Suture of Vessels. (Ueber die Gefässnaht und ihre klinische Anwendung.) M. H. Kostic.

### Zentralblatt für Chirurgie, Leipsic

*May 11, XXXVI, No. 19, pp. 641-672*

109 Experimental Exophthalmic Goiter. (Zur experimentellen Erzeugung des Morbus Basedowii.) H. Klose and A. E. Lampe.
110 *Technic for Iodin Sterilization of Field of Operation. (Zur Iodtinkturdesinfektion, zugleich ein Beitrag von metastatischer Entzündung nach subkutaner Verletzung.) F. Brüning.

110. **Iodin Sterilization of Field of Operation.**—Brüning has been applying Grossich's technic for several years with complete satisfaction, using a 10 per cent. solution of iodin. Küttner recently stated that the results were equally good with a 5 per cent. solution, and Brüning changed to this strength. Within a week, however, severe pyemia developed in an operative case and, discouraged, he returned to his old technic with which he had never had any experiences of the kind.

### Zentralblatt für Gynäkologie, Leipsic

*May 11, XXXVI, No. 19, pp. 593-632*

111 *Eclampsia Statistics. (Geschichte der Eklampsiestatistik.) F. Lichtenstein.
112 *Severing the Clavicles to Aid Delivery. (Zur Frage der Kleidotomie.) E. Liebich.

111. **Expectant Treatment of Eclampsia.**—Lichtenstein has been compiling statistics in regard to eclampsia after delivery, and states that eighteen German obstetricians have reported a total of 4,585 cases of eclampsia, of which 955, that is, over 20 per cent., developed post partum. He cites this among other arguments as speaking against the advisability of premature delivery as a therapeutic measure in eclampsia. He writes from the maternity at Leipsic in charge of Zweifel where expectant treatment has been the rule for the past year.

112. **Improved Embryotomy.**—Liebich reports two cases to demonstrate anew the advantages of kleidotomy, that is, of cutting the clavicles when the shoulders are abnormally broad. The vessels in the region were not injured in his cases. The bones would soon heal if the child survived.

### Zentralblatt für innere Medizin, Leipsic

*May 11, XXXIII, No. 19, pp. 447-468*

113 *Functional Dilution Test for the Kidneys. (Ist der Strauss-Grünwald'sche Verdünnungsversuch für Diagnose und Prognose der Nephritis verwertbar und von Nutzen?) B. Goldberg.

113. **Dilution Test of Kidney Functioning.**—Goldberg commends to the general practitioner the Strauss-Grünwald dilution test as a simple and quite instructive means of estimating conditions in respect to kidney functioning, viewed in connection with the results of other tests and objective findings. It is possible by this means to determine the harmless character of an albuminuria, or the tendency toward recovery of actual nephritis, or the progressive nature of the kidney trouble. The patient takes nothing after 7 p. m., but the next morning drinks a pint of water at half past six. The night

urine is collected and weighed, and also the urine voided at 7, 8, 9, 10 and 11 a. m., recording separately the amount and specific gravity of each portion. In health a corresponding amount of urine is voided during the first three hours, the patient constantly reclining. At 8 a. m. the urine has the lowest specific gravity and by 10 a. m. a pint at least has been voided. The amount voided, time required, specific gravity and variations in the latter are the four points by which this test throws light. As possible sources of error must be borne in mind the psychogenic polyuria of nervous women, and the fact that men over 60 frequently retain at each micturition from 50 to 100 gm. of urine in the bladder although this does not give rise to any symptoms.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*May 5, XXXIII, No. 54, pp. 561-576*

114 Diagnosis of Syphilis. (La diagnosi moderna della sifilide. Siero-diagnosi e cutireazione.) R. Bellantoni (New York).

*May 9, No. 56, pp. 585-592*

15 Case of Hysteric Gangrene. (Contributo clinico sulla gangrena isterica.) G. Garginlo.

*May 12, No. 57, pp. 593-608*

16 *Sea Water in Transmission of Cholera. (Trasmissione di colera per mezzo dell'acqua di mare.) G. Porrini.

116. **Sea Water in Transmission of Cholera.**—Porrini reports wo cases of men who had accidentally fallen into the water n the harbor at Genoa last fall, and who both developed holera the third or fourth day thereafter.

### Policlinico, Rome

*May 12, XIX, No. 20, pp. 709-744*

17 Changes in Shapes of Bullets Fired from Modern Firearms. (I cambiamenti fisici dei proiettili delle moderne armi da fuoco portatili da guerra.) P. Imbriaco.

*May, Surgical Section No. 5, pp. 193-240*

18 *Non-Operative Treatment of Surgical Tuberculosis. (Importanza e limiti del trattamento incruento nelle tubercolosi chirurgiche.) R. Alessandri.
19 *Treatment of Diffuse Purulent Peritonitis. M. Fasano. Commenced in No. 4.
20 Excessive Muscle Functioning as Factor in Hernia. (Di un importante coefficiente nella genesi delle ernie.) E. Casati.

118. **Non-Operative Treatment in Surgical Tuberculosis.**—lessandri emphasizes the fact that a surgical tuberculous rocess is a chronic lesion generally secondary to other foci at accessible points, and with a tendency to heal when general id local conditions are favorable for this. The aim in treat-ent should be to modify general and local conditions so as promote the spontaneous recovery. The part affected should kept at rest and protected from injury of all kinds, while berculin and iodin should be called in to modify the general id local conditions. He advises conservative measures for berculous processes of the soft parts, lymph-nodes, tendon eaths, synovial and serous membranes and male genitals. operation is generally required when the tuberculous proc-s is in the intestines, female genitals, kidney or nervous stem. In bone. conservative measures may answer the pur-se in some cases, but in others operative treatment is neces-ry and these considerations may justify early intervention once. Open tuberculous lesions, with mixed infection, ways require operative treatment unless the superposed infec-n can be eradicated. If this can be done conservative treat-nt comes into its own again. Fistulas with scanty secre-n may heal under paste treatment, especially bismuth paste.

119. **Purulent Peritonitis.**—Fasano says that the bacteria in peritoneum take about six or eight hours to develop; in perimental research, operative measures later than this are ible to save the animals. In the clinic, purulent peritonitis ould be treated on the same principles as an abscess any-ere, but much depends on the management of the case after s has been done. Fasano reiterates that the pus is the duct of a defensive reaction, not the infecting agent. Mere noval of the pus does not necessarily sterilize the region, l anything that promotes absorption from it enhances the ic action. He follows Murphy's technic in detail except t he supplements it by injecting into the peritoneal cavity per cent. solution of thiosinamin to induce local hyper-kocytosis which reaches its highest point in five or six irs. The thiosinamin is harmless, he says, and can be injected daily for several days, each repetition having the same or a magnified effect. He reports ten cases in detail with recovery of six of the patients.

### Brazil Medico, Rio de Janeiro

*April 15, XXVI, No. 15, pp. 143-152*

121 Pathology and Symptomatology of the Adrenals, and Treatment. (Syndromes supra-renaes, lesões das capsulas e seu tratamento.) L. Freire.

*May 1, No. 17, pp. 165-174*

122 *Chronic Progressive Chorea. (Sobre a chorea de Huntington.) A. de Castro.
123 *Disease of the Spinal Roots. (Algumas notas sobre as radiculites.) J. V. Romeiro. Commenced in No. 16.
124 *Dioradin. H. Autran.

122. **Chronic Progressive Chorea.**—De Castro has been studying two cases of the rare affection known as Huntington's disease or hereditary chorea. The first patient is a man of 43 free from known hereditary or pathologic taint until the first onset of the chorea five years ago. The twitchings and motor disturbances interfere to some extent with voluntary movements but have not incapacitated the man from continuing his business, although the attention and memory do not seem quite as alert as normal. The affection seems of the Huntington type except for the absence of known inherited taint. The other patient is a man of 66, the father of several healthy adult children. The chorea commenced in this case at the age of 46. The mind has not failed to a notable extent although there are occasional periods of excitement with tendency to suicide. De Castro gives a series of kinematographic representations of an attack, and mentions as a characteristic symptom the loss of the function of arresting one motor impulse and substituting for it an opposite one—adiodokinesia.

123. **Disease of the Spinal Roots.**—Romeiro discusses the symptoms of radiculitis, the paroxysmal pains or the gradual development of a dull ache The interval between the attacks of pain may be a year or more; an interval of three years is on record. The pains may have many features suggesting tabes. In one case any abrupt movement was liable to bring on an attack of pain. and it always started the most violent paroxysms of pain. This sign is not pathognomonic but it was noted in nearly all the cases on record, as also lymphocytosis in the cerebrospinal fluid. The data suggest that radiculitis and tabes may be merely different manifestations of a single specific meningitis. Romeiro reports a number of cases, stating that the trouble usually is first mechanical, the primary disturbance being some tumefaction or syphilitic lesion.

124. **Inefficacy of Dioradin.**—This is a communication presented at the April 18 meeting of the Brazil Academia Nacional de Medicina by H. Autran. He stated that he had received a letter from Szendeffy of Budapest and Bernheim of Paris replying to his unfavorable criticism of their product, dioradin, a few months ago (*Brazil Medico*, 1911, xxv, 291-298). Autran read the letter, refuting each of the points raised in turn, citing further from letters received by him from A. Lima, Sr., and Jr., and R. Cezar who had given dioradin an extensive trial at the Dispensario da Liga Brazileira contra a Tuberculose without obtaining good results and had consequently dropped it. He read further a letter containing other unfavorable comments on dioradin from A. Ferrari and O. da Fonseca. Autran remarked in conclusion that he was thus in good company in his denunciation of dioradin. and had no reason to modify his previous unfavorable criticism.

### Semana Medica, Buenos Aires

*April 11, XIX, No. 15, pp. 693-736*

125 *Resection of Elbow. (Las resecciones del codo en las luxaciones antiguas.) G. B. Arana.
126 *Atmolysis. (Atmolisis y atmolizador.) R. Dubois.

*April 18, No. 16, pp. 737-780*

127 *Catarrhal Inflammation of the Rectum with Obstinate Constipation. (Las rectitis catarrales en la constipacion pertinaz.) C. B. Udaondo.
128 Experiences with Salvarsan in Syphilis. B. N. Calcagno.

125. **Resection of the Elbow for Old Dislocation.**—Arana gives a detailed report of his experiences in six cases, all confirming the ultimate fine results after partial resection of the epiphysis of the humerus above the line of junction of the epicondyle with the epitrochlea. Resection should be reserved

for the last resort in adults after failure of all other measures perseveringly followed. It should never be applied until after the age of 17; before this, massage, exercise of the joint and electricity should be systematically applied. The incision should be longitudinal and brachial, and before any resection is attempted, efforts should be made to reduce the dislocation. The results grow constantly better with time as the bone regenerates. The more freedom of movement desired, the more bone should be resected, up to 4 cm. Great stress should be laid on the postoperative treatment, especially on the necessity for patience and perseverance on the part of the patient. The functional outcome was surprisingly good in his cases.

126. **Atmolysis.**—Dubois has coined this term to express the action exerted on organic tissue by the fumes of volatile fluids, such as benzin, ether, chloroform, alcohol, etc. He has devised an apparatus for the study of the phenomena involved. He explains them as of osmotic nature and states that they are important aids in physiologic and physico-chemical research and in extraction of therapeutic chemical principles.

127. **Catarrhal Inflammation of the Rectum.**—Udaondo emphasizes the necessity for direct visual inspection as the only means to differentiate positively catarrh of the rectal mucosa from diarrhea of other origin. He has encountered it three times in eighty-six cases of constipation from atony of the bowel. The patients all had long suffered from chronic constipation but the catarrhal affection caused a scanty serous stool every three or four hours. Defecation was painful but no blood was noticed in the stools. The sigmoid flexure was found distended with fecal matters and hard lumps were seen at sheltered points in the rectum while the mucosa was congested and swollen with more or less adherent mucus. The catarrhal trouble may lead to this serous diarrhea or the fecal lumps may be merely coated with mucus. The rectum should be rested by mild laxatives, giving it a chance to recuperate, and small enemas of a weak solution of silver nitrate or other silver salt are advised after each defecation. Left untreated, the condition may lead to serious complications while it yields readily to the above simple measures.

## Hygiea, Stockholm

*April, LXXIV, No. 4, pp. 386-480. Last indexed May 11, p. 1488*

129 *Otitis Media in Scarlet Fever. (Om otitis media perforativa vid scarlatina.) G. Holmgren. Commenced in No. 3.

129. **Otitis Media in Scarlet Fever.**—The first part of Holmgren's article was summarized in The Journal, May 11, p. 1488.

## Ugeskrift for Læger, Copenhagen

*April 25, LXXIV, No. 17, pp. 649-692*

130 Cerebral Localization. (Hjærnelokalisation—særligt Lokalisationen af de sjælelige Funktioner.) K. Malling.
131 Baths for Pregnant and Parturient Women. (Bør fødende og svangre bruge Karbad?) M. le Maire.

*May 2, No. 18, pp. 693-722*

132 Roentgenoscopy of the Intestines. (Om Røntgenundersøgelser af Tarmkanalen.) R. W. Kiær.
133 *Tardy Manifestations of Inherited Syphilis. (2 Tilfælde af formentlig Lucs hereditaria tarda.) E. Clausen.

*May 9, No. 19, pp. 723-768*

134 Serodiagnosis of Syphilis. (Erfaringer med Hermann-Perutz's Syfilisreaktion.) V. Ellermann.
135 Gastro-Intestinal Diseases. (Om Sygdommene i Fordøjelsesorganerne.) A. Madsen.

133. **Tardy Manifestations of Inherited Syphilis.**—Clausen reports two cases in a brother and sister apparently healthy until about 19 years of age. The young man developed then a process in the leg suggesting ostitis of the tibia, which he ascribed to a trauma. The girl had keratitis and later periostitis in the arm. Both were treated with mercury and iodid and were soon cured, previous operative measures having failed to arrest the affection.

## Upsala Läkareförenings Förhandlingar

*XVII, Nos. 4-5, pp. 271-392. Last indexed March 16, p. 828*

136 *Hydrops of Bile Passages. (Till frågan om hydrops i hela gallvägssystemet.) S. Lindqvist.
137 *Heredity of Deaf-Mutism and Importance of Heredity for Pathology. (Om den konstitutionella döfstumhetens ärftlighetsförhållanden samt några ord om ärftlighetsforskningens betydelse för sjukdomsläran.) H. Lundborg.
138 Effect on Amphibia of Changes in Concentration of Medium. (Om amfibiernas förhållande i olika koncentrerade lösningar.) E. L. Backman and C. G. Sundberg.
139 *The Molecular Diuresis with Varying Intake of Water. (Om den molekylära diuresens förhållande vid sparsam, resp. riklig vattendrickning och konstant kost.) A. Herne.
140 The Optimum Conditions for Contraction in Frog Muscle. (Undersökning angående läget af belastningsoptimum för musculus gastrocnemius hos groda vid olika intensitet af tetaniserande retning.) A. Aronson.
141 *Non-Malignant Bone Cysts. (Bidrag til kännedomen om de s. k. äkta eller benigna—genuina—bencystorna.) E. Utterström.

136. **Hydrops in Bile Passages.**—Lindqvist summarizes from the literature five cases of hydrops of the entire biliary passage apparatus with chronic obstruction of the common bile duct, published since Kausch's compilation in 1910 of fourteen cases. Lindqvist's series includes a case reported by Berg last year, and he adds to this a case from his own experience. His patient was a vii-para of 38 and the liver extended below the costal arch, occupying nearly the entire right abdomen. Puncture released from the gall-bladder large amounts of a limpid white bile. After systematic draining the liver receded to its normal outline. A few days before her last delivery there had been attacks of pain and the liver had increased in size. It was evident that mild infection had set in and an operation became necessary the day after delivery. Pressure from the gravid uterus plus the increased secretion in consequence of the infection, had caused conditions compelling an emergency cholecystostomy which speedily restored conditions to normal.

137. **Heredity and Disease.**—Lundborg reproduces Fay's tables on the 4,477 marriages of the deaf in America. He then reviews the data in regard to 414 families from his own experience in which 12.3 per cent. of the 2,205 children are deaf-mutes. Comparative analysis of all this material demonstrates, he says, the truth and reliability of Mendel's laws in regard to heredity. These laws illuminate most instructively the nature and biologic workings of consanguineous marriages. They also supplement other data, pathologic, clinical and statistical, in regard to various diseases and clinical entities.

139. **Molecular Diuresis with Varying Intake of Fluids.**—Herne's tables show that on an otherwise constant diet the proportion of solid elements in the urine increases materially when after a period of small intake of water large amounts are ingested.

141. **Bone Cysts.**—Utterström reports a case of a solitary bone cyst in a girl and boy both 6 years old. The pains and spindle-shaped enlargement in the femur or tibia were traced to a trauma two months or two years before. The cyst in the tibia was lined with a brownish membrane which was easily stripped off. The cavity was tamponed with gauze and it gradually healed, filling up with new bone. Roentgenoscopy five months later revealed that the cavity had not entirely filled up while a new cyst was seen to be developing below the old one. It had not caused any pain yet and the content were only semifluid and there was no membrane lining. Th cavity was curetted and it soon healed and filled up, the le being now, a year later, apparently entirely sound. In th other case the cavity in the femur was as large as a hen' egg and a polyp-like growth protruded into it. This wa removed with the lining membrane. The bone fractured in th operation but the lesions all healed promptly and the boy ha been entirely well since. Nothing was found on microscopi examination to suggest cancer, but this seemed probable i another case in a boy of 9 who had a cyst in the neck of th femur. Operative treatment disclosed sarcoma-like tissu Conditions did not suggest that the lesion was very maligna and intervention was limited to curetting the focus. The bo healed completely with no impairment of function and the bo is now, three years later, still apparently entirely well. Th findings in the two first cases suggested fibrous ostitis as th cause of the cyst formation and that trauma is a factor, a also some predisposition on the part of the bone. The pro nosis is good with prompt operative treatment but it important to avoid confounding lesions of this kind with t malignant.

Journal Announcements, Knocks and Boosts, Books Received a changes in the Public Service will be found in the advertising s tion, commencing on the second page following reading matter.

# Society Proceedings

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## COMING MEETINGS

Michigan State Medical Society, Muskegon, July 10-11.
North Carolina Medical Society, Hendersonville, June 18-20.
Washington, Idaho and Oregon associations, Portland, July 5-8.
West Virginia State Medical Association, Webster Springs, July 10-12.

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## THE SOUTH CAROLINA MEDICAL ASSOCIATION

*Sixty-Fourth Annual Meeting held at Columbia, April 16-18, 1912*

The President, Dr. J. W. Jervey, Greenville, in the Chair

### Officers Elected

The following officers were elected: president, Dr. Charles M. Rees, Charleston; secretary-treasurer, Dr. E. A Hines, Seneca. The next annual meeting will be at Rock Hill, April, 1913.

### The Medical Profession and the Public Health

Dr. J. W. Jervey, Greenville: The people should be taught how immeasurable are the benefits to be obtained by obedience to the laws of preventive medicine; what wonders have been wrought in the conquering of disease and the prolongation of life, and what can be further accomplished, if they will but give us their intelligent cooperation; also, that their children must be carefully instructed in the laws of health. The great molders of the public mind have been and are (1) parents; (2) teachers; (3) politicians; (4) the clergy, and (5) the press.

Another and even greater class must take a hand in the education of the people, the doctors of medicine; because they are necessarily the only class that can give competent instruction in medical subjects, and by giving it will render incalculable service to mankind. The ultimate and certain logical fact is that the welfare and prosperity of a state or a nation depends on the health of its people. We must show our fellow men, first, the dangers that surround them, and next, how these are to be avoided.

It is our present duty (1) to preach, day in and day out, the gospel of education (including the teaching of the principles of health and disease) for our children; (2) to urge on our legislature the fundamental importance of enacting a law for the recording of vital statistics; (3) to continue our efforts in behalf of legislation requiring the medical inspection of school children.

### Twenty-Three Consecutive Cases of Gunshot Wounds of the Abdomen, With Two Deaths

Dr. LeGrand Guerry, Columbia: In all these cases, save the first, thorough irrigation of the abdominal cavity, with salt solution, was employed. I used the Blake two-way irrigator. Just as soon as the abdomen is opened and irrigation decided on, the irrigator is introduced and kept going throughout the operation. Drainage consists of a cigarette drain of iodoform gauze and protective tissue, or a drainage-tube. Every patient of this series was placed in the exaggerated Fowler's position. We need to be most careful in the question of diagnosis, especially in cases in which some doubt exists. My rule is always to explore, unless convinced beyond a reasonable doubt that the bullet has not entered the abdomen. The question of whether to repair or to resect the intestine is a very important point to determine, and this decision alone will influence the tide for or against success. In some cases the intestine is so badly damaged, or the perforations are so close together, or the individual hole so large, that time will be saved and security against leakage safeguarded by resection rather than individual repair. It is an excellent plan, unless definite indications exist, to have the patient transported in the semi-inclined position. The question of present importance to determine is, how extensive a search shall be made for the perforation. About 2 per cent. of cases of gunshot wounds of the abdomen result fatally because of tetanus; therefore I always give them an immunizing dose of antitetanic serum. Administration of the serum should be begun at once.

DISCUSSION

Dr. George W. Crile, Cleveland, O.: I can recall no other series of perforating wounds of the intestines with such signal success attending operations. Dr. Guerry mentioned hemorrhage as one of the dangers in gunshot wounds. In these cases one might, with advantage, perform transfusion of blood.

Dr. Charles M. Rees, Charleston: I would mention one point in Dr. Guerry's treatment which has not seemed of advantage. At the Roper Hospital we get many cases of gunshot wounds. The shooting among the colored people, and a good many others too, in our section, is done very indiscreetly. We have found the less interference we make there the better for the patient. We have not found that the salt irrigation going on during operation is of any particular advantage —generally an injury. The peritoneum is making a desperate effort to take care of the infection. Free drainage after the operation is an assistance. The peritoneum and bowels should be disturbed as little as possible. When he speaks of cleaning out the peritoneum by irrigations, I think he is attempting something beyond possibility.

### A New Method of Operation for Typhoid Perforation

Dr. L. B. Owens, Columbia: A free incision should be made in the right iliac region, and if the peritoneal cavity is filled with fluid and fecal matter, one should be made in the median line and one in the left side. Gauze pads should be placed in the peritoneal cavity during operation to absorb poisonous matter. The peritoneal cavity should not be irrigated, except in elective cases. Intestines should not be handled or pulled out. Drainage-tubes should be placed down where pus is liable to gravitate. I prefer rubber tubes with wicks. Iodoform gauze should be packed loosely about the lower end of the ileum in such a way as not to cause an obstruction. Incisions should be left wide open packed with gauze, compresses being used to keep back the intestines. There will probably be a fecal fistula, which should discharge through the wound in the right side. In most cases Fowler's position is indicated.

I have operated in two cases of typhoid perforation by this method, both being very unfavorable, owing to the fact that neither patient would submit to an operation until the third day after perforation. One died two and a half days after the operation. In the other case perforation occurred ten days after fever and the patient was operated on three days after the perforation. Pulse was 160 just before operation. A certain percentage of cases will be followed by hernia, which can easily be cured by a second operation, which is practically free from danger.

### The Present Status of Goiter Surgery

Dr. A. B. Knowlton, Columbia: In the light of past events it is not surprising that the operation for goiter has had to struggle for a place on the list of established surgical procedures, but this struggle has been made and the net result is that elective operative interference has achieved the undisputed mortality of less than 3 per cent. Prior to 1890 practically every operation that had been done for this condition was done after the patient's condition had become practically hopeless. If the whole thyroid were removed, myxedema ensued; if the parathyroids were removed, or too many of them, tetany and death resulted. If too large a portion of thyroid was removed, the patient would have to live on thyroid gland to make up the thyroid deficiency. Every case should be treated medicinally before operative procedures are recommended.

To simplify the process of selection of cases for operation all cases are grouped under three heads: cancer, adenomata and exophthalmic goiter. In cancer the condition has usually progressed enough so that the patients benefit but little, if at all, by operation. The adenomatous goiters are by far the most frequent type encountered. They rarely produce death, except by malignant or degenerative changes in the gland structure, and are most favorable cases for operation. The third or exophthalmic group presents the most scientific interest to internist and surgeon alike. This group shows not only anomalies of structure, but of secretion. In this condition the thyroid, for some unknown reason, secretes an increased amount of thyroidin. In this condition it is not at all necessary that the thyroid gland should be enlarged in the least degree, for in some of the most pronounced cases hyperthyroidism coexists with an entirely normal-sized gland.

In the treatment, the physiologic use of belladonna is recommended. The $x$-ray seems to exert a modifying effect on the hypersecretion. The surgical treatment may consist of ligation of one or both of the superior thyroid arteries, with their accompanying veins, or of removal of a portion of the gland itself. If the symptoms continue, one-half of the thyroid is removed. The result is that when the elective hour for operation is chosen, goiter operations are now yielding results second to none in restorative surgery.

### DISCUSSION

Dr. C. B. Earle, Greenville: I have had a few cases in which I was very much puzzled to decide whether surgical interference should be attempted or not. I do not know where to draw a sharp line in those cases in which we think that the impairment of the heart is permanent, and those in which recovery is possible. I have been very much surprised at the ability of the patient to repair these cardiac and other changes after the removal of a portion of the thyroid gland.

Dr. S. E. Harmon, Columbia: Oftentimes when we accuse ourselves of having cured a patient with drugs, Nature has done the work herself, and I think we should leave it alone, or else deal with it as a strictly surgical condition.

Dr. W. J. Burdell, Camden: I have found that many general practitioners when they decide that a patient has goiter, no matter what form it is, give thyroid extract. It seems that where hyperthyroidism exists, one is just hastening the end of the patient to give him thyroid extract.

Dr. S. C. Baker, Sumter: There is one part that the administration of thyroid extract might play in the treatment of hyperthyroidism, and that is as an aid to diagnosis. I cannot see where thyroid extract is indicated in the cure of hyperthyroid conditions. I have seen patients who seemed to recover after thyroid extract had been administered, but I think it was *post*, and not *propter hoc*. In many cases, tachycardia and certain digestive and nervous symptoms lead us to believe that they possibly are due to an increased secretion of the thyroid, the absorption of which is producing these symptoms. In such cases, if we will give thyroid extract for a short time, and carefully watch the symptoms, count the pulse, and note all the other conditions, and if we see that they are getting worse, we can be pretty well confirmed in our diagnosis of hypersecretion, and that it has been made worse by the administration of thyroid extract. If it has not been made worse, we probably have not a case of hyperthyroidism to deal with, and so we can let it go along and be treated as something else.

## Conservatism in the Treatment of Affections of the Ear, Throat and Nose

Dr. Charles W. Kollock, Charleston: Conservative treatment of acute affections of the middle ear—the chief cause of deafness, chronic middle-ear disease, mastoiditis, brain abscess, etc.—consists of prompt treatment of the throat and eustachian tube and early incision of the drum membrane in order to establish free and unobstructed drainage. In a fair percentage of mastoid cases recovery would take place without an operation, but every case should invariably have constant and careful supervision until all signs of danger have passed. Mutilating operations of the septum and turbinate bones are uncalled for often, when prolonged treatment might preserve them. Even in treating the antra and sinuses, non-operative methods should be given a fair trial if the symptoms are not urgent. I advocate the entire removal of diseased tonsils by enucleation, but simple hypertrophied tonsils which do not interfere with breathing, hearing and swallowing should be left until proved a menace. Adenoids should invariably be removed on account of their situation and likelihood to increase in size at times.

### DISCUSSION

Dr. J. W. Jervey, Greenville: There is much unnecessary surgery done on the mastoid process. I have never seen in my own practice a case of mastoid disease that has terminated fatally or badly, and I have seen many patients recover under the conservative plan of treatment. I believe the majority of mastoid operations done in this section are done simply because the preventive measures which could and should have been undertaken have been wholly neglected. Nearly all of us see these cases when attention to the middle ear, and drainage of the middle ear by incision of the drum membrane would result in alleviation of the conditions. Even when there is possibly pus in the antrum, frequently drainage of the middle ear will bring about relief. No one can examine a tonsil and say whether that tonsil is or is not thoroughly diseased. It is merely a question of deduction at which we arrive from clinical experience. I believe that there are many temporary conditions of tonsils which appear to be diseased but which will be restored to their natural function when other diseased conditions are removed. I have seen this demonstrated so frequently that I have made it an almost fixed practice to remove the adenoids and leave the tonsils alone, unless they are evidently and palpably diseased. If there is a simple hypertrophy, with no evidence of chronic, persistent inflammation, no matter how large those tonsils are, unless it is evident that serious embarrassment is going to be caused by extreme enlargement of the tonsils, I leave them there, to see whether or not they will resume their normal size and position after nasal breathing has been reestablished. If they do, well and good. If they do not, I remove them, but I reserve my judgment in each individual case whether I shall do a tonsillotomy or a tonsillectomy.

Dr. R. A. Gyles, Blackville: I would like to emphasize the conservative treatment of the mastoid condition. The apparent condition externally does not indicate the character of the diseased organs or the ultimate result of the case. A great number of cases of mastoid abscess, mastoid involvement and nasal troubles, particularly spurs and turbinates, are to-day treated by a radical operation, which is not indicated and not necessary. I remove these when I see that it is necessary, but small spurs, for instance, that do not affect drainage, I let alone.

Dr. C. L. Kibler, Columbia: The treatment I use in general, in suppurating middle-ear diseases, is thorough drainage and cleansing, opening of the ear-drum, free incision, then thorough cleansing of the ear canal, also middle ear. A solution of bicarbonate of soda or boric acid or 1-5,000 bichlorid, followed with some mild astringent. If a chronic condition is present, I use one drop of alcohol, once a day.

## Board of Health Powers Increased

Through the combined efforts of the members of the South Carolina Medical Association, an act has recently been passed by the general assembly of the state which increases the powers of the State Board of Health. The board has jurisdiction over the sanitation and disinfection of all passenger cars steamboats and other vehicles of transportation, and also al public institutions, such as convict-camps, jails, etc., and al places used by or open to the public. The board has the powe to segregate and isolate persons having, or suspected of having any communicable, contagious or infectious disease, and als to regulate the methods of disposition of garbage, sewerag and any like refuse, wherever found. Provision is also mad for a thorough investigation and study of the causes of dis eases and the means for the prevention of contagious dis eases, and for the publication and distribution of such informa tion as may contribute to the preservation of the public healt The board is also empowered to make separate orders an rules to meet any emergency not provided for by the genera rules and regulations. There is also a section which make any violation of this act a misdemeanor, punishable by fine c imprisonment.

# PROCEEDINGS OF THE ATLANTIC CITY SESSION

## MINUTES OF THE SIXTY-THIRD ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ATLANTIC CITY, N. J., JUNE 3-7, 1912

*(Continued from page 1812)*

### President Murphy's Address to the House

In opening the House of Delegates, Monday morning, June 3, Dr. John B. Murphy, Chicago, President, said:

*To the Members of the House of Delegates:* Permit me to again express to you my sincere appreciation of the great honor you conferred on me in electing me President of the American Medical Association, the largest and, I believe, the most representative body of medical men in the world. This honor is deeply appreciated, and for it I am profoundly grateful.

It has been the custom of the retiring President to deliver in brief his estimate of the activities of the Association during his administration, and to give his opinion as to the lines which should be followed for increasing the force and service of the Association to the public and to the profession. I have not been able to accomplish all that I had hoped for when I assumed the presidential office, but I have made an earnest and honest effort to the full extent of my capacity. Its shortcomings, many as they are, have not been of the heart or desire, but of incapacity. I wish to thank the officers and committees for their work in behalf of the Association during my administration.

The medical profession's interest in the public welfare is axiomatic, supported by the ideals advanced and the practice followed by the medical profession for centuries. An attempt has been made in the superlative degree in the last year to discredit the altruism of the medical profession in its interest and action in its public health welfare. This attack has been so venomous, persistent and outspoken in its unquestionably false accusations which originated primarily from those with personal adverse interests, that it has now become so disseminated and broadcast that many right-minded people are accepting them as true. This has been most conspicuous in the attacks on the national health endeavors of the Association. In other words, the deep-rooted and stealthily cultivated opposition, which was hidden in the past and thus able to exert a most pernicious and adverse influence, has now been forced into the open by the efforts of the American Medical Association, and it is found to consist of those outside of the profession, who, for profit and personal interests or license, prey on the public, such as the patent medicine, adulterated drug and food interests, the Christian Scientists, chiropractics, osteopaths and magnetic healers, fortune-tellers, a small number of the homeopaths and eclectics, and a very small number of the so-called regular profession.

The fact that the work is now in the open imposes an obligation on the profession clearly and forcefully to place before the people regarding the federal health activities the fallacies and misrepresentations of those who have profited privately and stealthily by the negligence and indifference of the national government toward the health welfare of its people. Its position must be stated on every available occasion and occasion sought for its promulgation. Every time a speaker is advertised to attack the profession, he must be met on the same platform by members of the profession who are informed and capable of placing the medical profession in its actual and true light. Then the victory is ours. The time for assumed impregnability of the profession and dignified silence regarding these charges is past. The issue must be forceful, militant and active if the Association hopes to win for the people the benefits that can accrue from a national health department.

Note what an organized health department service has accomplished for the people in Germany. The mortality from tuberculosis has been cut in two in the last five years. The mortality from diseases of children has been reduced from 18 per cent. to 9 per cent. In this country the activities which produce these results are being fought by a certain class of people, and in a clean-cut anarchistic way. No one can interpret the action of the League for Medical Freedom otherwise than as the action of an anarchistic body against law and order. The question is, will anarchy and license prevail, or will intelligence, freedom and protection dominate the health interests of these one hundred millions of people? The arguments advanced by the League for Medical Freedom spell anarchy and unbridled license, and not intelligent organization and freedom, although many of these good and misguided people do not recognize that their actions are basically anarchistic.

All that is necessary is that the people shall know, and we must tell them, and there will be no trouble then in overcoming the hidden and selfish opposition within the profession, as well as the richly financeered and well organized opposition from without. If we are to obtain a national independent health service it must be done through, first, educating the public, which should be the scope of the Council on Health and Public Instruction; and, second, and not less important, entrusting the legislative work to men of national reputation who are familiar with the details and requirements of legislative enactments. I therefore recommend that the legislative work be transferred from the Council on Health and Public Instruction to a Council on Medical Legislation to consist of five members, to be elected by the House of Delegates, one for five years, one for four years, one for three years, one for two years and one for one year. Thereafter, one member shall be elected each year to serve five years. The Council shall organize and adopt such regulations for the government of its action as is deemed expedient. The Secretary of the Association shall be the Secretary of the Council. The Council shall expend money or contract financial obligations only as shall be authorized in writing by the Board of Trustees and the Board of Trustees shall be instructed to furnish the necessary financial aid.

Through this plan we may hope to secure a federal independent health service and that hope may soon be realized. This Council will need and, I am sure, will receive, as our Committee has received, the hearty coöperation of all of the state societies, and I wish here to express my personal appreciation of the enthusiasm and force with which the state societies have responded when called on.

#### ORGANIZATION *

The activities in organization have been decreasing from year to year until now they have about reached a standstill.

I submit a report of the membership since May 1, 1908.

| | | | | |
|---|---|---|---|---|
| Number of members May 1, 1908 | | | | 31,343 |
| Died | 290 | | | |
| Resigned | 1,439 | | | |
| Not eligible | 290 | | | |
| Non-payment | 484 | | | |
| Not found | 55 | | | |
| Total | 2,558 | | | |
| Added by subscription | | 3,638 | | |
| Added by new members | | 1,512 | 5,150 | |
| A net gain of | | | | 2,592 |
| Or a complete membership of | | | | 33,935 |

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* [In compiling these statistics regarding organization, the President does not take account of the many instances where men were dropped from the roll one year and reinstated during the following year; also that a large number of those each year entered as having resigned from the Association were no longer eligible to membership under the By-law which requires continued membership in the state association, and that these were allowed to resign in preference to being entered as dropped, while many more resigned on account of age. This has been referred to year by year in the reports of the secretary and of the trustees.

For several years efforts to have those who were taking The Journal as subscribers and who were eligible to membership in the Association to transfer their names from the subscription list to the membership roll, have not been made because of the uncertainty of the final ruling of the Post-Office Department regarding the mailing of The Journal to such members. As noted in the report of the Board of Trustees, this matter has now been adjusted. The increase of membership that really counts is the increase in the membership of the organization; that is, in the county societies. —Secretary.]

| | | | |
|---|---|---|---|
| Number of members May 1, 1909 | | | 33.935 |
| Died | 289 | | |
| Resigned | 1,937 | | |
| Not eligible | 625 | | |
| Non-payment | 406 | | |
| Not found | 95 | | |
| Total | 3,352 | | |
| Added by subscription | | 3,593 | |
| Transferred | | 2,628 | |
| New members | | 965 | |
| A net gain of | | | 241 |
| Or a total membership of | | | 34,176 |

| | | | |
|---|---|---|---|
| Number of members May 1, 1910 | | | 34,176 |
| Died | 335 | | |
| Resigned | 222 | | |
| Not eligible | 462 | | |
| Non-payment | 1,849 | | |
| Not found | 48 | | |
| Total | 2,916 | | |
| New members added | | 2,700 | |
| Transferred from sub. list | | 2,294 | |
| A net loss of | | | 216 |
| Or a total membership of | | | 33,960 |

The number of members May 1, 1911, was 33,960; 299 members have died; 1,301 members have resigned; 500 members have been dropped as non-eligible, and 1,987 have been dropped for non-payment of dues, and 64 reported not found, making a total of 3,151 names to be deducted from the membership list. There have been added 3,474 to the membership roll, of which 2,253 were transferred from the subscription list. The membership of the American Medical Association May 1, 1912, is 34,283. There have resigned from the Association in the past four years 4,899; there have been dropped for the non-payment of dues 2,726, making a total of 7,635 members taken out of the Association. Why? This means an annual loss to the Association in dues alone of $38,175 and a still greater loss in prestige and education. No business house would permit such a loss of patronage without the closest scrutiny and the most careful analysis. Again, we have in the United States practically 102,000 medical men, with only 34,000 of these in the American Medical Association. Some states are thoroughly organized having as high as 66 per cent. of the physicians in the state as members of the American Medical Association, as North Dakota; while others have as low as 22 per cent.—Tennessee. It appears to me it is the obligation of this Association to determine why the state of North Dakota has not 80 or 85 per cent. and the state of Tennessee an equally high percentage. Are we doing a sufficient amount of work for the every-day practitioner to keep him interested? Are we giving him sufficient for the $5 which he pays for his membership and The Journal? Or, what in addition must we do to keep alive the interest in the Association and to obtain his support and membership? All these questions should be worked out by a body of men who have special ability and facilities to determine the cause and remedy the evil effects of this diminution in membership. It will be said that we have taken in more than we can assimilate. That is not a rational explanation. It will be said that we have taken in a large number of members who were undesirable. That I do not believe is true. The fact, as it appears to me, is that we have a colossal number of desirable members of the profession outside of the organization who are not reaping the benefits in the way of education and stimulation to higher work which they should receive from this Association. I therefore recommend that organization be taken out of the work of the Council on Health and Public Instruction, as it is an entirely independent function, and that it be placed under a Council on Organization, to be elected by the House of Delegates, to consist of five members, one of whom shall be elected for a period of five years, one for four years, one for three years, one for two years, and one for one year and one each succeeding year for five years.

This work must be advanced but it cannot be done through literature. It must be advanced by direct contact with the medical profession in the various localities, in state and county societies. I would suggest that the delegates also read Dr. Littig's article in The Journal, June 1, p. 1653.

It is very much to be regretted that Dr. J. N. McCormack has severed his connection with the organization activities of the Association. The American Medical Association owes him a great debt of gratitude for the splendid service which he carried on for so many years in increasing its enrolment. The results which he achieved could be obtained only by a man with a born conviction in the ideals which he advocated, with the charm and force of character which carried conviction to those who listened to or came in touch with him. He had a better knowledge and a better control of the agencies which induced men to become members of the Association than any man connected with it since its organization. I had hoped that the House of Delegates might prevail on him to continue his activities, even in a less laborious manner. He has made many sacrifices of personal comfort and financial loss to further the interests of this body. His was truly an altruistic labor. It is this type of devotion, however, that is necessary to maintain and increase our membership. Organization must receive special forceful and continued effort in order that the best results may be obtained. The statement that the organization has taken in more members than it can assimilate is not in consonance with the facts if the great interests of the general practitioner are to dominate the American Medical Association, and these interests by the force of number and by the degree of their utility should dominate every act of this organization.

### THE SECRETARY

I wish personally to thank the Secretary, Dr. Alexander R. Craig, for his effective and ever ready assistance and advice during my administration.

### THE JOURNAL

The splendid journal which the American Medical Association is publishing is a monument to its scientific work, a stimulus of enthusiasm, a beacon of integrity in the diffusion of medical knowledge and in the standardization of journal ethics. Great credit is due to the editor, Dr. Simmons, for these results. It is his desire to increase the scope and enhance the service of this journal to the medical profession. This organization is now on a firm financial basis. It has a goodly surplus and an increasing revenue. This surplus should not be hoarded, but should be annually expended for the education of the great body of practitioners of the organization. The Journal is essentially the sole modern library of many thousands of practitioners, both at the cross-roads and in the side-streets. Indeed, it is the only journal of moment which many practitioners take. It should therefore bring to these men the greatest possible amount of available information. It is objected that it is too large now for the busy practitioner to read in a single week. That may be true of some, but not of many. It should have in it the maximum amount of information available and well indexed for the practitioner to refer to when a particular case comes under his charge, and when he looks to The Journal it should not be found wanting. The Journal has now on an average of 54½ pages of advertisements, and 64 pages of reading matter. We do not need to increase the advertisements, but an addition of 50 or 100 per cent. to the reading-matter can be made at no great expense in publication, and we have the money to do it. There are more than enough good articles sent to The Journal and rejected than would fill this additional space. We have been setting up standards, through editorials and articles, as to the type of journal in which physicians should publish their articles. If we are to be practically true to this standard, let us provide for them a place of publication for these articles in a journal that is above reproach and has a large circulation. Again, it appears to me, it would be profitable to publish more of the communications from the state and county societies, both of inquiry and of suggestion. From the number of letters which I receive annually, asking where information concerning topics can be found, and what can be done for certain cases, it seems to me that greater space can be given to inquiry, and in this way stimulate its frequency and enhance its usefulness. In other words, we should have a bureau of inquiry and information. Whether the additional material should appear as a monthly or bimonthly supplement, or as a regular weekly edition in the way of pages, is a question for the General Manager and Editor, but the increase should be ordered by the House of Delegates.

### COMMITTEE ON NOMENCLATURE AND CLASSIFICATION

This committee, through the zeal and labor of its chairman, Dr. Cressy L. Wilbur, has accomplished a great deal in the past six months, as the chairman has only been in this position since Dec. 7, 1911. In that short space of time it has been demonstrated how much can be accomplished by a committee when its chairman and some of its members are alive to the work. A report will be submitted to you to-day which is scientific, comprehensive and inspiring. I sincerely hope that the House of Delegates will encourage the continuation of the work as it is of major importance in the standardization and general advancement of medical education and information. One of the dominant ideas in all branches of science in the last two decades is precision—precision of thought, precision of deduction, precision of investigation and precision of nomenclature, I regret to say that precision has not been dominant in medical writing, medical instruction, in medical practice, either in diagnosis or treatment. Individualization must support precision in our work. This committee should be made a permanent one, and I trust may be continued under its present chairman.

### COUNCIL ON MEDICAL EDUCATION

Under the able chairmanship of Dr. Arthur Dean Bevan, this Council has continued the great work and its former activity, and it has annually added to its credit-rôle of achievement in elevating and standardizing American medical colleges. It seems to me a fitting time for this Council through this body to take some action in recognition of the foundation of the first medical college in America, 1765, by Dr. John Morgan, of Philadelphia, and I submit a letter which I received from Dr. Edgar Fahs Smith, provost of the University of Pennsylvania, to the House of Delegates and through it to the Council on Medical Education. This Council should receive full encouragement that it may continue the great and splendid work of its former years.

### COMMITTEE ON ANESTHETICS

The House of Delegates should encourage the work of this Committee. There was no appropriation made for its special work last year. Dr. Yandell Henderson, of Yale, incurred some expense during this time, and I feel that he should be reimbursed and the Committee's work continued.

### JUDICIAL COUNCIL

This Council has worked arduously in the preparation of the skeleton report in connection with the Principles of Medical Ethics. We feel that this is the most important matter for the House of Delegates at this session, and should receive the most careful and studied attention. I will call especial attention to Section VI, Article 4. I feel that it is not sufficiently comprehensive and does not definitely condemn and penalize a practice that is outrageously too prevalent. I feel that the parasitic practices that have been and are in vogue should be called by their proper names and printed in letters of burning condemnation so that he who runs may read, and that the guilty may be easily recognized and properly sequestrated from the great mass of honest, conscientious and supremely trustworthy medical men who are leading exemplary lives and practicing medicine according to the highest ideals of our profession, and who should not have their good names and their good work tarnished by a questionable few.

I submit the following as a tentative substitute, prepared by Dr. John B. Roberts, of Philadelphia:

Strike out Section 4, Article 6, on relation of physicians to their patients, and insert:

> "No honorable or self-respecting physician wil offer or give to another physician, surgeon or specialist a portion of the fee, paid by a patient for his professional services in a medical or surgical consultation or operation, as a commission or reward for bringing or referring the patient to the consultant; and no honorable or self-respecting physician or surgeon, who desires the professional opinion of another physician or surgeon as an aid in the treatment of a patient under his control, will accept a division or splitting of the fees in any direct or indirect manner, unless the patient or his next friend is fully aware of, and intelligently understands the details of, the transaction. Otherwise this division or splitting of medical fees is an intolerable betrayal of the patient's confidence."

### THE COMMITTEE ON CLINIC DAYS

This committee has encountered many difficulties, but finally overcame them in arranging for the clinic days. Atlantic City is the least available in this particular line. In other cities clinic days can be made quite an attractive feature of the annual session, and, I believe, will double the attendance at the annual sessions. The nineteenth century was the reading and contemplating period, the twentieth century is the seeing, hearing, doing, demonstrating period, and the testing of all things by personal observation, and unless this organization is in pulsation with these world movements, it will soon cease to be the great potential force for medical advancement that its opportunities afford. Unless clinics are made a part of the annual program, inside of three years the attendance at the Clinical Congress of Surgeons will exceed the attendance at the annual meetings of the American Medical Association. Any one who has attended the meetings of the clinical congress cannot help but realize the enormous enthusiasm and interest which they created. All modern education employs the laboratory, the work-shop, the training-school, and the application plan and medical education should be of the experimental or hospital type more and more. This Association should not be obsolete in its methods of disseminating knowledge. The empty, and too frequently stereotyped papers on medical topics do not educate, inspire and arouse enthusiasm as the actual demonstration does. Even if they are good, they are robbed of their force by cutting down the time for presenting the subjects to fifteen minutes. It is a counterfeit method of education, and the earlier the Association ceases to pass counterfeits, the sooner it will be placed on a substantial, legal-tender basis of present-day pedagogy. We want more subjects on modern lines by modern writing and thinking men.

I would suggest that this committee be made a permanent one, and feel that if Monday, Friday and Saturday of the annual session week are appropriated for clinics, it will bring the members to the meeting in time and retain them to the end of the session, and the clinics will receive the heartiest support of the profession.

### HOUSE OF DELEGATES

In an organization of the magnitude of the American Medical Association, the selection of its officers, trustees, councils and committee members is most important in order that it may not tend to bureaucracy or autocracy. It is important in every great organization that rotation in positions of power and trust take place, otherwise in time, regardless of the efforts that may be made to the contrary, personal interests or idiosyncracies, likes and dislikes, will dominate its management, which must of necessity be to the detriment of the whole. This rotation in position should be automatic, in order that it may be entirely impersonal and democratic. This House, representing in a small body the larger interests of the medical profession, should not delegate its prerogatives or responsibilities without a most careful analysis of the work of the smaller number during the interim when the House is not in session. They should annually check up the instructions which were given to the Board of Trustees, councils and committees, and ascertain if these were carried out to the letter and in the spirit of the House. The House of Delegates should and must remain in absolute control of every interest of this Association and see to it that no individual or combination of individuals or council or the Board of Trustees can thwart its will, divert its force, ignore its instructions or assume ownership of it. It has been and must remain the sovereign power.

I would suggest, as an amendment to the By-Laws, that the President, the Secretary, and the Editor and General Manager, be made ex-officio members of the Board of Trustees without voting power, that the Secretary of the Association be made secretary and custodian of the transactions of the Board of Trustees, that accurate minutes should be kept of all its proceedings, financial and otherwise, and that he be prepared at the annual meeting to give the details of any of these transactions to the House of Delegates—the sovereign body.

Gentlemen, I thank you for your courteous attention.

## Second Meeting—Monday Afternoon, June 3

The House of Delegates reconvened at 2:15 p. m., and was called to order by the President.

### Report of the Committee on Memorial to Medical Officers Who Died in the Civil War

Colonel William C. Gorgas, Canal Zone, Chairman, read the report of the Committee on Memorial to Medical Officers Who Died in the Civil War, as follows:

*To the Members of the House of Delegates of the American Medical Association:*

At the sixty-second annual session of the Association held at Los Angeles, June, 1911, this Committee reported progress and was continued.

The formation of the General Committee of one surgeon from each state has been found almost impracticable on account of the death of many surgeons. Only three states, thus far, have responded; namely, Dr. H. O. Marcy, of Boston, Mass.; Dr. J. M. Keller, of Hot Springs, Ark., and Dr. D. J. Roberts, of Nashville, Tenn. These have been elected to membership on the Committee. Without regard to service in either army, your Central Committee proposes this year to select suitable members by which they will be enabled to complete the General Committee.

Through the courtesy of the Surgeons-General of the Army and Navy, a list of those surgeons who lost their lives in the Civil War is being compiled for future use that may be decided upon by your Central Committee. Already, it has been ascertained by our colleague, Dr. S. Weir Mitchell, that in the Union Army, fifty-one surgeons were killed, eighty-three seriously wounded, and that two hundred and eighty-three died from wounds or disease contracted during the Civil War. The available records of the Confederate Army are few, but the President of the Association of the Medical Officers of the Army and Navy of the Confederacy is at work and has already sent in several names to your committee. When these authentic statistics shall have been completed, they will be a satisfactory source of information for the future historian of our too meager records of the voluntary sacrifices made by our dead comrades, and he will be thankful for the collaboration by Federal and Confederate survivors of the War of 1861-65—to those who have thus joined hands in perpetuating the memory of valorous deeds and patriotic services, in which all true and broad Americans have an equal pride.

As soon as the General Committee is completed and the opportunity supervenes, your Committee desires, in each state, to begin aggressive operations on the lines of the proposition announced in a previous report and already endorsed by this House.

All the expense incurred in the work thus far has been paid by the Committee; however, they recommend that it be continued with the same privileges, instructions and appropriation authorized by the House at the Atlantic City meeting in 1909. Respectfully submitted,

William C. Gorgas, Chairman.
S. Weir Mitchell,
G. Lane Taneyhill, Secretary.
W. W. Keen,
G. B. Thornton.

On motion of Dr. Arthur T. McCormack, Kentucky, the report was adopted by a rising vote.

### Report of the Committee to Advise with the National Red Cross

Dr. A. T. McCormack, Kentucky, Chairman, read the report of the Committee to Advise with the National Red Cross, as follows:

*To the Members of the House of Delegates of the American Medical Association*:

Your Committee to Advise with the National Red Cross has the honor of reporting that through its Chairman, three conferences have been held with the officers of that organization—one in New York and two in Washington.

It is a pleasure to testify to the grasp, efficiency and usefulness of the heads of our Red Cross, and to pay a special tribute to its presiding genius, Miss Mabel Boardman.

The first problems presented by the Red Cross to your Committee were, "How may we organize an effective medical force throughout the country which may be available without delay in case of a local disaster?" "When medical services are volunteered to the Red Cross, how may it determine the reputability and competency of the volunteer?"

The opportunity offered to our profession for life-saving work of the highest character seems manifest. If in times of great disaster a wise executive committee of the Red Cross right on the spot is already empowered to act and then report to the general officers at Washington, its work will be far more effective than the present somewhat haphazard method of organization following newspaper or other more or less roundabout notification. The good work of the Red Cross under this system has been due to the genius and initiative of its general officers and it is their desire to diffuse the responsibilities as well as the opportunities for good into a great organization actually national that will reach into every nook and corner of the country where disaster may come of such character that it demands more than local assistance. A disaster involving a remote mine in Tennessee or the Dakotas, a railroad wreck in Arizona, a schoolhouse fire in Ohio, a factory holocaust in New York, or a flood in Kansas or Arkansas should have in its own vicinity an organized force ready to spring into active operation instantly and take the initiative in relief work, which is frequently the most important part of the whole Red Cross campaign.

Your Committee therefore recommends: (1) that a standing committee of three on Red Cross medical work be constituted by an amendment to our By-Laws, one of whose members shall be appointed by the President on the nomination of the Surgeon-General of the Army, and one on the nomination of the Surgeon-General of the Navy; that the third member of the committee, who shall be its chairman, shall be appointed by the President of the Association and nominated to the Red Cross as the representative of this Association on its Relief Board; (2) that the necessary expenses of this Committee, not to exceed $500 annually, be paid by the Board of Trustees; (3) that this Committee shall have advisory supervision over state and county committees and shall be empowered to act for the Association in matters involving medical personnel in times of disaster, provided that it shall not be authorized to involve the credit of the Association without the express authority of the House of Delegates; (4) that this Association recommend to its constituent associations that they constitute similar committees of which the State Secretary shall be Chairman; and a county committee for each component society of which the District Councilor and the County Secretary shall be ex-officio members; (5) that such state and county committees shall have similar duties to the national committee in their respective jurisdictions, and shall be authorized to cooperate with the lay, nurses, finance and other committees of the National Red Cross in carrying out their functions.

It will, we feel sure, be readily seen that such a vast organization as is contemplated in this report, involving the formation of thousands of locals all over the country by the National Red Cross, will, if successful, be forced to do something to keep its hand in, so to speak, and your Committee has suggested the possibility of such an organization of existing hospitals and nurses' training schools and other public health forces as will best train them as agencies for the protection of life in times of war or national disaster while they are actually responding to the constant calls of the tens of thousands of unnecessary and preventable deaths in the country each year from preventable diseases, from faulty sanitary and housing conditions, from industrial and other violence. This would involve the formation of a central organization supervising training-schools for nurses with similar functions and powers of moral suasion as our Council on Medical Education. It would involve, eventually, at any rate, the coordination of all those forces working publicly for the prevention and cure of ill health and resulting loss of life. It would involve, in due course of time, such local cooperation with the local authorities and the people as would lead to the establishment in all centers of population, at least in all county seats, of hospitals, whose function would not be merely the cure of disease but which would be real centers from which should emanate everything which could help the people of that community toward right living.

Gentlemen, this may seem idealistic. No ideal can be too high either for the American Medical Association or the National Red Cross which can work to the welfare, health and happiness of the American people in peace or in war. It will involve hard, prolonged work, but the results to be accomplished are so vast that it must be worth while, and American medicine has accomplished too much to turn from any opportunity to do more. Until the profession and people of the United States have at least made its cities and its rural communities as healthy as Colonel Gorgas and his associates have done in pestridden Panama, we have an opportunity which we may not neglect.

Respectfully submitted,
A. T. McCormack, Chairman.
Charles A. L. Reed,
Miles F. Porter.

This report was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

The minutes of the previous meeting were read and approved.

### Reference Committee Changed

In the absence of Dr. Joseph Becton, Texas, President Murphy appointed Dr. William B. Russ, San Antonio, to take the place of Dr. Becton on the Reference Committee on Amendments to the Constitution and By-Laws. In place of Dr. J. N. Jenne, Vermont, he appointed S. G. Kahn, Salt Lake City, Utah.

In the absence of Dr. A. C. Scott, Texas, he appointed Dr. J. W. Fleming, Brooklyn, N. Y., on the Reference Committee on Miscellaneous Business, as Chairman.

Dr. D. Chester Brown, Connecticut, Chairman, presented a supplementary report for the Committee on Credentials, reporting an additional registration of twenty delegates.

The Secretary called the roll, recording as present sixty-four members.

## Report of the Committee on Nomenclature and Classification of Diseases

Dr. Cressy L. Wilbur, Chairman, read the report of the Committee on Nomenclature and Classification of Diseases, as follows:

*To the Members of the House of Delegates of the American Medical Association:*

The present Chairman of the Committee on the Nomenclature and Classification of Diseases was appointed on Dec. 7, 1911, *vice* Dr. Alexander Duane, resigned. Doctor Duane was long associated with the work of the Committee under the chairmanship of Doctor Foster and the Committee desires to express its high sense of appreciation for his continued interest in the work and for valuable assistance since his resignation.

During the past year your Committee has suffered a severe loss in the death of Dr. Frank P. Foster, its first Chairman. From the time of his appointment until his death Doctor Foster labored assiduously on the task assigned to him, for which, indeed, he was eminently fitted by training and temperament. To a scholarly nature and sound judgment he added a broad culture, a profound knowledge, based on great lexicographic experience, of the meaning and derivation of words, and a long and intimate acquaintance with the periodical literature of medicine. These qualifications made him a most excellent arbiter on all questions of nomenclature. To the subject of classification, with its involved problems and its various conflicting systems, he gave close and conscientious study, calling in whenever necessary the aid of specialists, whose contributions, carefully digested and combined with his own researches, he summarized in the reports presented to the Association in 1908 and the following years. It must be added, as showing the nature of the man, that during all this time, while pursuing the work with characteristic industry, accuracy and faithfulness, he was already in the grip of the disease from which he finally succumbed. Yet he kept faithfully on, laboring to the very last and bearing his affliction with uncomplaining cheerfulness and unvarying fortitude. Your Committee feels that it cannot let this occasion pass without testifying to its admiration for Doctor Foster's high character, varied attainments and great ability, its appreciation of his uniform fair-mindedness, courtesy and tact, and its gratitude for his self-sacrificing labor and unselfish devotion.

The work of this Committee is on a subject of fundamental importance to medicine. Its general purpose and scope may be learned from a statement entitled "A Nomenclature of Diseases for the United States," published under the head of "Association News" in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, April 13, 1912, page 1134. Its primary object is to provide a definite nomenclature or list of names of diseases and pathologic conditions so that physicians throughout the United States may have a guide in the selection of precise terms for clinical reports, hospital statistics, and general mortality and morbidity reports. "Among the great ends of such a uniform Nomenclature must be reckoned that of fixing definitely, for all places, the things about which medical observation is exercised, and of forming a steady basis upon which medical experience may be safely built."[1] The present condition is chaotic; a single disease may be represented by many names and a single name may be used for several diseases. A large number of unsatisfactory and indefinite terms, which reflect discredit upon a scientific profession and vitiate all medical statistics, are in common use.

The Reference Committee on Hygiene and Public Health recommended at Los Angeles last year, and the recommendation was approved by the House of Delegates, that—

"The Committee on Nomenclature and Classification of Diseases . . . be instructed to continue its work in cooperation with other organizations working along the same lines, and that such classification as they may adopt, together with the International Classification of Causes of Death, be published and supplied to the members of the American Medical Association."

The first purpose of the Committee, therefore, was the preparation of a practical Nomenclature of Diseases that could be "published and supplied to the members of the American Medical Association," and the Committee is happy to report that the copy for such a publication has been prepared and will be ready for printing as soon as the final details, which will be adjusted at the sessions of the Committee at Atlantic City during the present meeting of the Association, are incorporated and an index completed. The Committee accordingly requests that the publication of same be authorized

In preparing this Nomenclature, the Committee recognized the recommendation that was included in Doctor Foster's report as adopted by the House of Delegates last year to the effect that the Bellevue Hospital Nomenclature of Diseases and Conditions, the last edition of which contains an arrangement of terms in the order of the International List, should "be made a part of whatever publication on the subject of the nomenclature and classification of diseases the American Medical Association may decide to issue—and the prominent part, by reason of its clinical character," and took this Nomenclature as the basis of its work. The Committee desires to express its thanks to the Committee on Clinical Records and to the Board of Trustees of Bellevue and Allied Hospitals for kindly placing at its disposal a considerable number of copies of the Nomenclature for the use of members and collaborators and recommends that a formal resolution of appreciation be extended by the Association.

From the short time available it was necessary to organize the work rapidly and to complete each part of it by a prescribed time. This could not have been done if the matter had not been studied previously and the fact recognized that the Bellevue Nomenclature in its present form had proved most useful and acceptable in the practical clinical work of many hospitals, as well as being in close accordance with the Manual of Nomenclature of the Army Medical Department. A list of collaborators was therefore prepared, including the Chairman of each Section of the Association, and letters requesting cooperation were mailed on February 1; replies were received, classified, and submitted to the members of the Committee (up to April 15); and the Committee is now engaged at the time of the submission of this report (April 20) in considering the recommendations and will conclude its work, in regard to any details that can not be settled by correspondence, by meetings held during or just prior to the sessions of the Association at Atlantic City, June 4-7, 1912. Cordial thanks are due to those who have contributed suggestions, in some cases amounting to detailed classifications of special groups of affections, and to Surgeon General Torney of the Medical Department of the Army and Surgeon General Stokes of the Bureau of Medicine and Surgery of the Navy for hearty support. All the differences in the Army Nomenclature, the Philippine Nomenclature, the Navy List, etc., together with the suggestions from individual collaborators, have been considered, the whole number of recommendations amounting to several thousand. It is believed that the result will be of practical value and constitute a beginning for more extended work on the subject.

In this connection it may be mentioned that overtures have been made for possible cooperation with the Committee of the Royal College of Physicians of London that will soon be constituted, in all probability, to arrange for the fourth decennial revision or fifth edition of the Nomenclature that has been the authority in England and all the British possessions for the past forty years. England has recently adopted the International List of Causes of Death and the Registrar-General has published a Manual similar to the corresponding Manual published by the U. S. Bureau of the Census, so that all mortality statistics will now be compiled on an identical basis by all English-speaking countries. It is hoped that this Association may cooperate with the London College in preparing a Nomenclature of Diseases that will be of equally world-wide use, with equivalents in Latin, German, French, and Spanish for the English terms, and that valuable suggestions may result therefrom for the Third Decennial Revision of the International List of Causes of Sickness and Death. Thus will be brought about that harmony between the statistical lists employed for the tabulation of statistics of sickness and mortality in hospitals, in the Government medical services, and in the general population, with the underlying basis of a thoroughly scientific and comparable nomenclature of diseases and conditions for the general use of the profession, that it was the great purpose of the American Medical Association to assist.

Respectfully submitted,

CRESSY L. WILBUR,
*Chairman.*

April 20, 1912.

On motion, the report was referred to the Reference Committee on Miscellaneous Business.

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[1] Preface Nomenclature of the Royal College of Physicians of London, first edition.

### Report of the Committee to Consider the Mode of Commemorating the Completion of the Panama Canal

Dr. A. L. Brittin, Illinois, presented the report of the Committee to Consider the Mode of Commemorating the Completion of the Panama Canal, as follows:

*To the Members of the House of Delegates of the American Medical Association:*

I have the honor to report for the Committee to Consider the Mode of Commemorating the Completion of the Panama Canal as follows:

In due season a communication was addressed to each of the members of the Committee, requesting suggestions for a report to the American Medical Association meeting in June. The replies were received from all of the members of this Committee with the exception of Dr. Amos Graves, of San Antonio, Texas, who was reported as having died in the month of January.

The digest of the suggestions of each member of the Committee, together with the Chairman's idea of a report, was sent to each of the members of the Committee for their approval, correction or amendment.

This synopsis follows:

REPORT PROPOSED BY CHAIRMAN FOR SUBMISSION TO THE HOUSE OF DELEGATES AT THE 1912 MEETING OF THE AMERICAN MEDICAL ASSOCIATION

A Congress on Tropical Medicine and Hygiene should be held just before or just after the meeting of the American Medical Association in 1915. This congress should, by preference, be held in San Francisco and under the auspices of the American Medical Association and the authorities of the San Francisco Panama Exposition.

If the 1915 meeting of the American Medical Association is not held in San Francisco, the congress should be held at the place of meeting of the American Medical Association in that year and the congress should be held under the auspices of the American Medical Association.

1. Such a congress should receive the official commendation and support of the United States government by congressional act authorizing the cooperation of the Services of the Army and Navy and the U. S. P. H. and M.-H. S. Such congressional authorization would not only dignify the congress, but would fulfil the purpose of authorizing a proper cooperation with the service schools, bureaus and other institutions interested in advancing the knowledge of tropical medicine and hygiene. Governmental recognition would also permit the proper invitation of delegates from foreign countries.

2. Such a congress should be organized by a committee made up of representatives from the American Medical Association, the Government Medical Services of the United States embraced in the Army, Navy and P. H. and M.-H. S., together with representatives of the boards of health of the various states and the bureaus or boards of health of the various territorial possessions of the United States.

Such an organization committee should include representatives from the leading institutions of learning and of research in the United States and of the territorial possessions especially interested in the objects of the congress, such as the societies of tropical medicine, institutes of research and medical colleges of standing.

Such an organization committee should be as large as possible, with the idea of creating widespread interest in the proposed congress and its purposes, and with a view of making the celebration as great as it should be.

The actual plans and other fulfilment should be undertaken by an executive committee derived from the general organization committee.

The selection and appointment of the organization committee should be made by the constituted officers of the American Medical Association, in conference with the constituted head officials of the government services and, if the meeting of the American Medical Association in 1915 is to take place in San Francisco, such appointments should be made with the cooperation and approval of the constituted authorities of the exposition.

3. Delegates to the congress should be invited from all foreign governments: from societies and other bodies interested in the subject of tropical medicine and hygiene, including schools devoted to the study of these, such as those of London, Liverpool, Paris, Hamburg, Rome, Lisbon, China, Australia, etc.; the schools of tropical medicine and hygiene related to the United States and its possessions have been included by representation in the organization committee.

4. Plans for the congress should contemplate the arrangement of a program which should provide the discussion of topics of current interest in tropical medicine and hygiene. In addition, a systematic exhibition should be arranged and this should be representative of all parts of the world. One day of such a congress should be exclusively devoted to the chief object of the congress, viz., the celebration of the completion of the Panama canal.

The program for that day should include the demonstration of the achievements in sanitary science accomplished in the Canal Zone and such demonstration should also include the achievements of Americans in tropical medicine.

It would be timely and appropriate to arrange for a memorial exercise to Reed, Lazear, Carroll, Ricketts and others who have been martyrs to this particular field of preventive medicine.

5. The American Medical Association should memorialize Congress with a view to a permanent monument in recognition of the great and glorious work of Americans in sanitary science and preventive medicine. Such a monument might be constituted in the erection of a hospital for tropical diseases, to be located either within the confines of the United States or, more appropriately, in the Canal Zone itself, and the dedication of such an institute could be contemplated among the plans for the celebration in 1915.

6. The present Committee should be continued, or a like committee appointed, to expand the plans proposed by this Committee so as to permit their practical fulfilment, such plans to be submitted fully at the 1913 meeting of the American Medical Association.

As Chairman of the Committee I beg to submit the plan embodied in the Chairman's report to the members of the Committee which has been approved by the individual members of the Committee without correction, as the report of the committee to the House of Delegates.

Respectfully submitted,

Isadore Dyer, Chairman.

Dr. Hubert Work, Colorado, moved that this Committee be made a permanent one and its work continued until the completion of the canal in 1915.

Motion seconded and carried.

### Miscellaneous Business

Dr. G. Lane Taneyhill, Maryland, under the head of "Miscellaneous Business," presented the following:

### Memorial on Behalf of The Home for Widows and Orphans of Physicians Incorporated

The undersigned, representing the "Home for Widows and Orphans of Physicians, Incorporated," beg leave to present the following facts and proposal:

This institution is a "doctors" charity, located in the city of Baltimore and chartered under the laws of the state of Maryland. It is designed for the care and maintenance of destitute persons of the classes named in the title, and has no connection with any other corporation.

It originated in an experiment begun about ten years ago when our attention was drawn to the subject, from which we learned of many sad cases in which the wives and families of physicians have been left helpless and in want by the death of their natural protectors. We know of several suicides of doctors' widows, of one widow who was rendered insane by her misfortunes, of one aged widow who has been compelled to beg from door to door and of a number who have been saved from the poorhouse only by the pity of non-medical friends. The ordinary "homes" are closed to these people because they have no means to pay the large entrance fees.

It seems a great reflection on the medical profession that no provision of this sort has *ever* before been made by it for the care of these persons.

Moved by a knowledge of their needs and a warm sympathy for their sufferings, we have undertaken to provide a home for them in Baltimore. We take in, without fee of any kind, any such person representing a physician in good standing in any part of the country; in other words, the scope of our charity is *national*.

This being the case, it is our desire to unite in some way with your Association, only reserving on our part, the privilege of continuing to work for the charity under your direction and auspices. We are willing to turn over to you our large three and a half story brick building, 20 by 132 feet, located in the best residence section of Baltimore, and which we own in fee.

A delegation of our board has been appointed to attend the ensuing meeting of the Association at Atlantic City, and it will be glad to appear before you or any committee having such matters in charge and explain further our work.

Should the Association not be able for any reason or not desire to take up the work in the manner suggested, we request that you assist us by an annual appropriation of—say $1,500—for maintenance. We wish to place the charity on a permanent and safe footing, and appreciate the necessity of some financial provision of this sort. As yet we have no endowment fund and are dependent for the maintenance of the charity on the subscriptions and donations of the members of the medical profession and the proceeds of entertainments of various kinds which we get up from time to time.

We can refer to Dr. William H. Welch, who knows and approves of our project.

MRS. EUGENE F. CORDELL, President.
MRS. J. F. H. GORSUCH, Vice-President.
MRS. ANNA M. MCCANN, Rec. Secretary.
EUGENE F. CORDELL, M.D., Treasurer.
GENEVIEVE E. PERKINS, Pres. of Aux.
MRS. JOHN G. JEFFERS, Cor. Secretary.

On motion, duly seconded, the memorial was referred to the Committee on Establishment of Physicians' Sanitarium.

Dr. H. G. Wetherill, Colorado, the delegate from the Section on Obstetrics and Gynecology, presented the following resolution, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws:

*Resolved*, That through the representative of this section we request the House of Delegates to make the following alteration in the By-Laws of the American Medical Association: Amend Chapter XI, Section 1, Heading 3, to read as follows: "Obstetrics, Gynecology and Abdominal Surgery."

### Requests for New Sections

Dr. H. A. Royster, North Carolina, presented a communication asking for the establishment of a Section on Orthopedic Surgery, which was referred to the Reference Committee on Sections and Section Work.

Dr. A. T. Bristow, New York, moved that a committee be appointed by the President to communicate with the officers of the British Medical Association, with a view to finding out whether a joint meeting of the British Medical Association and the American Medical Association is desirable and possible in the future.

The chair referred the motion to the Reference Committee on Miscellaneous Business.

Dr. G. Wythe Cook, District of Columbia, presented a communication asking for the formation of a new Section on Physical Therapeutics, which was referred to the Reference Committee on Sections and Section Work.

In the absence of Dr. Granville MacGowan, California, President Murphy appointed Dr. K. A. J. MacKenzie, Oregon, on the Reference Committee on Sections and Section Work.

On motion the House took a recess of fifteen minutes.

### Report of the Committee to Formulate Amendments to the Constitution and By-Laws to Extend Membership

When the House reassembled, Dr. D. S. Fairchild, Iowa, chairman, read the Report of the Committee to Formulate Amendments to the Constitution and By-Laws to Extend Membership, as follows:

*To the Members of the House of Delegates of the American Medical Association:*

This being regarded as an important matter, it was felt that sufficient time should be taken to digest carefully all the features of the subject and to report first to the A. M. A., after which, in accordance with the resolution creating the committee, to report back to the state medical associations. Then it could properly come before the A. M. A. for adoption. If any plan was adopted other than the one now in force, it must be: first, to extend membership to all members of the constituent medical associations so that every physician who became a member of his county and state organizations should automatically become a member of the A. M. A.; second, to increase the dues collected by the county societies so as to include in addition to the county and state dues, a sufficient sum of money to carry on the work of the A. M. A. A careful investigation showed at once that the second plan was impracticable; the opposition would be overwhelming. The first plan was the only one considered after we had made an extended inquiry. This plan, as already stated, is to include in the membership of the A. M. A. all members of the constituent state medical associations.

It became at once apparent that a non-paying membership was an anomaly we could find no precedent for, a condition which permitted one set of members to be taxed and another set to escape taxation and yet to enjoy the right to vote on important matters, as for instance the election of members to the House of Delegates of the A. M. A. The nearest approach to this condition was found when the matter was investigated from a legal point of view, as in the constitution of boards of directors of corporations where a member of such a board can serve and perform the duties incident to his position without owning stock in the corporation, provided the articles of incorporation specified the right to vote without owning stock. Applying this to the House of Delegates of state associations, it becomes clear that there is nothing inconsistent, illegal, or contrary to a recognized principle of business for a member having no financial interest in the property or business of the A. M. A. to vote on such matters as may be provided for in the by-laws of the Association, viz., members of the House of Delegates of said Association. This part of the question being disposed of, it only remains to consider how the money necessary to maintain the present work of the Association may be provided for from a membership essentially in the first instance without dues or fees. To meet the necessary large expenditure for the work of the Association, a member at his option may on application and the payment of $5.00 per annum become a contributing member or fellow of the Association and receive a card which will entitle him to active participation in the meetings of the Association, render him eligible to a place on the program and eligible to serve in the House of Delegates of the American Medical Association under the provisions of the by-laws of said Association, and to receive THE JOURNAL. It is provided for convenience that the members of the A. M. A. who derive their membership from the constituent associations shall be designated as members of the A. M. A. and that the said members may on application and payment of $5.00 become contributing members and shall be designated as fellows of the A. M. A.

In accordance with this plan section 2 of chapter 1 of the by-laws shall be changed to read as follows: "The American Medical Association shall consist of the membership of its state and territorial associations and the Association shall be divided into two branches, (a) business branch, (b) scientific branch." To further the interest of the scientific branch it is recommended that upon making application on suitable blanks and paying the sum of $5.00 a member of the American Medical Association may become a fellow of the American Medical Association, which shall carry with it the rights and privileges which are now accorded those at present known as members of the American Medical Association.

The adoption of the amendments to the constitution, offered by Dr. John B. Roberts, Pennsylvania, last year, will make the constitution harmonize with these suggested amendments to the by-laws. In other words, the amendments to the by-laws will correspond to the amended articles of the constitution.

### BY-LAWS

### Chapter I.—Membership

Section 1. Classes of Members.—There shall be four classes: members, fellows, associate fellows, and honorary fellows.

Section 2. The American Medical Association shall consist of the membership of its constituent state and territorial associations and the Association shall be divided into two branches, (a) business branch, (b) scientific branch.

Section 3. Fellows.—Any physician reported as a member in good standing of a constituent association by the secretary of that association, who on a prescribed form shall apply for fellowship and subscribe for THE JOURNAL, paying the annual dues for the current year, shall be a fellow.

Commissioned medical officers of the United States Army, United States Navy, and the United States Public Health and Marine-Hospital Service shall be fellows of this Association so long as they retain their connection with their respective service; these fellows shall not be required to pay dues and shall not receive THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, except by personal subscription.

Section 4. Tenure of Fellowship.—Fellowship in this Association shall continue only so long as the individual is a member in good standing of the constituent association of the state in which he resides. When the Secretary shall be officially informed by the secretary of the constituent association of the state in which a fellow resides that the fellow is not in good standing, the Secretary shall remove the name of such fellow from the fellowship roll of the American Medical Association and shall notify the fellow of the action taken, together with the reason therefor.

Section 5. Effect on Fellowship of Removal to Another State.—A fellow who becomes a resident of another state, to retain his fellowship in the American Medical Association, must become a member in the constituent association of the state to which he has removed within one year following his change of residence.

Section 6. Delinquency.—Any fellow who, for one year, has failed to pay his annual dues, shall forfeit his fellowship thirty days after notice from the Secretary has been mailed to his last known address.

Section 7. Fellowship Restored.—Any former fellow who complies with section 3, chapter 1, shall be reinstated upon payment of his indebtedness, including his dues for the current year.

Section 8. Associate Fellows.—The following may be elected in accordance with section 4, chapter VI, to associate fellowship: physicians who are members of the chartered national medical societies of foreign countries adjacent to the United States; dentists holding the degree of D.D.S. who are members of state or local dental societies, and pharmacists who are active members of the American Pharmaceutical Association; and representative teachers, students of sciences allied to medicine, resident in the United States and not eligible to regular fellowship. Associate fellows shall enjoy the same privileges as regular fellows, and shall be subject to the same conditions.

Section 9. Honorary Fellows.—Physicians of foreign countries may be elected honorary fellows by the House of Delegates in accordance with section 4, chapter VI.

Section 10. Invited Guests.—Scientists who are not eligible to regular membership in their constituent state association may be invited by the general officers or by the officers of a section to attend any annual session and to take part in the scientific work. They shall be designated as invited guests and be entitled to participate in the scientific and social functions.

### Chapter II—Registration

None but fellows, associate fellows, honorary fellows and invited guests shall be allowed to register or take part at the scientific meetings of the Association.

No fellow shall be eligible to register at an annual session until he has paid all of his current indebtedness.

No fellow shall take part in the proceedings of the Association or of any of the sections until he has registered his name and address in the registration office.

A fellow on registering shall designate the section in which he wishes to be enrolled, but no fellow shall register in more than one section at any annual session.

## BUSINESS AND LEGISLATION

### Chapter III—Qualifications, Term, Apportionment, and Registration of Delegates.

Section 1. Delegates must have been Fellows of the American Medical Association Two Years.—No one shall serve as a member of the House of Delegates who has not been a fellow of the American Medical Association for at least the two years immediately preceding the meeting of the House of Delegates at which he is to serve. In determining the qualifications of members of the House of Delegates, membership in the Association at the time of the adoption of this By-Law shall be regarded as equivalent to Fellowship in the Association.

Respectfully submitted,

D. S. FAIRCHILD, Chairman.
JOHN W. YOUNG,
CHARLES S. SHELDON,
HORACE D. ARNOLD,
JERE L. CROOK,
W. W. GRANT,
M. L. HARRIS.

## Report of the Committee on Scientific Exhibit

Dr. Frank B. Wynn, Indiana, chairman, presented the report of the Committee on Scientific Exhibit, as follows:

*To the Members of the House of Delegates of the American Medical Association:*

The first Scientific Exhibit of the Association was established under the presidency of Dr. W. W. Keen in this city in 1900. Atlantic City as the birthplace of the Scientific Exhibit suggests comparison of the first with the present exhibit. The maiden effort was as much to the credit of the Association in that day, as the present one is to the profession in 1912. To be sure, the present exhibit is larger and presents many finer points of excellence not seen in the earlier efforts. This, however, is only to be interpreted as part of the progress being made along all lines of the profession.

Noteworthy in the evolution of the exhibit have been: the vast improvement in the methods of preparing and presenting museum material; the development of serial exhibits in illumination of special phases of pathology; the growth of research exhibits showing in most convincing manner the work of original investigation; *x*-ray exhibits setting forth their great diagnostic value; and in the realm of disease prevention, those developing the cartoon, and seeking to standardize tuberculosis and other public health exhibits.

The present exhibit in point of size, scope and general excellence is perhaps superior to any previously held. It is not possible at this time to give a detailed description. In all about forty separate exhibits are presented. These may be summarized under the following general headings:

### A. RESEARCH EXHIBITS

1. Experimental Nephritis.—Nature, cause and principles o relief in edema and nephritis. Martin H. Fisher, University o Cincinnati.

2. Specimens of experimental endocarditis, and a demonstration of the microscopic and cultural features of the organisn so commonly found in chronic or subacute infectious endocarditis. Edward C. Rosenow, Chicago.

3. Experimental intestinal anastomosis. W. D. Gatch, Indiana University, School of Medicine.

4. Exhibit showing laboratory phases of syphilis; the different strains of spirochetes, infected rabbits and the lueti test. Hideyo Noguchi, Rockefeller Institute for Medica Research.

5. Blood-vessel suturing. J. Shelton Horsley, Richmond, V

### B. GROSS AND MICROSCOPIC SPECIMENS IN SERIES

1. Heart series showing subacute bacterial endocarditis, wit reference to healing and healed cases. E. Libman, Mt. Sin Hospital, New York.

2. Series showing pathologic conditions of the prenatal an lying-in state. J. R. Losee, New York Lying-In Hospital.

3. Series illustrating the various pathologic conditions the lungs. W. M. L. Coplin, Jefferson Medical Colleg Philadelphia.

4. Bone lesions of syphilis and traumatic lesions of bon D. S. Lamb, Army Medical Museum, Washington, D. C.

5. Visceral lesion of syphilis—gross and microscopic demo strations. W. H. Welch, Baltimore, and Joseph McFarlan Philadelphia.

6. Specimens illustrating animal pathology. United Stat Bureau of Animal Industry.

7. Microscopic series relating to malaria and amebic dyse tery. Isthmian Canal Commission, Department of Sanitatio W. M. James, Ancon, Canal Zone.

8. A series of 1,100 cystic calculi obtained in the Cant Missionary Hospital. John M. Swan.

### C. PHOTOGRAPHIC AND PHOTOMICROGRAPHIC EXHIBITS

1. Photographic enlargements showing carcinoma of t uterus and injected vessels. J. A. Sampson, Albany.

2. (a) Trypanosomes as tissue parasites. (b) Tropi phagedenic ulcer. S. B. Wolbach, Harvard University Medi School.

3. Photomicrographs showing pathologic histology of hea kidney and blood-vessels. Frank B. Mallory, Harvard Univ sity Medical School.

4. Tumors in fish. Harvey R. Gaylord, Buffalo, N. Y., N York Institute for Study of Malignant Disease.

5. Photographs illustrating chloroma. Walter L. Bierri Des Moines, Iowa.

6. Series illustrating cutaneous syphilis. H. W. Stelwag Philadelphia, Pa.

7. Series of photomicrographic enlargements showing (a) Diverticulitis of the sigmoid. (b) Pathology of the prostate. (c) Gastric contents. Mayo Clinic, by Louis B. Wilson and Frank Smithies, Rochester, Minn.

D. GROSS ANATOMIC SERIES

Specimens injected by the Souchon method. Edmond Souchon, Tulane University, New Orleans, La.

E. X-RAY DIAGNOSIS

1. (a) Surgical lesions demonstrated by colloidal injection of the kidney, pelvis and ureter. (b) Lane splints and transplantation of bone. (c) Esophageal lesions. (d) Gastro-intestinal conditions. (e) Stereoscopic plates of tuberculosis. (f) Intrathoracic thyroid. Mayo Clinic, by J. H. Selby.

2. Stereoscopic reductions of pulmonary conditions. Kenon Dunham, Cincinnati, Ohio.

3. Showing fetal development of osseous system. New York Lying-In Hospital, by E. D. Truesdell.

4. Very complete series of plates illustrating the scope and achievements of Roentgenology in diagnosis and treatment. These were contributed by the following gentlemen: Drs. Emil G. Beck and W. A. Pusey, Chicago; Drs. L. G. Cole, Arthur Holding, Leopold Jackes and S. Tousey, New York City; Dr. A. W. George, Boston, and Dr. J. H. Selby, Rochester, Minn., and the following members of the American Medical Association and the Philadelphia Roentgen Society: Dr. E. W. Caldwell, New York City; Dr. H. Thelkeid-Edwards Smith, Bethlehem, Pa., and Drs. C. L. Leonard, W. T. Manges, W. S. Necomet, H. K. Pancoast, G. E. Pfahler and T. S. Stewart, Philadelphia.

F. PUBLIC HEALTH EXHIBITS

1. Miscellaneous exhibits relating to various public-health problems. Public Health and Marine-Hospital Service.

2. Cartoon exhibit, consisting of about 100 cartoons dealing with the following public-health problems: (a) Public water- and milk-supply. (b) The health of the people *vs.* the health of domestic animals, trees, plants, grain, etc. (c) Quackery and the patent-medicine business.

3. Demonstration relating to the venereal peril consisting of a large number of lantern slides, kinemacolor, moving pictures, motion pictures of the *Spirochæta pallida*, of the ameboid movement of white corpuscles, etc. By National Cash Register Company, Dayton, Ohio.

4. Photographic enlargements and charts by the American Association for the conservation of vision. F. Park Lewis and Douglas C. McMurtrie.

5. Patent-medicine frauds. United States Bureau of Chemis-ry, by R. E. Doolittle.

6. Illustrating by exhibits the teaching of oral hygiene in he public schools. By O. B. Nesbitt, Valparaiso, Ind.

G. HOSPITAL EXHIBITS

1. Sheppard and Enoch Pratt Hospital. In illustration of andicraft class for patients and occupation course for nurses. By William R. Dundon.

2. Massachusetts General Hospital. Apparatus, photographs nd devices.

3. Highland Hospital, Fall River, Mass. Picture, floor plans, ays and devices.

4. Harriet Lane Home for Invalid Children, Baltimore, Md. lans and drawings.

5. New York Hospital. Plans.

6. Michael Reese Hospital, Chicago, Ill. Infant's bed.

7. Department of Health, New York City. Blank forms ed in hospitals.

II. MISCELLANEOUS EXHIBITS

1. Charts and propaganda of the American Medical Associa-on relating to the prescribing of proprietaries.

2. Historical collection of stethoscopes. U. S. Army Medical useum, by D. S. Lamb.

A committee on awards should be appointed by the President once. They should arrange to meet all exhibitors at 10 a. m., ednesday. A separate committee should be appointed on wards for the cartoon contest. The usual appropriation of ,000 is recommended by the committee for the promotion of e work of the exhibit and its maintenance.

In conclusion, a few comments and suggestions are permis-ble concerning the future conduct of the exhibit. Certainly it ll not be denied by anyone that the Scientific Exhibit has undantly justified its existence. It is well to keep always in ind that this important phase of the Association work would impossible were there not many men who love the science medicine for its own sake, who are willing year after year in their strivings after scientific ideals, to give lavishly of their time, and often of their money, to aid this feature of the Association work. Under the generalship of the committee they have been the army which has made possible the prosecution of successful campaigns. Certainly the sentiment of this body is not misinterpreted in saying that you believe these men should be aided and encouraged in every possible way.

In the judgment of the committee nothing would contribute so much toward this end as a certain, fixed policy with reference to the location of the Scientific Exhibit.

First, it should be located at Registration Headquarters because it is, or should be, of interest to every member and therefore in a position of easy access.

Second, it should have commodious and well-ordered space immediately adjacent to the Registration Bureau. Let the first view which meets the eyes of the registering member be a splendid Scientific Exhibit before him and all about him. It should make the profound impression on him that this is what the American Medical Association stands for, and not commercialism. Why should we hesitate about a matter of this kind? Is it not simply keeping pace with the work of the Association in other directions; in advancing the standards of medical education, national health legislation and ethical prescribing? The fear that the Commercial Exhibit would suffer in patronage and therefore curtail material resources is not well grounded. On the contrary the Scientific Exhibit could be made a conspicuous and attractive avenue leading to the Commercial Exhibit. These views have the urgent endorsement of your committee, and would meet with grateful response from those who in times past have made possible the exhibit and on whom we must depend for its success in the future.

Finally the chairman offers his heartfelt thanks for the loyal support of his coworkers in the exhibit and of this honorable body. If the sentiments expressed seem to bear the mark of heat and criticism let me protest that they are merely the words of exhortation and earnest desire to be of service to this great and useful organization.

Respectfully submitted.

FRANK B. WYNN, Chairman.
W. M. L. COPLIN.
F. B. MALLORY.
F. ROBERT ZEIT.
LOUIS B. WILSON.
D. S. LAMB.

On motion, this report was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Dr. Miles F. Porter, Indiana, moved that whoever has charge of the location of the exhibit, be instructed by the House of Delegates hereafter to give first choice of location to the Scientific Exhibit in the Exhibition Hall.

Motion seconded and carried.

The President appointed as the Committee on Awards for Scientific Exhibit Drs. E. J. McKnight, Connecticut; H. A. Royster, North Carolina, and Hugh T. Patrick, Illinois.

## Report of the Committee to Arrange Appropriate Lectures to the Public at the Annual Meeting

Dr. William A. Evans, Illinois, Chairman, presented the report of the Committee to Arrange Appropriate Lectures to the Public at the Annual Meeting, as follows:

In January, 1912, your committee outlined a plan of education for the public along the following lines:

Two weeks before the meeting a New Jersey state-wide series of health lectures was to be inaugurated. The lectures were to be in public schools in connection with the exercises pertaining to the closing of the school year—in churches and in women's clubs.

The arrangements for these meetings, securing meeting-places and invitations to speak and furnishing speakers were placed in the hands of Dr. R. S. Morton and Dr. Mana Venton. They were to secure the cooperation of the services of the physicians of New Jersey, and particularly those working with the Committee for Public Health among women.

The Atlantic City program consisted of several features: one, the presentation of a health play; the second, moving-picture health films; the third, lectures in the churches and hotels. This part of the program was placed in charge of Dr. Guion of Atlantic City and Dr. Neff of Philadelphia. Soon after this committee began to make arrangements for meeting-places, and after it had begun negotiations for the health play, it was apprised that the Council on Health and Public Instruction had appointed a special committee for the purpose of arranging for public lectures at Atlantic City. When this was brought to the attention of the chairman of your committee, he conferred with the President, and it was decided to allow the Council to proceed with its plans and to refer the matter to you for your decision. This year no harm was done, although some energy was wasted. We respectfully suggest that the House of Delegates settle the question of the right of the Council to assume functions which the House of Delegates had retained for itself.

Edward Guion,
W. A. Evans.

On motion, this report was referred to the Reference Committee on Legislation and Political Action.

### Report of the Committee to Investigate the Advisability of Publishing a Health Journal

Dr. William A. Evans, Illinois, Chairman, presented the report of the Committee to Investigate the Advisability of Publishing a Health Journal, as follows:

*To the House of Delegates of the American Medical Association:*

1. In our efforts to form definite conclusions on this important matter we have during the past year discussed the subject with many physicians; and we find that a large proportion of them feel that there is great need of, and a demand for, a health magazine for lay readers. They also express themselves as feeling that it is the duty of the American Medical Association to augment the excellent work that it is now accomplishing in educating the public on hygiene and medical matters, by undertaking the publication of a popular health magazine.

2. We believe that there is a demand on the part of the public for a health journal. The particular classes that would patronize such a journal are teachers, ministers and other professional men; those engaged in sociologic work of all kinds; and the intelligent men and women of all the walks of life. Physicians would also be interested in a health magazine, and they would aid in creating a greater demand by advising their patrons to read it.

The fact that all the popular magazines and the daily papers feature their articles on health matters shows that there is a demand on the part of the public for information on subjects pertaining to hygiene. We believe that the reading public will pay for such information in the shape of an illustrated attractive magazine, if published by and under the authority of the American Medical Association.

3. The features of the proposed journal that can be relied on to attract and hold the attention of lay readers are as follows: popular articles, as free as possible from technicalities, on such subjects as personal hygiene, including physical culture; school hygiene; industrial hygiene, with particular reference to occupational diseases, dietetics, including the selection and preparation of food, with infant-feeding as a special department; hygienic problems affecting life in the country, towns and cities; child labor, prison reform, eugenics and other sociologic subjects; medicolegal questions; public health laws; the customs and methods of living in foreign countries; patent-medicine frauds; sex problems and medical organization. There is no limit to the material on these and other subjects that would attract and hold the reading public, while at the same time educating all classes on the necessity for the passage and enforcement of the proper laws for the protection of the public from disease.

4. There are a number of physicians who have demonstrated their ability to write popular articles on medical subjects. The bulletins of various city and state boards of health publish many attractive and instructive papers for distribution to the public, and in that way many men are being trained in the preparation of popular medical literature.

Many physicians are capable of writing such articles, but have not done so for the reason that they have had no medium for their publication. They will not prepare them for publication in newspapers because of the fear of criticism by their professional brethren, but would be pleased at the opportunity of publishing such articles in a popular magazine of such high standards as are demanded by the American Medical Association.

5. The advertising in a health magazine should be of the same character as that of other popular monthlies, conforming, of course, to the present standard of advertising of The Journal of the American Medical Association. Such a journal would attract a large advertising patronage that would in a very few years make it a financial success.

While realizing the difficulties in making a success of a health journal for lay readers, your committee is of the opinion that it can be accomplished; if not by our organization, it surely will be by others who may not be in sympathy with our ideals. We believe that it offers a splendid field of usefulness for our great organization. We therefore recommend that the American Medical Association establish a popular-priced health journal that would reach and move the average doctor and appeal to the interest of the intelligent laity.

Respectfully submitted,
Seale Harris.
E. Fronzak.
B. R. McClelland.
W. A. Evans, Chairman.

It was moved that the report be referred to the Board of Trustees.

Motion seconded and carried.

### Maryland Asks for Public Health Journal

Dr. G. Lane Taneyhill, Maryland, supplemented the report of Dr. Evans by presenting the following memorial from the Medical and Chirurgical Faculty of the State of Maryland:

Whereas, The broadening field of public health evidently demands a special publication for the enlightenment of the profession and the public:

*Resolved*, That our delegates to the House of Delegates of the American Medical Association be, and are hereby, instructed to request the proper authorities of the American Medical Association to consider the feasibility of inaugurating the publication of a magazine or journal devoted to the instruction of the public on matters of public health, including the dissemination of information for the medical profession and the relation of the public to the profession.

Passed at the regular annual meeting at Baltimore, Md., April 24, 1912. John Ruhräh, Secretary.

Dr. William A. Evans, Illinois, moved that the resolution presented by Dr. Taneyhill be attached to the report of the Committee to Investigate the Advisability of Publishing a Health Journal, and that it be recommended favorably by the House of Delegates to the Board of Trustees. Carried.

### Report of the Committee to Investigate the Advisability o Publishing a Small Medical Journal

Dr. J. N. McCormack, Kentucky, Chairman, presented the report of the Committee to Investigate the Advisability o Publishing a Small Medical Journal, as follows:

*To the Members of the House of Delegates of the America Medical Association:*

The suggestion of the President of "many general practitioners who are keen, earnest, industrious, overworked and ethica men, who desire and require scientific medical assistance,' meets the approval of your committee. "They are diffident an reluctant to ask for it. It should be the purpose and accomplishment of this body to deliver to them this information.' This may be done, he continues, "by the establishment of dollar monthly periodical, this to contain working abstract of articles in the larger journals, original articles on pathol ogy, diagnosis and treatment of the more common ills, suc as malaria, typhoid, diphtheria, tuberculosis, syphilis, hookworm, etc., brought up to date and by authorities, so that man may have the latest information on the every-day disease at his command. It can carry, in addition, personal new medical economics, course of instruction, legal decisions o medical subjects, write-ups on climates, states, cities, hospitals and men; in other words, a breezy, gossipy, personall helpful magazine containing a large percentage of the mo modern practical medical facts."

These suggestions are worthy of the great mind which co ceived them. Describing the ideal medical journal of the cla and size of the average medical journal, they should inspi the medical editor to conduct a cleaner and better publicatio This Association may well point with pride to its great jou nal as the *summum optimum* of medical journalism. An eve lasting monument not alone to the genius of its editor, b to the entire American profession, its every number contai many columns which help to carry new thoughts, bett methods of practice and higher ideals to everyone who w read them. It is unfortunate that this ideal journal cann reach every practicing physician in the Union.

As it cannot at present hope to do this, is there no existing agency at our hand which can be remodeled so that it can more and more realize the ideal of our President?

Many of the journals of the state associations are appre- iably near the high mark. Several privately owned journals are similarly conducted. Your committee does not consider as reputable a medical journal which accepts advertisements or reading notices of medicinal preparations which are fraudu- ent either in chemical composition or in therapeutic claims.

There are now 278 journals published in this country more or less medical. Many of these are absolutely disgraceful to he profession which supports them. Would this Association etter conditions by adding another—even a better—small ournal, to the already excellent minority, or shall the Asso- iation enlarge its office force in Chicago so as to be able to xtend real help to those journals—organization or privately wned—which are actually being conducted along honest lines? After an extended correspondence with health authorities, gen- ral practitioners and with the best class of medical editors, our committee is decidedly of the opinion that the time has ome when an amendment to our By-Laws should provide that no one shall be eligible to membership in the American Med- cal Association who is connected as owner or editor with any medical journal which accepts advertisements or reading notices of medicinal or other frauds, and that such frauds hould be defined clearly.

Such a procedure, clearly outlawing the most blatant ffenders against the profession would bring this matter to its ttention in such a way that reputable medical journalism would be freed from this taint of corrupt commercialism. Unquestionably, such a procedure would for a time curtail he income of such journals as complied with it. Why should his committee not assist them?

Your committee therefore recommends that a committee, onsisting of the Editor of THE JOURNAL, Dr. George H. Sim- ions; its subscription and advertising manager, Mr. W. C. raun; its Secretary, Dr. A. R. Craig, and the editors of three ate and one privately owned journal, to be selected by them, hall constitute a Committee on Medical Journalism, which hall be empowered, with the approval of the Board of Trus- ees, to employ an advertising manager and to furnish him ith necessary office and office force, who shall assist such urnals as are conducted in accordance with reasonable rules, s to plain honesty in their advertising and reading pages, in ecuring honest advertisements on a reasonable percentage asis; and a correspondent and his necessary assistants, who hall prepare or cause to be prepared scientific articles or bstracts on practical subjects of interest to the general practi- oner for such of these journals as desire them; provided that ich advertising manager or editor or committee shall not ttempt in any way to influence the policy of any medical urnal assisted as herein provided. With such assistance om this great Association, your committee feels that exist- g medical journals—state and privately owned—may fill the ants so aptly described by your President.

Respectfully submitted,

J. N. McCormack, Chairman.

On motion, the report was referred to the Board of Trustees.

### eport of the Committee on Relief Fund and Physicians' Sanatorium

Dr. Edward Jackson, Colorado, Chairman, read the report of e Committee on Establishment of Physicians' Sanatorium, follows:

*the Members of the House of Delegates of the American Medical Association:*

At the last meeting of the Association the House of Dele- tes endorsed the proposition to organize a corporation for e collection, care, and administration of a Relief Fund, and e supporting of a tuberculosis sanatorium; and directed it a committee of five be appointed with authority to add their number one member from each state medical society, e from the society of the District of Columbia, and one om each of the government medical services, to bring the ject of the Relief Fund and Physicians' Sanatorium to membership of state and local medical societies.

By correspondence with their presidents the matter has n brought to the attention of the various state medical ieties, that of the District of Columbia, and also to the ids of the medical services of the various departments of federal government. The enlarged committee has been med, but it has been impossible to bring it together until this year's meeting of the American Medical Association. A meeting of the enlarged committee has been called, at which the matter will be taken up and discussed somewhat in detail.

In view of this your committee ask permission to present a supplementary report on a later day of this meeting.

Respectfully submitted,

Edward Jackson, *Chairman.*

It was moved that the report be received and filed. Motion seconded and carried.

On motion, the House of Delegates adjourned until 2 p. m., Tuesday, June 4.

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## *Third Meeting—Tuesday, June 4, 1912*

The House of Delegates met at 2 p. m., and was called to order by the President, Dr. Abraham Jacobi. Dr. Jacobi said: "I have been elected simply to continue the business on hand, and I mean to do so. To-day I can say nothing to you. I hope you will have patience with my shortcomings, and if I have anything to say, as possibly I may within a day or so, you will hear me then, but for the time being we will go on with the business."

The Secretary called the roll, and fifty-six delegates responded.

The minutes of the previous meeting were read, corrected, and approved.

### The Scientific Exhibit

Dr. W. T. Councilman, Massachusetts, took the floor on a question of personal privilege and called attention to the Scientific Exhibit, saying it was one of the best the Association had ever held. Its arrangement was excellent, the space allotted abundant, and the light good, but access to it very poor. He said there seemed to be an idea that the exhibit had not been sufficiently recognized, that its importance was minimized on account of its location, and he wished to correct that impression.

President Jacobi said that the House of Delegates should see to it that next year the principal part of the Scientific Exhibit should be on the floor where the registration is going on, as this would be a fine place for such an exhibit.

### Report of the Council on Health and Public Instruction

Dr. Henry B. Favill, Illinois, Chairman, presented this report in abstract. The report was published in THE JOURNAL last week, page 1800.

Dr. J. N. McCormack, Kentucky, moved that the report be referred to the Reference Committee on Legislation and Political Action. Motion seconded and carried.

### Report of the Committee on Uniform Regulation of Membership

Dr. Thomas McDavitt, Chairman, Minnesota, presented the Report of the Committee on Uniform Regulation of Membership. It appeared in THE JOURNAL last week, page 1811.

On motion of Dr. Jere L. Crook, Tennessee, the report was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

### Invitation to Australian Medical Congress

President Jacobi asked Dr. George H. Simmons, Illinois, to introduce Dr. J. W. Barrett, Melbourne University, Melbourne, Australia, to the House of Delegates.

Dr. Simmons, in introducing Dr. Barrett, said that he had come from Australia to invite the members of the American Medical Association to attend the Australian Medical Congress.

Dr. Barrett, being accorded the privileges of the floor, stated that the Australian Medical Congress met every three years. The next meeting would be held in Auckland, N. Z., and on behalf of the officials of the congress and the trustees of the University of Melbourne he invited the members of the American Medical Association to attend this congress in 1914, thus giving them an opportunity to visit Australia and New Zealand.

President Jacobi thanked Dr. Barrett for the kind invitation extended and on motion of Dr. Arthur T. McCormack, Kentucky, the invitation was referred to the Judicial Council.

### Report of Committee on Establishment of a Physicians' Sanatorium

Dr. Edward Jackson, Chairman, presented the supplementary report of the Committee on Establishment of a Physicians' Sanatorium, as follows:

*To the Members of the House of Delegates of the American Medical Association:*

The enlarged committee, appointed to consider the establishment of a relief fund and tuberculosis sanatorium for physicians, presents the following supplementary report:

After a general informal discussion of various phases of the subject, the following resolutions were adopted:

It is the sense of the Committee that owing to the many difficulties of financing and administering a tuberculosis sanatorium for the benefit of physicians, such a project is, at this time, impracticable; that it is impracticable to organize a separate corporation for the collection and care and administration of a relief fund; and that if such fund is now to be established it must be administered by the American Medical Association and be drawn from the general funds of the Association.

The committee considers that only in the manner indicated would it be practicable to give the assistance asked for by the Home for Widows and Orphans of Physicians of Baltimore, Md.

The committee presents this as a final report and asks to be discharged.

Respectfully submitted,

Edward Jackson, Chairman,
J. E. Tuckerman, Secretary,
For the Committee.

On motion, this report was referred to the Reference Committee on Miscellaneous Business.

### Report of Committee on National Department of Health

Dr. John B. Murphy, Illinois, Chairman, presented the Report of the Committee on National Department of Health, as follows:

*To the Members of the House of Delegates of the American Medical Association:*

At no time has the prospect for the divorce of the supervision and control of the health interests of the federal government from unrelated interests been so bright as at present. The Senate Committee on Public Health and National Quarantine has favorably reported a bill for the establishment of an independent public health service, based on what is commonly known as the Owen bill, and the bill as reported is now on the Senate calendar.

In the House of Representatives, in whose organization public health has not as yet received the substantial recognition that has been given it by the Senate, a resolution is now pending, and is receiving serious consideration, providing for the establishment of a Committee on Public Health. The House of Representatives now has no such committee, and matters pertaining to the public health commonly find their way into the Committee on Interstate and Foreign Commerce and at times into other committees. The adoption of the pending resolution would, therefore, be a distinct advance in the public health organization of the national government—even independent of any changes that may be made in the executive branch of the government by the enactment of the Owen bill or of any similar measure—since it would provide a committee in whose deliberations the advancement of public health would be the controlling motive.

Returning now to the bill for the establishment of an independent federal public health service, the bill as reported by the Senate committee does not provide for the establishment of an executive department, whose chief executive officer would be by precedent and custom a member of the President's cabinet. It provides, however, for a public health service independent of all existing executive departments, the head of such service being made responsible directly to the President. To this proposed service are to be transferred the Public Health and Marine-Hospital Service; the Division of Vital Statistics, Bureau of the Census; so much of the work of the Bureau of Chemistry, Department of Agriculture, as relates to the control of foods and drugs; and such other branches of the federal government as the President may deem expedient. All of the functions and authority pertaining to these several branches of the government are to be vested in an independent federal public health service, and the future of that organization left to depend entirely on whetehr it does or does show itself worthy of support.

The bill as reported seems amply to guard against any lessening of the rank and dignity of any of the services affected by it, and against the lessening of the rank, dignity, or emoluments of any person employed in any such services; but in order that this point may be put beyond the range of any possible controversy, Senator Owen has introduced a proposed amendment guarding even more specifically against any such event. In this connection, however, your attention is invited to the bill now pending in Congress to improve the status of the physicians in the Public Health and Marine-Hospital Service, so as to put them on an equal plane so far as emoluments are concerned with the medical officers in the Army and Navy. This seems to be but an act of simple justice and the enactment of this bill should be furthered by all possible means, provided, of course, the bill is not made to carry with it legislation designed to prevent forever the establishment of a department of health.

There are several bills pertaining to the organization of the federal public health services now pending before Congress other than those referred to above, but they have not at the present time attained such status as to require the discussion of them here.

A subcommittee has been appointed by your committee t confer with representatives of the American Institute of Homeopathy, to enlist the active cooperation of that organizatio in the pending movement toward the establishment of a independent, properly coordinated federal public health service

Your committee respectfully recommends:

1. That the Association reiterate its appeal for the enactment of legislation for the proper coordination of the publi health activities of the national government in an independen public health service, along lines laid down in the Owen bill a reported by the Senate Committee on Public Health an National Quarantine, plus the amendment proposed by Senato Owen to maintain the status of the Public Health and Marine Hospital Service.

2. That the Association endorse pending legislation t improve the status of the physicians employed in the Publi Health and Marine-Hospital Service, provided such legislatio be enacted in a form not calculated to prevent or delay th proper coordination and the independence of the public healt work of the national government.

3. That the Association continue the Committee on Nation Health Organization, with instructions to use every prope means to procure the effective coordination and the ind pendence of the public health work of the national governmen

J. B. Murphy, Chairman.
William C. Woodward.
William H. Welch.
(with the exception
recommendation thre
J. N. Hurty.
W. A. Evans.
J. N. McCormack.

On motion of Dr. Arthur T. McCormack, Kentucky, t report was referred to the Reference Committee on Legisl tion and Political Action.

### Report of the Committee to Arrange for Clinic Days

Dr. Charles L. Mix, Illinois, Chairman, presented the Repo of the Committee to arrange for Clinic Days, as follows:

*To the Members of the House of Delegates of the Americ Medical Association:*

The Committee on Clinic Days was authorized at the 19 meeting of the American Medical Association when the Hou of Delegates adopted the report of the Reference Committ on Reports of Officers, in which it was recommended that:

> "Another committee of five be appointed by the pre dent to arrange for one clinic day before, and one d after the close of the annual session."

The committee appointed by Dr. John B. Murphy, pre dent, after the close of the meeting, is as follows: Char L. Mix, chairman, Chicago; Edward Martin, Philadelph Philip Marvel, Atlantic City; Alexander Lambert, New Y City, and John M. T. Finney, Baltimore, Md.

The committee recently met in Philadelphia and discus the general subject. It was thought wiser after correspo ence with the chairmen and secretaries of the fourteen S tions of the American Medical Association to abandon the idea of having the fourteen Sections participate in this set of clinics by reason of the fact that many of the chairmen and secretaries did not feel enthusiastic about arranging for a program. It was also thought wiser to have no duplication of programs but instead to arrange for a limited number of clinics which should not overlap but which would be consecutive. It was decided that Monday, June 3, could best be devoted to the advances which have been made in medicine, surgery, pathology, etc., during the last year, and further, that the most representative men in the United States be invited to participate in this clinic. The following program was therefore finally arranged for June 3, 1912, at Atlantic City.

Milton B. Hartzell, Philadelphia—Recent Contributions to the Diagnosis and Therapy of Skin Diseases.

Alfred Stengel, Philadelphia—Recent Contributions Toward a Fuller Understanding of Cardiovascular Diseases.

Robert W. Lovett, Boston—Recent Advances and Some Fundamentals in Orthopedic Surgery.

John B. Murphy, Chicago—Recent Contributions Toward the Advancement of Clinical Surgery.

Louis B. Wilson, Rochester, Minn.—Recent Advances in Medicine and Surgery Incident to the Study of Living Pathology.

Chevalier Jackson, Pittsburgh—Improved Diagnostic Methods in the Study of the Respiratory Tract.

Simon Flexner (or associate).—Recent Contributions to Medicine, with Special Reference to the Work of the Rockefeller Institute.

Harvey R. Gaylord, Buffalo—Recent Contributions to the Solution of the Cancer Problem.

It was decided to devote the whole of Monday to the above program, with the exception of the evening, which it was decided to give over to the Army, Navy, United States Public Health and Marine-Hospital Service, and the Isthmian Canal Commission. Letters were accordingly sent to Surgeon General George R. Torney, United States Army; Surgeon General Charles F. Stokes, United States Navy; Surgeon General Rupert Blue, United States Public Health and Marine-Hospital Service, and Colonel William C. Gorgas, Chief Sanitary Officer, Canal Zone. The following nominations were made by these officers:

### UNITED STATES ARMY

Major Frederick F. Russell—Army Experience with Typhoid Prophylaxis.

### UNITED STATES NAVY

Medical Inspector E. R. Stitt, Surgeon A. W. Dunbar—Recent Advances in Sanitation in the United States Navy.

### NITED STATES PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE

Passed Assistant Surgeon J. F. Anderson—Recent Contribuions by the United States Public Health and Marine-Hospital Service to Preventive Medicine.

### ISTHMIAN CANAL COMMISSION

Drs. W. M. James and W. C. Deeks, Ancon Hospital, Ancon. . Z.—The Diagnosis and Treatment of Amebic Dysentery.

It was the further decision of the Committee on Clinic Days o arrange for supplementary programs for Friday, June 7, 912, at Philadelphia, Baltimore and New York. The arrangement of the program to be given at Philadelphia was entrusted o Dr. Edward Martin who selected Dr. John B. Deaver as the ocal chairman. By his energy a most satisfactory program as been arranged for at the various Philadelphia hospitals, nd this program will appear in the *American Medical Association Bulletin.*

Dr. John M. T. Finney, appointed by your Committee to rrange for a program at Baltimore, selected as the local hairman, Dr. Thomas S. Cullen who has arranged for a imilar clinical day at Baltimore for Friday, June 7, 1912

The Committee on Clinic Days would respectfully suggest hat if it be continued, its expenses be provided for in the nual budget of the Association. It also suggests that THE OURNAL give greater publicity to any future meetings that ay be held than was given to the meeting at Atlantic City June, 1912. Notwithstanding the fact that but few knew f the program arranged for by your Committee, about 500 ere present in the afternoon session, and nearly that numer in the evening session.

Respectfully submitted,

CHARLES LOUIS MIX, Chairman.

On motion of Dr. J. W. Fleming, New York, the report was eceived and the committee continued.

## Report of the Reference Committee on Amendments to the Constitution and By-Laws

Dr. Arthur T. McCormack, Kentucky, Chairman, presented the Report of the Reference Committee on Amendments to the Constitution and By-Laws, as follows:

Your Committee to which was referred the Report of the Committee on Uniform Regulation of Membership cordially commends the report and recommends that it be adopted and that the Secretary be instructed to communicate its conclusions to the constituent associations.

Your Committee recommends that the Report of the Committee to formulate amendments to the Constitution and By-Laws to extend membership including the pending amendments to the Constitution introduced at the 1911 session, be referred to the Judicial Council with power to confer with constituent associations and to report to the House of Delegates.

The Committee further recommends that Chapter III, Section 1, of the By-Laws be amended to read as follows:

> Section 1. Delegates must have been members of the American Medical Association for two years.—No one shall serve as a member of the House of Delegates who has not been a member of the American Medical Association for at least the two years immediately preceding the meeting of the House of Delegates at which he is to serve.

The Committee further recommends that Section 2, of Chapter IX, be amended by adding the following:

> The House of Delegates may recall the election of any officer or the appointment of any member of a committee or Council at any session by a two-thirds vote of the members present and voting, provided that no motion for recall shall be acted on till the day following that on which it is introduced.

The Committee further recommends that the Board of Trustees be directed to secure the amendment of the Charter so as to provide that the President, the Secretary and the Editor of THE JOURNAL shall be ex-officio members of the Board of Trustees without the right to vote, and that the Secretary of the Association shall be ex-officio Secretary of the Board of Trustees; and that the Board report its action to the next annual session of the House of Delegates so that the By-Laws may be amended accordingly and that the following words be added to Article 10, Section 2, of the Constitution.

> "and the President, Secretary and Editor of THE JOURNAL shall be members of the Board of Trustees without the right to vote."

The Committee further recommends that the Judicial Council be requested to investigate the secret division of fees and the giving of commissions and the matter of contract practice, and recommend such action by the House of Delegates and the constituent associations as will remedy existing evils.

Your committee approves the suggestion of the Secretary in regard to invited guests and recommends that Section 9, Chapter I, of the By-Laws be amended to read as follows:

> SEC. 9. INVITED GUESTS.—Scientists who are not eligible to membership in the component society of the locality in which they reside may be invited by the general officers, or by the officers of a section, to attend any annual session and to take part in the scientific work. They shall be designated as invited guests and be entitled to participate in the scientific and social functions.

It also approves the action of the Board of Trustees in making slight modifications of the By-Laws as affecting postal rates and recommends that the first paragraph of Section 2, Chapter I, be modified to read as follows:

> MEMBERS.—Any physician, reported as a member in good standing of a constituent association by the secretary of that association, who on the prescribed form shall apply for membership and subscribe for THE JOURNAL, paying the annual dues for the current year, shall be a member.

And that Section 5 of Chapter I be amended so as to read:

> DELINQUENCY.—Any member who, for one year, has failed to pay his annual dues shall forfeit his membership thirty days after notice from the secretary has been mailed to his last known address.

And that Chapter XIII be amended to read:

> The annual dues shall be five dollars, payable in advance on the first day of January of each year, of which not less than four dollars shall be credited to the subscription for one year to THE JOURNAL.

The committee approves the Report of the Judicial Council and recommends that the rules to govern the Judicial Council and the methods of procedure be adopted:

### RULES TO GOVERN THE JUDICIAL COUNCIL

1. The Judicial Council shall meet during the annual session of the American Medical Association and at other times at the call of the chairman or on the written request of three members of the Council.

2. Three members of the Judicial Council shall constitute a quorum.

3. It shall require the affirmative vote of a majority of the Council to decide any question.

4. The time and place of the meetings of the Council shall be announced in each call for a meeting, which call shall be issued at least thirty days before the time of the meeting to the members of the Council and the parties to any question pending.

5. In the adjudication of all questions involving the character and status of individuals or societies, the parties implicated must be duly informed in writing of the charges and afforded an opportunity for defense.

6. No mere hypothetical question asking for expression of opinion shall be considered by the Council and no question of any character shall be considered until such question is referred to the Council in accordance with the rules adopted for its procedure.

### METHODS OF PROCEDURE

1. In all cases in which the Council has original jurisdiction, questions must be stated in writing whenever they are submitted by action of the House of Delegates or by any of the constituent state associations.

2. In all cases in which the Council has appellate jurisdiction, action must be originated by written appeal made by the individual or organization aggrieved.

3. Documentary evidence in printed or typewritten form must be presented to the Secretary of the Council with a copy of the complaint.

4. The Judicial Council shall set a time for the hearing of the cases that are referred to the Council and shall give notice to the prosecutor and to the defendant of the time and place at which the hearing is to be held. Such notice shall be mailed to both parties to the controversy at their last known address not less than thirty days before the date set for the hearing, and no hearing shall be held without this notice unless this condition be waived in writing by both the prosecution and defense.

5. The prosecutor and the defendant, or either of them may be represented before the Judicial Council by any member of the organized medical profession included in the American Medical Association.

6. The attendance at all hearings of cases shall be limited to the members of the Judicial Council, the secretary of the Council, the two principals and their representatives and the witnesses called in the case, provided, however, that at the request of the accused, the Judicial Council, at its discretion, may hold a public hearing. Should either party to the controversy fail to appear in person or to be represented by a member of the Association at the time and place regularly set for the hearing, the Judicial Council shall, at its discretion, continue the case, quash the indictment, or render a decision.

The committee recommends that Section 4, Chapter I, of the By-Laws be amended to read as follows:

> The Effect on Membership of Removal to Another State.—A member who changes the location at which he practices medicine from the state through whose constituent association he holds membership in the American Medical Association to another state in which there is a constituent association, is eligible to membership in the component society of his new location upon the presentation of a transfer card and an official statement that his dues have been paid in full in the society in which he holds membership. He shall forfeit his membership in the American Medical Association one year after such change of location, unless he becomes a member of the constituent association of the state to which he has moved. Provided, however, that if the component society into whose territory such a member has moved shall refuse him membership, the member shall be privileged to appeal to the Judicial Council of this Association to determine whether or not he be guilty of any act that warrants the enforcement of the provisions of this section. Pending the decision of such appeal, he shall retain his membership in the American Medical Association through his original state association. And provided further, that the term, "the practice of medicine," throughout these by-laws shall be held to mean the offering of service or counsel for the relief of those suffering from abnormal physical or mental conditions.

The committee further recommends that the second paragraph of Section 2, Chapter 1, of the By-Laws be amended by substituting for the present paragraph the following:

> Commissioned medical officers of the United States Army, United States Navy and the United States Public Health and Marine-Hospital Service shall be members of this Association so long as they are engaged actively in their respective service and thereafter if they have been retired on account of age or physical disability. These members shall not be required to pay dues and shall not receive The Journal of the American Medical Association except by personal subscription.

The committee further recommends that the last sentence of Section 4, Chapter IX, of the By-Laws be amended by inserting the words "at its discretion" following "may" and the word "general" following "investigate" so that the Section as amended shall read as follows:

> The Judicial Council may, at its discretion, investigate general professional conditions and all matters pertaining to the relations of physicians to one another and to the public and shall make such recommendations to the House of Delegates and the constituent associations as it deems necessary.

Your committee asks for further time as to the other matters pending before it.

Your committee to which was referred the resolution of Dr. Wetherill of the Section on Obstetrics and Gynecology approve the proposed alteration in the By-Laws and recommend that Chapter XI, Section 1, Heading 3, be amended to read as follows:

### Obstetrics, Gynecology and Abdominal Surgery

Your Committee approves the Report of the Judicial Council submitting the Principles of Medical Ethics as revised by the Judicial Council and recommend its adoption with the following slight changes. [The full draft appeared in The Journal last week, page 1790. The sections in which changes were recommended are repeated below as corrected.]

### CHAPTER II.

Sec. 4.—Solicitation of patients by circulars or advertisements, or by personal communications or interviews, not warranted by personal relations, is unprofessional. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other like self-laudations defy the traditions and lower the tone of any profession and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary simple business cards, being a matter of personal taste or local custom, and sometimes of convenience, is not *per se* improper. As implied, it is unprofessional to disregard local customs or offend recognized ideals in publishing o circulating such cards.

It is unprofessional to promise radical cures; to boast o cures and secret methods of treatment or remedies; to exhibi certificates of skill or of success in the treatment of diseases or to employ any methods to gain the attention of the publi for the purpose of obtaining patients.

Sec. 5.—It is unprofessional to receive remuneration fror patents for surgical instruments or medicines; to accep rebates on prescriptions or surgical appliances, or perquisite from attendants who aid in the care of patients.

### ARTICLE VI.—COMPENSATION

Section 1.—The poverty of a patient and the mutual pr fessional obligation of physicians should command th gratuitous services of a physician. But institutions endowe by societies, and organizations for mutual benefit, or for acc dent, sickness and life insurance, or for analogous purpose should be accorded no such privileges.

[Sec. 3 is omitted and Sec. 4 becomes Sec. 3.]

Sec. 3. It is detrimental to the public good and degradin to the profession, and therefore unprofessional, to give or receive a commission. It is also unprofessional to divide fee for medical advice or surgical treatment, unless the patie or his next friend is fully informed as to the terms of th transaction. The patient should be made to realize that proper fee should be paid the family physician for the servi he renders in determining the surgical or medical treatme suited to the condition, and in advising concerning those be qualified to render any special service that may be required the patient.

Respectfully submitted,

A. T. McCormack, Chairman,
S. G. Kahn,
W. L. Noble,
W. B. Russ,
Seale Harris.

Dr. A. W. McAlester, Missouri, moved that the recommendations be read and voted on seriatim. Motion seconded and carried.

On several motions, duly seconded and carried, the sections of the report were adopted.

### New Principles of Ethics Adopted

The report relating to the Principles of Medical Ethics was then presented for adoption as a whole. After discussion by Drs. U. C. Collins, Illinois; Wendell C. Phillips, New York; A. C. Cotton, Illinois; F. W. Robbins, Michigan; Miles F. Porter, Indiana; Curran Pope, Kentucky, and Arthur T. McCormack, Kentucky; Dr. E. J. Goodwin, Missouri, offered the following motion:

I move that action on the code submitted by the Judicial Council be postponed for one year; that copies of it be mailed to every member of the House of Delegates and to the incoming members next year, with instructions to study it and come prepared to vote on it at that time; that the Judical Council ask for opinions from members of the house in the interim between this and the next meeting for their information and tabulation and report at the next meeting. Motion seconded.

After discussion by Drs. Arthur T. McCormack, Kentucky; C. E. Cantrell, Texas; Hubert Work, Colorado; E. J. Goodwin, Missouri; G. V. I. Brown, Wisconsin; Luther B. Kline, Pennsylvania, and G. Lane Taneyhill, Maryland, the President put the motion to postpone and declared it lost.

Dr. Taneyhill moved the adoption of the Principles of Medical Ethics recommended by the Reference Committee. Motion seconded and carried.

On motion, duly seconded, the report of the Reference Committee on Amendments to the Constitution and By-Laws was adopted as a whole.

### Additional Report of Committee on Credentials

Dr. D. Chester Brown, Connecticut, Chairman presented a report from the Committee on Credentials, and stated that the credentials of Dr. J. H. McCracken, Texas, had been examined, and it was found that Dr. McCracken had been duly elected as a delegate by the Texas State Association, but that the records in the Secretary's office recorded Dr. McCracken as having become a member of the Association in June, 1911.

On motion of Dr. C. E. Cantrell, Texas, which was duly seconded and carried, Dr. McCracken was seated as a delegate.

### Report of Reference Committee on Reports of Officers

Dr. Hubert Work, Colorado, Chairman, presented the report of the Reference Committee on Reports of Officers, as follows:

Your Committee on Reports of Officers begs leave to report that it concurs in the President's recommendations, as follows: That the legislative work of this Association be transferred from the Council on Health and Public Instruction to a Council on Medical Legislation to consist of five members, to be elected by the House of Delegates, one for five years, one for four years, one for three years, one for two years, and one for one year. Thereafter, one member shall be elected each year to serve five years. The Council shall organize and adopt such regulations for the government of its action as is deemed expedient. The Secretary of this Association shall be the secretary of the Council. The Council shall expend money or contract financial obligations only as shall be authorized in writing by the Board of Trustees and the Board of Trustees shall be instructed to furnish the necessary financial aid.

The committee concurs in the further recommendation that the House of Delegates requests the Council on Medical Education to take some action in recognition of the founding of the first medical college in the United States by Dr. John Morgan of Philadelphia in 1765.

The suggestion that the Committee on Clinic Days for the Association be made permanent is recommended by your committee, believing that the inauguration of clinics as a permanent feature of the Association proceedings will be attractive to visitors and a distinct advance in presenting medical instruction on special subjects to members.

The full and concise report of the Board of Trustees made no specific recommendations properly coming before this committee. Supplemental reports were attached, showing itemized appropriation of funds, together with sums expended and balances remaining, also the pay-roll for the month of May, showing salaries and wages paid to each officer and employee, by name, which I shall read separately if anyone so desires. We endorse the Secretary's suggestion aimed to facilitate and improve the work of the House of Delegates.

During the past year there has been some conflict regarding the scope of the work of the special committees that were appointed at the last meeting of the House of Delegates and the established councils of the Association. In order that all the activities of the Association may be coordinated it is advisable that the House of Delegates extend the courtesy of the floor to the members of the various councils and especially that it request the secretaries of these councils to attend the sessions of the House, according them the privilege of the floor, in order that the House may be constantly in position to obtain information concerning work that is being done by these councils that this body may direct these activities.

We also heartily concur in the Secretary's request that the House take time properly to consider the matters brought before it and finally to act only after mature deliberation on them. Every resolution should be referred to its proper reference committee before final action by the House.

Every year undigested resolutions are hastily passed, entailing unnecessary work with confusion of objects. We see a growing tendency to delegate duties to committees—a practice not in itself objectionable, except that the reports of these committees are usually the work of the chairman, approved by the remaining members with scant consideration. The duties of the House then are performed by a very few men, without much discussion, which is in our opinion contrary to the proper spirit and best interests of the Association.

We further recommend that the work on organization be taken out of the work of the Council on Health and Public Instruction, as it is an entirely independent function, and that it be placed under a Council on Organization, to be elected by the House of Delegates to consist of five members, one of whom shall be elected for a period of five years, one for four years, one for three years, one for two years, and one for one year and one each succeeding year for five years.

Additional recommendations contained in the reports of officers properly belonging to other committees have been referred to them.

Respectfully submitted,
HUBERT WORK, Chairman,
J. W. ELLIS,
DONALD CAMPBELL,
J. W. YOUNG,
E. A. HINES.

Dr. A. T. Bristow, New York, moved that each recommendation in the report be considered separately. Seconded and carried.

The report was then read by sections.

On motion, the section authorizing the establishment of a Council on Legislation was referred, after discussion by Drs. A. R. Mitchell, Nebraska; D. Chester Brown, Connecticut; Hubert Work, Colorado; H. D. Arnold, Massachusetts, and A. W. McAlester, Missouri, to the Council on Health and Public Instruction for consideration and report at the next annual session.

Subsequent sections of the report were on several motions, which were duly seconded, adopted, with the exception of the last section authorizing the establishment of a Council on Organization. It was moved and seconded that this section be referred to the Council on Health and Public Instruction for its consideration with the request that it report to the House at its convenience. Carried.

It was moved, with the exception of the two items, referred as above, that the report be adopted as a whole. Motion seconded and carried.

Dr. Donald Campbell, Montana, moved that the Board of Trustees be instructed to empower and direct the Secretary to mail a copy of the Principles of Medical Ethics to every member of the Association in booklet form. Motion seconded and carried.

Dr. Arthur T. McCormack moved that the motion be referred to the Board of Trustees.

The motion was seconded and carried

### Petition for the Formation of a Section on Proctology

Dr. Dwight H. Murray, New York, presented the following:

*To the American Medical Association*: We, the undersigned, members of the American Proctologic Society and also members of the American Medical Association, do respectfully petition your honorable body to form a Section on Proctology, which we agree to register in and actively support, as we believe that the interest of the public can be best conserved by an earnest effort to educate the general profession through the American Medical Association.

The American Proctologic Society was organized in Columbus, Ohio, in 1899. Since then we have held regular annual meetings at the time and place of the meetings of the American Medical Association with an average attendance of from fifty to one hundred.

Our membership was originally limited to thirty, but the interest in this line of work has increased so rapidly that we have been forced to extend our membership to fifty, which is now practically filled and there are a number of applicants pending election.

We herewith submit copies of the transactions of the American Proctologic Society for the years 1908, 1909, 1910 and 1911, a copy of the constitution and by-laws and the program of this year's work, which also includes the list of members.

Respectfully submitted.

J. L. Jelks, President, Memphis, Tenn.
A. Z. Zobel, Vice-President, San Francisco.
Lewis H. Adler, Jr., Secretary, Philadelphia.
Louis J. Hirschman, Detroit.
A. B. Graham, Indianapolis.
George W. Combs, Indianapolis.
J. A. MacMillan.
Collier F. Martin, Philadelphia.
E. H. Terrell, Richmond, Va.
Frank C. Yeomans, New York.
Ralph W. Jackson, Fall River, Mass.
Samuel T. Earle, Baltimore.
J. Coles Brick, Philadelphia.
J. Rawson Pennington, Chicago.
Samuel G. Gant, New York.
William M. Beach, Pittsburgh.
George B. Evans, Dayton, O.
James P. Tuttle, M.D., New York.
Jerome M. Lynch, New York.
Dwight H. Murray, Syracuse, N. Y.
G. S. Hanes, Louisville.
B. J. Dryfuss, New York.

The chair directed that this petition be referred to the Reference Committee on Sections and Section Work.

Dr. J. H. J. Upham, Ohio, presented the following resolution:

*Resolved*, That the National Association of State Secretaries and Editors requests that arrangements be made for a meeting of this association in Chicago during the fall of 1912, and that the Board of Trustees be requested to appropriate a fund sufficient to pay the expenses of members in attending the meeting, which is to be devoted to an interchange of views as to the most effective method of work.

The Chair directed that this resolution be referred to the Board of Trustees.

On motion, the House of Delegates adjourned until 2 p. m., Wednesday, June 5, 1912.

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## *Fourth Meeting—June 5, 1912*

The House of Delegates met at 2:10 p. m. and was called to order by the President.

The Secretary called the roll, eighty-two members present.

The minutes of the previous meeting were read and adopted.

### Supplementary Report of Board of Trustees

Dr. W. W. Grant, Colorado, Chairman of the Board of Trustees, reported for the Board that in the matter of the resolution offered by Dr. Upham to provide for a meeting of the Association of State Secretaries and Editors, the Board recommends that the request be referred to the Board of Trustees for final action to be taken at the October meeting of the Board. Also regarding the establishment of a health journal, the Board recommends that if it is feasible to undertake the publication of such a journal, the House authorize the Board of Trustees to proceed at once with the work.

On motion, duly seconded, the recommendations of the Board were adopted.

### Report of Committee on Anesthesia

Dr. Yandell Henderson, Connecticut, Chairman, read the report of the Committee on Anesthesia, which was referred to the Reference Committee on Reports of Officers.

The report is as follows:

*To the Members of the House of Delegates of the American Medical Association:*

The functions of this committee are to gather and analyze data regarding anesthetics, to initiate and stimulate investigation, and to make such recommendations to the House of Delegates and to the members of the American Medical Association generally as a careful consideration of the present status of anesthesia may suggest.

Recent developments in this field afford ground for the hope that we are today at the beginning of an epoch of progress in anesthesia unequalled since its original discovery and introduction. We shall indicate briefly certain of the recent discoveries and improvements which in our judgment deserve prompt and general adoption, and shall suggest the lines along which others may profitably be developed. We desire, however, to give the first place in this report to the discussion of a broader question, namely, the status of anesthetics in relation to the future development of anesthesia.

In the judgment of your committee the easiest and safest line of approach to many of the practical problems of anesthesia today lies in the recognition of anesthetists as specialists on a par in the importance and difficulty of their work with those in other branches. In all of our larger cities a certain number of men of particular aptitude and interest are devoting all, or the greater part, of their time to administering anesthesia. This practice should be in every way encouraged. Similarly the administration of anesthesia by those whose work has been almost entirely in other lines should be severely discouraged. The physician who would not think of undertaking a major surgical operation will frequently, without hesitation, assume the equally great responsibility of anesthetizing for such an operation. It should be recognized that the welfare of the patient demands skill on the part of the anesthetist no less than on that of the surgeon.

Anesthesia should cease to be regarded as merely an adjunct of surgery. It is a topic in which surgeons as a rule take relatively little interest. It should be in charge of those whose principle aim is, not to see as much of the operation as possible, but to administer anesthesia in such a manner as to bring the patient through with the least possible loss of vitality.

Every hospital, certainly every large hospital, should have as a regular member of its staff an attending anesthetist (as is the case, for example, at the Massachusetts General Hospital in Boston and at the Church Home and Infirmary in Baltimore), whose authority in his special department should be as complete as is that of the attending physician or surgeon in their fields. This arrangement will be particularly important during the next few years when the older methods of anesthesia—chloroform, ether, cocain, etc., will be competing with, and greatly modified by, newer procedures, e.g. nitrous oxid, intratracheal insufflation, spinal anesthesia, intravenous anesthesia (chloroform and hedonal in saline), intra-arterial injection of novocain by the methods of Bier and Ramshoff, measures for the prevention and relief of acapnia, the prevention of pain associations (as practiced by Crile), etc.

One of the practical questions of increasing importance is whether routine anesthesia in hospitals should be given by interns in continually changing assignment with the disadvantage of having to train a novice every few weeks or months, or by a nurse devoting her entire time to this work. To either of these arrangements there are objections. We do not believe, however, that any decisive opinion one way or the other on this matter can now be formed. The problem should be placed in the hands of attending anesthetists and left to them to work out. The day when anesthesia was supposed to require nothing more than a bottle of ether or chloroform and a towel or some simple mask is rapidly passing. The newer procedures above mentioned, some of which will undoubtedly come into extensive use in the not distant future, will demand a degree of knowledge and intelligence far beyond the requirements of the past or present. The hospital which relies wholly upon nurses, or wholly upon interns, without the supervision of an expert attending anethetist, will be unable to adopt the newer procedures without serious risk of accident. If these procedures will lessen mortality and prevent suffering, as there is good reason to believe that they will, there can be no sufficient justification for adhering to the older methods merely because they require less intelligence and experience to administer.

During the past year an important step toward the recognition of anesthesia as a special field of practice and investigation has been taken in the organization of the New York Society of Anesthetists. A member of this committee has attended all of its meetings, and can testify to the high quality of the papers presented and the stimulating character of the discussions following them. Nothing conduces to rapid progress in any field of work so much as meetings which bring otherwise isolated workers into personal contact with those of similar interests. We understand that it is proposed to broaden this society into a national body. We bespeak for it the cooperation and assistance of the officers of the American Medical Association. At the request of the Society of Anesthetists, conveyed through this committee, the Sections on Pathology and on Pharmacology have united at this meeting for a joint symposium on anesthesia.

The papers to be read in this symposium and later published in The Journal of the American Medical Association will present the recent advances in knowledge, and improvements in technic with completeness and authority. A detailed discussion need not therefore be included in this report. We shall confine ourselves to certain specific recommendations.

(1) The use of chloroform as the anesthetic for major operations is no longer justifiable. Scientific investigation and clinical experience agree in demonstrating that necrosis of the liver ("delayed chloroform poisoning") follows in a by no means inconsiderable percentage of cases. The mode of causation of this sequel is unknown. There are therefore no precautions that can be intelligently taken against it. Accordingly the surgeon whose patient dies in this manner a day or two after operation must face the responsibility of having knowingly taken an unnecessary chance—and lost. We see no reason to believe that in respect to toxicity there is more than a slight quantitative difference between chloroform alone and such chloroform mixtures as A. C. E., anesthol, etc.

(2) For minor operations also the use of chloroform should cease. In general it may advantageously be replaced by nitrous oxid, or nitrous oxid-oxygen. It is a mistake to think that a fatality under anesthesia is necessarily due to an unusually large administration of the anesthetic. A previous condition of suffering or anxiety, or a prolongation of the stage of anesthetic excitement renders a subject who would otherwise be able to resist a large dosage liable to collapse even under a small dosage. The practical importance of avoiding so far as possible all anxiety and pain has been demonstrated on the clinical side by Crile, and experimentally by Henderson. It is noteworthy that Levy (with Cushny) has recently demonstrated that in cats a sudden heart failure (fibrillation) is induced by a period of *light* chloroform anesthesia, while this form of death is not inducible by deep anesthesia. Risks of this sort are far greater with chloroform than with ether, and greater with ether than with nitrous oxid. As they can not be foreseen, they can not be avoided, except by replacing a dangerous anesthetic by a safe one.

(3) Chloroform is sometimes found convenient for initiating anesthesia in alcoholics or other difficult subjects. As a means of avoiding the ill effects of a prolonged period of ether excitement the temporary employment of chloroform for this purpose is perhaps sometimes the lesser of two evils. It is justifiable only when nitrous oxid is not available. If chloroform is to be so used, it should be given as soon as it is evident that the patient will not go under ether readily. Unless the change to chloroform is made early it should not be made at all. We wish especially to emphasize the point that chloroform should never under any circumstances be administered after a prolonged period (10 or 15 minutes or more) of ether excitement. Even a small administration of chloroform is then peculiarly liable to induce respiratory or cardiac death. As soon as full anesthesia is attained ether should be substituted.

(4) As regards ether, the two points to be especially emphasized are that anesthesia should always be induced quickly, and that throughout its entire duration it should be as nearly uniform as possible. Physiology has demonstrated that the predominant stimulant maintaining respiration in a normal subject is the $CO_2$ in the blood. If for even a few minutes this gas is exhaled more rapidly than it is being produced, a compensatory period is liable to follow in which all spontaneous breathing ceases. This apnea vera tends to last until the body has reaccumulated its normal store of $CO_2$, and the respiratory center is thereby again stimulated to its normal activity. During the initial period of etherization, the so-called stage of excitment, the subject generally breathes excessively. The analyses of Henderson have shown that if this period is prolonged a condition of intense acapnia (deficiency of $CO_2$) results. When full anesthesia is thereafter attained the subject, although acapnic and prone to apnea, is still sufficiently stimulated by the influence of ether so that, in the majority of cases, an apparently natural or even excessive respiration is maintained. This condition may continue even up to the end of a long operation. At any time, however (and the tendency increases as time goes on), the balance between the stimulant action of ether and the depressant influence of acapnia may become negative, and the subject stops breathing. If the acapnia is sufficiently intense, this respiratory failure (apnea) may continue until death results from lack of oxygen. Fortunately lack of oxygen also exerts indirectly some stimulating influence upon respiration. Otherwise such fatalities would be much more frequent than they are. We are of the opinion that respiratory failure may be in certain cases the indirect result of an unskillful timidity which, by prolonging the stage of excitement, induces acapnia, rather than the direct result of over-boldness in the administration of ether at the moment of failure.

(5) It is a well demonstrated and important rule that a subject who has once been etherized or chloroformed cannot be again anesthetized within a few hours without great risk. Essentially the same danger is involved in allowing the intensity of anesthesia to vary during an operation. It is not the anesthetist who at all times maintains uniformly deep anesthesia whose patient stops breathing. This accident comes particularly to those who administer so irregularly that the patient at times comes nearly out of anesthesia and again is plunged into profound narcosis. In the production of a fatality the intervals of incomplete anesthesia play a part as great as, or even greater than, the period of profound narcosis which immediately precedes the respiratory (or cardiac) failure. Anesthesia is good in proportion as it is uniform.

(6) Offenses against this principle occur most frequently in adenoid and tonsillar operations. When the death of the patient (usually a child) results it is assigned either to "heart disease" or to an "unrecognized condition of status lymphaticus." It is probable that in most cases these deaths are merely the natural result of intermittent anesthesia and of the increased susceptibility induced by fear. Under the ordinary methods the anesthetist and the operator are alternately in control of the patient's nose and mouth. The method of intratracheal insufflation introduced by Meltzer and Auer appears to be peculiarly well adapted to afford a safe anesthesia and at the same time to keep the field of operation clear, and the anesthetist out of the way. There is now a sufficient accumulation of clinical experience with this method to demonstrate its safety and convenience. We recommend that it be widely adopted. For operations on the head and neck, when it is advantageous to keep the anesthetist out of the surgeon's way, most of the advantages of intratracheal insufflation are afforded by intrapharyngeal insufflation with the simple apparatus (air blower, ether vaporizer, and catheter inserted through one nostril) devised by Thomas. Gwathmey has shown the marked advantage of warming ether vapor, even in the ordinary methods of administration. For any form of insufflation an arrangement for heating is essential.

(7) Theory and practice alike demonstrate the propriety in the large majority of major operations of administering subcutaneously a liberal dose of morphin half an hour or more before initiating anesthesia. It obviates anxiety, diminishes the intensity and duration of the stage of excitement, and lessens pain after the anesthesia is terminated. These are all points of marked advantage in conserving vitality. Morphin is par excellence the prophylactic against shock. Against the use of morphin it has been argued that it depresses respiration and thus tends to delay the elimination of the anesthetic after the operation. This is true, and it is a point of importance. In the next section is set forth a method of overcoming this disadvantage.

(8) We suggest that in every operating room there be kept on hand and available for immediate use tanks of oxygen containing 8 or 10 per cent. of $CO_2$. We have communicated with all of the principal companies manufacturing gases for clinical use, and we have been informed by them, not only that they can supply such a mixture, but that as soon as there is a considerable demand for it they will be able to do so at the same price as that charged for pure oxygen. It has been demonstrated that $CO_2$ (properly dilnted) is by far the most efficient (because it is the natural) respiratory stimulant. The carbonated oxygen is conveniently administered by means of such a mask and bag as is ordinarily used for nitrous oxid. It should be administered at the first sign of respiratory or circulatory failure. By using it at the outset of anesthesia by any "closed" method a more rapid absorption of ether may

be obtained, and a consequent shortening of the period of excitement. By administering it alone after the operation respiration is stimulated to a more rapid elimination of the anesthetic in even a deeply morphinized subject. It is thus easy to prevent the prolonged period of subnormal breathing with its cyanosis and ether retention which now frequently follows anesthesia. For the last mentioned purpose it would be equally effective and much cheaper to employ pure $CO_2$ (such as is used in the manufacture of carbonated table waters) diluted with 10 to 12 volumes of air. An apparatus for effecting this dilution is now being devised and tested by a member of this committee, and will probably be available for general use within a few months.

(9) The most important event in the recent progress of practical anesthesia was the demonstration by Gatch of the beneficial effects of a certain amount of rebreathing in nitrous oxid oxygen anesthesia. It affords a clinical confirmation of the validity of the acapnia theory in relation to anesthetic fatalities. As the result of Gatch's work nitrous oxid oxygen, reenforced when necessary with a very small amount of ether, and administered by "rebreathing" methods, is being extensively adopted as the anesthesia of choice for major operations involving a considerable amount of shock, or upon already shocked subjects. A number of ingenious and convenient forms of apparatus for the administration of nitrous oxid have recently been devised and put upon the market. We have examined them, but feel that it is as yet too early to decide on their relative merits. In one respect all of those that we have seen are defective, namely, in the insufficient closeness of the mask upon the face. If the air in any quantity leaks into the mask and bag, the oxygen which it contains is quickly absorbed, and leaves the nitrogen. As air is 4 parts nitrogen to 1 of oxygen, the mixture of nitrous oxid and oxygen which the patient is breathing soon becomes so diluted with nitrogen that it neither prevents cyanosis nor maintains full anesthesia. Such troubles as occasionally arise with nitrous oxid anesthesia are principally due, in our opinion, to this dilution. To overcome this defect a mask which is at once light, easily adjusted, absolutely air tight on any face, quickly removable and not requiring to be held by the hand of the anesthetist is the greatest need. We recommend that a prize of $200 be offered for the invention of a mask fulfilling these requirements—the award to be made by our successors on this committee.

While nitrous oxid oxygen appears to afford the least deleterious of all forms of anesthesia, it is also unfortunately the most expensive. It is easily seen that the greater part of this cost is not for the nitrous oxid which is actually absorbed to induce anesthesia, nor for the oxygen which the patient consumes. The patient is constantly exhaling $CO_2$; and even when a considerable amount of rebreathing is practiced, the removal of this substance from the mask and bag involves the waste of 10 to 20 times as much oxygen, and 50 to 100 times as much nitrous oxid. It is the necessity of removing $CO_2$, therefore, which is the source of at least 90 per cent. of the cost of this form of anesthesia. As a few cents worth of sodium or potassium hydroxid would absorb all the $CO_2$ exhaled by the patient in many hours, a member of this committee has undertaken the problem of devising a simple form of absorber. The results of the experimental and clinical tests of this device will be reported later in The Journal of the American Medical Association.

(10) Finally we would respectfully recommend that the President of the Association in appointing our successors upon this committee make his selection not, as has been the custom in the past, wholly or almost wholly from the ranks of the surgeons, but rather from among those whose principal interest is in this field of work, and who during the past few years have themselves made contributions of value to the theory and practice of anesthesia.

Respectfully submitted,
Yandell Henderson, Chairman.
Thomas S. Cullen,
E. Denegre Martin,
Thomas W. Huntington,
Fred T. Murphy.

Dr. J. N. McCormack, Kentucky, moved that the report of the Committee on Scientific Research be received as printed and referred to the Reference Committee on Reports of Officers. Motion seconded and carried.

The report is as follows:

## Report of the Committee on Scientific Research

*To the Members of the House of Delegates of the American Medical Association:*

The Committee on Scientific Research of the American Medical Association begs leave to report as follows:

The present committee was appointed Jan. 2, 1912. There was then a balance in its fund of $1,250; on Jan. 24, 1912, Dr. Mary R. Lawson was paid a grant of $200 allowed her by the previous committee, and on April 3, 1912, Dr. G. B. Webb was paid a grant of $200, similarly allowed. This left $850 at the disposition of the committee and in response to applications received, grants have been allowed as follows:

1. Dr. R. M. Pearce, University of Pennsylvania, Philadelphia, $200 for investigations in his laboratory by Dr. J. H. Musser, Jr., on changes in the blood following splenectomy, and by Dr. J. H. Austin and Dr. A. B. Eisenbrey on utilization of parenterally introduced serum.
2. Dr. Benjamin White and Oswald T. Avery of the Hoagland Laboratory, Brooklyn, New York, $250 in support of an investigation to be conducted at the Saranac Laboratory for the study of tuberculosis, on the action of the split products of tuberculoprotein.
3. Dr. A. Sophian of the Division of Laboratories of the Department of Health of the City of New York, $200 to aid him in an investigation in Texas on protective inoculation against epidemic cerebrospinal meningitis.
4. Dr. K. K. Koessler, Chicago, $200 for work to be conducted in the Memorial Institute for Infectious Diseases, Chicago, on the etiology of scarlet fever.

This makes the total grants now pending $850, and this being the sum at the disposal of the committee, no further grants can be made for the present.

Since the last meeting of the House of Delegates, grants have been paid as follows:

1. Aug. 15, 1911. Dr. R. M. Pearce, Philadelphia, $200 for investigation by H. T. Karsner and J. H. Austin entitled "Studies of Experimental Bland Infarction," and for investigation by H. T. Karsner and J. B. Nutt entitled "The Relation of Toxic Doses of Horse Serum to the Protective Dose of Atropin in Anaphylaxis."
2. Sept. 5, 1911. Dr. E. C. Rosenow, Chicago, $200 in support of work on "Autolysis of Pneumococci."
3. Dec. 11, 1911. Dr. K. K. Koessler, Chicago, $200 in support of work on "Antibodies in Scarlet Fever."
4. Jan. 24, 1912. Mary R. Lawson, Boston, $200 for work on "The Development of the Tertian Malarial Organism."
5. April 3, 1912. Dr. G. B. Webb, Colorado Springs, $200 to further investigation on the "Production of Immunity by Inoculation of Living Bacteria."

April 26, 1912. Respectfully submitted,
Ludvig Hektoen,
Graham Lusk,
Eugene L. Opie,
*Committee on Scientific Research.*

## Report of Reference Committee on Sections and Section Work

Dr. Wesley T. Mulligan, New York, Chairman, presented the report of the Reference Committee on Sections and Section Work, as follows:

The committee has received three petitions for the creation of new sections as follows:

1. A Section on Physical Therapeutics.
2. A Section on Proctology.
3. A Section on Orthopedic Surgery.

We do not recommend the creation of a Section on Physical Therapeutics.

We do not recommend the creation of a Section on Proctology.

We do recommend the creation of a Section on Orthopedic Surgery.

Respectfully submitted,
Wesley T. Mulligan, Chairman.
Hugh Cabot,
Kenneth C. J. MacKenzie,
Thomas D. Davis.

It was moved and seconded that the report be adopted.

After discussion, which was participated in by Drs. Curran Pope, Kentucky; Edward Jackson, Colorado; Hugh Cabot, Massachusetts; H. D. Arnold, Massachusetts; C. E. Cantrell, Texas; G. Wythe Cook, District of Columbia, and Wesley T. Mulligan, New York. Dwight H. Murray, New York, moved as an amendment that that part of the report relating to a Section on Proctology be recommitted to the committee.

Motion seconded.

Dr. J. R. Pennington, Illinois, was accorded the privileges of the floor and discussed the advisability of establishing this proposed Section on Proctology, after which the subject was further discussed by Drs. Edward Jackson and C. E. Cantrell.

The Chair put the amendment of Dr. Murray and it was declared lost.

The original motion to adopt the report was put and carried.

Dr. W. R. Tipton, New Mexico, Chairman, reported progress for the Reference Committee on Rules and Order of Business, and asked for further time, which on motion, duly seconded, was granted.

### Report of Reference Commitee on Medical Education

Dr. J. H. J. Upham, Ohio, Chairman, presented the report of Reference Committee on Medical Education, as follows:

*To the Members of the House of Delegates of the American Medical Association:*

Your committee has carefully considered the Report of the Council on Medical Education; it has conferred with the Council and has listened to suggestions from members of the Association interested in these educational problems. We wish again to congratulate the Council on the continuance of its excellent work.

The Council's report of the results of the third inspection of medical colleges is one of the most important matters brought before us this year. The Reference Committee, with the consent and approval of the Council, recommends a slight change in the classification from that offered in the Council's report to the House of Delegates, namely, Class A + and Class A in place of Class A and Class A —.

The classification recommended is as follows:

Class A +.—Colleges receiving a rating of 70 per cent. or above in each and all of the divisions of date.

Class A.—Colleges receiving a general average of 70 per cent. or above, but who in one, two or three divisions fall below a rating of 70 per cent.

Class B.—Colleges receiving a rating below 70 per cent. in four or more divisions, but attaining a general average of at least 50 per cent.

Class C.—Colleges receiving a rating of a general average below 50 per cent.

This is essentially the same classification that has been used before, with the exception of a subdivision of Class A, which gives what we regard as proper recognition to those colleges which are most successfully carrying out the standards which the Association has approved.

The Reference Committee further recommends that after Jan. 1, 1914, all colleges to be included in Class A must require not less than one year of college credits in chemistry, biology, physics and a modern language, or two or more years of work in a college of liberal arts, in addition to the accredited four-year high-school course.

The committee would call attention to the results already accomplished since the Council made its classification of medical colleges and since it made this classification public. The Council's first classification was reported in 1907. Since then fifty-three colleges have been closed, twenty-seven by merger and twenty-six by extinction. Sixteen of these have occurred in the past two years since the classification was made public. Of the twenty-six colleges which have become extinct, twenty-three belonged to Class C, one to Class B, and two to Class A. It is evident that this educational campaign is having its greatest effect on the Class C schools, as was intended.

The Council wishes us to state that it will be glad to inform any medical college of the direction in which it needs improvement in order to elevate its standing, and it will also be glad to discuss the rating of any college.

The Reference Committee approves of the Council's suggestion in reference to the investigation of hospitals, and recommends that the Council be authorized to undertake such an investigation with reference to the opportunities opened to interns. The committee recommends that the Trustees be requested to furnish money for this purpose.

The committee recommends that the Council be authorized to invite to the next Annual Conference on Medical Education, some distinguished representative of the German medical educational methods, and that the Trustees be requested to provide a suitable honorarium.

The committee further recommends that the classification of medical colleges reported be published at the discretion of the Council. Respectfully submitted,

J. H. J. Upham, Chairman.
Horace D. Arnold,
A. T. Bristow,
Reid Hunt,
George W. Guthrie.

Dr. Arthur T. McCormack, Kentucky, moved, as a tribute to the Council on Medical Education, and particularly its Chairman, Dr. Bevan, that the report be adopted by a rising vote.

Motion seconded by several and carried.

### Report of the Reference Committee on Legislation and Political Action

Dr. William A. Evans, Illinois, Chairman of the Reference Committee on Legislation and Political Action, stated:

1. That the committee had considered the matter of cooperation with the National Educational Association, and recommended that it be accepted and placed on file.

2. As to the report of the Subcommittee on Public Health Education Among Women, the committee moved that the report be received, and that the subcommittee be commended for the excellence of its work.

3. With regard to the report of the Subcommittee on Visual Standards for Pilots, the committee recommended that the report be received and placed on file.

4. As to the report of the Subcommittee on Prevention of Blindness, the committee recommended the adoption of the report of the subcommittee on Prevention of Blindness and also the following specific recommendations:

(a) *Resolved*, That the Secretary of the Council inform the State Boards of Health that it is the opinion of this Association that ophthalmia neonatorum be made a reportable disease.

(b) That the necessity of a study of trachoma in the United States is necessary, and that the Public Health and Marine-Hospital Service be requested to undertake a study of this disease, its prevalence, mode of spread and measures of prevention.

5. As far as the report of the Council on Helath and Public Instruction is concerned, the committee had considered all of the report beginning with page 62 of the Handbook and going to the top of page 74, and respectfully asked that this part of the report of the Council on Health and Public Instruction be approved and placed on file.

6. The next matter for consideration was embraced under the heading "Legislation" on page 74 of the Handbook. The committee suggested that the House accept the report relating to the sections extending from page 74 to the middle of page 75, "Bureau of Protection of Medical Research," and also that there be added this recommendation, that the Council be instructed to carry on a definite and vigorous policy of legislative activity.

7. Also, that there be added this:

*Resolved*, That the Council on Health and Public Instruction and Secretary of the American Medical Association be instructed to carry on an aggressive work for the increase of membership and a more complete organization.

8. As to the remainder of the report on pages 75 to 78, down to the middle third of the sub-head "Annual Conference," the committee reported its approval of these portions of the report, and recommended that they be adopted.

For the committee, William A. Evans, Chairman.

On motion, the first section of the report, as it involved the appropriation of money, was referred to the Board of Trustees, and on several motions the subsequent sections of the report were adopted. Finally the report was adopted as a whole.

### Report of Reference Committee on Reports of Officers

Dr. Hubert Work, Colorado, Chairman, presented the report of the Reference Committee on Reports of Officers, as follows:

Your committee on Reports of Officers desires to make this additional report:

Whereas, No appropriation was made last year for the special work of the Committee on Anesthetics; and

Whereas, The work of this committee has been arduous, valuable and apparently completed to date;

*Resolved*, That the Trustees be instructed to reimburse Dr. Yandell Henderson for the expenses incurred and that the committee be discharged.

The Committee on Reports of Officers beg to recommend that the selection of an official button or emblem for the Association be referred back to the Board of Trustees with power to act, and that they do act.

Hubert Work, Chairman.
J. W. Ellis,
J. W. Young,
Donald Campbell.

It was moved that the report be adopted. Motion seconded.

After discussion by Drs. G. Lane Taneyhill, Maryland; W. W. Grant, Colorado; Jefferson R. Kean, U. S. Army; George W. Guthrie, Pennsylvania; Arthur T. McCormack, Kentucky, Dr. Taneyhill moved as an amendment the following:

Whereas, The House of Delegates of the American Medical Association at Los Angeles adopted the recommendation of the Reference Committee on Reports of Officers, June 29, 1911, recommending the new button;

*Resolved*, That the Board of Trustees be and are hereby instructed, after receiving competitive bids, to have a sufficient number of the new button manufactured for the use of those members who may choose to purchase the same.

Seconded.

Dr. George Wythe Cook, District of Columbia, moved as a substitute that in any action the Board of Trustees may take in regard to the button they disregard the Red Cross button.

Motion seconded.

Dr. Luther B. Kline, Pennsylvania, moved that the substitute be laid on the table.

Motion seconded and carried.

After further discussion by Drs. Grant, Taneyhill and Cantrell, Dr. George W. Guthrie, Pennsylvania, moved that the Board of Trustees be authorized to change the lettering on the margin of the button according to their discretion; that if it is better to have American Medical Association on it instead of A. M. A., the Board be authorized to make this change.

Motion seconded and carried.

On motion of Dr. Taneyhill, the report of the committee was then adopted as amended.

### Report of Reference Committee on Miscellaneous Business

Dr. W. E. Anderson, Virginia, Chairman, presented the report of the Reference Committee on Miscellaneous Business, as follows:

1. In regard to report of Committee on Nomenclature and Classification of Diseases, which report you will find in the Handbook of the House of Delegates, your committee recommends the approval and adoption of the very excellent report and the continuance of this committee.

2. Reporting on a motion offered by Dr. A. T. Bristow, i. e., that a committee be appointed by the President to communicate with the officers of the British Medical Association with a view to finding out whether a joint meeting of the British Medical Association with the American Medical Association is desirable and possible in the future, we recommend the adoption of the motion as presented.

3. Considering the supplementary report of the enlarged committee appointed to consider the establishment of a Relief Fund and Tuberculosis Sanitarium for Physicians and a contribution to "the home for widows and orphans of physicians" at Baltimore, we recommend the adoption of the committee's report and that the committee in accordance with its request be discharged.

Respectfully submitted,
W. E. Anderson, Chairman.
James W. Fleming,
J. F. Highsmith.

On motion, the report was adopted.

Dr. Washburn, a delegate from the Hospital Section, offered the following:

Moved that the committee appointed by the Hospital Section to consider the matter of inspection and classification of hospitals be approved, and that the Board of Trustees be authorized to appropriate such a sum as may be necessary to meet the expenses of this committee.

On motion, this was referred to the Board of Trustees.

Dr. William A. Evans, Illinois, stated that the Section on Preventive Medicine and Public Health had presented to him several matters which it desired to be introduced to the House.

1. *Resolved*, That there be formed a permanent Committee on Industrial Hygiene to cooperate with the American Association of Labor Legislation in the promotion of the study and prevention of industrial diseases.

On motion, this was referred to the Reference Committee on Hygiene and Public Health.

2. *Resolved*, That the resolution presented by Dr. H. M. Bracken, St. Paul, providing a new clause in the Principles of Medical Ethics, be referred to the Judicial Council.

Motion seconded and carried.

3. That the report of the Committee on Standard Methods of Procedure for the Control and Prevention of Tuberculosis, read by Dr. Ravenel, be referred to the Reference Committee on Hygiene and Public Health.

4. That a resolution on venereal diseases be referred to the same committee.

5. That a recommendation by Dr. Oscar Dowling, Louisiana, that definite instruction be given to the public on the importance of a pure milk-supply and the necessity for effecting supervision to obtain the same; that the score card of the official dairy instructors' association be adopted as the standard in the scoring of dairies; that the tuberculin test be required, and that legislation be urged to make effective the provisions named above, be referred to the Reference Committee on Hygiene and Public Health.

On motion, it was so referred.

6. That the following be referred to the Reference Committee on Legislation and Political Action:

#### MEMORANDUM RELATIVE TO THE REGULATION OF THE SALE OF OPIUM AND OTHER HABIT-FORMING DRUGS

No city can regulate the sale of these articles satisfactorily, because those desiring to obtain them in violation of city ordinances have merely to get them by mail or express from other cities.

No state can regulate this matter, because unscrupulous dealers and persons addicted to the use of such articles can obtain them by mail or express from other states.

While the state can regulate the traffic on these articles within its own boundaries in so far as relates to commerce by express, its control over commerce through the mail is practically wanting. The state has absolutely no control over the purchase of articles in other states, and the bringing of them into the state first referred to, since this is a matter of interstate commerce, and therefore exclusively under federal control. Theoretically, it is true, the state may establish a system of inspection with reference to traffic in such articles; but in so far as it relates to interstate traffic in these articles, this is utterly ineffective.

The sale of these articles within any state *for delivery in another state* does not come within the scope of the laws of the state first referred to, since this is a matter of interstate commerce.

The only way in which the matter can be satisfactorily controlled is for the federal government to establish a system of licensing or registration of those who desire to traffic in these articles across state lines. This the federal government is bound to do, and is endeavoring to do, not only in the interest of the health of this nation, but also because of certain treaty obligations that it has assumed with certain other nations, which are endeavoring to protect the welfare of their own citizens and to cooperate with the United States in protecting the citizens of this country.

For the reason stated the adoption of the following resolution is recommended:

*Resolved*, That the American Medical Association urge the enactment of stringent laws limiting interstate and foreign traffic in opium, cocain, and other habit-forming drugs to persons duly authorized to engage in such traffic, and preventing so far as lies within the power of the federal government the propagation, importation, and exportation of such substances, and their distribution within the United States, except for proper medicinal purposes.

On motion, the resolution was referred to the Reference Committee on Legislation and Political Action.

Dr. H. D. Arnold, Massachusetts, offered the following resolution:

*Resolved,* That the President appoint a Committee on Anesthesia to consist of five members, for the purpose of continuing investigations in anesthesia, and that the Board of Trustees be requested to appropriate money for this purpose.

On motion, the resolution was referred to the Reference Committee on Miscellaneous Business.

Dr. Oscar Dowling, Louisiana, offered the following preambles and resolution:

Whereas, It is the sense of this body that postgraduate instruction in ophthalmology and otolaryngology is on an inadequate and unsatisfactory basis; and

Whereas, No fixed standards exist whereby the fitness of practitioners may be judged; and

Whereas, There are no restrictions which might deter men from entering on the practice of this specialty without adequate preparation; therefore, be it

*Resolved,* That this body respectfully requests the Council on Medical Education of the American Medical Association to supply this deficiency, namely

By the organization of postgraduate instruction in special and other hospitals supplied with adequate facilities in the treatment of diseases of the eye, ear, nose and throat; which instruction should cover a period of study of at least two years; that a degree be conferred on those students completing the course in a satisfactory manner; that the course of study be laid out by committees from leading special societies of the United States.

On motion, the resolution was referred to the Reference Committee on Medical Education.

Dr. H. A. Royster, a delegate from the Section on Surgery, asked unanimous consent, which was granted, to refer a resolution from the Section on Surgery to the Reference Committee on Sections and Section Work.

On motion of Dr. Edward Jackson, Colorado, duly seconded and carried, the Reference Committee on Sections and Section Work was authorized to receive communications from the sections directly and to report its recommendations thereon to the House.

Dr. Dwight H. Murray, New York, offered the following:

*Resolved,* That the following amendment to the By-Laws, Chapter IV, Section 5, be adopted: That the House of Delegates, at its last session shall elect a Speaker, who shall preside during the following twelve months and until his successor shall be elected.

On motion, this resolution was referred to the Reference Committee on Constitution and By-Laws.

Dr. Oscar Dowling, Louisiana, offered the following:

*Resolved,* That the Reference Committee on Miscellaneous Business bring before the House of Delegates a score card for doctors' and dentists' offices requiring that they be brought up to certain standards.

On motion, this resolution was referred to the Reference Committee on Miscellaneous Business.

At this juncture, Vice-President W. R. Tipton took the chair, and President Jacobi addressed the House.

On motion, a resolution suggested by Dr. Jacobi in connection with his remarks, was referred to the Reference Committee on Reports of Officers.

On motion, the House of Delegates adjourned until Thursday, June 6, 2 p. m.

(*To be continued*)

# The Opening General Meeting

## *Tuesday, June 4, 1912*

The general meeting was held in the Apollo Theater, and was called to order at 10:30 a. m. by the President, Dr. John B. Murphy, Chicago.

Prayer was offered by the Reverend Francis J. McShane.

On his arrival, the mayor of Atlantic City, the Honorable Harry Bacharach, was introduced by President Murphy.

### The Mayor's Address of Welcome

*Mr. President, Your Excellency, Ladies and Gentlemen.*—I do not think Atlantic City has ever before been accused of being late, but to-day I must plead guilty to that charge, and perhaps it would have been better for you if the gentleman who had been announced to speak to you had made the address of welcome instead of myself, and if I should not be as eloquent as that gentleman, I assure you, nevertheless, it will not be lacking in sincerity.

Atlantic City is pleased to welcome all conventions, but particularly a convention such as this, representing the greatest people in our country, and to show you how pleased we are that you have come among us, last night I appointed one of your members a member of the City Council. (Laughter and applause.) Whether the President of the City Council made a mistake or not, I leave it to your judgment. He appointed him a member of the Finance Committee, while I thought he should have been on the Police Committee—at least this week (laughter), but I assure you we are more than pleased to see you, and particularly at this time. Atlantic City is to-day perhaps more in the public eye than any city in the country. Perhaps a great deal of it is justifiable, but we know a great deal of it is not so. What I mean to say is this, that there is a good deal being published in the papers to-day about our city. These reports are exaggerated as to the conditions which prevail from a moral standpoint, and most of them are untrue, and we are going to leave it to your judgment, to your confidence, honesty and integrity, feeling quite sure that when you leave Atlantic City you will be satisfied that you have not only visited the greatest seashore resort in the world, but a place where ladies can go unaccompanied on the Boardwalk from early morning until a reasonable hour at night unmolested. (Laughter). And we are confident you ladies will keep your husbands home at night, so that they won't have to go home early in the morning.

We are proud of our city, proud of the greatest number of our citizens, and we ask you to judge us. We have the greatest and largest number of hotels of any city in the country. We have the most progressive hotel men, the most progressive and broad-minded citizens in the country, and we ask you to pass your judgment on us as a city and as citizens. Atlantic City has requested me to present to you a little token of their esteem and to assure you that you can come in the evening or come in the morning, you can come when you like, and any time you may see fit to come we bid you a thousand welcomes. The oftener we see you, the more we adore you, and now, Mr. President, in behalf of Atlantic City, I present to you the key to our city [Here Mayor Bacharach handed to President Murphy a key which was decorated with silk ribbon], and if the ladies do not object I will say to you that to-night the curfew shall not ring. (Laughter and applause.)

President Murphy: The next address of welcome will be delivered by Dr. Daniel Strock, Camden, N. J., President of the Medical Society of the State of New Jersey.

### Address of Welcome by the President of the New Jersey State Medical Society

Dr. Strock, in part, said: It is simply by the force of circumstances that the great honor has been assigned to me, as President of the Medical Society of the State of New Jersey, of welcoming the American Medical Association to this city, and this I do with great pleasure (Applause). The Medical Society of New Jersey antedates by ten years in age the Declaration of Independence. Ten years before the Declaration of Independence was adopted, the doctors gathered together and began the organization that we realize to-day as a great force in the State of New Jersey.

After referring to medical examining boards and medical matters of the state generally, Dr. Strock concluded by saying: On behalf of the State of New Jersey, I welcome you to this city and to the state and trust that your stay here will be profitable, pleasant and very enjoyable. (Applause.)

President Murphy: The commonwealth of the State of New Jersey is represented on this occasion by Governor Woodrow Wilson, who needs no introduction to this audience. (Applause.)

### Governor Wilson's Address of Welcome

Governor Wilson was received with loud and prolonged applause and said:

*Mr. President and Members of the American Medical Association, Ladies and Gentlemen.*— I feel it a privilege, as representing the State of New Jersey, to welcome this great society to its session this year in Atlantic City. A great many people come to Atlantic City on all sorts of errands, most of them not serious. (Laughter.) The problem that Atlantic City is confronted by is that it is the refuge of the idle, and those who are idle are apt to adjourn the ordinary standards of their lives. (Laughter.) But you are doubly welcome here because you have not come as idlers, but as those who study the more serious problems of our lives, both individually and nationally. Atlantic City is used now to investigation. (Laughter.) You have come as investigators, not to investigate Atlantic City except for your intimate knowledge of the make-up, the physical make-up of all citizens of the community (laughter), and I feel in facing a great association like this that I am facing a body of men and women who have a particularly intimate connection with the life of the country, because you are very much more than physicians individually. You are very much more than the advisers of individuals with regard to the problems of health. You are the guardians of communities. You are the guardians of communities not only with regard to those general sanitary problems which are summed up under the head of sanitation and general hygiene, for example, but of a great many moral problems also. In our days the old story that the physical welfare of man is very closely knit with the moral is very true, and as a man thinks so is he, a thing which comes very much nearer being a physical fact than is usually realized, because there is undoubtedly an air of morale in most of the problems that you have to deal with. At any rate, by way of preliminary determination and as counselors of individuals, you are the arbiters to some degree of the life of communities.

I have sometimes wished there might be some way of establishing an official connection between doctors and the state that has been found in the case of lawyers. Lawyers are officers of the court and are subject to discipline as such. They hold in their hands the honor of obeying and carrying out the laws of the commonwealth and they are held amenable on that basis. It is on that basis that men are dealt with for contempt of court and lawyers are held to a code which has nothing to do with their knowledge of the law. Similarly, it seems to me, the doctor, by reason of the license he holds is reputed to represent morality as well as the knowledge of the community. (Applause.) And the most interesting part of the profession is this, that knowledge is not vital unless it goes hand in hand with honesty and sympathy. I believe you will agree with me that one of the things to be regretted in modern times is that we have been obliged to specialize our professions to so great a degree, because in proportion as the medical profession is specialized, for example, the old family physician disappears. I remember going over in my memory a single year of my family life with my children when they were small, and finding that I had called in consultation thirteen different specialists. (Laughter.) There was no ill luck in the thirteen, because it all came out very happily. But where I had summoned thirteen specialists my father would have summoned one family physician. My father would not have got as good advice as I got, and yet I lived through it. (Aplause.) But every time he sent for his doctor he was sending for a personal friend. He was sending for a man who had his competency in a peculiar degree. He was sending for a man who walked along the paths of life with him as a comrade and confidant. There was something very vital, there was something very useful in that relationship, and although we have certainly yielded only to necessity, it is unfortunate that we should have been obliged to specialize so much as we have, and therefore it is necessary, it seems to me, if you will permit me to suggest it, that we regeneralize our sympathies. I remember saying once, when I was following out a certain occupation, that I understood the chief business of a university was to make young men as unlike their fathers as possible. I will hasten to explain that as I did on that occasion. I did not then, nor do I say that now in disrespect to the fathers, but merely this: By the time a man was old enough to have a son in the university he became so immersed in a special occupation and narrowed to the point of a single calling, it was advisable that his son should be taken out on some place of vantage where he could see the world instead of seeing a single individual, a single community, a single profession. I understood that to be the business of the university to regeneralize each generation of youngsters, show them the nation, show them the great infinite variety of human interests, show them the map of the world, so that they would never forget, at any rate, their general geographic relations to the races of mankind. So, it seems to me, every profession, particularly a profession so absorbed as yours is, and bent on investigations, must find it necessary to refresh its general sympathies by reconnecting itself with the wider questions of our modern life. As an American, I feel that the task of the statesman in our day is analogous to the task of the surgeon. There is a great deal that is necessary to be cut out of modern life (laughter), and yet we must be very careful not to injure any of the sound tissue in cutting it out, and the various processes of politics are not unlike the processes with which you are familiar. The preliminary agitations of a political campaign are a sort of prognosis (laughter) and the platforms are a sort of diagnosis, and then follows the critical part. (Laughter.) Then you have to study your materia medica; then you have to propose a particular operation and determine exactly what you are going to do in following up your diagnosis to remove the disease, or at any rate to apply some tonic which will enable nature to assist herself. (Laughter.) The moral of that sort of thing is, that the surgeon should know what he is about, and that rough and ready methods, methods of passion, methods of prejudice are of all things the most dangerous. (Applause.) They are the methods of the quack; they are the methods of the uneducated, the uninstructed, the unlicensed practitioner, and therefore I have a sort of sympathy with you. (Laughter.) It is very much easier for you to get at the difficulty, and the particular phenomenon with which you have to deal than it is for the men who are wandering abroad amidst the general phenomena of society, and yet, it seems to me, that you can be infinitely instrumental in assisting the statesman, because there are a great many evidences and symptoms at this time of hysteria (laughter), and if you will only hurry home from this convention and calm your communities down, we may be able to transact business. (Roars of laughter.)

I am very glad to have you all at once in New Jersey, but you cannot calm New Jersey down by merely sitting here in Atlantic City. It will be necessary for you to disperse to your homes and get to work on the people you know. I know a great many people whom I would like to get to work on (laughter), if I only knew the proper cure for hysteria, but never having, happily, felt the symptoms myself, I am unsympathetic about it. And yet, seriously, ladies and gentlemen, speaking of the problems of our life, they are all one. The thing I am particularly impatient with, ladies and gentlemen, is dividing our lives and our interests into sections and supposing you know nothing about anything, except one thing. The whole problem of modern society is infinitely complicated, just because it is variously specialized, and it should be our object to avoid the separation of interests, it should be our object to effect a union of purpose, to unite ourselves with one another, not as a body of competing interests, but a body of unified interests, moving forward to the common goal of general service. That, it seems to me, is the problem of all intelligent men in the United States and in the world at large. I cannot do better, therefore, than to ask you in your modern occupation to harmonize the various parts of our whole life to one another, so that heat, hostility and friction may be taken out and all the sweet and wholesome processes of life may be restored. (Loud and prolonged applause.)

President Murphy: Before retiring from the administrative office of this organization, I wish to express to you my sincere appreciation of the uniform and hearty support which you have given me during my administration. It is a pleasure in retiring, and an honor, to have the opportunity to recede from this office and from this position and turn it over to a man whose name is synonymous with the highest ideals and practices of the American or any other medical profession in the world. (Applause.) It is a pleasure to turn this office over to the Nestor of American medicine (applause), to a man who needs no introduction to any medical audience, and no introduction to the people of a nation—Dr. Abraham Jacobi of the City of New York, and of the world of medicine. (Loud applause.)

### President Jacobi's Address

Dr. Jacobi then delivered his address as President of the Association. It was published in THE JOURNAL last week.

Dr. Thomas W. Huntington, San Francisco, Chairman of the Section on Surgery, introduced Professor Rovsing, of Copenhagen.

Professor Rovsing said he greatly appreciated the invitation that had been extended to him to attend this meeting of the American Medical Association, and he brought to the Association the best greetings from his countrymen in science. It was not only a great pleasure but a source of gratification to meet the splendid scientific men whom he had thus far met in this country. He thanked the Association most heartily and cordially for the very kind and generous reception he had received.

After some announcements by the Chairman of the Committee of Arrangements, the general meeting adjourned.

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# THE SHORTCOMINGS OF DERMATOLOGY *

CHARLES J. WHITE, M.D.
Assistant Professor of Dermatology in Harvard University; Dermatologist to the Massachusetts General Hospital
BOSTON

It is my great privilege to welcome you here to-day at our annual convention in the interests of our common special branch of medicine. I assure you that I am deeply grateful to you all for the honor you conferred on me two years ago in choosing me to preside over these present sessions and it is my sincerest wish that I may discharge acceptably the duties of my honorable position.

The subject of my address is the shortcomings of dermatology — perhaps not a very flattering theme to choose for this occasion, but one which impresses me more and more the older I grow and the more intimately I become involved in dermatologic practice and teaching.

For the purpose of this thesis special scientific knowledge may be divided into several departments: diagnosis, clinical and pathologic, etiology and treatment.

## CLINICAL DIAGNOSIS

There is no doubt that we dermatologists are very proficient in clinical diagnosis—so much so, in fact, that our detractors are wont to accuse us of overelaboration in our nosology. It is, of course, very true that we have a great advantage over the internists in having our pathologic fields under our very noses, so to speak. We can employ all our senses, including our eyes—our best-trained organs of sense — while diagnosticians in many other branches of medicine must often work in the dark and grope their way about, guided only by their sense of touch, of sound or of smell. This unfortunate deficiency is partly counteracted by the clever employment of numerous instruments of precision, it is true, but still their special provinces lie hidden away under the skin or in dark and unapproachable cavities of the body.

It is greatly to our credit that this great diagnostic advantage of sight has not been thrown away by our predecessors or by ourselves and to-day it is not too great a boast for us to say that the best of us can practically always tell the patient the exact name of the disease with which he is afflicted. In other words, our possibilities of clinical diagnosis are perhaps greater and more accurate than those of any other branch of medicine. When there are more than 190 distinct titles of disease in the official list of the American Dermatological Association, one may appreciate how skilful in clinical diagnosis dermatologists have become.

On the other hand, however, is it not perhaps true that in this wealth of titles we have been somewhat overzealous in our minute subdivisions? Let us take merely, as an example, two classes of cases, i. e., the tuberculids and benign cystic epithelioma. In the group of tuberculids we have three titles which, from a pathologic point of view, at least, are really synonymous. I refer to "acnitis," "folliclis" and "hidradenitis destruens suppurativa," and there are even other synonyms. We all acknowledge their tuberculous etiologic kinship, their usually tuberculous histologic structure, their frequent caseation and their constant macroscopic jagged cicatricial termination. Why, then, have men given separate names clinically to these conditions? Apparently, only from their anatomic seat. When these practically similar lesions occur on the face we call the affection "acnitis": when they are found on the extremities we refer to them as "folliclis"; and when they have their seat in the sweat-glands we designate them "hidradenitis destruens suppurativa." Is such a redundant nomenclature, so puzzling and even discouraging to our non-dermatologic confrères and to our students, necessary or desirable?

Again, in the case of benign cystic epithelioma, consider what a superfluity of titles there are. To mention only a few, we have "epithelioma" or "acanthoma adenoides cysticum" (Brooke and Unna), "tricho-epithelioma papillosum multiplex" (Jarisch), "hydradenomes éruptifs" (Jacquet and Darier), "syringocystadenoma" (Török) and lastly "syringocystoma." Now what does this plethora of appellations signify? All men admit the epitheliomatous character of these tumors, both clinically and histologically, and also their gland-like structure microscopically, but the division of opinion and hence of nomenclature depends merely on the seat of origin of these otherwise similar new growths. If their origin is indefinite or from the rete malpighii, they are called "epitheliomas"; if they arise from the hair follicles they are dubbed "tricho-epitheliomas"; and if they are offshoots from the sweat system they are termed "syringocystomas" or "syringocystadenomas."

These two classes of cases are merely illustrative examples of our nomenclative redundancy — we could all mention many more. Is there no remedy for this overelaboration which arises, I think, from the absence of any acknowledged supreme authority?

The idea has occurred to me (it may not be an original one) that there could be an international tribunal by whose decisions all countries would promise to abide. This supreme court could be composed of representatives chosen by the different national dermatologic associations, each body electing perhaps two members noted for their wide clinical, pathologic, chemical and serologic knowledge and experience, men who would be able and willing to attend the meetings of this tribunal, which

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* Chairman's address before the Section on Dermatology of the American Medical Association, at the Sixty-Third Annual Session, at Atlantic City, June, 1912.

could be held at times sufficiently in advance of the international dermatologic congresses to allow ample deliberation and the preparation of a report of their findings and recommendations which would then be submitted for final action to the will of the supervening congress.

A second ameliorating measure would be the drawing-up of a common table of measurements of skin lesions based on scientific data, thus relegating to eternal oblivion our present code of similes and comparisons with national coins, with national measurements and with seeds, fruits, vegetables, et cetera.

A third would be the election of a subcommittee, perhaps composed of a few European representatives, men living within comparatively easy distances, to whom all new dermatologic productions could be forwarded as soon as completed. These literary contributions should be accompanied by large colored (?) photographs, moulages, microscopic sections, culture tubes, etc., and this subcommittee, meeting at frequent and stated intervals, would be then in an authoritative position (1) to determine priority of scientific achievement; (2) to correlate and identify rare and similar dermatoses to which widely scattered investigators had given widely variant titles; (3) to publish an international journal containing the cream of these world-wide contributions, printed in one and only one of three languages (i. e., English, French or German), the less important papers being returned to the author to appear as now in one of his own national journals. To each of these "crowned" papers could be added the judgment and criticism of this important committee, thus enhancing its value just as Besnier and Doyon's translation of Kaposi's "Skin Diseases" immeasurably enhanced the value of the original book; and (4) to edit a dermatologic index medicus at frequent intervals containing references to all papers which had passed through its hands and been published in its own journal or in some other.

### PATHOLOGIC DIAGNOSIS

In speaking thus far of our clinical diagnostic acumen I have really claimed that our only fault was over-elaboration; and now, in coming to our knowledge of pathologic diagnosis, have we just cause for equal self-congratulation? I am afraid not. It is true, to be sure, that when we know the clinical diagnosis we have a fairly accurate and distinct idea in our minds of the histologic picture of practically all our known dermatoses. But, on the other hand, when we are at a loss clinically to differentiate between two or more diseases can we always be sure that with the aid of the microscopic sections we can definitely settle the dispute? I fear not.

Even in such every-day affections as syphilis and tuberculosis we, as pathologists, make frequent mistakes. It has been my good fortune this winter to restore to health, by means of antisyphilitic treatment, a broken-down young woman who had been subjected to two operations, eight months of frequent injections of tuberculin, and overdoses of $x$-rays on account of an ulcer on the right arm, diagnosticated microscopically as tuberculosis. You could all, no doubt, recite similar experiences.

Or again, when we have not seen the patient or have not been told of the probable clinical symptoms, how many of us, although fairly well versed in histopathology, can be sure of our diagnosis microscopically in a good percentage of our dermatoses?

I was much impressed this last winter by a striking illustration of this very point. We at the Massachusetts General Hospital have been much perplexed by a localized nodular process on a man's buttock — a process which we have watched and treated and puzzled over for years. The patient was shown to the American Dermatological Association last spring, and opinions, when hazarded at all, favored tuberculosis or carcinoma. As an enigma, I sent a section of one of these nodules to one of our most zealous western confrères, who had not seen the patient, and who was naturally somewhat at a loss to make a diagnosis from the microscopic findings and therefore forwarded the specimen to his former European master, a most celebrated and expert histologist. In due time the answer came back: "mycosis fungoides." Perhaps this most positive pronouncement is correct, but, if it is, we Bostonians must enlarge very materially our conceptions of this disease.

And lastly, in the great class of dermatologic inflammation, what can we say of our powers of differentiating histopathologically many of these diseases?

We recognize pretty clearly erythema induratum (if we really feel that this affection belongs rightly in this class), urticaria pigmentosa, dermatitis exfoliativa in a severe or old example, lichen planus, psoriasis perhaps, furunculosis, equinia, pustula maligna, erysipelas, dermatitis gangrenosa, dermatitis from $x$-rays, varicella and variola. But what a pitiably small list this is when we come to add up the total—thirteen diseases out of fifty-seven!

Of course, when we have seen the patient we are always in a position to say that the histologic picture conforms with the clinical diagnosis of any of this large group of diseases, because we know the histology of each of them; but my point is that, save for the few exceptions I have mentioned, the remaining great majority of our inflammations have no specific histologic differences, thus far recognized by our experts, which allow us to say positively: "This is eczema, this is urticaria, this is pityriasis rosea, this is herpes simplex, this is dermatitis herpetiformis, etc."

### ETIOLOGY

Thus far my critics may say, perhaps, that I have been overcaptious, fault-finding, striving at trivialities; but now that we are to deal with the cause, and later with the treatment, of disease, I believe that not even the most optimistic can cavil at my remarks.

Since the discovery of bacteria, fungi and protozoa, dermatologists, like all their medical brothers, have made enormous advances in knowledge of disease—a just cause for self-congratulation; but thus far, unhappily, the list of cutaneous diseases to which men have ascribed and proved an infectious origin is relatively small numerically; according to the 1908 returns of the American Dermatological Association, a little over 21 per cent. of our recognized titles falls within this parasitic group. When, however, we compute percentages from the point of view of the number of individuals treated for these same infectious skin diseases, we find, fortunately, that nearly 54 per cent. of these patients came within this etiologically recognized zone — not nearly so bad a showing.

Now, excepting this infectious group, let us see where we stand etiologically in regard to the remainder of our skin diseases. For this purpose allow me to base my remarks on an analysis of my own patients. Let me consider my last 768 new patients, drawn from almost every social stratum and from many different states of this country. From an actual count of the diagnoses of these people (disregarding the infectious diseases), I find fifteen dermatoses recorded ten times or more and totaling 547 individuals—about 71 per cent. of the whole. I have chosen the common diseases for this study in order to make this a practical question. Now let me record in parallel columns these fifteen diseases and the number of patients afflicted by them. In the first column I shall place those affections whose etiology is practically accepted by all and in the second those whose cause is unknown or much disputed.

COMPARISON OF DISEASES WITH KNOWN AND UNKNOWN ETIOLOGY

| 1. Affections with Known Etiology | No. of Cases | 2. Affections with Unknown Etiology | No. of Cases |
|---|---|---|---|
| Acne vulgaris | 81 | Eczema | 122 |
| Dermatitis venenata | 41 | Alopecia furfuracea | 114 |
| Keratosis senilis | 18 | Alopecia areata | 25 |
| Urticaria | 17 | Seborrhea | 25 |
| | 157 | Rosacea | 21 |
| | | Eczema seborrhoicum | 17 |
| | | Hypertrichosis | 17 |
| | | Psoriasis | 17 |
| | | Hyperidrosis | 11 |
| | | Pruritus | 11 |
| | | Pityriasis rosea | 10 |
| | | | 390 |

In other words, we are brought face to face with the discouraging fact that we specialists know the cause of the common non-infectious diseases affecting our patients in only about 40 per cent.; and when we are constantly asked the question by intelligent patients: "Doctor, why have I got this disease?" we must feel chagrined when we must so often answer: "I don't know."

But even in this meager 40 per cent. of etiologic knowledge we cannot conscientiously feel, I think, that we know the whole truth.

For example, let us consider acne vulgaris. We all recognize the brilliant work in this field of our confrères, Gilchrist and Engman, among many others. To them the acne bacillus means perhaps everything, but to some of us this presumptive causative agent does not seem to be sufficient to explain all cases of the disease, for certainly this bacterium cannot be found in all examples, and on the other hand, the rôle of the staphylococcus cannot be ignored from a clinical, a cultural or a vaccinal standpoint.

And, again, what can we say of dermatitis venenata? We assert that the cause of this inflammation is the reaction of the skin to some well-recognized cutaneous irritant. Granted, but why should some men be able to handle *Rhus venenata* or *Primula obconica* with impunity, while many others are poisoned by these plants? Even more incomprehensible is the fact that certain individuals have been immune to these vegetable poisons for many years and then suddenly develop a susceptibility of perhaps intense degree. And, as another example, why should certain individual masons, painters, scrubwomen, physicians, and the representatives of many other trades and professions be obliged to discontinue their work because of susceptibility to the irritating materials of their respective occupations, while the great majority of their fellow-workers remain impassive to such exposures? To this latter question we may answer "immunity," but for the present, at least, this reply simply begs the question.

In the case of keratosis senilis, we believe that the chemical action of the sun acts deleteriously on the human skin as it grows older and we recognize the fact that certain occupations, such as farming and sea-faring, are especially conducive to this cutaneous change; but if this theory is to explain the whole question, why do we find this anomaly in ladies who are shut up in their houses most of the time, and again, why do we encounter this condition in comparatively young people?

And lastly, what can we say of urticaria? We are all in accord, I think, in condemning some toxic proteid as the cause of this disease. But here again most people are immune to these indicted causes and others are susceptible only once in a while. Then, the vast majority of sufferers recover quickly from this internal poisoning when the cause has been removed; but on the other hand, others do not regain their former equilibrium and the disease continues, either in recurrent attacks or ceaselessly for weeks or months or even years. And, finally, we all are still at loggerheads as to the exact nature of this form of poisoning. Is it an angioneurosis or is it an inflammation?

Thus we see that even in the meager column containing the four common, non-infectious diseases, of which we flatter ourselves that we know the cause, we can easily find large flaws in our knowledge.

When we turn to Column 2, containing as it does our very commonest skin affections, what must we confess of our etiologic knowledge? The answer is one to make us all feel depressed. We have suspicions and pet theories about them all, but there is not one of these eleven everyday, oft-recurring maladies to which we can point and say to ourselves, our patients, or our students without fear of contradiction, "this is due to this specific cause," "that owes its origin to that," et cetera.

TREATMENT

In the final division of this introspective and critical study we come to the practical side of our profession, the side which determines our value to our patients from whom most of us derive our means of livelihood — the side which justifies our very existence as physicians.

Without undue pride I think we can make claim to the fact that our therapeutic success is quite as great as that of any of our medical brethren. Should this answer satisfy us, however? It should not. Unfortunately, we dermatologists suffer from three practical disabilities. First, skin diseases manifest themselves outwardly in such a way that our patients can be their own judges as to the daily progress or stationary condition of their maladies. Second, our patients are, as a rule, well enough to insist on living their customary lives and, withal, expect us to cure them when they have been told emphatically that such a course means a continuance of trauma or of intoxication. Third, it has always been our patients' creed that all skin diseases are, or should be, curable, and usually in a short space of time.

Contrast these, our ever-present difficulties, with the conditions which confront other medical men. A patient suffering from some internal disorder cannot examine every day the seat of his disease and compare it visually with its condition and extent yesterday or one week ago. A patient with a broken leg or with typhoid fever cannot leave his bed, but remains day in and day out under just the conditions which his physician dictates and which his nurse sees are fulfilled. A patient brought low by pneumonia, phthisis, or cancer does not expect that he can necessarily recover and does not therefore leave his attending doctor because he is not cured, or, what is worse, go about making malicious remarks about his skill. These are, as I say, handicaps under which we especially must labor.

Leaving to one side these peculiar therapeutic difficulties, these excuses, if you will, where do we stand as successful or unsuccessful practitioners of medicine? In the acute diseases we are reasonably fortunate in our skill. We can alleviate discomfort, and, in a reasonably short time, restore to health a majority of our patients suffering from many of the conditions which arise suddenly. But when the acute diseases have been maltreated by others or by ourselves, or, for some unknown reason, become chronic, then we very often fail in our endeavors. Personally, I feel chagrined at my frequent therapeutic failures. It so often happens to me, as it does to others, that patients are sent, or come from long distances with the fixed idea that they are to be cured because they are consulting a specialist. They present themselves as old victims of acne vulgaris, eczema, psoriasis, alopecia furfuracea, alopecia areata, sycosis, lupus vulgaris, or what not; and how often in the end do we have to acknowledge our defeat? And yet these diseases are among our very commonest. It is not necessary here for me to mention prurigo, pityriasis rubra pilaris, hydroa vacciniforme, dermatitis herpetiformis among the inflammations; chloasma, acanthosis nigricans, palmar and plantar keratoses, verruca, ichthyosis, scleroderma and elephantiasis among the hypertrophies; practically all of the atrophies, and so on through the remainder of our dermatologic classification, in order to remind you of our therapeutic position to-day. We can all perhaps estimate our exact status in the people's mind when we see the floods of dermatologic advertisements in newspapers, street-cars, and on billboards disfiguring the landscape wherever we turn; when we hear of our best friends consulting osteopaths; when we read that there are 126 offices in the United States devoted to a certain form of treatment of the hair; and when we walk along the streets of our principal cities and note the glaring signs of the many commercial, self-styled "dermatologists." These are unfortunate but undeniable truths and we owe it to ourselves to advance our knowledge and to increase our successes to such an extent that these quasi-medical influences shall no longer be necessary or tolerated.

This brings me to the conclusion of this unpleasant task. This perhaps severe criticism of ourselves and our specialty is not meant to be disagreeable or pessimistic. It is intended simply to be a sort of moral and intellectual house-cleaning, a plain statement of our deficiencies, brought to your notice at a rather unusual time, perhaps, but with a definite purpose.

We all know of the great sums of money which have been donated by philanthropic men of wealth for the study of various diseases which afflict the human race. There seems to me no better way for a man to spend his surplus income, but we too should make claim to our share of these valuable gifts for the investigation of skin diseases. It is true that cutaneous affections do not often kill, but they maim and they torture and they disfigure, and at times ruin the lives of many poor men and women. These conditions should be combated until they have been conquered. To accomplish this end we need financial resources, but we need also the help of some of the brilliant young men who are graduating from our medical schools every year, and here is where we who are teachers can play our part by impressing on our students the unappreciated importance of skin diseases, telling them the misery they often entail and laying before them the great fields of pathology and therapeutics which lie ready to be tilled by some future clever scholar.

This is a work which it is our duty to perform, one which has prompted me to try to play my humble share by pointing out to you disagreeable facts which you are all cognizant of but which are not perhaps dwelt on at such great length in such a public manner. We who are here to-day are mostly teachers and practitioners of our chosen profession. We are, most of us, dependent on our private patients for our daily bread, and what time we can spare from this necessary labor we give to our hospitals and to our medical schools, thus leaving but an insignificant fraction of our working hours to research. Science does not make progress nowadays by rapid strokes of luck but rather as a result of long, arduous hours spent in the laboratory with one object in view at a time. This has been the method by which we and our patients have profited by the wonderful discoveries of diphtheria antitoxin, antityphoid vaccination, meningitis antitoxin, salvarsan, the Wassermann reaction, etc. This unselfish method of small incomes and long working hours must be adopted by dermatology if we, its present masters, want to see our dreams fulfilled. We need and must have dermatologic research workers and we here must see that such men are produced. There is where our greatest mission lies to-day, and may we go forth from this meeting and do our share in producing them!

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# THE TREATMENT OF SYPHILITIC DISEASES OF THE NERVOUS SYSTEM BY SALVARSAN *

JOSEPH COLLINS, M.D.
AND
ROBERT G. ARMOUR, M.D.
NEW YORK

1. There are diseases of the brain and spinal cord, their coverings, linings and blood-vessels that are caused solely by syphilis. These diseases are tabes, paresis certain forms of myelitis, myelomalacia, encephalomalacia, meningitis and endarteritis, and gummatous formation. Each of them, it matters not what is the seat or extent of the morbid process, causes symptoms which in their *ensemble* constitute well-defined clinical entities, and as such may be diagnosticated with readiness and certainty.

2. We possess tests and procedures (the Wassermann test and its modifications, chemical and histologic examination of the cerebrospinal fluid) whose application permits us to say positively that the individual who exhibits the clinical features of the above diseases has or has not syphilis or its hemic sequelæ.

3. Until the discovery of salvarsan we were not in possession of a cure for syphilis. Although mercury when administered in adequate doses does unquestionably either kill the *Spirochæta pallida* or aid the vital resistance to overcome the activity and to destroy them, in many instances it fails to do so. Furthermore, after the parasite of syphilis has occupied whatever part of the body which may be its host for a long time, it appears to gain an immunity from mercury.

No one denies either that mercury is a spirillicide, or that, given in adequate doses for a sufficient time, it overcomes the infection in many instances. But the fact that it is an inadequate, inefficient, impotent curative agency when given empirically is attested by the occurrence of syphilitic nervous diseases.

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* From the Neurological Institute of New York.

* Because of lack of space, this article is abbreviated in The Journal by the omission of a tabulated report of cases. This table appears in the reprints, a copy of which will be sent by the author or by The Journal (during the year 1912 only) on receipt of a stamped addressed envelope.

One of the experiences that impressed itself most deeply on us when we first began the study of syphilitic nervous diseases was that individuals who had had syphilis and who had been treated for it in the orthodox way and during the alleged necessary period of time developed nervous diseases that flow out of syphilis as early (that is, as soon after infection) and as severely as those who had little or no treatment.[1]

4. Whether or not we are now in possession of a cure for syphilis remains to be seen. In our judgment it is the neurologist who must give the dependable answer to this question. These are the facts: Syphilitic diseases of the nervous system occur; they may be diagnosticated positively before irrecoverable structural changes have taken place; untreated they are progressive to dissolution.

Before this question can be answered a vast amount of clinical material must be collected. The diagnosis in every instance must be confirmed by the tests at our command, and the patient must have remained a year at least within observation. It only adds to our confusion to learn that a score or a thousand patients have received an injection of salvarsan unless we are told also the state of health in which they are a year later, and whether or not their blood and cerebrospinal fluid give a negative or positive Wassermann reaction.

While we are making and collecting these statistics, on which the reputation of the remedy must stand or fall, we shall certainly learn what is the technic to employ in its administration, and we shall determine what constitutes its adequate administration which assuredly we do not know at the present time.

The object of this communcation is to discuss these questions and to record the results of eighteen months' experience during which time seventy-five patients suffering from syphilitic nervous disease have been treated in our division of the Neurological Institute.

We assume that it is admitted that salvarsan destroys the spirochetes of syphilis. It can destroy them only by being brought into contact with them. There is no *Fernwirkung* about it. The spirochetes that cause the well-defined diseases that are called syphilitic diseases of the nervous system must be either a more resistant type or species than the average or they must have a special capacity for withdrawing from the arena in which combat with the spirillicide is waged. Otherwise such disease would not occur so often in individuals who have been given what has been conceded to be adequate treatment.

That salvarsan shall fulfil its promise we must learn how to give it. The gasoline engine probably was more instrumental than any other agency in making the twentieth the most noteworthy of all the centuries. It took experts a long time to determine its application and efficiency. It shall not be determined in a day how to give salvarsan efficiently. Already we have learned something: to wit, that one dose does not cure, save rarely and under most favorable circumstances; that the objections to the intramuscular and subcutaneous injections are of such a nature that the intravenous method of administration is preferable; that the same quantity of salvarsan injected into the veins is not such a potent spirillicide as when injected into the muscles; and finally that in cases of long-standing syphilitic disease salvarsan must be given repeatedly, in many instances in full doses, and in some instances the beneficent aid of other agencies, such as mercury, must be invoked.

In June, 1910, Dr. Simon Flexner of the Rockefeller Institute generously put at our disposal a sufficient quantity of salvarsan to meet our needs until it was exposed for sale. In the majority of the cases the remedy was given intravenously; about twenty were given it intramuscularly. These are indicated in the table.

The diseases of the nervous system that flow from syphilis are tabes, general paresis, endarteritis and meningitis, and of these the most important by all means because of its frequency and susceptibility to cure is the last. It is highly probable that the vast majority of cases designated "cerebrospinal syphilis" have disease of the pia-arachnoid as their chief, and primary, structural change. This should not be construed to mean that the terminal lesion in such cases, if the disease progresses, is not predominately of the parenchyma. We think that the future will show that a most important guide for the physician to aid him in the diagnosis and prognosis of syphilitic nervous diseases will be the study of the cerebrospinal fluid, and particularly its cellular constituents. Our experience has already shown us that we must distinguish one case of tabes from another and one case of meningeal syphilis from another by cytologic criteria in order that we may estimate the more correctly their susceptibility to amelioration and cure by salvarsan.

We adhere to the conception of tabes formulated by Nageotte, namely, that it is characterized anatomically by an inflammatory lesion which attacks a number of sensory or motor roots at their exit from the subarachnoid space, which lesion is a generalized syphilosis of the meninges. By syphilosis is meant a special form of diffuse syphilitic lesion which is not peculiar to the nervous system from which tabes has its origin. It is characterized by a slight but very wide-spread inflammation. One of the most difficult problems for the neurologist is to distinguish certain cases of tabes from general paresis.

### THE CEREBROSPINAL FLUID IN ORGANIC NERVOUS DISEASES OF SYPHILITIC ORIGIN

We are influenced in deciding whether a case is tabes or general paresis by the findings in the cerebrospinal fluid. We believe that it is not consistent with normality that the cerebrospinal fluid shall contain more than ten cells to the cubic millimeter. In general paresis the number of cells is increased, but not enormously so, as the cerebrospinal fluid rarely shows more than twenty cells to the cubic millimeter. The globulin, however, is profoundly in excess. In fact, the globulin increase is greater in this than in any other syphilitic nervous disease. The Wassermann reaction in the majority of cases is positive, both in the blood and in the cerebrospinal fluid. In tabes, on the other hand, or possibly we should say in those cases that we are now calling tabes without a descriptive adjective such as exudative or degenerative, the cells are found to be present in numbers ranging from three or four to one hundred, and the globulin is in excess. The Wassermann reaction is often negative in the cerebrospinal fluid but positive in the blood, even though it has been influenced by treatment administered fairly recently.

Then we encounter a class of cases, clinically tabes, in which the cerebrospinal fluid shows a profound lymphocytosis, up to 1,500 cells in one instance, with upward of 100 polymorphonuclear leukocytes. In this type of case the globulin varies more or less in direct proportion to the number of cells found. The Wassermann reaction is almost invariably found to be positive in the blood, and often positive in the cerebrospinal fluid. No constant clinical distinction between the cases showing a positive and those showing a negative Wassermann reaction in the cerebrospinal fluid has been established.

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[1] Post-Graduate, July, 1896.

In other words, tabes is quite a different disease in one sense from what it is in another. Without going further into the question of its pathogenesis, it may be said that study of the cerebrospinal fluid in cases of so-called parasyphilitic nervous disease suggests that the morbid process in the majority of cases of tabes, in the beginning, is a leptomeningitis which in turn conditions a root neuritis and eventually column degeneration. The majority of the cases that we see now at the Neurological Institute are in this stage, the time having come, fortunately, when we are encountering tabes before it has reached the advanced stages.

From a therapeutic point of view we believe it to be of the utmost importance to recognize this distinction between tabes in the exudative stage and tabes in the degenerative stage. We take the position that certain cases of tabes are more benefited by salvarsan therapy than by any and all other therapeutic measures, and we cite experiences to substantiate this position. But it is not every tabetic patient that is thus benefited and perhaps cured. It is only the cases in which the clinical manifestations of the disease are dependent on a pathologic process in the spinal cord which is attended by profound lymphocytosis. Examination of our table,[2] in which the salient facts of these cases are set forth, will show that the constant result of the administration of salvarsan is the profound diminution of this lymphocytosis which goes hand in hand with the patient's improvement.

Cases of syphilitic spinal paralysis or meningomyelitis, using that term in the sense established by Erb, have shown a varying number of cells in the cerebrospinal fluid, and a varying amount of globulin, both dependent, we believe, on the coexisting amount and degree of meningeal involvement. The Wassermann reaction in these cases is usually positive in the blood, and either positive or negative in the cerebrospinal fluid.

Cases of endarteritis which from their histories, age of occurrence, or ancillary phenomena, such as Argyll-Robertson pupils, were diagnosticated as syphilitic, were found only rarely to have such alterations of constituents of the cerebrospinal fluid to make it worthy of note. Some of them showed an increase of globulin and of cells and many of them a positive Wassermann reaction.

Fehling's reaction for the reduction of copper has been tried with practically every specimen of fluid obtained from the cases of this series. In one instance only was the reaction found to be negative, the case in which there was an extremely high cell-count, previously mentioned. This fact seems to indicate a resemblance between these cases of syphilitic infection and acute infections of the meninges by other organisms, in none of which cases the cerebrospinal fluid has failed to reduce the copper.

To compare our findings with those of other workers, we have taken an article by Nonne[3] as a fair standard. He reports a positive Wassermann reaction in 100 per cent. of the blood of general paretics and taboparetics. Our findings are the same. In the cerebrospinal fluid of these patients he reports positive Wassermann reaction in 85 to 90 per cent. by the original method and even higher by the method in which larger quantities than 0.2 c.c. have been used. We have for the last two years used 1 c.c. of cerebrospinal fluid and found the Wassermann reaction positive in 92 per cent. of these cases. Ninety-five per cent. of Nonne's cases show an excess of globulin and cells in the fluid, while 86 per cent. of ours show an excess of globulin, and 71 per cent. an excess of cells.

In tabes Nonne does not give the number of cells found, merely saying they are in excess of those usually considered normal, say from 6 to 10 cm. We have classed together cases which we call degenerative tabes and exudative tabes, cases, as mentioned elsewhere, which are clinically indistinguishable, yet show vast difference in the amount of globulin present and the number of cells.

His cases of tabes show an excess of globulin and cells in 55 per cent. of cases; ours an excess of globulin in 33 per cent., and excess of cells in 60 per cent. His cases give a positive Wassermann reaction in the blood in 60 to 70 per cent.; ours in 66 per cent. His give a positive Wassermann reaction in the cerebrospinal fluid in 100 per cent. by the method of using larger quantities; ours in only 41 per cent.

Taking his cases of cerebrospinal lues as the same type as those we have called meningomyelitis and cerebral syphilis, that is, cases showing bilateral spastic phenomena in the lower extremities with or without cranial nerve involvement, his figures are positive Wassermann reaction in the blood of 80 to 90 per cent. of patients; ours, 88 per cent. There was positive reaction in the cerebrospinal fluid of almost all his cases; whereas only 43 per cent. of our cases give a positive reaction. His show a globulin excess in in almost all cases; ours, in 86 per cent. His show excess of cells in almost all cases; ours, in 70 per cent.

Mott, Hauptman and almost all writers are agreed on the very high percentage of cases in which all four reactions are positive in cases of general paresis. As can be seen in the table of our cases,[1] very little change has been effected in the serum and cerebrospinal fluid of those patients whom we are able to follow.

In tabes, however, and in cases we call meningomyelitis, there will be a greater disparity noticed. This, we are convinced, is due to the patient having a better insight into the onset of his disease and resorting more or less to medication. This medication must influence these findings. Many of our patients, being men of financial prosperity, have at some time or other undergone protracted treatment with mercury and iodids, frequently immediately before coming to us, and this may account for the lower percentage of positive results we report.

In many of these cases the laboratory findings have been much affected by treatment, either recent or remote, and the findings must always be somewhat uncertain, depending on this factor.

Our experience has been that all these four reactions are affected in very different ways. For instance, the globulin may entirely disappear, while there are still a considerable number of cells present, as in one case in which the cells fell from ninety-six before treatment to sixty-eight two months afterward, the globulin entirely disappearing. In still another case recently encountered in which the cells were twenty-six in number and the globulin in excess, a week after treatment the number of cells had risen to ninety-six while the globulin had disappeared.

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[2] The table, which is here omitted on account of lack of space, is included in the authors' reprints, which may be had by sending a stamped addressed envelope either to the authors or to The Journal.

[3] Nonne: Deutsch. Ztschr. f. Nervenheilk., Sept. 18, 1911.

Claims have been made that differential diagnoses can be made in the laboratory alone. These, however, have emanated chiefly from those working solely in the laboratory. Our experience does not substantiate such claims. We must still make our diagnosis from the clinical signs which the patient presents. The laboratory findings may then be used to confirm our diagnosis or to differentiate the finer shades and will be of the greatest assistance in giving a prognosis and in indicating what effect the treatment is having.

### THE DOSE OF SALVARSAN IN SYPHILITIC NERVOUS DISEASES

The average dose of salvarsan for an individual suffering from diseases of the central nervous system whose vitality is not conspicuously impaired is the contents of one ampule (0.6 gm.). In patients whose blood-pressure is high (above 165 by the Stanton apparatus) and in whom there is very distinct evidence of cardiovascular degeneration, not more than one-half a dose should be given the first time. If the first administration is not followed within a fortnight by a chemical and microscopic evidence of cessation of activity of the syphilitic poison and the pathologic process conditioned by it (negative Wassermann reaction, diminution of globulin, profound numerical reduction of lymphocytes in the cerebrospinal fluid) the dose should be repeated. The second dose should be the same as the first unless some special reason exists for increasing or diminishing it. On the other hand, if the first dose is followed by indications of cessation of activity of the pathologic process, the second dose should be delayed for from six weeks to three months. The amount that shall then be administered will again be determined by the obtainable evidence of the effect of the former dose.

Physicians who have had much experience with salvarsan in the treatment of syphilis in what may be called its florid or active stages are apparently inclined to give the remedy in small doses and at frequent intervals, that is, from a week to two or three weeks. It has not been our experience that organic diseases of the nervous system or constitutional disorder, such as syphilitic neurasthenia, exudative tabes, meningitis, are best treated by frequently repeated small doses. On the contrary, we have had much experience that tends to show that these cases (cases, that is, of patients who have a fair amount of vitality), other things being equal, are best treated by the administration of the remedy in full doses. We give the second, third and even fourth dose sooner now than we did a year ago, which may be construed to mean that we have become divorced from the idea that one dose of salvarsan is competent to overcome syphilis of the nervous system. We always tell patients before they receive their treatment that they are certain to have a second and possibly several. The dose of the remedy subsequent to the second injection (which with us is almost invariably a full one) depends on the laboratory findings in the blood and cerebrospinal fluid and the condition of the patient. One of the most extraordinary features of salvarsan therapy of organic nervous diseases is the enormous physical uplift which many of these patients get, and which is attended not only by a feeling of well-being and improvement on the part of the patient, but by an increase of weight. We have a score or more of such examples.

### TECHNIC OF ADMINISTRATION

The contents of an ampule of salvarsan (0.6 gm.) are dissolved in 100 c.c. of boiling freshly distilled water. This gives a clear, intensely acid solution. From 20 to 30 minims of a 15 per cent. solution of sodium hydrate is added to this, i. e., a sufficient quantity to make the solution mildly alkaline. In some instances the former quantity suffices, while in others full 30 minims are required. When the sodium hydrate is added a heavy precipitate, which clears up as the neutral point is reached, is thrown down. Even when the mixture is shown, by its effect on litmus paper, to be slightly alkaline there is occasionally a slight opalescence. We have found that the administration of salvarsan in solution possessed of such opalescence is more likely to cause nausea and other disagreeable symptoms than a solution of salvarsan in which the alkalinity has been carried a little further and the mixture is quite clear. The solution thus prepared is made up to 300 c.c. by adding distilled water at the boiling point. The solution is now ready for administration at blood-temperature. We have been in the habit of administering this from an ordinary irrigating can or glass vessel elevated about 2½ or 3 feet above the bed. A small quantity (from 2 to 4 drams) of saline is allowed to fill the tube and run into the vein before any salvarsan is put into the vessel so as to make sure that there will be no extravasation of salvarsan about the vein. A free flow having been established, the salvarsan is allowed to run in slowly (from ten to fifteen minutes) so that no dyspnea or other discomfort shall be experienced. A small amount of saline is then allowed to follow this to prevent any leakage from, or lodgment in, the vein of the salvarsan.

The only unpleasant local manifestation we had from salvarsan administered in this manner was one case of phlebitis extending from the point of injection to the shoulder-joint. In this instance the fluid was presumably too hot, though certainly not above 99 F.

It is advisable to use a short needle without a long beveled point, for a needle with such a point will sometimes penetrate the opposite wall of the vein before the lumen of the needle coincides with the lumen of the vein. A needle of too small caliber is a disadvantage, requiring a high pressure. The salvarsan will otherwise flow so slowly that clotting of blood may occur about the mouth of the needle.

For the intramuscular injection we use, only when the intravenous method is for some reason not feasible, a solution prepared as follows:

The contents of an ampule, say 0.6 gm., are dissolved in 5 c.c. of boiling distilled water; the mortar in which the mixture is to be made and the pestle should be kept warm to permit the most rapid solution possible as unnecessary exposure to the air is not desirable. A solution of slightly syrupy consistency results. This is alkalinized as before with 15 per cent. sodium hydrate solution. From the admixture of the sodium hydrate and solution of salvarsan a heavy paste results. This should be absolutely uniform in consistence or a clear solution will not be obtained later. Again, on passing the neutral point, this paste becomes transformed into a liquid and is then made to 20 c.c. with boiling distilled water.

This is a more difficult solution to make than that which we use for the intravenous injection. Solutions are also made in iodipin and other oily preparations. We have not used them, but we have obtained good results from the intramuscular injections with pain of greater or less severity, but no unpleasant local lesions such as sloughing with watery solutions. It is advisable when this form of administration is resorted to that it be given in two parts, one of 10 c.c., say, into each buttock. An ice-bag should be kept applied to the part and massage administered over the area once or twice daily for a few days. When this is done patients are frequently able to go about their work suffering only the inconvenience of pain.

Patients who are given salvarsan intravenously are kept in bed after each administration for from one to three days. They are given a gentle purge before the administration and a very light meal several hours before. For six or eight hours afterward they are given nothing to eat or drink. They are urged to keep warm and to avoid any exertion whatsoever. By adhering to this routine our patients had very little discomfort; very rarely has one of them displayed any elevation of temperature.

Dr. Kaplan, director of the clinical laboratory of the Neurological Institute, has directed our attention to the occurrence of urobilinogen in the urine of every patient who consumes alcohol habitually after salvarsan administration, whereas it does not occur in those who are abstainers.

### THE RESULTS OF SALVARSAN THERAPY IN ORGANIC NERVOUS DISEASES

In spite of reports deprecating the use of salvarsan in syphilitic diseases of the nervous system, we are convinced of the advisability of its employment not only in what may be called acute conditions, but also in some which can only be regarded as degenerative cases. Arsenic is undoubtedly a tonic of great value and even if this were its only effect in these latter cases, its use would be justified. But it is not. We have experience which attests its remarkable curative value. To illustrate some of the more marked benefits we have seen follow its administration, several cases are quoted in some detail.

The table,[2] however, should be consulted for information concerning the therapeutic value of salvarsan in seventy-five unselected cases of luetic nervous disease.

It is difficult to summarize in a few lines the information of the table. An attempt is made therein to set forth the age and sex of the patients; the leading symptoms of the disease and their duration, the physical signs of the disease on which the diagnosis is largely if not wholly made; the alleged local lesion and the treatment which was administered to combat the infection; the chemical and microscopic findings in the blood and cerebrospinal fluid before the administration of salvarsan and after such administration (as a rule six weeks or longer after); the time when the dose was repeated, the results from such second or third administration and finally the remote results. In many instances the remote results are the results a year after administration.

We offer statistics of thirty-six cases of tabes in various stages of the disease. Some of these we classify as exudative tabes because of the cerebrospinal fluid findings indicating an active process in the meninges, which may be construed, in the majority of instances at least, to be cases of the disease that are less advanced than those called degenerative tabes. Of these thirty-six cases, twenty-two showed striking and, in some instances, remarkable improvement, both subjective and objective. In nearly every instance there was a decided increase of weight and a subjective feeling of bettering. In many instances the pain was mitigated or relieved and in the majority of instances the ataxia was very much improved. In two cases, in which the observation was corroborated by several of the staff of the institute, the pupils, which were reported on examination to be unresponsive to light, regained that capacity.

As examples of profound improvement we may quote Case 6, a case of tabes with most alarming attacks of laryngeal crises (so much so that in one attack the patient was put on the operating-table). He has now been almost entirely free from attacks for upward of a year and during this time has been working hard on a farm. In Case 2, a physician has been enabled to resume practice after three injections of salvarsan.

A tailor, aged 36, had syphilis eighteen years ago. He came complaining of severe shooting pains in the legs and arms and of gastric crises, occurring frequently and lasting several days. He showed considerable ataxia, absent knee- and ankle-jerks and Argyll-Robertson pupils and was much emaciated.

The Wassermann reaction was positive in the blood but negative in the cerebrospinal fluid. The latter showed no excess of globulin or cells. He was given full doses of salvarsan in January, 1911. After a week he had no more gastric crises and the pains in the legs and arms were much reduced. In August he was at work, the only pains being about the hips, and he had grown from an emaciated to a well-nourished man. When he was first ill he could hardly walk; during the summer he could walk without assistance carrying a valise.

He returned to the clinic in the late summer and said he again had pain. He was given a second dose in September. In November he had developed a Charcot joint in the foot and another full dose was given. At this time the Wassermann reaction and the blood were negative. It is, of course, impossible to say what influence salvarsan has had on this joint, but it has most assuredly put the man on his feet again, very definite improvement having taken place after each of the first two doses, and, as in many other cases, the pains being much relieved; yet in his cerebrospinal fluid he showed no evidences of active syphilis.

Another instance of great improvement is Case 11, in which the patient had been under our treatment for two years during which time mercury had been given hypodermically and through the skin without particular improvement. The first injection was given April 22, the second on June 21, 1911; the third on Feb. 14, 1912. He maintains that he is better than he has been in years. His blood and cerebrospinal fluid showed negative Wassermann reaction on April 6, 1912. Case 16 is similar.

Many of these patients have been under observation and treatment by one of us for many years, so that we are in a position to contrast the results obtained from the treatment by mercury and by salvarsan, and I have no hesitancy in expressing the belief that the results obtained by the latter are incomparably better than those obtained by the former. In none of our cases of tabes have we supplemented the treatment by the use of mercury, and as we have long held that iodid of potassium is injurious rather than beneficial in the treatment of tabes, it need scarcely be said that that remedy has not been employed in any of these cases. In other diseases than the parasyphilitic, we have frequently given mercury, iodin and potassium iodid to supplement the salvarsan treatment and often with benefit.

We have administered salvarsan systematically and earnestly in nine cases diagnosticated as general paresis. In two of them it was difficult to say whether the diagnosis should be tabes or paresis. It was in these and in one other in which there was unanimity of opinion as to the diagnosis of paresis, that great improvement took place.

In Case 37, the patient was a man, 47 years old, who had become infected when he was 34. He received vigorous conventional treatment for four years, and every year since then he has taken mercury. A year before coming under our observation he had attacks of vertigo and vomiting which responded to antisyphilitic treatment. After this he became garrulous and childish in his behavior, and displayed lack of insight. Physical examination revealed a fine tremor of the hands, tendon-jerks very lively, pupils unresponsive to light, right larger than the left, a slight but obvious indistinctness of speech, blood Wassermann positive, cerebrospinal fluid Wassermann negative, globulin minus, cells 14. Two days later, injection of 0.6 gm. salvarsan; no discomfort following the injection. Dec. 5, 1911, it is noted he has felt well all summer, been to business steadily, played golf and comported himself as a normal individual. Examination on April 2, 1912, showed the blood and cerebrospinal fluid to be negative, and the pupils were responsive to light.

A patient with general paresis, who made very striking improvement and then died abruptly several months after he had been discharged from the asylum to which he had been committed, was a professional man, 31 years old, who had a local lesion on the finger when 22. He had the orthodox treatment from the professor of syphilology in the university where he was a student, and remained well until the spring of 1911 when he became restless, nervous, irritable, combative, unresponsive; bartering, trading, speculating, planning; the victim of profound motor unrest. Examination showed absent tendon-jerks, Argyll-Robertson pupils, facial and manual tremor. Blood and cerebrospinal fluid positive, globulin plus, cells 11, Fehling's plus. First injection of salvarsan May 28, 1911. The reactions remained negative for five weeks without improvement in the mental state. Shortly after the second injection, July 5, he began to show rapid improvement and by August 1 he was discharged from the asylum. August 2 he was given a third injection, September 12 the fourth, October 10 the fifth. October 10 it was noted that he showed no mental deterioration. He returned to his professional work and comported himself as he did when well. Nov. 28, 1911, while sitting smoking and talking to friends he had a series of convulsions followed by hemiplegia and died within twenty-four hours.

Cessation of symptoms, indeed what may be termed an intermission in the course of paresis, occurs every now and then, but I have never seen a case in which symptoms seemed to disappear entirely as they did in this case. That the outcome of the disease was not influenced, however, was shown by its termination. Another patient in this category who was improved was Patient 40, whose case was diagnosed as taboparesis. Neither the intensity of the symptoms nor the course of the disease seemed to be in any way influenced by repeated injections of salvarsan in any of the other cases save that of one patient who may or may not be cured.

A chauffeur, aged 40, came to us in November complaining of constant headache, poor memory and rapidly increasing deafness, all of two weeks' duration. From the physical signs it was manifestly a case of general paresis. After three full doses of salvarsan he returned to his work. The case is quoted to show the effect of treatment on the hearing. When first seen he heard a low whisper at 4 feet only. In a month and a half he received three full doses and the hearing improved until he could hear a low whisper at 23 feet. He cooperated well at all times and these results are taken from many examinations kindly made for us by Dr. Dench.

There are nine cases in our series diagnosticated meningomyelitis and it is these cases and those diagnosticated as meningitis that show the most gratifying response to treatment. Without entering into detail as to the clinical delineation of the cases included under meningomyelitis, we may say we have grouped under this heading all cases of exudative syphilis in which both the meninges and the cord gave evidence of being simultaneously involved. Some of these cases had likewise been under treatment by one of us for several years with mercury and potassium iodid; such particularly as Nos. 46 and 53, and it was not until they were put on salvarsan therapy that the gratifying condition, in which the patients now are, developed.

There were six cases of cerebral endarteritis of luetic origin. In only two of these was there profound improvement.

In one, a locomotive engineer, aged 63, who denied syphilis, noticed that for three months he had grown so weak that he could not manage his engine. He had a desire to sleep constantly; paroxysmal pain in left temple; frequent crying spells, and oftentimes difficulty in speaking. He had become very forgetful and his weight had gone off 13 pounds. He showed no abnormal physical signs except a slight arteriosclerosis.

The Wassermann reaction in the blood was positive. He received a full dose of salvarsan intramuscularly and three weeks later returned to work free from symptoms and has remained so since, having gained 20 pounds.

In our list there are seven cases of what may be termed brain syphilis, that is, infections of the meninges or substance of the brain.

Case 61.—A man, 34 years old, whose infection was of three years' duration, complained of headache, loss of weight, vertigo with transient blindness. Blood plus, cerebrospinal fluid minus, cells 7, globulin 0, Fehling's plus. Intravenous injection, 0.6 gm. of salvarsan, July 26, 1911; repeated Sept. 4, 1911. Patient reports, April 5, 1912, that he has been quite well since the second injection.

Case 65.—Patient a man, 36 years old, who denied syphilis and whose blood was plus, gobulin plus, cells 9, Fehling's plus, and who was afflicted with epileptic attacks, received his first injection intravenously July 22, 1911, the second on March 20, 1912. Has not had a convulsion since the first injection.

Case 67.—Another patient with epilepsy who had infection when 31 years old has had no epileptic attacks since the first injection.

There are three cases of spinal meningitis probably more of the dura than the pia. One of these showed no improvement and one of the patients (Patient 71, who had been treated for many years as a case of lead poisoning, but whose blood and cerebrospinal fluid were plus, globulin plus, Fehling's plus, cells 4) experienced no relief from injections of salvarsan or mercury and the iodid. This case will eventually be published in detail. Another patient showed improvement lasting for a short time, but pain recurred as severe as ever. The third got nearly well.

Two cases which must be classed as pachymeningitis deserve mention: One patient received an injection of salvarsan a year ago. He was entirely free from pain for nine months, when it returned. A month ago he received a second injection and so far has again been free from pain.

In a similar case the patient was relieved for only a fortnight and then the pain returned persisting up till a second injection a month ago, since when he has been free. The number of cells in the first case was 5 per cm.: in the second, 143. It is interesting to compare them with still another similar case, who had been considered for seven years to be suffering from lead-poisoning. This man had also 141 cells per cm., received no appreciable benefit from the salvarsan and finally died.

We have had a few cases of syphilitic infection which do not permit of clinical designation unless we call them by the chief symptom of which the patients complain, such as syphilitic neurasthenia, syphilitic migrain, etc., in which the four reactions were present and in which the patients made striking recoveries after salvarsan had been administered. We refer most briefly to two of these cases:

A lady, 60 years old, whose husband had suffered for many years from tabes and had developed in addition, a year before his death the typical features of general paresis, had her first attack of "nervous prostration" when she was 52 years old. The chief features were weakness, inertness, emotional irritability, sensitiveness and a sensation of profound exhaustion; in short, prostration without attributable cause. She remained abroad, where she had first developed these symptoms, for two years, taking various "cures" meanwhile. She gradually recovered and remained comparatively free from symptoms, if she did not overtax her strength, for six years; then she had another attack. The only objective signs that we could elicit were cardiovascular sluggishness and pupils which, though they still responded to light, did so very slowly and through a small arc. The Wassermann reaction was positive in blood and spinal fluid. After the first intravenous injection of .06 gm. salvarsan they remained negative for two months and she became astonishingly well. At the end of that time the symptoms began again and the reactions were found to be positive. She received a second similar injection, and since that time, now eight months, she has been quite well, and the reactions have remained negative.

The second case is that of a lady, 44 years old, whose complaint was of the symptoms that constitute typical migraine. Objectively she had glaucoma of the right eye for which an iridectomy had been done two years before, and slightly increased tension of the left eye. From certain facts of her history in the few years succeeding marriage, we were led to make a Wassermann test of her blood which on three different occasions and by two competent pathologists was found to be strongly positive. She received forty intramuscular injections of sublimate, an equal number of inunctions, both in large doses, and for a time, namely, four months, she was relieved of the migrainous attacks and the sensation of tension in the eye. At the end of that time the symptoms returned and she was given mercury again with similar results. The Wassermann reaction for the third time becoming positive, it was then decided after mature deliberation and wise counsel to administer salvarsan, despite the slight degree of optic atrophy. She received a full dose in November, 1911, and two weeks later a half dose. She remained free from symptoms until the present writing, March 1, 1912. We propose now to repeat the treatment, if the reactions are positive.

Some of the patients showed such extraordinary results from salvarsan administration that they demand special description.

F. S. A., a clerk, aged 25, who denied syphilis, came to the institute in August, 1911. He was sent from one of the ophthalmic hospitals as presenting a case of brain tumor. His complaint was of constant supra-orbital headache; diplopia; profound general weakness, and a tendency to sleep most of the time. This latter amounted nearly to coma on his admission. These symptoms had been progressing for six weeks. He showed exaggerated knee- and ankle-jerks, the Babinski signs on both sides, paralysis of the external rectus muscle of each eye and an absence of the senses of taste and smell.

The Wassermann reaction was positive in both the blood and cerebrospinal fluid. The latter showed an excess of globulin and 134 cells per cubic millimeter. He was given two full doses of salvarsan, a week apart; within a few days after the first dose he experienced a marked relief from his symptoms. In less than three weeks after the second injection he returned to work, free from all symptoms.

In the six months since then he has gained 45 pounds. The Wasserman reaction in the blood remained negative until March, 1912, when it was found to be positive. Then a third full dose was given. Meanwhile he had been entirely free from symptoms.

And this is illustrative of a point to which we call attention: The patient may be clinically quite well after salvarsan administration, while the laboratory tests show the necessity for further vigorous treatment.

Another case giving such gratifying results was that of a woman who was aged 38, but who looked over 50 years of age. She complained of "breaking" pains in the hands and feet, constant headache, insomnia, frequent vomiting and marked constipation—all these of one and a half years' duration. The only evidences of her having had syphilis were that she had had four miscarriages and only one child, a cripple, out of three that were born alive, survived. She showed a slight Romberg, exaggerated knee- and ankle-jerks, unequal pupils which reacted sluggishly to light and pronounced emaciation and general weakness.

The Wassermann reaction was positive in the blood and cerebrospinal fluid. The latter showed 1,480 cells per cubic millimeter and a marked excess of globulin. She was given a full dose of salvarsan and a month later the cerebrospinal fluid showed a reduction in the number of cells to 148 per cubic millimeter and decidedly less globulin, though the Wassermann reaction was still positive. The dose was repeated and two months later she is a well-nourished-looking woman, doing a full day's work, and complaining only of slight weakness in the legs and of some vertigo on stooping. All reactions are negative.

The man in the street with a newspaper in his hand tells us that there is a national prejudice in France against the admission of the fact that salvarsan is curative of syphilis; the syphilitic in our consulting-room chair tells us that Doctor So-and-So has told him that salvarsan is a failure; the medical press teems with articles setting forth the fact that salvarsan does not cure cases of advanced tabes, general paresis and other diseases in which the tissues which are fundamentally attacked have become destroyed. If any of these statements have the slightest effect on a physician who is earnestly searching to determine the cause and cure of disease, it transcends our understanding. Metchnikoff showed, a few years ago, that syphilis could be transmitted to apes, and this vulnerability of the lower animals has permitted countless investigators to demonstrate the fact that salvarsan can kill all the spirochetes in an infected animal. It is not the only agency capable of overcoming syphilitic infection. Mercury is such an agency. If it can be given to the syphilitic in sufficient doses, that is, in amounts that will neither impair his health nor kill him, it will rid him of the syphilis. It has been a trusted weapon in the combat of syphilis for a long time. It has practically been the only one. Steam was for a long time practically the only motive power. It was fairly satisfactory. Few scoffed at it and no one scorned it. When electricity was introduced as a motive power, it was found to be more reliable, more efficient and more economical than steam. It has not yet replaced it, however; perhaps it never will. To-day these two agencies are used side by side, one often supplementary to the other. The profession is in a similar position relative to mercury and salvarsan. Salvarsan has not replaced mercury; its therapeutic potentialities are not yet fully shown. But of one thing we feel convinced and that is that the treatment of diseases of the nervous system that flow out of syphilis is far more satisfactory with salvarsan than with mercury. And this statement is made without dogmatic emphasis and without prejudice.

149 East Sixty-Seventh Street.

# SIMPLE METHODS IN INFANT-FEEDING *

DAVID J. LEVY, M.D.
DETROIT

By way of introduction I wish to mention briefly a few already well-known facts. The Biedert theory, which dominated for many years American pediatric practice, held the proteid as the essential disturbing element in infantile digestion, and on the basis of this belief there was developed the long popular, although difficult and empirical, percentage system of feeding. The work of Czerny and Keller, attacking the problem of nutritional disorder from the standpoint of metabolism, demonstrated the comparative innocuousness of the proteid, and the importance of the rôle of the fats. Finkelstein and his school carried toward their logical conclusion the metabolism observations of Czerny and Keller and demonstrated the relationship of the carbohydrates, the salts and the whey medium itself to the physiology and pathology of the nutrition of infancy. Finkelstein also demonstrated the important principle that each individual infant has its own limit of nutritional tolerance, within which it must be fed. If the child be fed beyond the limits of its tolerance, it starts on a downward course, not *in spite* of the quantity of food it is receiving, but *on account* of the quantity — the so-called paradoxic reaction. This principle is of the utmost importance. It means that each infant, so far as its nutritional requirement is concerned, is a law unto itself — that in the feeding of a given patient, that patient must be regarded as an entity not to be adapted to an empirical tabulation with its corresponding empirical food formula. We have as our guides for determining its requirement, the age of the patient, its weight, the weight of the average normal child of the same age — *Sollgewicht* — and the principle of caloric feeding. All this, instead of complicating infant-feeding, serves by reducing the procedure to a logical rationale to render the task simpler for the physician, for the mother and certainly for the child.

We find, however, in handling large numbers of infants, that the average tolerance-limit is sufficiently wide to permit of certain generalizations, and I wish to confine my remarks to a discussion of the methods to be pursued in the routine feeding of normal babies. For the methods themselves I claim no originality. They will be recognized as those used by Finkelstein. I wish merely to testify as to the effectiveness of the methods as demonstrated by experience with a rather large material during the past year. The methods used by Finkelstein in the hospital have been employed in the dispensaries of the United Jewish Charities, the Franklin Street Settlement and the Salvation Army, as well as in private practice. Dispensary patients furnish the least favorable conditions for artificial feeding, yet experience with these has been practically uniformly successful, so that I am urging the simple methods there found effective for use in routine feeding in private practice. Briefly stated, milk dilutions are used instead of cream, top milk or percentage mixtures, and sugar is added to a definite percentage. For children of the first six months of life, the dilution employed is half milk and half water, plus 5 per cent. sugar; from six to nine months, two-thirds milk and one-third water, plus 5 per cent. sugar; from nine months on, whole milk.

Through the first six weeks of life there has been recommended the employment of one-third milk with two-thirds water, plus 4 or 5 per cent. sugar, but it is difficult to cover the child's requirement with this dilution. Personally, I no longer use one-third milk, save in exceptional cases, and am using one-half milk from earliest infancy. Let us consider briefly the underlying principles, then in further detail the methods employed.

Heubner and Rubner showed that the healthy infant requires a definite number of calories for each kilogram of its body-weight. We may apply their findings as follows:

First three months, requirement, 100 cal. per kg.
Second three months, requirement, 90 cal. per kg.
Third three months, requirement, 80 cal. per kg.
Fourth three months, requirement, 70 cal. per kg.

It is a simple matter to reduce this computation to ounces, but decimals are for our present purpose more convenient. The caloric value of a liter (quart) of milk is variously estimated, but it is correct enough to assume for clinical purposes the value of 600, a little under its value as determined *in vitro*. There need be no distinction made in regard to caloric value between mother's and cow's milk.

We may assume as the average normal weight of the new-born 3,000 gm. and that the normal rate of growth is 500 gm. per month. Therefore the average normal weight is

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|---|---|
| At birth | 3,000 gm. |
| At one month | 3,500 gm. |
| At two months | 4,000 gm. |
| At three months | 4,500 gm. |
| At four months | 5,000 gm. |
| At five months | 5,500 gm. |
| At six months | 6,000 gm. |

These figures are no doubt a little under our average local weights, but still are an effective guide.

The average child then should be fed according to the requirement of the average child of his age. For instance, we feed a one-month old baby 350 calories daily. If its weight is more than 3,500 gm. a general adherence to the schedule will prevent going beyond the infant's tolerance. If it is less, the child is so much the more rapidly brought to the point at which it should be. With the gradual increase in weight the food is gradually increased in quantity, hence in caloric value. Let us consider the mixtures previously mentioned.

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|---|---|
| One-half liter of milk | provides 300 cal. |
| Five per cent. sugar | provides 200 cal. |
| Caloric value one-half milk and 5 per cent. sugar | provides 500 cal. |
| Two-thirds liter of milk | provides 400 cal. |
| Five per cent. sugar | provides 200 cal. |
| Caloric value two-thirds milk plus 5 per cent. sugar | provides 600 cal. |

Example: Child of seven months should weigh 6,500 gm. Requirement at 80 calories per kg., 520 cal. This is furnished by 850 c.c. of two-thirds milk mixture. Therefore prescribe five feedings in twenty-four hours of 170 gm. or 5⅔ oz. each.

This brings me to the second essential feature of the simple method: long feeding-intervals, i. e., five feedings in the twenty-four hours. We are greatly indebted to Czerny for the emphasis placed in recent years on the longer feeding-interval and the discontinuance of the two-hour and three-hour schedule, involving twelve, ten or eight feedings per day. In the routine feeding of well infants, feedings should be limited to five in twenty-four hours. One must bow at times to prejudice and long-established custom and, in individual instances, compromise on a six-feeding schedule, but it may be stated as a rule that after the first few weeks five feedings should be insisted on.[1] Night feedings are unnecessary. My usual schedule is one feeding at each of the following hours: 6 a. m., 10 a. m., 2 p. m., 6 p. m. and 10 p. m. Between 10 p. m. and 6 a. m. milk feeding is not necessary. The child during the night may drink boiled water *ad libitum*.

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* Read before the Academy of Medicine, Kalamazoo, Mich., March 26, 1912.

As to choice of sugars, maltose dextrin is the best for our purpose, being especially advantageous probably owing to the contained dextrin. Lactose may be used with impunity in the case of the well child, although dyspeptic disturbances or constipation are more frequent with its use; also weight increase does not seem to be so rapid as with the first-mentioned sugar. Cane-sugar is permissible. One frequently finds that with the mixture above employed, the child gains up to a certain point, and then stands still, although its food requirement is being covered. If one fears that one is not yet warranted in passing on to the dilution of increased strength, 10 gm. of ordinary wheat flour may be added to the day's feeding, and practically invariably the increase is again resumed. This procedure is to be recommended only beyond the third month. Incidentally it may be mentioned that this simple procedure of addition of flour to the day's feeding frequently suffices to overcome a constipated tendency. In other instances in which constipation exists, oatmeal water containing ½ to 2 ounces of oatmeal to the quart may be used as diluent instead of water.

A fourth important principle is the limiting of the total of food mixture taken to a liter a day—a principle which applies up to the very end of infancy—and incidentally, so far as milk is concerned, through the second year. This maximum quantity can generally be reached by the fourth month, and even earlier.

One-third milk feeding, as before mentioned, often fails to meet the requirement. Experience shows that it is quite safe at a very early age to begin with one-half milk. One-half milk will be found very satisfactory through the first six months of life. One must not hold too arbitrarily to age divisions, however. When the individual patient ceases gaining on his hitherto appropriate mixture, the next step is to increase to two-thirds milk, which one will find a not too radical increase. The results with two-thirds milk are more than gratifying. One can carry the baby well up into the fourth quarter of the first year with steady and satisfying gains in weight by means of it, and it provides a convenient stepping-stone to the use of full milk. Full milk may be employed somewhat earlier than we have previously been taught, that is to say, whenever the increase on two-thirds milk and 5 per cent. sugar plus 10 gm. flour ceases —which generally is in the ninth or tenth month. I generally request, on beginning whole-milk feeding, that the upper ounce of cream be removed from the quart bottle, rapidly re-adding this as soon as it is evident that the child is not going to react with vomiting or constipation.

We now come to a principle hitherto little recognized or emphasized—that is, the early addition to the infant's diet of fruits, vegetables and broths. It is a matter of my routine practice in the case of the healthy infant (and many sick ones) to give daily from the sixth month on, one feeding including broth (a small saucerful of chicken, mutton or beef broth); stewed fruit (stewed apples, stewed prunes, stewed apricots), and a vegetable (stewed turnips, stewed carrots, spinach — the last-mentioned possibly, on account of its relatively high iron content, being the most desirable). The fruit and the vegetables must be thoroughly cooked, rendered to a state of fine subdivision by passing through a colander and given in tablespoonful quantities each.

The broth probably is valuable as a vehicle for salts, which aid in the water retention. The fruit and vegetables, save for the small quantity of carbohydrates contained, are probably negligible as to food value; their usefulness is probably due to the furnishing of organic salts and acids which are utilized advantageously in the body metabolism. Suffice it to say, the infant takes readily, often greedily, to these additions; he is less inclined to demand larger quantities of milk; the longer feeding-intervals are much more easily enforced, because the mother is quite satisfied with the quantity and variety of the baby's diet; laxative effect is frequently evident; the colored vegetables by virtue of contained iron counteract the anemic tendency; and it may not be going too far to say that a certain organic something seems to be supplied which is lost in the milk-heating process. I hesitate to use the term antiscorbutic or antirachitic in this connection, however.

Let me briefly recapitulate the principles herein set forth.

1. Milk dilutions instead of percentage formulas.
2. Long feeding-intervals: five feedings in twenty-four hours, four hours apart.
3. Mixed carbohydrates: the addition of 10 gm. of flour and the occasional use of oatmeal water as diluent; maltose dextrin as sugar.
4. Limiting the total quantity of milk mixture to 1 liter (one quart) a day.
5. The employment of broths, fruits and vegetables from the sixth month on.

The least intelligent nurse can readily prepare a proper milk mixture. It is simply necessary to say, for instance: Take a pint of milk, a pint of water, add an ounce and a half of milk sugar, divide into five feedings, and give every four hours. There is no need of prescribing a complicated formula calling for the preparation of so much top milk, or a cream containing a definite percentage of fat and the addition of lime water. These instructions, while competently carried out by mathematicians and chemists in the milk laboratory, serve to befuddle the mother or nurse, or to discourage her to the point of driving her to the use of proprietary foods, which are more convenient and simpler to prepare, or to the too early use of whole milk. In fact, many of the published tabulations are fallacious and unsafe guides even when strictly followed, not checking up to the requiremen when figured out calorically.

The longer feeding-interval acts in a twofold way a an advantage to the baby. The child has the opportunit to empty its stomach of the food already ingested befor it is called on to receive an added quantity, and i demands less frequent attention from mother and nurse who, being thus enabled to care for other domestic duties need not slight the child or hurry it through its feeding Particularly let me emphasize the value of the longe interval in the case of the breast-fed child. The demand on the mother are so greatly lessened as to permit her t continue her domestic and social duties without neglecting the baby. By lengthening the interval the mother's strength and patience is conserved and the adoption of a sensible schedule serves, in many instances, to defer weaning. For no matter how much improved our methods of artificial feeding may be, maternal nursing should never be abandoned until absolutely necessary. The bottle should be resorted to only after breast-feeding is no longer adequate or possible, or the period of infancy is passed.

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[1] Since the writing of the foregoing, Rietschl (Jahrb. f. Kinderh., April and May, 1912) has published an important series of observations evidencing the value of from six to eight feedings in the first weeks of life.—L.

Sociologic investigation, hygienic research, clinical experience and observation have in recent times lifted the major portion of the primary blame for infant mortality from the milk itself to our own shoulders. Certainly the canons of decency demand that that which enters the mouth of the little human animal as food shall be as clean and pure as skill and science can make it. But impure or contaminated milk is primarily responsible for only a share of infantile morbidity or mortality. We must look to-day for predominant influence in this respect to heat, housing, clothing and our own feeding-methods. Experience proves that we can aid most effectively in the infant welfare movement, can reduce the mortality among those infants concerning whom we are called on to advise, by employing simple feeding-methods —by prescribing simple mixtures that the baby can digest and by prescribing simple directions that the mother can carry out.

32 Adams Avenue W.

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# ADHESIONS OF THE COLON *

M. L. HARRIS, M.D.

CHICAGO

A study of the conditions affecting the lower right side of the abdomen has resulted in the acquisition of much valuable knowledge. This knowledge has not been acquired all at once, but, as is usual, it has come slowly and only after much labor. It is a curious fact, too, that here, as in so many other instances in the history of medicine, thought has traveled in a circle and we are now describing typhlitis and perityphlitis as they were described some forty or fifty years ago. It is not to be understood, however, that during these years no advancement has been made, for the circle has been a spiral and hence considerable progress has resulted, for the typhlitis and perityphlitis of yesterday are not the same as those of to-day. During the circuit, many other important conditions have been recognized and, as each was recognized, the tendency, as is usual, was to exaggerate its importance for the time being until some other condition came to the front and was differentiated from the others. Thus, when the frequency and importance of acute appendicitis was recognized, typhlitis and perityphlitis were entirely lost sight of and the appendix was considered the source of all the trouble in this part of the abdomen. Gradually, however, we began to hear of chronic appendicitis, relapsing appendicitis, obliterating appendicitis, adhesions about the appendix, adhesions about or fixation of the cecum, adhesions of the ascending colon, cecal ulcers, membranous pericolitis, Jackson's membrane, nephrocoloptosis and finally cecum mobile. We now know that all of these conditions are well-defined pathologic entities and that to each definite symptoms may be due. It is no longer allowable to call every case presenting irregular symptoms of pain and tenderness in the right side of the abdomen one of chronic appendicitis and immediately to proceed to remove that organ in the expectation of effecting a cure. The fact that many patients thus diagnosed and treated were found to be no better after the operation than before is what stimulated further investigation and it was just such cases as these which sounded the death-knell of the small incision, the 1-inch, the 1-½-inch and the buttonhole, etc., which at one time were supposed to show great dexterity, but which were also found not to cure the patient because, quite often, they left the real trouble unrecognized and therefore unrelieved.

Those of large experience will readily recall many cases of their own and particularly of others on whom they have had to do secondary operations because of the failure of the first to bring relief.

In all of these cases of right-sided abdominal trouble the incision should be ample, so that the entire region may be thoroughly inspected and thus the real condition not be overlooked.

The appendix is not the *fons et origo* of all of the pathologic changes found in this region. Admitting that chronic changes in and about the appendix are common and that these changes frequently give rise to well-marked and often distressing symptoms, I wish to emphasize the fact that there are many cases in which the appendix is innocent and in which the real trouble is to be found in the cecum or the ascending colon.

The conditions most frequently found are what in general may be designated as adhesions. These adhesions, however, may be quite different in character and also, perhaps, quite different in origin. The adhesions to which the attention first will be directed are those found on the posterior surface of the cecum and the posterolateral wall of the ascending colon. In some cases these may, perhaps, be better designated by the term "agglutination" than adhesions, as the peritoneal layer of the bowel seems to be simply stuck to the peritoneum of the parietal wall, without there being any visible organized bands connecting the two. If the bowel be raised up, a distinct white line frequently becomes visible showing the edge of the agglutinated surfaces and on further traction the parietal peritoneum becomes drawn on.

The appendix and its mesenteriolum may be entirely free from perceptible lesions. Many of these cases undoubtedly are of pathologic origin, but it has seemed to me that some of them are best explained by assuming that the agglutination which takes place normally during fetal life, between the original mesocolon and the parietal peritoneum, is more extensive than usual, and part of it persists after absorption of the opposed peritoneal layers has ceased. When this agglutination is extensive, free action of the ascending colon must be considerably interfered with.

In another variety of adhesions are found distinct bands of new-formed tissue extending from the cecum or the ascending colon to the parietal peritoneum, to the appendix, to the omentum or to the lower end of the ileum. These are all undoubtedly of inflammatory origin and may vary much in number, length and thickness. They frequently have a direction upward, outward and backward from the bowel to the posterolateral parietal wall.

The next condition to be described is sometimes called membranous pericolitis, or Jackson membrane. In the early stages of this condition the wall of the ascending colon presents the appearance of being thickened or edematous, and, on close inspection, the visceral peritoneum seems to be raised from the bowel-wall by reason of the presence of a subendothelial hyaline-looking substance or exudate. The endothelial layer of the peritoneum, which is slightly movable on the bowel-wall, gradually becomes separated from the bowel as a distinct layer and beneath it covering the bowel-wall there forms another layer of endothelial cells. A raised thin, transparent membrane remains attached to the bowel at the longitudinal bands at which point small blood-vessels may be seen entering and spreading over the thin membrane. Later this membrane is almost certain to acquire attachments to the anterolateral parietal wall. In older cases the membrane becomes thicker, particularly along the line of the blood-vessels, which also become larger and more numerous. In still later stages the membranous formation becomes more intimately attached to the ascending colon. It extends from pouch to pouch of the colon and, on contracting, as all such new formations do, draws the pouches together and puckers them up, so as practically to obliterate them on the external surface of the bowel. In this stage the membrane can be removed only with difficulty and leaves the bowel raw and bleeding.

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* Read in the Section on Surgery of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

It seems almost impossible that such a condition can exist without interfering materially with the muscular activity of the bowel and thus with its function. It is quite remarkable that this membranous formation very seldom extends entirely over the cecum itself, but almost always leaves the beginning, or the blind end, of the cecum free. The appendix may show evidences of chronic trouble or it may be to all appearances normal.

In cecum mobile the cecum and ascending colon are not only abnormally movable, but also, as a rule, abnormally enlarged. The cecum is a well-defined large pouch extending considerably beyond the extrance of the ileum and the ascending colon presents a more or less perfect mesocolon which permits a considerable range of motion. The mesocolon is often so long that the cecum and a part of the colon may lie below the upper plane of the true pelvis. That such an abnormally movable organ may cause disturbance of the intestinal function and also, when it lies in the pelvis and is filled with feces, may disturb the functions of the pelvic organs in the female, in whom this condition is most frequently found, is very evident. Such a cecum, lying in the pelvis and being filled with feces, may be mistaken for a pelvic tumor, as I have personally seen; and in one case I was sent for in great haste to operate on a case of extra-uterine pregnancy. The physicians in charge had recognized a mass in the pelvis to the right side of the uterus in a woman with symptoms of early pregnancy and concluded that the pregnancy was extra-uterine. The doughy feel of the mass, together with the fact that it was easily displaced out of the pelvis into the abdomen by placing the patient in a knee-chest position, led to the recognition of its true character, and the mass entirely disappeared after a dose of magnesium citrate and an enema.

That the cecum and colon may descend with other abdominal organs as a part of a general visceral ptosis is well known, but a true cecum mobile with a real mesocolon is a congenital condition.

There is a similarity of symptoms produced by all of these various forms of adhesions, yet a careful study of the clinical history will show slight differences which, as a rule, will enable one to differentiate the cases. That the symptoms are similar might be surmised from the fact that all of the pathologic changes affect the same portion of the bowel, namely, the cecum and ascending colon. The one symptom which is practically always present in some form is that of pain, but the pain varies somewhat in location and character. Tenderness is also a very constant symptom, but it is not so circumscribed and so localized as it usually is in chronic appendicitis. Attacks of pain may come on at irregular intervals and the attacks may last from a few minutes to two or three days, but the pain is not usually very severe, nor is there so much gastric disturbance as is commonly found when the appendix itself is the chief offender. Nor do these patients usually have any rise of temperature during these periods.

Membranous pericolitis occurs most frequently in young women from 20 to 35 years of age, but I have seen one well-marked case in a boy of 12. The soreness and pain are often worse during the menstrual period. Some of the patients describe the pain as a dull ache or of a drawing character, and a few have mentioned a rather sharp pain passing around the right side of the abdomen along the line of the spinal nerves in which case I have found distinct inflammatory bands passing from the colon to the anterior or anterolateral wall of the abdomen.

Practically all of the women with membranous pericolitis are constipated, some of them quite stubbornly so, and many of them are neurasthenics. They are hypersensitive and the whole right side of the abdomen feels sore and tender. They assert that they can feel gas as it passes along the ascending colon, and this part of the bowel is often found distended with gas which can be pressed up and down in the colon and gives one the impression that the hepatic flexure is spasmodically contracted, for if steady, gentle pressure be made the resistance seems to yield and the gas disappears down the colon.

In cecum mobile we find much the same feeling of soreness or discomfort in the right side of the abdomen, but in my experience the patients as a rule have not been constipated like those with membranous pericolitis. The cecum is frequently found distended with gas and in women may then be palpated on bimanual examination. Occasionally the cecum may become filled with feces and be felt in the pelvis as a boggy tumor-like mass. When the cecum and colon are sensitive this fact may be easily demonstrated by flushing out the colon and then injecting it with air. The size and location of the cecum and ascending colon may be outlined in this way.

The cause of the adhesions which take place about the cecum and colon is not so easy to unravel. That they are of inflammatory origin, as already stated, there can be little doubt. Excluding the rare cases in which the inflammation has extended to this region from some neighboring organ or structure, there is no escape from the conclusion that the inflammation must come from this portion of the bowel itself. Until comparatively recent times the function of the ascending colon was considered of very little importance. This portion of the bowel was thought to be simply a tube through which the contents of the intestine passed on its way from the small intestine to the rectum. It is now known, however, that it has a very important function. The intestinal contents pass from the ileum into the cecum and colon in a liquid form. In this part of the large bowel they are churned up and down until the liquid part is absorbed, leaving a semisolid mass which passes on down the bowel. In other words, in this part of the colon the water is absorbed from the intestinal contents. From 20 to 30 per cent. of the fecal mass as it leaves the body is composed of bacteria. These are of numerous varieties, the most constant of which is the colon group.

The upper part of the intestinal tract is comparatively free from microorganisms, but these increase in number from above downward until in the lower part of the ileum, where they are found in great numbers and in their most active state, so that the intestinal contents, when poured into the colon, are very rich in bacteria.

Under normal conditions the bacteria, after reaching the ascending colon, begin to lose their activity, so that by the time they have reached the sigmoid or rectum the majority have ceased to be active and many of them are dead.

As is well known, the colon bacillus is found in the majority of all cases of appendicitis, whether acute or chronic, and, although often found in association with other organisms, it was until quite recently looked on as the chief offender in this very common complaint. Since the masterful works of Runeberg and of Heyde, however, we know that the colon bacillus plays a very minor part in the causation of appendicitis and its complications in all their forms, but that the real active agents belong to the anaerobic class.

The reason why these organisms were not discovered earlier is due to the simple fact that the cultural methods used were such as prevented the growth of anaerobes and favored the growth of aerobes. Therefore, only aerobes were found in the cultures. Both Runeberg and Heyde have shown that by the use of proper cultural methods the anaerobes are almost invariably found in all inflammatory conditions having their origin in or about the appendix.

The organisms most frequently found are the *Bacillus thetoides, B. fusiformis VII, B. ramosus, B. ramosoides, B. butyricus, Parapneumococcus, B. perfringens, B. pseudotetanus, Streptococcus anaerobicus,* etc. These organisms are practically never found alone, but always in symbiotic relation of two or more varieties, and while the colon bacillus is also found in the majority of the cases it is not a primary invader, but a follower, as are the ordinary pus organisms which are so commonly found.

These facts open up an entirely new field for investigation which already offers us an explanation of some of the complications of appendicitis which heretofore were very obscure.

These organisms are found in the beginning of the colon under certain conditions, and experimental evidence already seems to indicate that they may cause changes in the intestinal wall similar to some of those described above.

The number and virulence of these organisms present seem to bear some relation to the activity of the colon bacillus which in turn depends on the character of the food and the perfection with which digestion is carried on in the upper part of the intestines. Much further study in this direction is necessary in order to clear up the subject, but sufficient is already known to show that the solution of the cause of many of these troubles in the right side of the abdomen is to be found in a study of the flora of this part of the intestinal tract.

The treatment of the various forms of adhesions, above described, is surgical and prophylactic. As will be seen, surgical treatment is mentioned first, for the reason that prophylactic treatment will seldom be called into play until after surgical treatment has been instituted. After adhesions have formed so as to give rise to distinctive symptoms, nothing but surgery can give relief. In operating on these patients an incision sufficiently long should be made to permit a thorough examination of the entire region. This can usually be a muscle-splitting incision if properly placed.

All adhesions involving the anterolateral parietal peritoneum will give rise to pain when drawn on. The object of the operation, therefore, should be to get rid of all such adhesions. Whenever the appendix is found involved in the adhesions, it should be removed, of course. If, on drawing up the cecum or colon, what are called agglutination bands are found, these should be separated, and if any uncovered area is left posteriorly, it should be carefully covered over with peritoneum. The so-called inflammatory bands or adhesions should be divided and removed and the area left should be recovered, so there shall be no denuded areas remaining.

In the membranous pericolitis, or Jackson membrane cases, the management is not always so easy. The object to be accomplished is to get rid of the membrane and at the same time leave the colon smooth and covered with peritoneum. If the membrane is attached to the parietal wall, it should be removed and the parietal peritoneum left smooth. If the membrane is thin and transparent and attached only at points along the longitudinal band of the colon, it should be removed and the small bleeding points controlled with hot, moist sponges. In such cases this is all that is necessary. If the membrane binds together the pouches, it must be thoroughly removed so as to free them. This will usually leave considerable raw bleeding surface on the bowel. These denuded areas must be covered by using the thin, transparent parts of the membrane in the manner of Thiersch's grafts. In managing these cases considerable ingenuity will often be necessary in order to accomplish the object desired. When this part of the bowel is extensively and firmly adherent to the parietal wall, so that, when separated, large denuded, bleeding areas are left which cannot be covered, the adhesions are almost certain to recur leaving the patient in as bad a condition as before the operation. In these cases the only successful treatment is to remove entirely this part of the bowel or completely to exclude it by anastomosing the ileum to the sigmoid.

The result of operative treatment in these cases is usually very satisfactory, but in those cases of old membranous pericolitis there is a tendency to recur, as I have seen in several cases, nor is there any reason why recurrence should not take place from what little we know of the cause. If the condition is due to the character of the intestinal flora or to a special virulence of the organisms present, then we must expect that a continuation of these factors will lead to recurrence of the condition. It is here, therefore, that prophylaxis finds its place. After the case has had the mechanical condition relieved by operation, it then becomes in a sense a medical case which must be influenced by such regulations of the diet, bowels, habits, etc., as shall tend to prevent or limit the changes described.

32 North State Street.

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**Infant Foods.**—The market affords some so-called "Infant Foods" designed not by scientists with the idea of fitting bodily needs, but by commercialists with the idea of financial gain.—W. D. Chapman in *Ill. Med. Jour.*

# UTEROVAGINAL PROLAPSE IN ELDERLY WOMEN

## TECHNIC OF OPERATION *

GEORGE B. SOMERS, M.D.
SAN FRANCISCO

In a paper[1] read before the Section on Obstetrics and Gynecology of the American Medical Association in 1911 I asked consideration of the question as to what should be the operation of choice in uterovaginal prolapse occurring after the menopause.

My reasons for presenting the question were that the problems connected with this operation have been before the profession long enough to allow some general agreement as to the best methods of operating; yet, as a matter of fact, the status of the operation is very uncertain. The first principles have not been settled. For instance, so wide is the variation of opinion among operators that we find authorities divided into two camps—those who prefer removal of the uterus and those who advocate its preservation.

Not only is there fundamental disagreement, but there are to be found among writers many complaints as to the frequency of failure or of recurrence following surgical treatment. Under these circumstances it seemed to me that by taking thought, we might at least determine on some general principles pertaining to the operation, which would be logically and mechanically satisfactory.

Working along these lines I felt justified in offering several conclusions bearing on the operation for prolapse. The points that I have tried to make may be summed up as follows:

1. Removal of the uterus as a cure for prolapse is unnecessary and entails distinct disadvantages. For instance, should cystocele recur after complete removal of the uterus, the condition becomes practically incurable because there are no tissues conveniently at hand that we may make use of to support the bladder. On the other hand, if cystocele recurs in the presence of the uterus and its ligaments, the prognosis is good because the preserved tissues may be used in several ways to effect a cure.

2. The importance of cystocele complicating prolapse is often overlooked. Recurrence after operation is very common and most operators find that the bladder is more apt to cause trouble than the uterus. The reason is that the ordinary anterior colporrhaphy is not an efficient remedy. Severe cystocele or hernia of the bladder is due to destruction of the supporting fascia situated in the anterior vaginal wall. When destroyed, this fascia cannot be restored so as to give adequate support. It is necessary, therefore, to reenforce the anterior vaginal wall with a structure which takes the place of the destroyed fascia and which is strong enough to give the bladder firm support.

3. There are two easy ways of reinforcing the anterior vaginal wall, one by interposing the uterus between the vagina and the bladder, the other by removing the uterus and sewing the remaining broad and round ligaments together beneath the bladder after the fashion described by Goffe.

4. As preservation of the uterus has obvious advantages over hysterectomy, it follows that vaginofixation or interposition is the operation of choice.

### TECHNIC

With these conclusions as a working basis I have made it a practice to treat all suitable cases of prolapse by interposition of the uterus. The general technic of this operation is well known and needs no description. My experience, however, shows that in applying the operation to the cure of prolapse several points require discussion. The chief difficulty lies in handling the cervix. The fundus is well cared for by being imbedded beneath the bladder, but unless special attention is paid to the cervix it has a tendency, through relaxation of the vaginal vault, through pressure from above or through insufficient support, to become flexed downward and thereby to imperil the success of the operation. These three causes must be cared for separately by three points in technic: (1) transposition of the cervix; (2) amputation of the cervix; (3) ligamentary support.

### TRANSPOSITION OF THE CERVIX

The relaxed condition of the vaginal walls requires removal of considerable redundant tissue so as to narrow the vaginal canal. This is best accomplished by removing a triangular strip both in front and behind the cervix (Fig. 1). The apex of the anterior strip should correspond to the tubercle of the vagina just beneath the urethra. The base should correspond to the width of the cervix at its attachment to the vaginal wall. The apex of the posterior strip should be the highest point in the vaginal vault and the base should correspond to that of the anterior strip.

The posterior portion of the denudation provides for a very important item in technic, viz., transposition of the cervix to a high point in order that it may be better supported. This is accomplished as one of the final steps of the operation by pushing the cervix into the angle of the posterior denudation previous to sewing up the anterior vaginal wall (Fig. 4).

### AMPUTATION OF THE CERVIX

A frequent accompaniment of prolapse is an elongated cervix. With a long and hypertrophied neck on which pressure may be exerted from above, failure is almost certain to follow the operation of vaginofixation, because the cervix becomes flexed, acts like a wedge and tends to force its way down the vagina, dragging the body with it. To prevent this the cervix must be amputated to such an extent that there remains no portio vaginalis (Fig. 2). Amputation removes the wedge and also the shelf on which downward pressure may be exerted.

### SUPPORT OF THE STUMP AND VAGINAL VAULT

Not only should the cervix be shortened but also i should receive extra support in compensation for the los sustained by the general relaxation of its supporting ligaments.

Reynolds, Hertzler, Dudley, Hirst and others propose to furnish the required support by uniting the base o the broad ligaments in front of the cervix. This method is excellent and rather easy of accomplishment. In the absence of a better method it is to be recommended, bu the support is not in the direction desired and it is no restoring the original support. The broad ligament support from the lateral pelvic walls. The sacro-uterin ligaments support from behind and above, and fur thermore, furnished the original support. If their func tion could be restored we should obtain exactly what i desired, viz., a lifting of the cervix upward and back ward.

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* Read in the Section on Obstetrics and Gynecology of the American Medical Association, at its Sixty-Third Annual Session, held at Atlantic City, June, 1912.

[1] Somers, G. B.: Uterovaginal Prolapse in Elderly Women, The Journal A. M. A., Dec. 9, 1911, p. 1883.

### SACRO-UTERINE LIGAMENTS

Much has been said and written about the utilization of these ligaments for correcting displacements of the uterus, but the methods proposed have been impracticable or too difficult for general adoption. It remained for Jellett of Dublin to show a surprisingly easy method of dealing with these ligaments and of demonstrating that they are large enough and accessible enough to be made use of whenever their support is needed.

Through the denudation posterior to the cervix, the sacro-uterine ligaments are readily exposed, felt and otherwise examined (Fig. 2). They are easily isolated, may be cut away from their attachments to the cervix (Fig. 3) and reattached to any point desired. In the operation under consideration the best place to fasten them is in front of the amputated cervix (Fig. 4).

This procedure not only furnishes the desired support but is practically a restoration of the normal support.

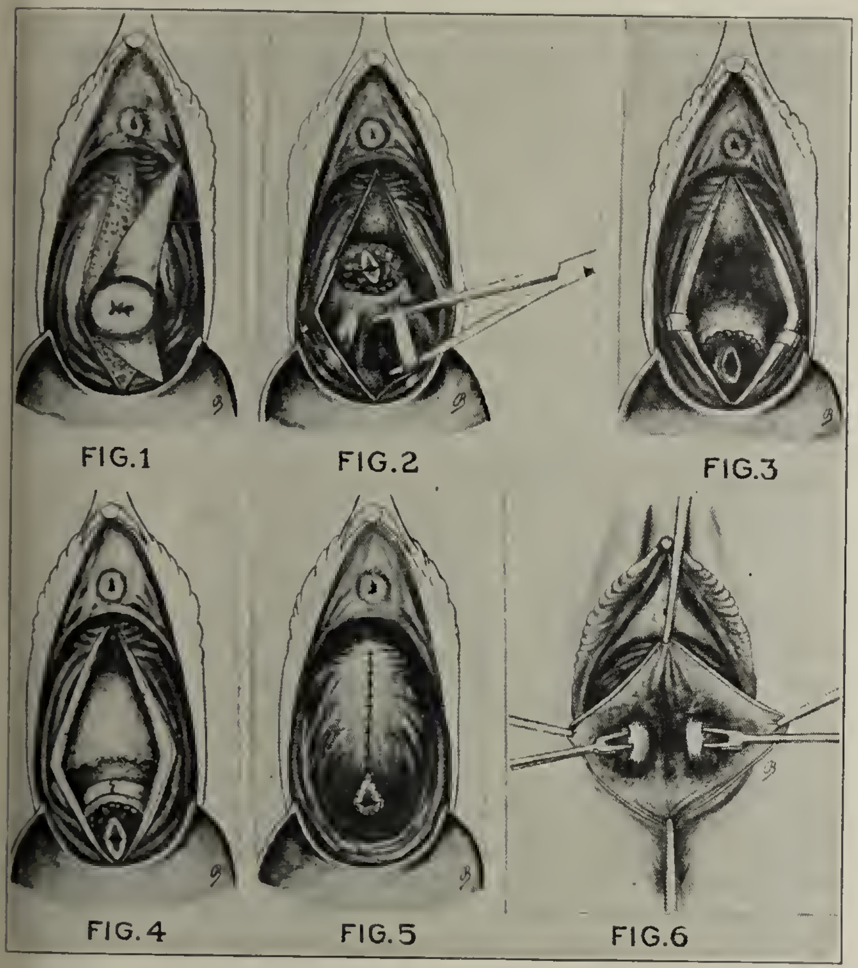

Fig. 1.—Removal of triangular strips both in front and behind the cervix to narrow the vaginal canal.

Fig. 2.—Amputation of cervix and exposure of the sacro-uterine ligaments.

Fig. 3.—The sacro-uterine ligaments cut away from their attachments to the cervix.

Fig. 4.—The sacro-uterine ligaments fastened in front of the amputated cervix.

Fig. 5.—Interposition of uterus completed.

Fig. 6.—Exposure of the levator ani by vulsella.

To my mind, utilization of the sacro-uterine ligaments in this manner marks the most important recent advance in the technic of the operation for prolapse.

### THE PERINEUM

The one step in operations for prolapse on which all authorities agree is that the perineum must be restored. To me it seems that the object should be functional restoration. In other words, an attempt should be made to repair the levator ani so that it will resume its function of keeping the vagina closed and the vaginal walls in contact. To ensure restoration of this function it is necessary actually to expose the edges of the levator so that they may be directly and strongly united.

As a point in technic I wish to call attention to the ease with which the edges of the levator may be fished out with the volsella. After denudation the edges of the muscle may be grasped between the index-finger and thumb. With this assistance a volsella may be deeply inserted into the muscle and the part plainly brought into view. With both sides thus exposed the levator is under perfect control and the separated edges may be directly, surely and securely united (Fig. 6).

### CONCLUSIONS

In conclusion I believe that a careful consideration of the conditions involved in the operation for prolapse of the uterus will lead to an acceptance of the following propositions:

1. It is better to preserve the uterus than to remove it.
2. The cystocele complicating prolapse of the uterus is most effectively treated by reenforcing the anterior vaginal wall.
3. Interposition or vaginofixation best answers the requirements of the operation.

In regard to the technic of interposition I believe that where the operation is applied to severe cases of prolapse, success depends largely on the following points:

1. Amputation of the portio vaginalis.
2. Transposition of the cervical stump high in the vault.
3. Support of the stump by shortened sacro-uterine ligaments.
4. Functional restoration of the perineum.

Lane Hospital.

### ABSTRACT OF DISCUSSION

**Dr. J. H. Carstens**, Detroit: Do you think it reasonable that a broad ligament that has been stretched out 2 or 4 inches and a round ligament that has been stretched out as thin as a hair would ever get their function and hold anything of the uterus that you save? I try not to be a hobbyist. I try to work according to each particular case. If a woman is young and anxious to have children—or no matter how old she is if she still menstruates and wants children—I am willing to stretch any kind of a point to save that uterus. But if the poor old woman is past 65 and has ceased to menstruate for twenty years and if she has a uterus hanging 3 or 4 inches out of the vagina with a cervix three times as large as the body of the uterus, with everything stretched out, why should I do a kind of complicated operation which takes a long time and is just as dangerous, and amputate the cervix in order to preserve the little piece of the fundus of the uterus, and then do all these operations, I can't see. That uterus is absolutely no good and the best thing to do usually is to take it out. Now I don't do that always either. Occasionally a patient has some abdominal trouble. Perhaps she has symptoms of inflammation of the appendages or symptoms of gall-bladder disease, and I want to open the abdomen and explore it. Then I pull that uterus up, attach it to the external incision and make a ventral fixation. Ordinarily when the uterus is removed, the broad ligaments are too long; I take them and fold them across each other, double them up and stitch them across. I lift up the bladder so that it comes up and that holds the uterus. It is a simple operation and not very dangerous. There are various ways of doing it. I think that Dr. Somers' is one of the most complicated methods and that it is indicated only in cases in which the woman has a chance and is anxious to have children.

**Dr. J. Wesley Bovée**, Washington, D. C.: I too believe that the simpler methods as a rule are the better. There may be cases in which the interposition of the uterus between the vagina and bladder is indicated, and in young women we will try to save the reproductive organs.

**Dr. C. L. Hall**, Kansas City, Mo.: Would Dr. Bovée do an operation such as has been described on a woman who is likely to have children?

**Dr. J. W. Bovée**, Washington, D. C.: No, but in those advanced cases in which there is not too great contra-indication of closure of the vagina my procedure is removal of the uterus making the pelvic structures of the woman resemble as nearly as possible those of the male. That is, I would build up the perineum as much as is necessary and do a Lefore operation, closure of the vagina. Getting rid of the uterus is not necessary but we should be sure to do a Lefore operation to avoid the risk of having malignant disease of the uterus occur later without being discovered as we might have if the uterus were buried behind a closed vagina. I do not believe it is wise to have a uterus turned over as in this case with the cavity of it drawn up. I would split the uterus and take out all the mucosa.

The medical profession is going to realize that there is some merit in the uterosacral ligaments. For twelve years I have contended that the uterosacral ligaments have some use in their own natural function and can be used for building up the fascia of the pelvis.

**Dr. Charles O. Thienhaus**, Milwaukee: About six years ago I had a paper before the Section on this subject. I should like to ask those who do double hysterectomy what they do if the bladder hangs down.

**Dr. H. J. Boldt**, New York: There is no one operation applicable to all cases of procidentia uteri or there would not be so many kinds. Every operation described undoubtedly has its field. There are conditions in which we have the large uterus instead of the small one in women past the menopause. When the uterus comes down when a large wedge is taken out we will have a delivery because the intra-abdominal pressure will push open that uterus and push it out with the vulva and cause many more symptoms than the patient ever suffered before. I have seen six such cases. Unfortunately, I have had opportunity to reoperate in only one. We must bear in mind that it is not necessary to make such a large incision and that if we take out a piece of the uterus we will get good results. In the class of cases with complete procidentia past the time of use for the genital tract there is no better operation than that done by Dr. Bovée.

**Dr. Rosalie Slaughter Morton**, New York: I am perfectly convinced that Dr. Goffe's is a very valuable operation because it is the most thoroughly physiologic reconstruction of the condition of the pelvis. The suspension of the organs is a great deal more nearly normal than by any other operation I have seen. If we can suspend from above any organ it is better than to keep it up from below and it is more apt to remain in that position. The broad ligament is not drawn down. It is drawn across the pelvis and kept in its normal position. It simply goes across the pelvis and helps to support the intestines, and then if the uterus has been removed the bladder is fastened up in such a manner that cystocele cannot recur.

So far as leaving in a portion of the uterus is concerned—although the paper refers only to the operation in women past the menopause—it is not scientific because the nutrition of the remaining part of the uterus is very much interfered with. If the ovarian artery is ligated you leave some tissue in an unnatural position without proper nutrition. If you do not ligate the artery you leave tissue in an unnatural position liable to congestion because you have oversupply of blood. The stretching of the ligaments, drawing down the uterus to put it behind the bladder, has a tendency to leave the rest of the abdominal contents without support, and so the intestines are more likely to come down. Speaking of the elongated cervix, if there is any amputation, why not amputate the whole uterus? It takes no longer, the patient is permanently relieved and the operation is simpler. In one of the discussions this afternoon Dr. Noble dwelt on the normal tonicity of the tissues, and this might apply to the nerve tone of the pelvic tissues. We cannot expect the broad ligament which has been overstretched for so long a time to recover its tone sufficiently to contract to the normal. The excess must be removed.

**Dr. Chester M. Echols**, Milwaukee: The most difficult cases I have had to treat are those in which somebody has done a hysterectomy and the patients have come back for a cystocele, which is very difficult to treat. I have been in the habit for the past twenty years of making use of the fundus to hold the bladder back behind the symphysis pubis. The only criticism I could make on the operation without studying it further is that it involves too much operating, and so long as the simpler technic gives good results I shall continue to use it.

**Dr. J. Riddle Goffe**: While Dr. Somers has attempted to explain my operation he has not the first conception of it. I do not think he has ever seen me do it or has seen a patient operated on. My idea is a constructive one for retaining the plane of the uterus. When it comes to the extreme cases in old women I take the uterus out, but when I take it out I stitch together the broad ligaments to restore that plane of tissue again. Dr. Somers said that I bring the broad ligament under the bladder; I restore the uterosacral and the round ligaments. I stitch up the bladder and restore the plane of tissue as a deflecting plane. If it is an old case I take the tissue out and restore the plane by stitching together the round ligaments and on that stitch up the bladder, endeavoring to reconstruct that plane of tissue. I spread the bladder out in front and stitch it up so that the trigon is as it was before. Of twenty-eight patients examined in May on whom operation was performed from two to eight years ago, not one had cystocele.

**Dr. Charles P. Noble**, Philadelphia: How does Dr. Somers get the uterosacral ligaments around in front? I am fully in accord with the general principles enunciated by Dr. Somers. He, however, explains his good results erroneously. We talk about these ligaments supporting the structures. They are merely guy-ropes and the intra-abdominal structures float. The intra-abdominal structures rest on pneumatic cushions provided by Nature and the guy-ropes merely help. The whole matter is a steady loss of energy. You can study it in protozoa. It is the law of devolution, not a question of medicine but a question of biology.

**Dr. Cotter** (?), Columbus: In cases of women who have passed the menopause I find that a colporrhaphy will give the best results.

**Dr. W. O. Henry**, Omaha: I think the operation is very ingenious but rather difficult. I think that in many of these cases because of lack of support in the perineum the bladder is pulled down, causing a cystocele or rectocele. I repair the vagina and perineum, giving good support, and then unless there is good reason to remove the cervix I open the abdomen, remove the uterus down to about the internal os, then bring the broad ligaments together from the side, the posterior ligaments from behind and fix them in the stump, making a support from above. The uterus and bladder are supported in a measure by a normal vagina and a normal perineum; and further, by the ligaments from above. It is our business to make these supports as nearly normal as possible. We get good results in that way.

**Dr. Walter B. Chase**, Brooklyn: The case of the woman past the menopause with small uterus which is displaced downward sufficiently to give discomfort and with it cystocele has not received proper attention. It seems to me that there is a simple method of operation in which the end-results are satisfactory. In a case of cystocele which is not too large and not associated with much inflammation of the bladder wall I have found that if the cervix is exceedingly long it is well to amputate it. We all recognize the fact that the bladder and uterus are interdependent. Where the uterus is not large, be sure that it is movable and the bladder not adherent. Make an abdominal incision, bring the uterus up, bring it forward into the abdominal cavity, remove a portion of the fundus so that you have a raw surface, stitch the peritoneal surface of the uterus to the abdominal wall. You then have the uterus and bladder both held up. Then you know just how much you have to do to overcome the cystocele

**Dr. George B. Somers**, San Francisco: The operation a proposed is at least interesting. More points have bee raised than I can answer. My whole object is to devise means of preventing the recurrence of cystocele after operation for prolapse, and I have taken it up from a mechanica and as I thought, from a logical standpoint. The uter sacral ligaments are not brought over the broad ligaments. They are easily exposed. You may put your instruments under them. The transfer is beneath the broad ligaments. Dr. Goffe asked me whether I expose the sacral ligaments. The ligaments are exposed, the cervix transposed to the upper part of the denudation and the ligament attached in front. The operation is easy to do. I want it plainly understood that this method applies only to severe cases of uterovaginal prolapse in elderly women, beyond the menopause, in whom the relaxation of the tissues has taken place.

Dr. Morton in criticizing the operation called attention to the fact that Dr. Goffe suspends, attaches or supports the bladder from above. I wish to dwell on the point that it is the anterior vaginal wall which must be reenforced and according to Dr. Goffe's description, he reenforces the anterior wall by bringing the round ligaments underneath and adds the abdominal supports to the bladder. The other attachments which he makes above to the perineum are not so important as his use of the round ligaments.

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# SORE THROAT AND MILK-SUPPLY

## ABSTRACT OF DISCUSSION

### ON PAPERS OF DRS. CAPPS AND MILLER AND DAVIS

*(Which appeared in The Journal June 15, 1912, pages 1848 and 1852)*

**Dr. Robert Bruce Preble**, Chicago: It very quickly became obvious in Chicago that while the disease very closely resembled the ordinary sore throats yet the clinical picture was not familiar. One of the most striking features in the clinical picture of these cases of sore throat, markedly in contrast with what one usually finds in ordinary streptococcus infections, was the slow pulse. In many cases there was not relatively but absolutely a bradycardia; patients with temperature ranging about 102 F. would have a pulse of 40 or even lower. There were patients also with extreme sore throats and a pulse about 90 and yet temperatures of even 104 or 105; even with such temperatures the pulse was frequently found to be as low as 80. This was quite important when one thought of the striking excursions that occurred in ordinary streptococcus infection; this was by no means a relative but an absolute and positive bradycardia. In the ordinary streptococcus infection there was more likely to be a tachycardia rather than a bradycardia. The picture presented by these cases I have not seen occurring except possibly in cases of typhoid; this disease had frequently associated with it a relative degree of bradycardia. Another peculiar feature of this disease in Chicago was the prolonged course, running sometimes for many weeks, even four and five months, and yet the patients suffered so little from anemia. It seems strange that such a disease would continue over such a long period of time, often with many complications, without developing very much hemolysis, and this was again in marked contrast with what occurred in ordinary streptococcic infections, or affections in which there were arthritis infections or complications. Hemolysis was not one of the prominent features in these cases and many went on without clinical evidences of hemolysis.

In spite of the large number of cases seen there were practically no cases of jaundice; possibly only two or three had been observed. In ordinary streptococcus infection, the one of ordinary type, jaundice early develops. All the views so far expressed regarding the type of disease epidemic in Chicago speak against the causative organism being the ordinary type of streptococcus. Against its being a pneumococcus infection is the fact, for example, that in pneumococcus infections one sees many skin conditions which could be called herpetic eruption, but in practically all the cases seen in Chicago there was only one case in which a herpetic eruption developed, although other eruptions were quite common, such as erythemas, diffuse scarlatiniform eruptions, erythema nodosum, erysipelatous eruptions and others from which a type of streptococci were obtained.

It seems as though there might be several organisms which occupied a position somewhere between the ordinary streptococcus and the pneumococcus and which might be a cause of this infection. They had produced by them features which were somewhat alike clinically and it was a question whether they were more like what was produced by the ordinary streptococcus or the pneumococcus. At any rate the clinical picture presented by these cases was different, giving practically a new clinical picture so far as my experience goes.

**Dr. Louis P. Hamburger**, Baltimore: All my thunder has been stolen, for clinically and otherwise, what has been stated and certainly with what Dr. Davis has said, can apply to the Baltimore epidemic of so-called septic sore throats which prevailed in February and during the first half of March. During the latter half of February there occurred a very large number of enlarged cervical glands, or, as I called them, bubos. These patients did very well. There were some, however, that were severely affected. During the first week of the disease some developed enormous swellings; when bilateral the situation suggested that one was dealing with a case of Hodgkin's disease. It seems strange that such large swellings did not suppurate; they went down. One, however, did suppurate. The pus was evacuated and the same streptococcus as described by Dr. Rosenow of Chicago was found. The course of the disease was, in many instances, prolonged for weeks. One child, aged 23 months, went nearly seven weeks with fever and with a sore throat which was not more than one saw in a case of ordinary follicular tonsillitis. These patients, as a rule, were out in from three to five days.

It seems strange that these septic sore throats could be disseminated in such a short time and I thought that it must be due to a universal carrier of the disease. In Baltimore it was not in fact a school epidemic. In my neighborhood, if an epidemic of measles, for instance, broke out, I knew what school to go to. But these cases occurred in little children under the school age. I began an investigation of the milk-supply. During three or four weeks in February we saw most of the cases. Thirty-five households were asked regarding their milk-supply; twenty-three took milk from what we term here X-Y-Z. M delivered milk from the largest dairy. We learned that there were in fact thirty-seven households supplied from X-Y-Z. These sore throats occurred during February and March. In thirty-three households there were ninety cases. There were thirty-seven households that did not take milk from the X-Y-Z dairy but from the M dairy, which was the largest. Among these thirty-seven only six cases of the disease occurred in six households. But an enormous number of cases occurred among the families supplied by the X-Y-Z dairy. Altogether there were sixteen deaths. (It was estimated that there were ninety odd cases in thirty odd households in Baltimore, and altogether probably between two and three thousand cases in the city.) There were, as I just stated, sixteen deaths, and fourteen of these patients took milk from the X-Y-Z dairy. Nine of these sixteen deaths resulted from peritonitis. As in the Chicago epidemic, the milk from a suspicious dairy was subjected to a temperature of 160 degrees for three minutes. It transpired that the pasteurizing plant broke down; but it was cold weather and it was believed that the milk could be sent out unpasteurized. This was found to be a mistake. As to the origin of the infection, whether human or bovine, we are not certain. We believe that it is milk-borne if not milk-bred.

**Dr. Howard S. Anders**, Philadelphia: In February and March of this year, in Philadelphia, there occurred an epidemic which was clinically similar to the one described. During February, March and April, and probably long before, we realized that we were dealing with an unusual infection of the streptococcus sore throat. As in the cases described, there was the sore throat, marked enlargement of the cervical glands, a disease which might be called "acute epidemic streptococcus adenitis."

As Dr. Preble has stated, there was another picture, a relative bradycardia associated with some irregularity in the heart's action in many cases. The temperature was acute, but short-lived. Most of these cases occurred among children between 3 and 5 years of age. They ran a temperature of from 103.2 to even 106 and then there occurred a rapid decline. Some of the cases started as follicular tonsillitis, or influenza, but there was no exudate on the tonsil. There were muscular aching pains, but the rapid decline of the temperature was significant. With this decline in the temperature there soon appeared a marked swelling of the glands near the angle of the jaw. This varied in size from a walnut to a pear. It was so marked that it made one believe that there was present a malignant case of diphtheria and, in many of these cases, the physician in attendance would have antitoxin ready to administer. But the subsequent course of the disease showed that he was wrong in his diagnosis.

Some of these cases started with appearances of an infection, with coryza, cough, and so forth, and appearances of an occurrence of a streptococcus infection. In one instance the milk producers were very careful to have clean cows; the milk must have been clean because of the methods employed. But there occurred cases of virulent sore throat. The man who milked the cows was ill with sore throat, but kept at his work. Five days after his sore throat one of the children in his household was taken sick and this was another instance of an epidemic of septic sore throat. An interesting question arose, is this peculiar disease due to a distinct or specific streptococcus or to some organism which produces other diseases as well? Is it bovine or human in origin? I am inclined to believe that it is human in origin. The milk that was infected was infected by the milkman. The infection did not appear to be from the ordinary streptococcus pus and whether it was from erysipelas microorganisms I do not know. It appears to me that too many particles of dust were allowed to get into the milk-cans and too many were about the cow-barns. With proper care much could be done to keep down this streptococcus infection.

**Dr. Josiah N. Hall**, Denver: Thirty years ago we had an epidemic of sore throat of the same type as described by the readers of the papers. This epidemic occurred in ten of our smaller cities and was characterized by abscesses appearing in the groin and under the arm and the streptococcus was found in these instances. During that winter alone there were many cases of multiple abscesses and some cases of a mild pyemia. Thirteen abscesses were opened, the pus examined and in all were found streptococci. These abscesses occurred very frequently and always the streptococci were found in the pus. No deaths occurred. The glands were very much enlarged but they did not suppurate, which was quite a contrast with what was usually found in ordinary streptococcic infections.

**Dr. E. C. Rosenow**, Chicago: It seems to me that this is a demonstration that almost any milk can be looked on as a carrier of such an epidemic. There is one general factor that stands out: bacteriologists rarely isolate these virulent streptococci; in order to show that the milk is virulently infected with the streptococci they use separators or clarifiers; they obtain slimes mixed with bacteria and in them are chiefly streptococci. When injected into rabbits or mice evidence of their virulency was obtained in twelve out of fourteen samples taken within a radius of 1,400 miles. Recently I have found with Dr. Davis table-milk that had been pasteurized and which gave beautiful results; also a sample of cream, as well as a sample of butter. I also attempted to obtain milk in a sterile manner from the cow—a milk that was without any bacteria. In one cow out of fourteen I found virulent streptococci, and yet with no evidence of disease of the udder. I found two instances of mastitis.

With regard to Dr. Hamburger's statement about the disease being milk-borne and not milk-bred, I am not quite sure but that it might be both. In regard to what was stated about mastitis in cows being the source of these epidemics, it should be remembered that there were in fact two sources of the streptococci. The chief original source was the throat of the individual; the farmer milked into a pail held between his knees into which he coughed, and this was without doubt a frequent source of the infection. The ordinary streptococci found in the throat could take on features which made them virulent, causing a virulent streptococcic sore throat.

**Dr. W. W. Tompkins**, Charleston, W. Va.: Are all these cases reported here the same or are we dealing with a variety of diseases? Is there the same diagnosis of the cases as they occurred in Boston, in Philadelphia, in Chicago and in other places? Are not one and all alike? Two individuals laid more stress on one symptom only than on another. A similar condition of affairs is found in dealing with cases of typhoid as they occur from year to year; in one year there may be many perforations of the intestines reported; the year following very few; yet this is the same disease. It cannot be said that the disease one year was a different disease from that the next year; it was still typhoid. I should like to know just how the cases in these epidemics of sore throat were designated and on what the diagnosis was made; whether there was a tonsillitis, a mixed infection, or something else.

**Dr. Wilder Tileston**, New Haven, Conn.: A milk epidemic has been recognized in England but not on the continent. In Boston occurred the first epidemic of the so-called sore throat in this country. We all know that the disease described by Pfeiffer is characterized by sore throat, enlarged glands or lymph-nodes, and so forth.

**Dr. J. A. Capps**, Chicago: In regard to the question about different streptococci being the cause of the different epidemics in various cities, it is very difficult to differentiate these epidemics of sore throat which occur in different parts of the country; it seems, however, that they are the result of one definite cause. Comparing the disease as it occurs in different cities there is noted quite a resemblance. The epidemic that occurred in Boston was thoroughly worked up and it was so described that it showed to be very much like ours. The clinical manifestations, especially those that occurred during childhood, were strikingly similar to what we found. One feature in the Boston epidemic was quite remarkable; the statement was made that so many patients were infected through the milk directly, and that the number of secondary cases was small, whereas the teaching had always been that the infection of streptococcic sore throat was readily and easily carried by direct contact and even by proximity. This fact was strongly brought out in the papers. Among ten cases of so-called secondary sore throat, there was only one that could be really traced. I am surprised that 85 per cent. of the cases could be traced to the milk-supply and 15 per cent. could not be so traced.

A physician in Chicago took care of a patient with a type of sore throat which was clinically the same as here described. While being examined the patient coughed in his face and mouth. The physician went home and told his wife that, as a result of this occurrence, he expected to have a sore throat. In thirty-four hours he had a chill, a sore throat, glandular enlargement, a nephritis, and was ill for several weeks. It seems remarkable that so few cases appear to be secondary, and so many primary.

In a discussion in Boston much was said about the normal run of cases of tonsillitis and the question arose how to differentiate these cases of ordinary tonsillitis from these cases of septic sore throat. One hundred and seventy-three cases were most carefully studied by smears and cultures and apparently they were of the epidemic type. But in a house-to-house investigation, all gone over carefully, many hundreds of households showed that no such investigation or distinction could be made with any degree of certainty. There was a certain definite number of people who used milk, for instance, from the X dairy which afforded more serious cases of septic sore throat and the complications than people who used milk from other sources. With regard to the number of people infected, in three districts only there were about 10,000 people infected.

I have no accurate way of determining the mortality rate; in all probability about 200 or 300 people died.

**Dr. Joseph L. Miller**, Chicago: Did all these people who were taken ill drink milk? There is no doubt but that there were a large number of people who were taken ill who did not drink milk at any time, but they did take cream and this is a possible source of infection. I presume also that the use of butter might be another source of infection. There is another thing to be taken into consideration in these cases of streptococci septic sore throat infections, and that is whether or not any particular epidemic belonged to any certain type; whether the large glands came after the appearance of the sore throat; whether there was a tendency for them to break down or suppurate, and so forth. Many of these cases in Chicago were looked on as cases of ordinary tonsillitis.

Dr. David J. Davis, Chicago: Through the kindness of one of the doctors at Harvard College I was enabled to obtain four strains of the streptococcus which was isolated during the Boston epidemic. These strains have been subjected to various tests. They all seem to be identical with the organism with which we had to deal in Chicago. In this epidemic occurring in Batavia there were many cases of mastitis occurring among cows and this appeared to be quite unique. This was detected by the farmers themselves and was to them quite a new experience, for many of them had never had such an experience before and were quite astounded. In a great many of these cases the mastoiditis preceded the outbreak of the epidemic sore throat and occurred among the owners of the herds who had sore throats. In some of the cases the disease did not appear to precede the mastoiditis. There was always great difficulty in getting accurate data, especially after two, three or four months had transpired since the epidemic I see no reason to believe that the infection, the streptococcus, comes directly from the cows, although there is no reason to believe that the milk might not be subsequently infected by the workers.

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# INCOMPLETE ABDOMINAL SURGERY *

H. G. WETHERILL, M.D.

DENVER

From Jan. 1, 1901, to Dec. 31, 1910, a period of ten years, 1,244 women were operated on in St. Mary's Hospital, Rochester, Minn. (C. H. and W. J. Mayo), for uterine myomas. Of these, ninety-two, or 7.1 per cent., had gall-stones.[1]

No single factor has served to discredit gynecologic and abdominal surgery during the past twenty years so much as has the failure to bring about symptomatic cures for our patients, though gross pathologic processes have often been found and eliminated at our operations. Frequent complaints from patients that they were worse or at least no better than before the operation have disheartened and discouraged both the patient and her friends, as well as the surgeon, and repeated operations have become necessary because the first was incomplete owing to a failure to find important associated abdominal disease.

Special and regional surgery in limited fields has been responsible for such results in most instances, the operation being based on a more or less specific diagnosis which may be quite correct as far as it goes, but which from the obscure and complicated nature of many of the cases does not, and often cannot, go far enough or be made exact enough in all details until the abdomen is opened.

In this way serious pelvic lesions, intestinal diverticula, enteroptoses, kinks, bands, hernias and diseases of the stomach, gall-bladder, pancreas or kidneys have been overlooked in the performance of operations for appendicitis through a small "gridiron" incision, and many similar oversights must be charged to pelvic surgery, even when seriously diseased pelvic organs have been properly dealt with. Indeed it is only within the last few years that the practice of making a systematic search for undiagnosed pathologic conditions of the abdominal viscera after the abdomen is opened has found favor, and even to-day it must be admitted that this practice, as a routine, is limited to a very small proportion of those who perform abdominal operations. This may not always be so much of a misfortune, however, as would at first appear, for many abdominal operators have come into existence during the last few years who are relatively safe in undertaking an appendectomy or hysterectomy and yet are not sufficiently experienced to deal successfully with gall-stones, gastric ulcer or an intestinal anastomosis, should the necessity for such an operation be found to exist. A living patient with overlooked gall-stones is after all better off than a dead one. Nor are we justified in saying that there is no field of usefulness for him whose limitations of experience and opportunity lead him to feel that he is confident and competent in limited areas only, for many occasions arise when such an operator may in an emergency make an exact diagnosis of a localized disease and deal with it successfully.

The principles of surgery in general and of abdominal surgery in particular are, however, now so established that everyone who performs abdominal operations of any kind should feel it his duty to equip himself to meet any intra-abdominal complication disclosed at the operation, and he should never close an abdomen, except in an emergency, without exploring by palpation or inspection all of the common points where coincident or correspondent pathology may be found.

Certain notable exceptions to this rule must of course be conceded to exist, as for example in operations for intestinal perforation, appendicitis or salpingitis where infection would be diffused, or in ectopic pregnancy with rupture or a cesarean section. In such cases definite diagnosis previous to operation is ordinarily possible, and the emergency is usually such that the particular trouble diagnosed should alone be considered at the operation.

For such general intra-abdominal exploration as this thesis contemplates large incisions are necessary, preferably in or near the median line, with supplementary incision over any previously undetected diseased areas that may be found and are not accessible through the original opening. The hand and arm must be introduced and swept about from point to point where associated disease might exist.

Dr. James E. Moore of Minneapolis says in reference to this subject: "The average surgeon is prone to do his abdominal work through too small an opening. He points with pride to an inch and a half scar after an appendectomy, and a two and a half inch scar after an operation for the relief of pathologic conditions in the pelvis. . . . It would be very discomfiting to us if we could fully realize how often we have left unrecognized pathologic conditions because our opening was too small to admit of a proper examination, and because we had not acquired the habit of making a thorough examination of the whole abdominal contents in every instance."[2]

We now know that many of these intra-abdominal diseases are intimately or remotely associated. That many of them are directly correlated has been demonstrated repeatedly. The occurrence of cholecystitis or cholelithiasis in women three times as often as in men is important, and the fact "that 90 per cent. of the women who have gall-stones have borne children, and that 90

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* Read in the Section on Obstetrics and Gynecology of the American Medical Association, at its Sixty-Third Annual Session, held at Atlantic City, June, 1912.

[1] Mayo, William J.: Innocent Gall-Stones a Myth, The Journal A. M. A., April 8, 1911, p. 1022.

[2] Moore, James E.: A Plea for Larger Incisions and More Thorough Examinations in Abdominal Surgery, The Journal A. M. A., Sept. 16, 1911, p. 950.

per cent. of the women who have gall-stones and who have borne children identify the beginning of these symptoms of cholelithiasis with some particular pregnancy,"[1, 3] is of paramount importance to all those engaged in the practice of obstetrics, gynecology and abdominal surgery. The involvement of the appendix with diseases of the right tube and ovary, and of the right tube and ovary with the diseases of the appendix are so common that few abdominal surgeons operate for a disease of one of these organs without examining the other, and removing it if necessary. The coincident involvement of the kidney with diseases of the bladder and the implication of the stomach, liver and duodenum with various pathologic conditions in the lower abdomen and pelvis are well known. Even certain physiologic pelvic conditions give rise to profound stomach symptoms. Instances in which a gastro-enterostomy has been done for what ultimately proved to be the vomiting of pregnancy have been known. It is fair to assume that the operation was not done by an obstetrician or a gynecologist, but by an enthusiastic gastro-enterostomist.[4]

Tuberculosis, cancer, enteroptoses, stomach or intestinal perforations, volvulus and intussusception or other forms of intestinal obstruction, rupture of the uterus, bladder or vagina, diverticula, gall-stones, pancreatitis, etc., may accompany any other condition and complicate any abdominal operation one undertakes. Some of these lesions are correlated, and if incomplete and unsatisfactory results are to be avoided the surgeon must be prepared to deal successfully with any of them if he presumes to undertake the cure of one of them through an abdominal operation.

The point may be raised that exact and detailed diagnosis should be made previous to operation, and that an operation should not be undertaken until such a diagnosis is made; to anticipate this it becomes necessary to state that an exact and complete intra-abdominal diagnosis of all the possible complications previous to operation is, on the face of it, impossible even when an exact diagnosis as to one diseased viscus is easy.

In certain areas of the abdominal cavity, particularly if the disease be advanced, accurate differential diagnosis may never be made with any degree of certainty, even by those who have had the greatest clinical opportunities. This is particularly true of the upper right quadrant where the liver, gall-bladder and ducts, the stomach and duodenum, the pancreas and the right kidney are all so closely grouped. With their vast experience and exceptional opportunities for exact diagnosis in this region, the staff of St. Mary's Hospital, Rochester, Minn., frequently content themselves by telling patients that a "surgical condition" is presented and that an operation is necessary. Exact diagnosis is left to be made at the operation. Who, for example, can tell by external palpation, stomach analysis and the clinical history when a gastric or duodenal ulcer becomes carcinomatous, or exactly when an impacted gall-stone has ulcerated through into a circumscribed abscess or into the intestine, or, through pressure caused carcinoma or pancreatitis? Who can differentiate when all of these structures are matted together in a common mass of adhesions with symptoms pointing to all of the involved organs and characteristic of none alone?

The salient points of the histories of two illustrative cases furnish examples.

CASE 1.—A female patient of Dr. G. W. Holden at the Agnes Memorial Sanatorium for Consumptives, the wife of a physician, was taken suddenly and seriously ill with abdominal pain, vomiting, rise of temperature, markedly increased pulse rate, etc.

A provisional diagnosis of appendicitis was made by the house officer and confirmed by me after examination. I found a distended, painful and rigid abdominal wall, with marked rigidity and localized tenderness midway between the umbilicus and the anterior superior spine of the right ilium. I discovered that she also had a uterine retrodisplacement. Following my customary practice in such operations on women, a long median incision was made below the umbilicus, through which a comparatively innocent-looking appendix was examined and removed, and the retrodisplaced uterus corrected. Careful detailed exploration through the incision had, however, previously determined that an enormously distended and tense gall-bladder containing several large stones extended so low in the abdomen that its tip was well below the umbilicus, almost to McBurney's point. It could easily be seen through the low median incision. The first incision was closed and a second made over the base of the gall-bladder, the sac was aspirated, the stones were removed (one being impacted in the "pelvis" of the gall-bladder) and the wound was closed with the usual drain in position. The patient made a prompt and *complete* recovery, which, of course, she could not have done had the usual small incision for appendicitis been employed and the coincident injection of that organ been accepted as the sole cause of the symptoms. No thorough examination would have been possible through such an incision, and the gall-bladder, distended to the bursting point with a turbid mucopurulent fluid, must have escaped detection.

CASE 2.—A woman who had been under treatment for gastric ulcer for many years by some of the best internists in the country, had during this time a number of hemorrhages of the stomach. She was brought to me for an operation for piles attributed to a prolonged milk diet. Examining her I found an irritable anal ulcer (fissure) and some small hemorrhoids, a retrodisplaced bound-down uterus, and a chronic appendicitis. The latter diagnosis was confirmed by a report from Dr. J. N. Hall, who once saw her in an acute attack of appendicitis.

She at first refused operation except for the rectal condition, but finally consented to have the uterine retrodisplacement corrected and the appendix removed. On the morning of the operation, however, she gave her consent to an exploration of the upper abdomen through the incision and requested that we deal with any diseased condition found.

The bound-down retrodisplaced uterus was freed and replaced, and an old, scarred veteran of an appendix wrapped in adhesions was removed. No kinks or other intestinal complications were discovered, and a perfectly normal stomach and duodenum presented themselves. The gall-bladder was filled with large stones, however, and these were removed in the usual way through another incision. The fissure and hemorrhoids were then taken care of and the patient returned to her bed, to make a prompt and also a *complete* recovery. Had she failed to agree to the exploration and operation in the upper abdomen, she would probably have remained a victim of "gastric ulcer" all her life without relief, inasmuch as the true cause of her stomach symptoms (the gall stones) had never been discovered.

This case illustrates the complex character of many of these intra-abdominal diseases, and demonstrates the folly of dealing with one or two diseased organs and leaving others which are quite important as factors to keep the patient ill or in pain.

Regional abdominal surgery in limited fields has had its day. He who aspires to do abdominal surgery to-day must fit himself to do any and every operation within the abdomen that a systematic operative exploration shows to be necessary, and when he has finished with hi work it must not be incomplete.

310 Metropolitan Building.

## ABSTRACT OF DISCUSSION

DR. J. C. BLOODGOOD, Baltimore: Historically it is rather interesting to look back on the narrowness of our ambition i the field of abdominal surgery. For many years, in operating on the appendix the surgeon saw little but the appendix. H

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[3] Branson, Laura H.: Cholecystitis and Cholelithiasis in Their Relations to Pregnancy, THE JOURNAL A. M. A., Nov. 18, 1911, p. 1690.

[4] This word is coined to describe a type of modern surgical enthusiast.—H. G. W.

failed to see conditions of the cecum and of the pelvic organs. In the development of surgery of gall-stones, the literature shows that for a great number of years while we were removing gall-stones from the bladder and common duct, draining the gall-bladder, we rarely if ever made a note in regard to the pancreas. Of course, to-day we are given an opportunity to operate at an earlier period of the disease so that the pathologic changes are less extensive; they do not hold our entire attention or require our entire efforts to cure them, so that there is opportunity without increasing the risk of the patient, to allow the surgeon to look for other lesions. You open the abdomen in appendicitis and find peritonitis or abscess or gangrene of the appendix. You are unable or you will be unwilling to investigate further because it will require all your art to cure that lesion; but when you explore early in the acute stage of appendicitis, or open the abdomen between the attacks, for vague abdominal symptoms, you must be prepared not to be satisfied with the exploration of the region of the appendix only, but to look for other conditions. We should not only enlarge our field of vision during the operation, but we should be very careful to enlarge our investigation before the operation. There are two types of abdominal lesion: one in which the symptoms are so acute that time is the most important element, as in perforations with hernia, cystocele, acute inflammatory lesions of the appendix and pelvis, attacks of gall-stones of such severity that you fear pancreatitis, symptoms suggesting intestinal obstruction. Here there is no opportunity for a long investigation; the life of the patient depends on early intervention and there we must be content with relief of the one predominant lesion; but to-day we more often see patients in the subacute and chronic period and I am inclined to think that now and then in the hurry of our surgical work we subject these patients to operation before making a very careful investigation. I would urge therefore that the investigation in the chronic group or the group in which the symptoms are subacute or chronic should be much more extended. It requires time and on the whole it is more expensive, but you will be surprised what you ascertain by spending a little longer time in taking the history. Often in those cases in which our records say there are no symptoms, a more careful history brings out a pretty definite symptomatology.

Dr. James E. Moore, Memphis: No matter how expert we may be in diagnosis and study of our cases before operation, every abdominal operation is in a measure an exploratory one. Dr. Wetherill flatters me by quoting from a paper which I was led to write through my own mistakes. I felt honestly that my gray hairs and my long experience in surgery put me in a position that I could afford to state publicly that I had made mistakes so that younger men might benefit by my misfortunes. I can remember some patients who came back to me after I had done what I considered brilliant surgery and I was still more chagrined when they went to other surgeons who reoperated and found that I had failed to recognize important intra-abdominal conditions at my first operation because I had not established the practice of systematically examining the whole abdominal cavity when I opened the abdomen. I feel that we owe it to our patients that when once we have made an abdominal operation we should sweep the hand over every corner and examine every organ that is particularly liable to be infected. If the patient's condition is such as to permit it, these conditions should be relieved at once. If this cannot be done we at least know what we may be called on to do later and we can give the patient the benefit of it.

Dr. C. Lester Hall, Kansas City, Mo.: Not long ago I was asked to do an emergency operation on the wife of a physician in my own city. The case was one of twisted pedicle of an ovarian tumor. Operation was not permitted until the patient was in collapse. I removed the tumor, which was very easy, and then, as was my habit, I swept my hand around the abdomen. I found a gall-bladder full of gall-stones. As the patient was in no condition for a prolonged operation, no attempt was made to remove the stones. The patient recovered after a stormy convalescence, but we were in position then to operate later, knowing definitely of the presence of gall-stones. Now that just emphasizes that if these patients are in critical conditions, it is justifiable except in cases of infection to explore the abdomen and make diagnosis; the doctor is then in position to know what he may be called on to do later. I think that is one of the most important points, even if the patient is not in condition to have the operation continued five or ten minutes longer. The time is well spent if we investigate the abdomen and know what we may be called on to do at another time.

Dr. Walter B. Chase, Brooklyn: We often find conditions which we do not anticipate and it is a question whether we have the legal right to go on and do what ought to be done. We have found that it is well to ask the consent of the patient before operation to do what surgical common sense dictates should be done.

Dr. Hugo O. Pantzer, Indianapolis: The opprobrium resting on modern surgery is that it ministers too much to the emergency phase of disease. Patients come to us when they are very sick and our attention is drawn to that acute phase. The time must be when medicine is preventive more than curative. When our patients come to us we ought to make careful search for disease and thus avoid unnecessary operation.

Dr. Thomas S. Cullen, Baltimore: As Dr. Bloodgood says, we should be more careful in the taking of our histories. There are, however, many instances in which it is absolutely impossible to make diagnosis before operation. The economic side of this subject is important. If I am doing pelvic surgery and find something, in addition to pelvic disorder, requiring an operation in the upper abdomen which I am not capable of performing, I must close the abdomen and turn the patient over to some one capable of looking after the condition in the upper abdomen. That entails two operations which means a double length of time for the patient in the hospital, double risk, twice the expense and two operators' fees. The time is coming when this will resolve itself into an economic problem and one which, if we do not settle for ourselves, the public will settle. I feel that any man who does pelvic work should be able to undertake anything in the upper abdomen. There is no doubt that the most difficult operation in abdominal surgery is the complete Wertheim operation for carcinoma of the uterus, and that surgery in the upper abdomen on the average is child's play in comparison with the pelvic conditions that we frequently have to deal with. The obstetrician must be a good surgeon, but on the other hand we cannot tell when babies are going to come, cannot tell when we are going to be called out at night and as a result cannot always be in good condition to perform two or three abdominal operations the next day.

Dr. C. A. L. Reed, Cincinnati: The point just made is exceedingly important. In my teaching I have insisted on the matter of taking histories, that the specialist owes it first to his patient and next to himself that the particulars in reference to his own specialty shall be noted. In other words, my record-blanks are so drawn that they give the general survey of the case and the probable conditions within the abdominal cavity. The idea that any surgeon could restrict himself to one-half of a cavity and to the organs within it is specialism run mad. The man who on entering the abdominal cavity finds himself incompetent to deal with anything he might find in that cavity ought not to be in practice. I believe therefore that the point has been well taken that all these conditions should be brought under survey and dealt with at the same time, if this is consistent with the general welfare of the patient.

On the other hand, there is something to be said with regard to the endeavor to complete the operation when the interest of the patient is thereby jeopardized. It is just as important to know when to quit as to know when to begin. Obviously a surgeon is recreant to his duty if he leaves an operation incomplete or continues to the jeopardy of the patient on meeting an unexpected condition. Every surgeon should go in with the assurance that he is to attend to all conditions which in his judgment are essential to the welfare of the patient.

Dr. J. S. Weber, Davenport, Ia.: A thought that should be particularly emphasized is that conservative surgery means complete surgery. I think we ought to have a better understanding between our patients and ourselves. I have in my own hospital for the past two years had typewritten blanks in which I have both the patient and the husband give me the permission to do what in my judgment is the best for the patient.

Dr. George Erety Shoemaker, Philadelphia: Our permission should go one step further. For years I have had in my hospital a book with the blanks for giving permission to do what we find necessary. In this way we have these consents which go back for years, giving the surgeon permission to do that which arises in an emergency.

Dr. Horace G. Wetherill, Denver: The surgical and gynecologic lines are readjusting themselves to present conditions and necessities. The time no longer exists when the ophthalmologist limits himself to the right eye or the front half of the eye. The time has come when these limitations must be wiped out. This is a critical time, in my judgment, for the Section on Obstetrics and Gynecology. It is most gratifying to find the unanimity of sentiment which endorses a very much wider scope as a field of usefulness for this Section.

# THE NATURE OF THE FILTERABLE AGENT CAUSING A SARCOMA OF THE FOWL*

PEYTON ROUS, M.D.
AND
JAMES B. MURPHY, M.D.
NEW YORK

Although the filterable viruses have but recently come to attention, it is known that they are of very diverse character and that, except as a matter of expediency, they can scarcely be discussed together. At present each constitutes a separate problem. This is especially true of the filterable agent which causes a sarcoma of the fowl.[1] The disease is so different from the ordinary infectious processes that nothing can be preassumed with regard to the character of the etiologic agent. On the contrary, in considering it one must take into account all those numerous and often bizarre possibilities which are suggested by the literature on tumor-causation.

The first question concerning the agent is whether it is living. A very little of it will give rise to a growth from which numerous others may be started, each yielding the agent in abundance. But this does not necessarily settle the point. The agent might very well be a chemical substance somewhat similar to those used experimentally to produce atypical cell-proliferation. The fact that the proliferation induced by a chemical compound ceases as the latter is expanded, whereas our sarcoma's growth is continuous, constitutes no objection. For the sarcoma cells may themselves be the source of the inciting chemical, and thus serve to perpetuate the disease. Such an assumption throws little light on the origin of the "spontaneous" tumor which by transplantation has yielded our material.

The most direct means of proving that the agent is alive is to grow and transfer it in culture. Recently we have done much work in this direction without success. The results of differential filtration may have some value as indicating whether the agent is a formed body and its probable size. Here our recent results confirm those first reported. In a dilute tumor extract the agent will pass through Berkefeld filters which hold back at the same filtration *Bacillus fluorescens liquefaciens,* an organism measuring 0.5 micron by 1.0 to 1.5 microns. On the other hand, Chamberland bougies (F) prove impermeable despite conditions which seem very favorable to passage. Could the findings be accepted at their face value, they would go to show that the agent is organized and perhaps even visible. But many factors serve to invalidate negative results with filters of fine texture. As is well known, these may hold back the complex proteins as well as living organisms. Nevertheless, in view of the findings, we have made repeated attempts to demonstrate the agent with special stains or the dark-field microscope, but to no purpose.

The conditions under which the agent can survive have much interest. As elsewhere stated, it may retain its activity in dried tissue for seven months, and for at least one month in tissue placed in 50 per cent. glycerin. In both instances it undergoes a gradual attenuation, as evidenced by the behavior of the tumors it engenders. These appear in relatively few hosts and after a long interval; they grow slowly and retrogress frequently. The process of repeated rapid freezing and thawing, which reduces the tumor tissue to a pulp, does not markedly lessen the activity of the associated agent. The latter's resistance to heat, on the other hand, is little greater than that of the tumor-tissue itself, as has been shown by parallel inoculations of bits of the same heated material into susceptible fowls and the plasmatic medium of Burrows. Tumor-tissue submitted to a heat of 50 C. (122 F.) for fifteen minutes fails absolutely of growth in the plasmatic medium, in which its proliferation is ordinarily very active; but when inoculated into susceptible fowls it often gives rise to tumors and may do so even when it has been heated at 53 C. (127.4 F.). Whether growth in the plasmatic medium is a real index of the tumor tissue's viability is uncertain. But that the filterable agent will withstand a temperature of 50 C. for fifteen minutes is shown by the production of tumors with tissue which has been dried, ground and suspended in Ringer's solution previous to heating. Material which has been heated to 55 C. (131 F.) for fifteen minutes never gives rise to the sarcoma.

In sarcomatous tissue autolyzing at the temperature of the chicken's body (41 C., 105.8 F.) the agent remains active for less than forty-eight hours. Toluol and chloroform in the proportions employed to prevent bacterial growth during autolysis destroy it in less than two hours. So, too, will 50 per cent. alcohol or 2 per cent. phenol (carbolic acid). Unlike the virus of poliomyelitis, the agent fails to withstand phenol 0.5 per cent. Like the animal organisms in distinction from most of the vegetable ones (von Prowacek) it is rapidly destroyed by bile, and by saponin in high dilutions. At 41 C. it is within two hours deprived of all activity by 50 per cent. rabbit bile or chicken bile, or by saponin in strengths greater than 1 to 800.

To obtain the foregoing data the only test employed or at this time possible to employ in demonstrating the agent's activity, has been the inoculation of susceptible fowls. No single attribute among those determined suffices to show the nature of the agent; yet, taken together its characters are those which we associate with micro-organisms.

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* From the Laboratories of the Rockefeller Institute for Medical Research.

[1] Rous, Peyton: The Journal A. M. A., Jan. 21, 1911, p. 198.

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**The Preservation and Restoration of Tendon Function.**—Fo the small tendons of the limbs, transplantation is frequentl one of our best methods of restoring function, because th splitting and lengthening operations are frequently not desirable on account of the tendons being so small. Many time we can bridge in a gap in flexor or extensor tendons in th wrist, because some one of the group frequently is no destroyed. At other times by transplanting we can restor function to a tendon paralyzed because of destruction of nerv function.—W. L. Brown in *Texas State Jour. Med.*

# A METHOD OF CONTINUOUS STERILIZATION OF INSTRUMENTS, TOGETHER WITH ASEPTIC HYPODERMIC MEDICATION

WILLIAM J. MANNING, M.D.
Medical Officer, Government Printing Office
WASHINGTON, D. C.

It will be seen in the illustration that an attempt has been made to demonstrate, pictorially, a procedure whereby instruments and hypodermic medication may be rendered reasonably safe, convenient and prompt as concerns sterility, as well as designedly simple from a practical standpoint, particularly as relates to emergency room, minor surgery or similar work.

Briefly stated, the essential features are that little or no attention under this system need be paid to the matter of the mechanical or the chemical cleanliness of instruments after this sterilizer is in operation, with consequent relief of mind where one is without skilled help; that the annoyance of the sterilizing receptacle running dry or overflowing is avoided; that the applied agents mentioned are convenient for prompt use, and that the nearest tinsmith or plumber may readily construct a similar contrivance for those who may desire such innovations in their operating rooms, connected up with their present equipment.

The water used for hypodermic injection (sterile and hot) is withdrawn from the small metal well, shown in picture (*c*) into the barrel of sterile syringe, aided by the plunger, the tablet then being dropped into the water-filled barrel, and the needle removed from ring (*d*) on the side of the well by means of the hickory-wood pincers (*e*) that are kept immersed in a solution of liquor formaldehydi within the large test-tube, also shown in the view, the barrel being screwed on the needle-thread, while the latter is presented in a perpendicular manner by the wooden forceps grasping needle away from the nub, the same utensil later withdrawing the wire from the needle.

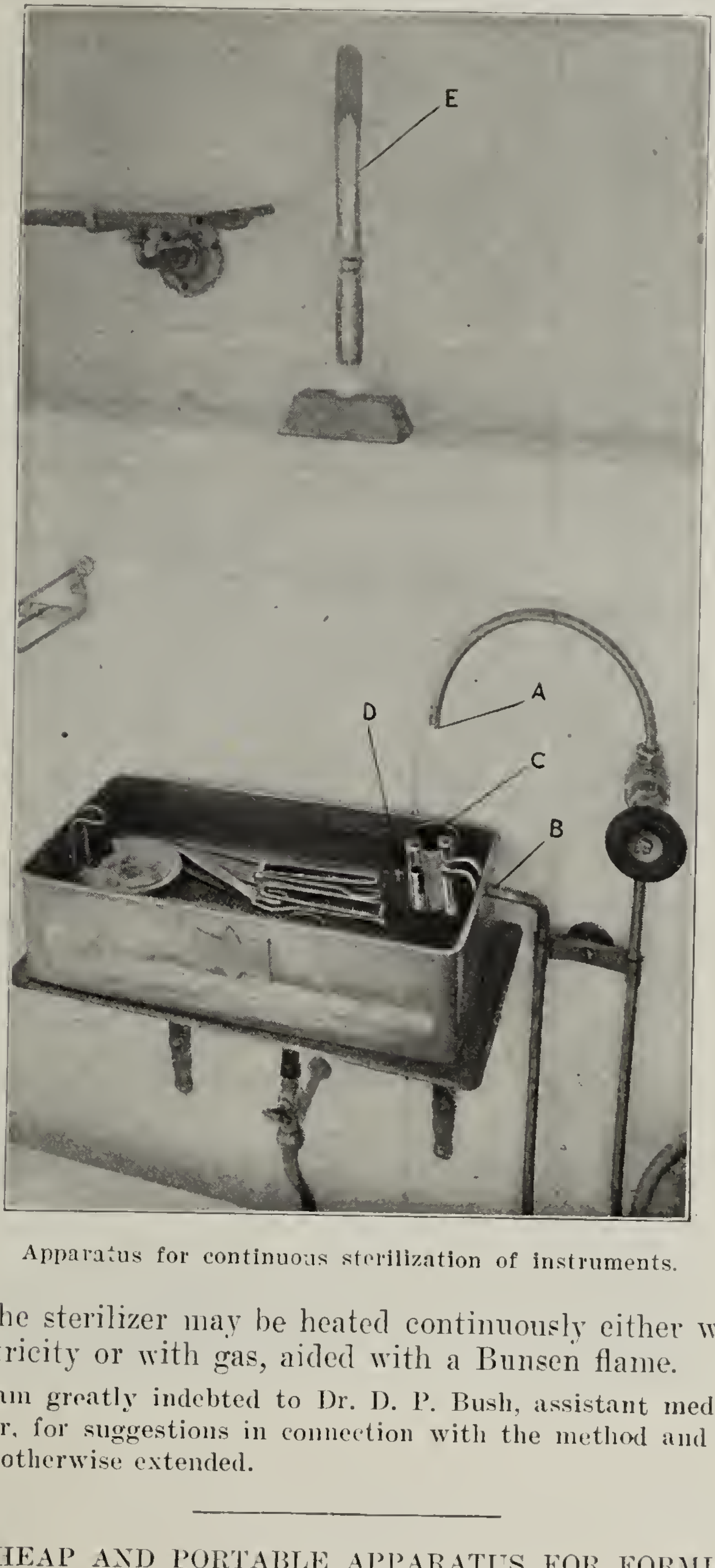
If an all-metal syringe is used the needle is simply adjusted over the end of syringe in the same manner, and clamped in place in the usual fashion by turning the plunger handle bars from above. Absolute alcohol, or full-strength tincture of iodin[1] is now applied to the surface of the skin about the size of a silver dollar to render the skin sterile, through which the needle is then passed at a point previously determined on, thus completing the procedure.

The water-inlet marked *a*, in starting up the sterilizer, is at first turned on full and the entire receptacle, inclusive of the well, allowed to fill up to a point indicated by *b*, or the water-pipe, which does not thus permit the sterilizer at any time to overflow, and which drains into an escape-pipe or pail placed on the floor, or connected with the house drain-pipe.

When this has been accomplished the water-inlet pipe *a* is now allowed to drip constantly into the small metal well *c*, from which it escapes or "slops over" down its circular walls into the sterilizer proper, and in that manner going to supply the water lost by evaporation in the form of steam, and which of course prevents the sterilizer from ever running dry during actual use.

The instruments when needed, or after use, are simply removed to and from the sterilizer by the aid of the wooden forceps already mentioned, which were made of this material to withstand the action of the formaldehyd solution. The instruments during use are dropped on a sterile towel or placed within a dish containing a 1 per cent. solution of liquor cresolis compositus.

Sodium carbonate to the amount of 3 or 4 ounces placed in sterilizer each morning largely prevents the formation of rust or oxids on the utensils. A few turns on a barber's strop or hone of the cutting-edged instruments after being dried, when the Bunsen gas flame is turned off each night, maintains the sharp cutting surface. The low degree of moist heat present of 100 C. as concerns the steel does not appear to have any deleterious effect on the temper of this metal.



Apparatus for continuous sterilization of instruments.

The sterilizer may be heated continuously either with electricity or with gas, aided with a Bunsen flame.

I am greatly indebted to Dr. D. P. Bush, assistant medical officer, for suggestions in connection with the method and for help otherwise extended.

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# A CHEAP AND PORTABLE APPARATUS FOR FORMING CARBON DIOXID PENCILS

GOUVERNEUR H. BOYER, M.D., POTTSVILLE, PA.

Many physicians are no doubt deterred from using solidified carbon dioxid pencils for freezing off moles, warts and epitheliomata, by the cost and cumbersomeness of the large tank of liquid carbon dioxid commonly used for making the pencil.

Prest-O-Tire tubes are small steel tubes filled with liquid carbon dioxid, sold for inflating automobile tires. They weigh less than 2 pounds and can be carried in the usual surgical bag. The original cost is but $1.25 and an empty tube may be exchanged for a full one at a cost of 20 cents. They are used with a puncturing valve made by the same manufacturers and costing $2. The total cost of the installation is therefore $3.25; the cost of use is 20 cents for each time used.

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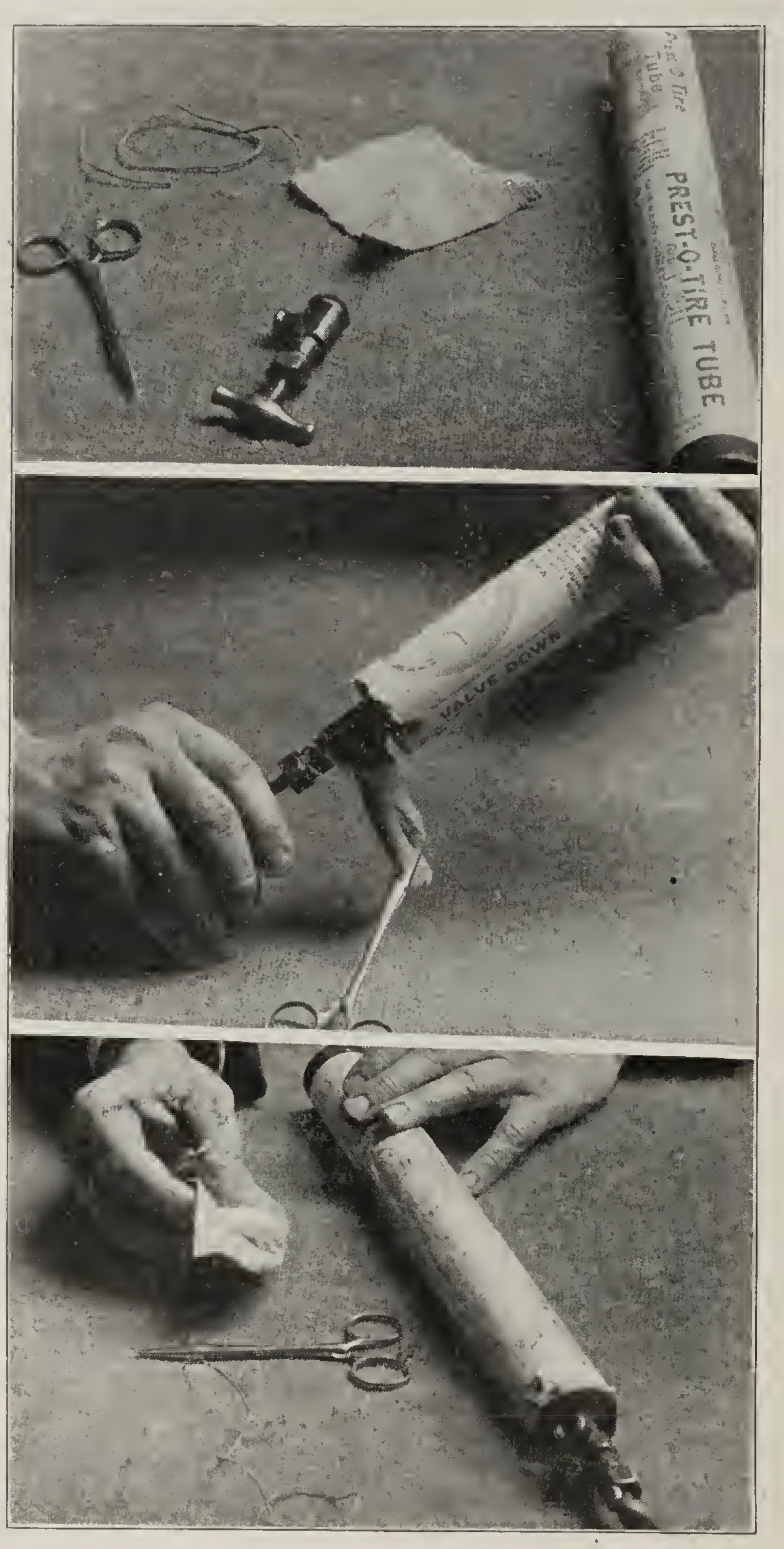
[1] The United States Army Medical Corps used this agent for the sterilization of the skin previous to the injection of antityphoid vaccine.

To make the pencil of solidified carbon dioxid, remove the connecting tube from the valve proper, tie with string a piece of chamois, 3 inches square, around the mouth of the valve and close the end of the tube thus formed with a hemostat. Then screw the valve tightly into the tube of compressed gas and operate it as the label describes for inflating tires. Test the contents of the chamois tube by feeling it, and when it feels solid you have a stick of solid carbon dioxid ready for use.



Apparatus for forming carbon dioxid pencils and method of making.

## A CATHETER KNOTTED IN THE BLADDER

William J. Anderson, M.D., Chicago
Night Warden, Cook County Hospital

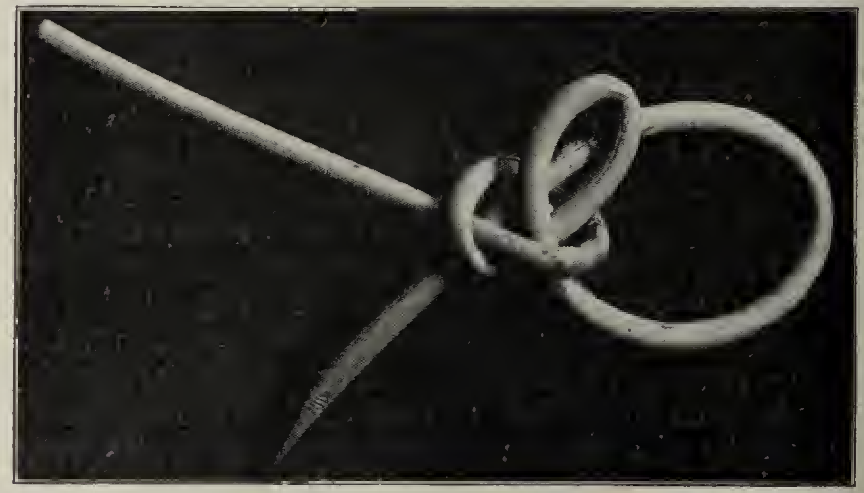
The object in reporting this case is to point out the possible danger in the passing of a soft rubber catheter. This may apply more especially to the female, in whom several inches of tubing may be inserted into the bladder without any particular difficulty. According to the U. S. marine service there are thirty classified knots, and a maritime expert who has examined the specimen in this case says that this knot cannot be classified.

*Patient.*—Max L., a Russian, married, aged 35, a baker, was admitted to Cook County Hospital March 18, 1912. Several months previously patient consulted a physician who advised him to use a soft rubber catheter on account of retention of urine due to a supposed enlarged prostate gland. He used this catheter several times and mislaid it.

On the morning of admittance the patient purchased a section of rubber tubing, cut one end obliquely and inserted it into the meatus through the penis and into the bladder. Urine was voided but patient was unable to withdraw the tube. Since then he had been able to pass a small amount of bloody urine around the tube but none through the tube.

*Examination.*—A medium-sized soft rubber tube, about the size of French No. 12 in urethra, protruded about 4 inches from the meatus. I was unable to remove it by traction. On rectal examination, the tube could be felt in urethra, anterior to the prostate which was slightly enlarged and firm. A radiograph was taken showing that the tube was knotted, this evidently being the reason it could not be withdrawn.

*Treatment.*—Suprapubic cystotomy. The catheter was stretched through anterior urethra and cut short. The loops within bladder were grasped with forceps and removed. French No. 32 sound passed through urethra into the bladder, and latter was washed out. The catheter was inserted through the penis into the bladder and retained by stitch through glans penis. A rubber tube was retained in the bladder through the abdominal incision. Recovery followed.



Catheter knotted in the bladder.

## TEN PELLAGRINS IN ONE FAMILY

J. E. Knight, M.D., Waycross, Ga.

Case 1.—In June, 1911, A. C., a man, aged about 40, came to the A. C. L. Hospital for something to cure his sunburned hands. Diagnosis was made of pellagra and the man put on treatment. When the patient first came to the hospital, a symmetrical dermatitis was to be seen on the back of both hands, extending half way up the forearms, and a slight dermatitis on both cheeks, on back of both ears and on both feet. The mucous membrane of mouth was entirely gone in most parts and that which remained was diseased. The patient gave a history of early morning diarrhea that was first noticed in the spring of 1909. His appetite was good, but his digestion poor. He complained a great deal of hands and stomach burning. He would wake up in the middle of the night with this; he said that he felt as if his hands were on fire and his abdomen full of hot coal. The patient seemed to be improving, when mental symptoms became marked and the man got up in the middle of the night and tried to kill his family; he declared that he had been poisoned. The next morning he was put in the county jail and then sent to the state asylum. Reports from there show his bodily health very good but mental condition practically unchanged.

Case 2.—In April of this year, while at the home of this patient, I noticed several of his children with the dermatitis on the hands. On thorough investigation I found that Mrs. M. C., aged 38, wife of the patient just described, had noticed in September, 1911, that her hands were slightly sunburned and that she had a diarrhea at the same time. On careful examination I found only a slight trace of the dermatitis but the mouth was denuded of the mucous membrane in several places and some ulcers were present. Mrs. C. is the mother of nine children, ranging from 2 to 20 years of age. Three of these are by her former husband, who is now dead; the other six are by the present living husband.

Case 3.—J. T., aged 20, oldest child by the first husband of Patient 2, showed a symmetrical dermatitis on both hands, denuded mucous membrane in mouth and history of diarrhea. He appeared well nourished, but suffered from insomnia. He first noticed the symptoms described in March, 1911, but all of these cleared up so he did not see any doctor. In February, 1912, the symptoms returned.

Case 4.—R. T., aged 18, was very anemic and poorly nourished; the symptoms were the same as his brother's, except much more marked; they were noticed first in May, 1911, and then again in April, 1912.

Case 5.—S. T., a girl, aged 17, showed no lesions on hands at this time, though mouth showed denuded areas; there was a history of diarrhea. Patient says her hands were like her brother's, but they got well without any treatment. Slight diarrhea was still present.

Eight children, of one family, all suffering from pellagra. The parents, who also have the disease, objected to having their pictures taken.

Case 6.—L. C., girl, oldest child by second husband, was examined next. She showed a marked dermatitis on both hands, both cheeks, diarrhea and diseased mucous membrane in mouth. Physical examination showed a very poorly nourished child with a mitral regurgitant lesion. She first noticed pellagra symptoms in April, 1912.

Case 7.—M. C., a girl, aged 9, with dermatitis on hands and face, very marked, gave a history of diarrhea, and mouth showed a diseased mucous membrane. Symptoms were first noticed in April, 1912.

Case 8.—Next, R. C., a boy, aged 8, showed dermatitis on both hands, mucous membrane of mouth diseased and history of diarrhea. Symptoms were first noticed in April, 1912.

Case 9.—M. C., a boy, aged 6, showed same condition and same history as those of the previous patient.

Case 10.—R. C., aged 4, showed marked dermatitis on both hands; he gave history of diarrhea, and mucous membrane of mouth was sore.

Baby C., aged 2, showed no symptoms as yet.

The three youngest children have recently had measles, the older ones having had it previously. Examination for hookworm showed all but the mother and baby infected, also showed L. C. infected with *Ascaris lumbricoides*.

*Treatment.*—A specimen of the corn-meal used was examined and found to be unfit for human consumption. The patients said that on several occasions the meal bought would be so moldy before it was used up that they fed it to the stock on the place. Corn in all forms was prohibited to these people, intestinal antiseptics were prescribed and at present (May, 1912), all are doing nicely. R. C., however, has run away from home and gone to Winoker, Ga.

I wish to thank Dr. T. F. Abercrombie, of Atlanta, and Dr. M. M. Johnson, of Waycross, Ga., for courtesies showed me with these patients. Both of these physicians went to see the patients with me and confirmed the diagnosis.

Gilmore Street.

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# A SIMPLE AND PRECISE METHOD OF DIFFERENTIAL LEUKOCYTE COUNTING WHERE THE WHITE CELLS ARE GREATLY INCREASED

Philip Atlee Sheaff, M.D., Philadelphia

In a recent case of splenomyelogenous leukemia in which the leukocytes approached 350,000 per c.mm. the great abundance of white cells in the stained spread made an accurate differential count almost impossible. After some delay, however, the task was easily and accurately carried out by cutting a square from the end of a microscopic slide of just the exact size to fit within the eyepiece and rest on its diaphragm.

With a glazier's diamond, and by most delicate pressure, four lines were ruled parallel with each side of the square and forming a small square in its center. This, when placed in the eyepiece, the lines being down, gave the outline of a small square on the stained spread and within the usual round field and permitted the easy and accurate counting and classification of cells within its borders, the slide being moved to include a new lot in proximity to the first, and the operation repeated as often as necessary until the total number of cells required for the count has been made.

4008 Baring Street.

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## *Special Article*

# TYPHOID FEVER IN ST. CHARLES

[*By Our Special Commissioner*]

St. Charles, Illinois, is a town with about 4,500 inhabitants (population 1910, 4,046) located 40 miles west of Chicago.

Sixty cases of typhoid were reported to the St. Charles health department during the eight months preceding May, 1912, or approximately one case for every seventy-five inhabitants.

Prior to the recent outbreak no cases had been reported to the health department since 1907, in which year six cases were recorded. On inquiry among the physicians in the city it was found that a few cases had been observed during the intervening years, but that they had attracted no particular attention and had not been reported to the health officer.

Geographically St. Charles is a compact town lying on both banks of the Fox River. The river divides the city into an eastern and a somewhat smaller western section. These two divisions constitute the main part of the town. A short distance west of the western section is a settlement of recent Belgian immigrants connected with the business district by a single road. In this isolated settlement, composed of about 150 people, the first case of typhoid appeared about Oct. 18, 1911. This case was more or less directly responsible for thirteen others, as described below.

The attending physicians said that it was impossible, during the early cases in the settlement, to enforce necessary sanitary measures. Especially was it difficult to secure the isolation of patients. Large families occupied small cottages. A small two-storied structure housed in one instance two families, among whom there developed four cases of typhoid. The healthy members of the household were of necessity in close proximity with the sick, with consequent increased danger of contact infection. In addition, the physician's order that the patient be isolated was often overruled and bedside visits were frequent. This disregard or ignorance of the danger from infection undoubtedly caused the extensive spread of the disease. The thirteen cases immediately following the appearance of typhoid in the Belgian district are believed to be contact infections.

Water from the various wells used by these families was tested bacteriologically by the State Water Survey under the direction of Professor Bartow and in all instances the water was pronounced safe for drinking purposes.

Three of the seven families in which typhoid appeared were on the same milk-route—designated later as "M." Only one milk-dealer, however, sells milk in this section of the town and no other cases appeared among his customers in other parts of the town at this time.

The order of development of the cases in the first two of the seven families affected will serve to illustrate the method by which the contagion spread.

| Case No. | Family No. | No. of Cases | Date of Onset | |
|---|---|---|---|---|
| 1 | 1 | 1 | 10/16 | Origin not known. |
| 2 to 5 | 2 | 4 | 11/2 | Woman who helped care for No. 1. |
| . | . | . | 11/13 | Four-year-old son of No. 2. |
| . | . | . | 11/16 | Ten-year-old child of No. 2. |
| . | . | . | 11/20 | Seven-year-old child of No. 2. |

The remaining nine cases, because of similar circumstantial evidence, are regarded as contact cases. All were Belgians and all were close friends. In every case there was an interval of from one to three weeks from the time of known contact with a typhoid patient to the appearance of the disease in the exposed individual.

Typhoid in St. Charles was confined to the Belgian community until the middle of January. From the middle of January to the middle of May there were forty-four new cases rather evenly distributed throughout the main part of the town on both sides of the river. The probable relation of this second outbreak to the circumscribed series of cases in the settlement will appear presently.

A record of cases had been compiled by Dr. Van Patten of the health department, and was kindly placed at our disposal. This was supplemented by a partial house-to-house canvass of the typhoid patients and by interviews with the physicians.

The water-supply of St. Charles is obtained from two wells about 800 feet deep. The greater volume of water is forced directly from the wells to the town mains. The remainder is stored in a stand-pipe near the pumping-station. Tap-water collected at several points in the town showed a low bacterial count with no evidence of intestinal bacteria. There was an emergency pipe to an intake in the river that had formerly been used in case of fire. This pipe had not been used, it was stated, for over four years. The onset and age distribution of cases were not such as are ordinarily found in water-borne epidemics.

The milk-supply of St. Charles is handled principall by two dealers, M and N. M produces no milk but buys of two farmers, A and B. No history of typhoid could be obtained among the workers on the farms, o in M's milk-depot. J, a worker in M's plant, had been sick the week before Christmas. The ailment did not resemble typhoid, and attempts made by us to demonstrate the presence of typhoid bacilli in the feces and urine of this man were not successful.

N lived about two miles from town on his own farm and produced all the milk he sold. Conditions about the barn were fair. The cooling and bottling shed was admirably located and well kept. On N's farm the milk was handled largely by N himself. Neither N nor his help had ever been known to have typhoid.

On the outskirts of the town numerous families kept one or two cows and sold milk to their neighbors.

TABULATION OF CASES WITH REFERENCE TO THE MILK ROUTES *

| | Milk-Routes | | | |
|---|---|---|---|---|
| | M. | N. | Others | Total |
| 1/10/31 | 1 | 2 | 0 | 3 |
| 2/ 1 /15 | 4 | 1 | 1 | 6 |
| 2/15/29 | 6 | 2 | 0 | 8 |
| 3/ 1 /15 | 7 | 2 | 3 | 12 |
| 3/15/31 | 4 | 1 | 2 | 7 |
| 4/ 1 /15 | 0 | 1 | 0 | 1 |
| 4/15/30 | 3 | 1 | 0 | 4 |
| 5/ 1 /9 | 1 | 0 | 0 | 1 |
| | 26 | 10 | 6 | 42 |

* No milk used in two cases.

Thirty-eight of the forty-two cases using milk were in thirty-eight different houses. Two developed in each of two families. In one instance, both cases appeared within four days, indicating some common origin. In the other family, fifteen days elapsed between the appearance of the first and second cases, possibly indicating a secondary or contact infection.

The age distribution of the cases is as follows:

| Years | Cases | Years | Cases |
|---|---|---|---|
| 0- 5 | 4 | 20-30 | 16 |
| 5-15 | 4 | 30-40 | 3 |
| 15-20 | 13 | 40-45 | 2 |

The following table shows the approximate number of customers on each of the milk-routes and the number of cases developing on each.

| Milk-Route | No. of Customers | Cases of Typhoid |
|---|---|---|
| M | 470 | 26 |
| N | 250 | 10 |
| All others | 150 | 6 |

Of the six cases of typhoid developing among familie not using milk from dairies M or N, two were in al probability contact cases. In one instance a woma took care of a boarder, a young man sick with typhoid Sixteen days after she began to care for this man sh came down with the fever. The other suspected contac infection took place through laundry collected at a hom in which there was typhoid. The girl employed to sor the laundry as it came in became sick about two week after the parcel of laundry in question had been received Of the remaining four patients to whom neither M no N regularly supplied milk, three were young men accus tomed to taking meals at various lunch-rooms in th town at which milk from M's dairy was used. Prac tically all of the ice-cream used in St. Charles was mad by M with uncooked milk. The dirty milk-bottle brought in by the wagons were washed in the room use for the manufacture of ice-cream and the same help was employed in both operations.

Assuming, then, that these men used milk from M's dairy occasionally, we find that of the forty-two patients known to have used milk, there were only three who did not receive milk from dairies M or N either all or part of the time, and that of these three, two were in all probability secondary or contact cases.

The probable explanation of this second and larger outbreak of typhoid in St. Charles may be found in the methods used in handling the milk-supply.

The Belgian community located west of the city proper had had about one in ten of its entire population down with typhoid during the fall and winter of 1911-12. There had in several instances been from two to four cases of typhoid in each family in which the disease obtained a foothold. This indicates a failure on the part of these families to observe sanitary methods in the care of the patients and in disposing of infectious material. Three of these families used milk from dairy M. Two of the three had, during the winter, four cases each of typhoid.

It is reasonable to suppose that these families, careless as they were of their own safety, neglected to sterilize the outgoing milk-bottles. M's wagon collected the bottles from these homes. At the bottling room of M's plant these bottles were washed *but not sterilized.* They were then filled with milk and delivered to customers, thus furnishing a vehicle for the transfer of typhoid bacilli from the typhoid patients in the Belgian settlement to the customers of M in the city proper.

There were several houses in the city proper, containing more than one family, to which both M and N supplied milk. No great attention was paid at such places as to whose bottles were collected by a given dairyman. The driver of one wagon, on leaving the appropriate quantity of milk, took hastily a corresponding number of empty bottles and departed. In this way it is known that M's bottles were often collected by N. By means of this interchange of bottles the infection may have been introduced on N's milk-route.

On February 20, the health commissioner, Dr. Van Patten, suspecting milk to be the infectious agent, issued an order prohibiting the collection of milk-bottles from houses known to contain typhoid patients and requiring the milk-dealers to sterilize their bottles by boiling for at least twenty minutes. Beginning February 21, attempts were made at sterilization of the milk-bottles, but the improvised apparatus was inadequate for the task, and it was the last of February or the first week of March before the permanent apparatus was installed in both the dairies and sterile bottles were insured. Whatever the source of the contamination, it ceased to be operative by the first or second week of March.

### SUMMARY

Two definite outbreaks of typhoid occurred in St. Charles between October, 1911, and May, 1912. One, beginning in the Belgian settlement west of the main part of town, was evidently spread chiefly by contact infection. It was restricted to a group of Belgian workmen and their families.

The second outbreak began about the middle of January and was apparently caused by a contamination of milk through bottles collected from infected families on milk-route M. The infection was carried to N's customers through an exchange of the bottles between routes M and N, and was practically checked by a regulation enforcing sterilization of the bottles.

# Therapeutics

## DUODENAL ULCER

Perhaps no abdominal condition is just now so much in the foreground as duodenal ulcer. Well-aimed surgery and exploratory incisions have demonstrated that this condition is of frequent occurrence, and a very frequent cause of chronic abdominal pain and chronic indigestion, to say nothing of more or less permanent debility. It has been shown that there is, generally, a tangible excuse for gastric indigestion, hyperacidity (or hyperchlorhydria as it is termed), and for abdominal distress as well as actual abdominal pain. In other words, dyspepsia, gastralgia, nervous indigestion, neurasthenia, hysteria with gastric crises, and neuroses of the stomach are beginning to be terms that must be defended rather than used as diagnoses back of which one may hide.

It is generally agreed that chronic appendicitis or recurrent subacute appendicitis or the adhesions caused by an old appendicitis can be the cause of gastro-intestinal indigestion, and that nothing but removal of the appendix will offer a permanent cure.

The gall-bladder has of late years been better understood, and chronic cholecystitis and adhesions from a previous more or less acute cholecystitis are recognized as causes of gastro-intestinal indigestion that cannot be cured without surgical procedures. Without an actual inflammation of the gall-bladder, small gall-stones may become fixed in the various ducts, or concretions may form in the ducts, not properly placed or not large enough to cause obstruction, and yet give continuous reflex symptoms or actually cause inflammation in some of the bile ducts, and perhaps congestion and disturbance of the function of the pancreas, if not an actual chronic pancreatitis.

A recurrent catarrhal duodenitis with not sufficient congestion or swelling to cause obstruction to the common bile-duct and therefore jaundice, but sufficient to cause at times considerable indigestion, considerable distress and pain, constipation at one time and diarrhea at another, with a slight yellowing of the sclerotics, with a trace of bile in the urine, has been recognized by some physicians for many years, and such physicians as noted this condition were close to the diagnosis. But it seems that this condition is probably very frequently caused by an exacerbation of trouble from a recurrent inflammation of a healed duodenal ulcer. The very conditions that are now shown to cause recurrence of ulcer of the duodenum were the very things that seemed to cause a recurrent duodenitis, viz., exertion, chilling, or something very irritant in the food, such as mustard.

The symptoms of duodenal ulcer may be tabulated as: (1) a prolonged or recurrent history of epigastric distress and dyspepsia; (2) pain, or at least distress; (3) symptoms of gastric hyperacidity; (4) blood in the stools.

An ulcer of the duodenum gives a more variable story of improvement than does ulcer of the stomach. This is perhaps because there is more tendency to heal where the surrounding food and liquid is more or less constantly alkaline, while in the ulcer of the stomach the food and liquid are more or less constantly acid. Whatever be the cause, the intervals of improvement of ulcer of the duodenum are very typical. Indiscretions in diet in which the food becomes excessively acid, or remains long in the stomach (possibly from an overindulgence in alcohol) and thus becomes very acid and therefore very irritant, or when the patient takes a large amount of very acid drinks, mustard, red pepper, Worcestershire sauce, or sour peppered pickles, all may be predisposing causes to reirritation and reulceration of a healed or quiescent ulcer. Chilling of the surface of the body from low temperature or the simple chilling of the body from insufficient covering at night contracts the blood-vessels of the surface and increases congestion in the abdomen and a quiescent ulcer may recur.

The diagnosis may be made from the suggestive history as above described, from a feeling of hunger or a sense of "all-goneness," which is satisfied by any simple food, or real pain which is lessened by a simple bland food or by water, especially an alkaline water. If the pain caused by such an ulcer is not improved by warm, bland alkaline drinks, such as perhaps milk, or by such a drug as milk of bismuth or milk of magnesia, probably the pain is partially due to dragging or pulling on adhesions caused by the ulcer. Sometimes the pain does not occur until a short time after a meal, and perhaps not until two hours after a meal. This is very characteristic. Pain that is absent between meals and develops only after eating will occur sooner or later after a meal, depending on the character of the food taken. If it is a liquid, it will soon pass to the duodenum. The more fluid the food, the more easily digestible, and the sooner it will pass to the duodenum and perhaps cause pain. The more solid the food and the more peptic digestion necessary, the longer the food will remain in the stomach. If the food is very irritating and there is marked hyperacidity the pylorus will remain closed for some time.

Or the duodenal ulcer may cause such reflex irritation of the pylorus as to cause it to have attacks of spasm. Such contractions of the pylorus are the forerunners of gastric dilatation, and yet there may be no real obstruction at the pylorus, although if the ulcer is near the pylorus contractions as well as adhesions may cause permanent obstruction.

The pain is generally located by the patient in the central epigastric region, but may be referred to the right side, and often to the back. In a large number of cases, but by no means all, a tender point will be noted by the patient just to the right of the median line in the central epigastric region. There may be a tender point nearly opposite on the back near the spine. There may be tenderness in the pancreatic region and tenderness may be referred up under the ribs. The right rectus muscle is often hypertrophied and often resistant to pressure, much as is noted in appendix inflammation.

From reflex irritation hyperacidity of the stomach is frequent, and with this pyrosis, heartburn and gastric flatulence occur. The tongue is more or less coated and is often dry, and the patient often complains of thirst. The bowels are likely to be constipated, although there may be recurrent diarrheas.

A considerable number of these symptoms and signs are duplicated by chronic appendicitis, chronic cholecystitis, gall-stones and chronic pancreatitis. A differential diagnosis is aided by the above findings and history plus hyperacidity of the stomach and the finding of blood in the stools.

A tangible amount of blood in the stools, with the liver intact, and the above symptoms present, generally means an ulcer in the gastro-intestinal tract. Ulcer may be present without blood appearing or being found in the stools at any one given time. Repeated examinations may frequently show blood, but even then not always. Traces of blood, or occult blood, even with all meat removed from the diet for at least forty-eight hours is rather an unimportant finding. Mucous membranes can readily ooze a trace of blood.

A patient with a history pointing toward ulcer of the duodenum should have the duodenal contents examined, at least by the simple regurgitant method, viz., the administration of a few ounces of olive oil given after the stomach is washed out and is known to be empty, and then this oil withdrawn from the stomach in a half hour. The olive oil seems to cause a regurgitation or at least an opening of the pylorus which allows some regurgitation of the duodenal contents into the stomach and the fluid and oil that is thus removed will separate on standing. Examination of this fluid may give a number of clues as to the condition of the duodenum.

The Cammidge reaction of the urine should be noted to test the condition of the pancreas. While this test has been shown not to be absolute, still the absence of this reaction permits the assumption that the pancreas is in a healthy condition and obstruction or disturbance is not probable at or near the orifice of the pancreatic duct.

An examination of the stools should also be made to determine the presence of blood in any amount, to note the presence or absence of an abnormal amount of fat of undigested meat fibers, of crystals, of bile; and th reaction to litmus should be taken.

The urine, besides being tested for the Cammidge reaction, should be especially tested for bile and indican

### TREATMENT

While there is no question that ulcer of the duodenum is a surgical condition, that operative interference i the only radical cure, that there is danger from pro longed ulceration causing adhesions to or inflammation in adjacent organs, that an ulcer in healing may caus narrowing of the duodenal canal and perhaps mor or less obstruction, and that an unhealed ulcer may b the irritating cause of a future localization of carcinoma still, many patients will not submit to operation, an instances of cure and healed ulcers are frequently see on autopsy and apparently often clinically occur. Con sequently, there is plenty of justification for the medic inal cure or medical management of duodenal ulcer.

Prerequisites of such treatment are:

1. The teeth, gums, mouth, tonsils and pharynx. in bad condition, must all be properly treated and pu into as nearly perfect order as possible.

2. A test breakfast, a test of the duodenal regurg tated fluid and a test of the feces must be made t determine, if possible, exactly the amount of disturbanc in the digestive tract that is present.

3. The urine must be carefully examined to determin any liver, pancreatic and kidney disturbance.

4. The blood must be studied to determine the seriou ness of the condition and the latent or reserve strengt of the patient.

All of the above having been accomplished, the phys cian is ready to carry out the treatment. The treatmen consists of:

1. The administration of a cathartic the night befo the patient begins his treatment, such as the followin

| R | Gm. | | |
|---|---|---|---|
| Hydrargyri chloridi mitis......... | 15 | | gr. iiss |
| Pulveris rhei ...................... | 25 | or | gr. iv |
| Sodi bicarbonatis ................ | 50 | | gr. x |

M. et fac chartulam 1.

Sig.: Take at bedtime with a cup of malted milk or other bland nutriment.

2. Absolute rest in bed for three weeks.

3. Early in the morning of the first day the patient should receive 10 gm. (2½ drams) of Rochelle salt, given in a glass of hot water. This, with the cathartic of the night before, will cause as near as possible surgical cleanliness of the intestine; and, as elsewhere, an ulcer must be kept as clean as possible.

4. Dry heat should be applied to the abdomen more or less constantly for ten days, best with an electric pad.

5. There should be no food for forty-eight hours.

6. A glass of hot water with a quarter of a teaspoonful of salt and a quarter of a teaspoonful of sodium bicarbonate should be given every four hours for four times. There should be no more water given for ten or twelve hours, except in sips as needed for thirst. The object of this is to clean off the mucus thoroughly from the inflamed duodenum, and then to give the stomach and upper intestine an absolute rest.

7. After forty-eight hours, viz., on the third day, very small quantities of nourishment should be given. The food must not excite the stomach to the production of much hydrochloric acid, as it is better to prevent its production or secretion rather than to administer olive oil, butter or atropin to stop it. This means that no meat or meat-juices or meat extracts or broths should be given, although some clinicians seem to find meat chopped fine and prepared in various ways a most valuable food, even in the early stage of the treatment of this disease. The nourishment should be in small amount so as not to cause distention of the stomach and thus to interfere with the cure of any dilatation that may previously have been present. As soon as possible, of course, the food must contain sufficient calories to prevent further loss of weight, even if not much is gained for the first ten days. A very good nutriment for this period, viz., beginning on the third day, is a predigested and alkalized milk, i. e., 2 ounces of peptonized hot milk with an ounce of Vichy, drunk slowly, and given every three hours during the third day of treatment. On the fourth day 3 ounces of peptonized milk and 1 ounce of Vichy should be given hot every three hours.

8. Two and one-half hours after every other administration of peptonized milk, viz., every six hours, and one-half hour before the next feeding, a glass of hot water should be given to wash the stomach and duodenum; or, if hot water is objected to, a clear, clean, fresh clam broth may be given.

9. On the fourth day the bowels should be moved by an enema, and this should then be daily repeated until later in the treatment.

10. On the fifth day 5 ounces of peptonized milk and one ounce of Vichy should be given every six hours, alternating every six hours with 5 ounces of a thin, strained oatmeal gruel given hot, and followed by 2 ounces of warm Vichy; in other words, one or other of these feedings every three hours.

11. As the patient needs iron, and he is receiving no meat, a 3-grain tablet of saccharated oxid of iron should be given twice a day with the nourishment for a period beginning with the fourth day of the treatment. The tablet should be powdered before taking.

12. On the sixth day the cereal (oatmeal gruel, salted) should be continued and a raw egg on cracked ice with a trace of lemon juice should take the place of one milk feeding. The other feedings of milk on this day should be not peptonized but given with Vichy as before.

13. Hot water at least twice a day should be given one-half hour before a nourishment.

14. After ten days there should be a gradual increase in the food; first two raw eggs; then they may be cooked; shredded wheat biscuit, malted milk, junket and gelatin flavored with lemon or orange (no alcohol, tea, coffee, and only exceptionally tobacco, should be allowed) may be given. Later, finely chopped fresh chicken, roasted oysters in season, fresh steamed soft clams, chopped little necks served in broth, mutton, chicken and beef broths may be gradually added to the now increasing diet. Still later, chopped beef made into a pâte and broiled may be given once a day, and the frequency of the feedings changed to five times a day, then to four times. Water may now be taken cool but not cold, but not much liquid should be given or allowed with any one meal, so as to prevent still longer the stomach becoming distended.

15. The daily enema for the bowels should be given for ten days, which, with the four days before such treatment was used, means up to two weeks from the beginning of the treatment. Nothing else should be given to cause bowel movements unless they are very unsatisfactory. If such is the case, a sufficient amount of effervescing sodium phosphate may be given each morning, in hot water, but it should not be taken until it has nearly finished effervescing—not while it is storming.

16. After two weeks the enema should be stopped and sodium phosphate in the morning should be relied on to cause a movement of the bowels.

17. The patient having been in bed for three weeks, convalescence to last a week should be inaugurated. This means a gradual getting up as from typhoid.

18. The patient having recovered from his illness and its treatment, should take one month's rest, i. e., at the end of the four weeks, at some country, mountain, or sea shore resort, depending on the time of year. Or, if this is impossible, a month's rest at home, with plenty of out-door air, should still be insisted on. At the end of this time, viz., eight weeks, there should be a gradual resumption of his occupation, the patient being careful for a long time not to take into his stomach anything irritant, too cold, too salty, or any harsh, rough food, or anything that is acrid or may become acrid, as grape-fruit, strawberries, or anything that is too acid, as vinegar, pickles, etc. He should also be careful about getting chilled.

19. A laxative tablet will probably be needed for some time. A very satisfactory one is as follows:

| ℞ | Gm. | |
|---|---|---|
| Sulphate of strychnin.......... | 0015 | gr. 1/40 |
| Aloin ............................ | 02 | gr. 1/3 |
| Powdered ipecac ............... | 03 | gr. 1/2 |
| Extract of belladonna.......... | 006 | gr. 1/10 |

This should be taken after supper and not on an empty stomach. If it acts in the night when given at this time, it may be given at bedtime, but not on an empty stomach. The patient should have a cup of malted milk with a cracker or two broken into it before the tablet is taken.

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[*For other information see second page following reading matter*]

SATURDAY, JUNE 22, 1912

## REPORT ON HOOKWORM ERADICATION

The second report of the Rockefeller Sanitary Commission for the Eradication of Hookworm Disease, now in print,[1] outlines the activities of the commission for the year ending June 28, 1911, which in the main has been an expansion of the plan of action detailed in the earlier report.[2] The preliminary surveys of the areas of infection in the United States have been nearly completed; a definite, uniform survey to determine the degree of infection by counties as agreed on by the state directors is now in progress; and a report on the extent of infection in fifty-four foreign countries has been published. The practical side of the work—the enlistment of people's interest in the treatment of themselves and their families—has included a wide range of activities. The aid of local practitioners has been secured, county dispensaries have been started, county appropriations obtained, school inspections made, free clinics held at set times, the sanitary surveys of privies extended, and the people have been taught the dangers of soil pollution by means of stereopticon lectures, bulletins and folders, newspaper cuts and notices, exhibits at state and county fairs, school instruction and efforts to improve the health service in separate counties.

The exhibit of the preliminary survey includes a series of maps showing the degree of infection in eleven states, and statistics of its extent in ten of these. Infection has been demonstrated in every county of South Carolina, in nearly every county of Virginia, North Carolina, Alabama, Mississippi and Tennessee, and in twenty-seven out of the fifty-nine parishes of Louisiana, fifty-seven of the seventy-five counties in Arkansas, and twenty-two of the 119 counties in Kentucky. It has been shown to exist in eastern Texas, Florida, California, Nevada, Oklahoma and West Virginia, "with very strong clinical evidence of its presence in Maryland." The maps indicate that the areas of hookworm infection in these states are probably in belts or zones, the heaviest showings being in eastern Virginia and the eastern part of North and South Carolina, in central Tennessee, in the southern half of Alabama and Georgia and in the northeastern corner and southern half of Mississippi, following, as the report says, the sandy coastal plain in the seaboard states.

When the Rockefeller Commission began its work in 1909, the country people of the south did not know hookworm infection as a disease, and, although many of them were experiencing its effects, it was extremely difficult to get them interested in their own proper welfare. In the short space of two years, the effect of missionary work has been such that the people, entirely of their accord, now flock to the public dispensaries and clinics in great numbers. During the present year, nearly a half million people have been reached by means of public lectures, newspaper articles, bulletins and personal visits to teachers. The scientific secretary of the commission, Dr. Stiles, reiterates his view that the sanitary privy is the great problem of the non-sewered districts, and he holds that if all our Gulf-Atlantic states were provided with active, properly trained and compensated county health officers, the labors of the present commission would soon be at an end, as its work is even now rapidly passing into the hands of the most intelligent of them.

## HOOKWORM INFECTION AS A WORLD PROBLEM

As mentioned above, the Rockefeller Sanitary Commission for the Eradication of Hookworm Disease reports a survey of the United States and foreign countries, made to determine the degree and extent of hookworm infection throughout the world. We have already indicated the distribution of the disease in the United States.

Through the agency of the Department of State, the commission sent to American representatives in all foreign countries letters asking for information on five points, viz.: (1) whether or not the country had been found infected; (2) the geographic distribution of infection in the country; (3) an approximate estimate of the degree of infection; (4) whether it is surface or mine infection; (5) what efforts are being made to eradicate or relieve it. In addition, correspondence on the subject was conducted with physicians and healt officials in foreign countries.

The results show that hookworm disease belts the eart in a zone about 66 degrees wide, extending from paralle 36 north to parallel 30 south latitude. Practically al countries between these parallels are infected. Of th fifty-four countries found to be infected, the disease i confined to mines in six, Wales, Germany, the Nether lands, Belgium, France and Spain. In at least forty-si countries, aggregating a population of about 920,000,000, the disease is general and wide-spread. The tota population of the infected states in this country is abou 20,000,000. Together these constitute 58 per cent. o the earth's estimated population of 1,600,000,000.

The degree of infection is heaviest in America Samoa, where it is found in 70 per cent. of the popula

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1. Second Annual Report, Rockefeller Sanitary Commission for the Eradication of Hookworm Disease, 1911 (140 pages), Officers of the Commission, Washington, D. C.
2. The Journal A. M. A., May 6, 1911, p. 1332.

tion: in the southern two-thirds of China, in 75 per cent. of the population; in India, from 60 to 80 per cent. of the 300,000,000 population have the disease; in Ceylon, 90 per cent. in many parts; in Natal, 50 per cent. of the coolies on sugar and tea estates; in Egypt, 50 per cent. of the laboring class; in Dutch Guiana, 90 per cent. in many parts; in British Guiana, 50 per cent. of all; in Colombia, 90 per cent. of those living between sea-level and 3,000 feet, which includes most of the population; in 1904, 90 per cent. of the working population of Porto Rico were infected.

The economic loss from the disease is enormous. A physically sound coffee-picker in Porto Rico picks 500 or 600 measures a day; the anemic picker averages from 100 to 250 measures. This disease has lowered the average labor efficiency of the island to 35 or 50 per cent. of the normal. Dr. Herbert Gunn, special inspector for the California Board of Health, states that a 20 per cent. loss of efficiency in the mines is a conservative estimate of the actual results of the disease in that state. Estimating the infection to be present in 50 per cent. of the miners, he believes that a mine employing 300 men would sustain a loss of $20,000 annually. Taking this as a basis, the question is very pertinent as to what is the annual money loss in India with a 70 per cent. infection.

It is sometimes maintained that an acute disease may strengthen a race by removing the weak, but hookworm disease is characterized by its chronicity. It works subtly through long periods of time, and its cumulative effects—physical, economic, intellectual and moral—are handed down as an increasing handicap from generation to generation. What the disease has done for India, Egypt and China, it is now beginning to do for the United States. It is a menace and an obstacle to all that makes for civilization. It destroys economic efficiency and social development on the one hand, as it undermines physical and mental health on the other.

An important factor in the spread of hookworm disease in the United States is immigration. Every country which imports coolie laborers from India is bringing in a constant stream of heavy infection. Of 600 coolies going into Assam, only one was free from infection. The attention of the government at Durban was called in 1908 to the heavy infection among coolies on the sugar estates of Natal. The next shipload from India was examined and 93 per cent. were found infected. Last year at San Francisco a shipload of Indian coolies had 90 per cent. infected. Quarantine was established at once against further immigration of this type. Every group of Indian coolies in California is a center from which the infection is spreading in that state.

The results of the survey show plainly that hookworm disease is not a local affection or of merely local concern. It is of international significance, and the measures directed toward its complete eradication must be international in scope.

## THE CAUSATIVE ORGANISM OF TRACHOMA

Unfortunately the causation of trachoma or "pink-eye" is a subject on which there have been more theories than demonstrable facts. Hence it is a source of satisfaction to see the problem attacked systematically by a well-organized corps of workers, as is being done by the Health Department of New York City, under the supervision of William H. Park.

The characteristic pathologic findings in trachoma, which have been noted by many observers, consist of certain granular inclusions in the epithelial cells of the conjunctiva. Some hold that these are the cause of the disease and have classified them as protozoa; others consider them as involution forms of gonococci or other bacteria. A group of ten workers in the Research Laboratories of the New York Health Department have made a bacterial study extending through more than a year's time. Their report[1] suggests a new explanation of the trachoma bodies. In this investigation measures were taken to secure examination of as large a number of cases as possible. Complete histories were kept systematically with detailed descriptions of the eye conditions. Bacterial cultures were made by curetting the conjunctival membrane lightly, rubbing it with a sterile swab and transferring the matter obtained to plates of various mediums. In most cases thus examined a tiny Gram-negative, strictly hemoglobinophilic bacillus was obtained. In blood-broth these bacilli grew in small granular masses taking a brilliant red when counterstained with fuchsin. When stained by Giemsa's method these masses showed characteristics similar to those of the epithelial inclusions, and to the "initial bodies" described by Lindener.[2] A comparison of these forms in smears by various stains led the observers to suggest their identity.

The finding of a Gram-negative hemoglobinophilic bacillus in cases of trachoma has been reported by others. Edwards[3] reported such an organism which he called *Bacillus trachus* and suggested it as the causative agent of trachoma. After a detailed examination and comparison the New York workers were unable to find a distinguishing characteristic between any of the strains isolated from their 213 cases or between these and the *Bacillus influenzæ*. The further differentiation or identification of these organisms remains to be established. The finding of these bacilli in a large percentage of cases among both Americans and immigrants adds evidence against the statement that the bacterial findings in trachoma are not constant in different localities. The failure to find the gonococcus or any organism similar to it in typical trachoma would seem to discredit the theory that the gonococcus or some modification of it is the causative agent. The cases reported constitute probably the most extensive series of observations on trachoma yet published, and mark a distinct advance in our knowledge of this disease. The fact that the growth of the organism is inhibited by the presence of certain streptococci suggests an interesting line of investigations directed toward a rational treatment. It may also explain the negative results often obtained in attempting to cultivate the organism from cases of trachoma. A more complete understanding of the bacteriology of trachoma will assist in formulating a rational prophylaxis and treatment of the disease. Further observations by this corps of workers will be awaited with interest.

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[1] Proc. New York Path. Soc., 1912, xii, 17.
[2] Lindener: Berl. klin. Wchnschr., 1909, xxii, 1697.
[3] Edwards, R. T.: THE JOURNAL A. M. A., 1910, liv, 965.

## THE ACTION OF SERUM ON CARCINOMA CELLS

The success of immunologic methods in the diagnosis of infectious diseases was followed by numerous attempts to discover specific bodies — antigens and antibodies — in cancer. It was hoped that in this way light might be thrown on the nature of cancer and methods of early diagnosis obtained. But the investigations carried out from this point of view have not yet given results of any practical significance. With respect to complement deviation, allergy, specific precipitation and hemolysis cancerous persons do not seem to be constantly peculiar in any way.

The only reaction of this general character of any promise of importance is the meiostagmin reaction of Ascoli.[1] This reaction depends on the fact that when antigen and antibody unite there results a diminution in the surface tension of the mixture which makes itself evident by an increase in the number of drops in a certain quantity of the fluid. In their experiments Ascoli and Izar made use of an alcoholic ether extract of mammary carcinoma as antigen, and the serum of cancer patients as antibody. Altogether a positive meiostagmin reaction has been obtained 209 times in 234 cases of carcinoma, that is, in 89 per cent.; in 233 normal and non-carcinomatous persons the reaction was positive only three times. It would seem then that this reaction merits further attention.

The reaction recently elaborated by Freund and Kaminer[2] rests on a different basis. In view of the great variation in the formation of metastasis in cancer it would seem that individual disposition must play an important part in the development of malignant tumors, whatever the real etiologic factor may be. Assuming that the blood contains a factor that protects the body against invasion by tumor-cells, especially carcinomatous, Freund and Kaminer undertook to determine the effect of normal serum and of serum from carcinoma patients on cancer cells. They find that at 37 C. normal serum exercises a distinctly solvent effect on carcinoma cells in the course of twenty-four hours, whereas the serum from carcinoma patients has no such action. The carcinoma cells are obtained from fresh material and suspended in 0.6 per cent. solution of sodium chlorid and 1 per cent. acid sodium phosphate. The solvent in the serum is not dialyzable, is soluble in ether, is precipitated by alcohol and destroyed by heating at 56 C. While the serum of carcinoma patients lacks this solvent substance, it is asserted also that it may contain a substance which protects the cells. In cases in which the reaction indicated the presence of carcinoma, Freund and Kaminer found this diagnosis to be wrong in 12 per cent. In other series the number of positive results in non-carcinomatous cases is smaller. It is said that on removal of carcinoma the serum soon loses its power to dissolve carcinoma cells.

Further studies are required before any definite conclusions may be drawn as to the diagnostic value and significance of this reaction. It is of interest that Kraus and Ishiwara find that the blood from the umbilical cord has no effect on carcinoma cells, and that the cells of human embryos are sometimes dissolved by normal serum, and are not dissolved by fetal serum. The maternal serum behaves like ordinary normal serum. They also find that normal serum dissolves carcinoma cells and embryonal cells, carcinoma serum, however, dissolving only the embryonal cells.

## PENTOSURIA

Pentosuria, first recognized by Salkowski twenty year ago, no longer belongs among the extreme rarities o pathologic metabolism. A considerable number of cases in which pentoses, or five-carbon sugars, were excrete in the urine have been described accurately in medica literature. The essential urinary symptom has bee stated in some instances to manifest itself in more tha one member of a family, so that pentosuria resembles i this respect some of those other rare anomalies o metabolism like alkaptonuria, which are now known t exhibit traits of inheritance. Manifestations such a these are as a rule accidentally discovered through fault diagnosis involving a routine urinary examination f other symptoms; there is seldom any immediate occasio to suspect the perversion of nutrition which they presen It is therefore more than likely that pentosuria pass unnoticed in not a few individuals whom the absen of conspicuous signs of ill health protects from mo careful examination.

Despite the repeated detection of pentoses in the uri of man — more than thirty cases being known — t exact identification of the sugar present has been effect in very few instances only. From the standpoint of t metabolic significance and etiology of pentosuria it quite as important to know precisely which of the fi carbon carbohydrates are here concerned as it is to kn that ordinary glycosuria is characterized by the excreti of dextrose, rather than levulose, galactose, sucrose lactose. Several years ago Neuberg[1] demonstrated t occurrence of the sugar arabinose in the urine of t pentosuria patient at his disposal. Lately Elliott and Raper[2] have studied another case in which the pentose sugar apparently differs from that described by Neuberg and possibly is ribose. This is interesting because the investigations of Levene and Jacobs have shown that the pentose sugar ribose is present as a constituent complex in some of the nucleic acids.

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[1] Ascoli and Izar: München. med. Wchnschr., 1910, lvii, 403.

[2] Freund and Kaminer: Wien. klin. Wchnschr., 1911, xxiv, 1759.

[1] Neuberg, C.: Ber. d. deutsch. chem. Gesellsch., 1900, xxx 2243.

The carefully examined instances are too few to encourage speculation as to the physiologic history of the urinary pentose. Inasmuch as pentosuria is increasingly more likely to be detected by clinicians, now that more careful routine examinations are being insisted on, the importance of pointing out the cases and furnishing an opportunity to clinical investigators to make further chemical researches on the urines of these patients deserves mention. Quite aside from any immediate help to the individual examined, it should be a pleasant duty for the practitioner to cooperate with the scientific investigator by giving him an opportunity to try to clear up the obscurity in which the real significance of pentosuria is now veiled.

## THE SAFE AND SANE FOURTH

Each year since 1903 we have been waging a propaganda against the insensate maiming and death-dealing methods of celebrating our independence holiday. We have gathered and collated the indubitable facts; and the lay press — magazines and newspapers — has seconded our endeavors so that an almost revolutionary change has been taking place.

It is gratifying to observe that more and more our constituted authorities have recognized that it is their duty to prevent the burning and crippling of children and their death by tetanus. These officials must take the responsibility, because the sale of fireworks and like destructive agencies is subject to state or municipal control. Official appreciation of this fact is evidenced by the enactment and enforcement of appropriate ordinances. Many officials have in the most salutary way cooperated with non-governmental agencies interested in the safe and sane Fourth. Legislation against fireworks has been restrictive or prohibitive. The latter, of course, gives the best results.

In European countries occasions akin to our Independence Day are commemorated by means of fêtes and other picturesque ceremonies, quite adequately, just as heartily and with as much patriotic fervor as among us. Continental peoples have a genius for festivities, national as well as all other kinds. For adult patriotism, oratory may suffice; but this is not satisfying to the youth of the land. In the legitimate interests of boyhood and girlhood, things equally brilliant and satisfactory must be substituted for the noise, the flare and the varicolored flame; and substitutes even more resplendent have been found in abundance. We have now methods by which the Fourth shall cease to be a day of terror, and shall become instead one of happiness, recreation and enlightenment. Noise is now being replaced by music — the music of bands, and of choruses drilled weeks beforehand by skilled leaders, and the singing of national airs and popular songs. There are tableaux, plays, floats devised by artists, representing historic and patriotic incidents and achievements; parades in which the Army and Navy, the police and fire departments, the militia, school children and industrial organizations take part; picnics with circuses and pink lemonade, peanuts, ice-cream and watermelon sufficient to satisfy the most anacondean digestion; parks and other public places and buildings, both public and private, gorgeously illuminated by electricity; children's carnivals and dances; school celebrations; athletic sports, with distribution of copies of the Constitution, and so on.

And no maimings, no burnings, no killings, no tetanus!

## WATER VERSUS POWDER IN MINING

Mining accidents are unusually frequent among us; "we kill every year more than all the rest of the world besides." There are 800,000 coal miners at work in the United States; upward of 30,000 have been killed and 80,000 injured in the past score of years. This trade is indeed peculiarly dangerous; and herein no doubt lies one among sundry reasons for the strikes of miners — strikes rather more frequent than in other occupations, and which prove unfortunate and even disastrous for many thousands besides the miners and mine owners immediately concerned. For fire is essential to civilization, and most of our fire is obtained from the coal which the miners dig out of the earth. It is said that under normal conditions the mining industry adds every year $2,000,000,000 to the wealth of the United States.

Of course all possible means should be employed to prevent mining accidents and to render mines as safe as possible. To this end the Bureau of Mines, under the directorship of Dr. Joseph A. Holmes, is doing yeoman work. Yet despite all the safeguards now known and practiced dreadful accidents do occur. For example, just as a Pennsylvania state inspector stepped from the shaft of a mine, after giving it a clean bill of health, an explosion took place in that very mine which killed 125 men.

Many mine accidents are caused by the explosion of fire-damp, a substance known also as methane and as marsh-gas, which produces the will-o'-the-wisp. Any unprotected flame or spark may ignite this gas. Blasting-powder used in mines may be tamped too lightly; it may then flare back, become a "windy shot"—a long white flame leaping out straight from the "face." Thus is fire-damp ignited, and an explosion produced. Another cause of explosions is the ignition of blasting-powder through sparks dropped by careless miners or produced by defective electric insulation.

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[2] Elliott, J. H., and Raper, H. S.: Note on a Case of Pentosuria Presenting Unusual Features, Jour. Biol. Chem., 1912, xi, 211.

It would perhaps be difficult absolutely to prevent such accidents so long as powder is used; but it is said that an assured remedy is forthcoming in the substitution of water for powder in mine blasting. Herr Carl Meissner, a German mining official, knowing of explosions in mines where there were no "gas pockets," became convinced that while the gas might not be a part of the coal, it was nevertheless in the coal seam, or perhaps in the pores of the coal.[1] He believed that if the water could be forced into the pores of the coal, it would drive out the gas. To this end he had built a long nozzle that would fit exactly into the hole bored by the miners for the insertion of their powder. A very small quantity of water—but a few quarts—having been injected, the gas was driven out with a hissing sound; it was then found that by the use of just a little more water, the coal would be sufficiently cracked and broken for a blow of the pick to bring it tumbling down.

Germany, it is reported, is gradually excluding powder from its mines, and is now mining coal by water on a large scale. Mr. Carl Scholz, president of the Rock Island Coal Mining Company, is planning to use this method for his mines in Indiana, Illinois and Oklahoma. The mines in Alabama and West Virginia and in British Columbia are being extensively worked by water instead of powder. It would be gratifying indeed to know of the universal extension of this method of mining.

## *Current Comment*

### BLOOD-PLATELETS AND BLOOD-CLOTTING

The blood-platelets, long unrecognized or neglected in relation to possible changes in the circulating medium of the body, have at length begun to attract the attention of scientific investigators. They are known to be present in diminished numbers in certain types of disease characterized by abnormal coagulability of the blood; and since the platelets are known to disappear very rapidly in shed blood or to agglutinate into masses which serve as foci for the formation of clots they have lately been associated with the phenomena of coagulation. In a review of recent theories of the coagulation of the blood in these columns[2] attention was directed to some of the factors unquestionably involved in this process. Besides fibrinogen and calcium, thrombin is necessary to complete the formation of fibrin. According to Howell these factors all exist normally in the circulating blood, but are prevented from reacting by the presence of antithrombin. These studies have been extended by Bayne-Jones[3] in connection with the possible rôle of the blood-platelets. In corroboration of earlier investigations of Morawitz he has found that the blood-platelets contain a substance (prothrombin) which, after activation with calcium salts, clots fibrinogen. They also furnish something which can cause certain types of non-coagulable blood to clot. Bayne-Jones concludes on the basis of his observations that "the disintegration and solution of the platelets when blood is shed are helpful or essential to the clotting of blood in two ways: (1) by setting free a quantity of prothrombin which is subsequently activated to thrombin, and (2) by liberating a thromboplastic substance (thromboplastin) which neutralizes the antithrombin normally present in the blood." Deductions of this sort are helpful not only in supporting the temporary working hypotheses regarding the coagulation process in blood, but also in associating the platelets with some appreciable physiologic function. It is always gratifying to discover some tenable use for compounds or anatomic elements whose part in the economy has remained obscure.

### WHY SOME MANUSCRIPTS ARE RETURNED

The sorrow of an author whose manuscript is returned —deep though it be—cannot be compared to that of the manuscript editor who, without the "justified" enthusiasm of the author, guided merely by the cruel spirit of analysis, stumbles over a "sentence" of this character:

> It is indeed true that in the height of the inflammatory process, during the moist stage Staphylococci are found in the secretion and it is also possible by some trifling traumatism to allow the penetration of Staphylococci into the limp spaces of the cutest and there owing to disintegration of the bacteriol body antitoxins are set free.

The article from which the above was quoted also contained the following remarkable examples of orthography: "persistent skin" (resistant skin), "accatete" (acetate), "a too edge sword," "antipruric," "suborrhic," "a leader" (liter) of water, "Sophlicoccus," "pussular condition." And yet some physicians wonder why their manuscripts are returned!

### VINEGAR AND THE PUBLIC HEALTH

The extent to which confusion is sometimes carried in public health affairs is well illustrated in a recent article on "Vinegar and Vinegar Laws" in the March *Bulletin of the Boston Health Department.* As the writer of the article points out, the value of vinegar lies in its acetic acid content, and the question of th "purity" of vinegar is one of commercial values and no of public health. The purchaser of vinegar naturall wishes to be assured that he is getting his money's wort of acetic acid, but every sanitarian knows that the purchaser's health will not suffer if the vinegar contain only 3 per cent. instead of 4.5 per cent. of acetic acid So long as the vinegar contains no injurious substanc it is quite immaterial whether it is made from cide molasses or any other wholesome material. The superiority claimed for vinegar made from particular substances is wholly fictitious since vinegar is purchase for the acetic acid it contains and for nothing else. Th author of the article cited, who is himself the inspecto of milk and vinegar of the Boston Board of Healt proposes in fact a law which forbids the application any descriptive term to vinegar indicating the substan or materials from which the vinegar is made. In this way the temptation to defraud would be eliminated and the public would probably obtain a superior product at a much less cost. In a word, the vinegar issue is not a public health question, but one of commercial honesty. "Much of the time now devoted to the improvement of vinegar laws could with simpler and less legislation be more wisely directed to other channels."

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[1] Cushing, S. N.: Taking a Profit from Blood, Technical World Magazine, December, 1911.

[2] A New Theory of the Coagulation of the Blood, The Journal A. M. A., Feb. 10, 1912.

[3] Bayne-Jones, Stanhope: The Presence of Prothrombin and Thromboplastin in the Blood Platelets, Am. Jour. Physiol., 1912, xxx, 74.

## A GOOD BEGINNING FOR A NEW STATE

The Democratic party in the new state of New Mexico held its first state convention at Clovis, May 14. One of the first things it did was to adopt the following plank in its platform:

> We believe a healthy, vigorous people to be the greatest asset of a nation. We commend the efforts of Senator Owen to secure greater efficiency in our national health agencies. We believe these public health agencies should be organized into a single national department of public health, and we favor such legislation as will effect this purpose.

It would be difficult to imagine a better starting-point for a party in a new state than such a declaration of its belief in the supreme importance of public health. The Democratic party in New Mexico has taken a position that will ultimately be that of all intelligent and unselfish citizens.

# *Medical News*

### CALIFORNIA

**Pasteur Institute for University.**—The Pasteur Institute for the manufacture of virus to be used in combating rabies is the latest addition to the scientific laboratories of the University of California, Berkeley, which is under the direction of Dr. Wilbur A. Sawyer.

**Alumni Meeting.**—The annual meeting of the Alumni Association of the College of Physicians and Surgeons, San Francisco, was held May 28. The following officers were elected: president, Dr. George W. Goodale; vice-presidents, Drs. H. A. Mager and A. H. White; secretary, Dr. Chas. M. Troppman, and treasurer, Dr. Clarence A. DuPuy.

**Personal.**—Dr. Manuel Fernandez, Pinhole, was seriously injured in an automobile accident recently.——Dr. Chas. Benjamin Hare, San Jose, has been elected secretary of the Santa Clara County Medical Association, vice Dr. McNally, deceased. ——Dr. J. N. Ward has been elected president of the Board of Health of Auburn.——Dr. A. P. O'Brien has been appointed a member of the Board of Health of San Francisco.——Dr. Hugh Lagan has been appointed surgeon of the fire department of San Francisco.——Dr. Walter Gavey, Kennett, has been appointed local surgeon of the Southern Pacific system at Red Bluff.——Dr. C. F. Buckley, San Francisco, is reported to be seriously ill with pneumonia at his home.

### COLORADO

**Research Laboratory for Denver.**—A research laboratory is being planned for the National Jewish Hospital for Consumptives at Denver, to be built under the direction of its president, Samuel Grabfelder, and to cost about $100,000. The work of the institution is to be research and study regarding tuberculosis.

**Personal.**—Dr. H. W. Kirby, Georgetown, has been appointed a member of the State Board of Health, vice Dr. B. F. Woody. ——Dr. W. J. Fairfield, Delta, who was believed to have been drowned in the Gunnison River over two years ago, is reported to have been rescued and to have suffered from a lapse of memory and after two years in Alaska, is now said to have returned to Colorado.——Drs. O. D. Westcott and Aubrey Williams have been elected members of the advisory board of the Health Department of Denver.——Dr. J. M. Perkins has been appointed health commissioner of Denver, Dr. Rose Kidd Beere, assistant health commissioner and superintendent of the County Hospital, and Dr. Rudolph Albi, medical inspector in charge of contagious diseases.——Dr. G. F. Wentch, Montrose, recently sustained serious injuries from a runaway horse.——Drs. Benjamin M. Steinberg and M. Ethel V. Frazer have been appointed county and city physicians of Denver.

### CONNECTICUT

**Babies' Hospital Opened.**—The Babies' Hospital, Hartford, opened for the summer, June 15.

**New Officers.**—Manchester Medical Society: president, Dr. W. R. Tinker; secretary-treasurer, Dr. N. A. Burr.

**State Society Election.**—Connecticut State Medical Society held its one hundred and twentieth annual meeting in New Haven, May 22-23, and elected the following officers: president, Dr. Edward T. Bradstreet, Meriden; vice-presidents, Drs. Frederick Gilnack, Rockville, and Alvin E. Barker, Bethel; secretary, Dr. Wilder Tileston, New Haven; treasurer, Dr. Joseph H. Townsend, New Haven; and delegate to the American Medical Association, Dr. D. Chester Brown, Danbury.

**Personal.**—Dr. H. De Forest Lockwood, Meriden, sailed for Europe, June 8. Dr. Lockwood was recently commissioned first lieutenant, Medical Corps, N. G., Connecticut.——Drs. Herman S. Schultz and Edward F. McGovern have resigned as ambulance surgeons on the staff of the Emergency Hospital, Bridgeport, and Drs. Charles R. Pratt and William H. Curley have been appointed their successors.——Dr. Paul Waterman has been appointed a member of the health commission of Hartford.——Dr. Albert C. Thomas, assistant physician of the Connecticut State Insane Hospital, Middletown, has been appointed superintendent of the New Haven State Hospital, vice Dr. H. T. Summersgill, resigned.——Dr. James E. Stetson, New Haven, sailed for Europe, June 1.

### ILLINOIS

**Personal.**—Dr. Stephen O. Hendrick, Henry, who has been seriously ill with heart trouble, is reported to be in a critical condition.——Dr. W. S. Howell, Winnebago, who has been ill in a sanatorium at Rockford, is reported to be convalescing.

**Annual Meeting of Sanatorium.**—The annual meeting of the Chicago-Winfield Tuberculosis Sanatorium was held in Chicago, May 23. The report showed that the daily average of patients was sixty-nine and one-half and that each had been treated at a daily expense of $1.19. It was announced that a new administration building would be erected during the coming year and that Dr. Albert Polon, of the Montefiore Home, New York City, had been secured as superintendent of the institution.

**Hospital Notes.**—Directors of the Elgin Women's Club have accepted a gift of property valued at $4,000 for Sherman Hospital from George Marshall. The gift will create the Marshall fund in memory of the late Dr. Sarah A. Marshall, the wife, and Newell Marshall, the brother of the donor.——The Ottawa Tuberculosis Colony announces that its new hospital building, especially constructed to apply the open-air treatment to cases of closed and surgical tuberculosis, will be completed by July 1. An industrial department has also been added for patients who cannot afford to pay the rates required for the main sanatorium, and for these a rate of $14 a week has been made. The colony has opened an office in Chicago.

#### Chicago

**New Officers.**—Chicago Medical Woman's Club, June 12: president, Dr. Effie L. Lobdell; secretary, Dr. Sadie May Adair. ——Chicago Medical Society, June 18: president, Dr. Jacob Frank; secretary, Dr. P. J. H. Farrell.

**Research Fellowship Funds Donated.**—At the alumni banquet of Northwestern University Medical School, June 10, Dean Edwards announced that a fellowship fund for research work in tuberculosis and infectious diseases has been donated to the institution by James A. Patten, Evanston.

**Personal.**—Dr. Frank T. Andrews underwent an emergency operation for appendicitis at Mercy Hospital, June 1, and is reported to be doing well.——Dr. Theodore B. Sachs has been reappointed a trustee of the Municipal Sanatorium.——Dr. and Mrs. D. A. K. Steele sailed from England, June 14, on their return from a trip around the world.

**Hospital Notes.**—The Lynde Hospital, formerly known as the medical department of Gads Hill Center, was the beneficiary of the performance at the Cohan-Grand Opera House, June 18.——A building permit has been issued to the Garfield Park Sanitarium for a three-story brick building to be used as a hospital, to cost $3,000.——The Ravenswood Hospital is said to have lost its appeal, in the case for damages in which Mrs. Clara Appell obtained a judgment for $7,500 against the institution on account of alleged injuries received while a patient therein.——The Jane Murdoch Memorial Building of the Presbyterian Hospital was dedicated June 9. The funds for the construction were provided by the will of the late Thomas Murdoch, one-third of the residuary estate of whom was bequeathed to the hospital. The building stands as a memorial to the sister of the testator. It has a maternity department with 34 beds, a children's department with accommodation for 23, five wards each of 10 beds, one four-bed ward, and nine rooms and four three-bed wards in an isolation department, making a total of 132 beds. The hospital also has a sun parlor, open air pavilion and thorough equipment for laboratory work.

## LOUISIANA

**Pure Milk Society Officers Elected.**—At the annual meeting of the Orleans Parish Pure Milk Society, Dr. W. W. Butterworth was reelected president; Dr. L. R. DeBuys was elected vice-president, and Dr. C. H. Rice, secretary-treasurer.

**Unveiling Chaillé Memorial Bust.**—The Chaillé memorial bust in memory of the late distinguished dean of Tulane University was unveiled at the Richardson Memorial Auditorium, the presentation address being made by Dr. Rudolph Matas.

**Railway Surgeons Session.**—The first annual meeting of the Louisiana State Railway Surgeons' Association was held in New Orleans, April 22, and the following officers were elected: president, Dr. H. B. Gessner, New Orleans; vice-presidents, Drs. J. B. Guthrie, New Orleans, S. L. White, Ruston, and H. B. Wilson, Vicksburg, Miss.; secretary, Dr. Joseph D. Martin, New Orleans, and treasurer, Dr. D. W. Kelly, Winnfield.

**Sanatorium News.**—The contract for the construction of St. Frances Sanitarium, Monroe, was awarded, June 5. The building and equipment will cost about $75,000.——A stock company has been incorporated to erect and operate a sanatorium at South Crowley, under charge of Dr. E. M. Ellis. The following physicians appear on the board of directors: Drs. E. M. Ellis, R. B. Raney, W. Hyde, D. D. Mims and M. L. Hoffpauir.

**Personal.**—Dr. Charles A. Borey, New Orleans, is under treatment in Johns Hopkins Hospital, Baltimore.——Dr. G. C. Chandler has been appointed health officer of Shreveport, vice Dr. A. A. Herold, resigned, to accept the appointment of coroner of Caddo Parish.——Dr. J. M. Ledbetter, Shreveport, was recently thrown from his automobile and fractured his shoulder.——Dr. Edward S. Kelly, New Orleans, secretary of the State Board of Health, has resigned.

**Needs of Leper Home.**—The biennial report of the Board of Control of the Lepers' Home shows that the number of inmates has increased from sixty-five to seventy-five. During the past two years thirty-one have been admitted, two have been discharged as cured, fifteen have left the institution and ten have died. The report asks for appropriations to meet present indebtedness, $48,000 for two years' maintenance, $10,000 for a new dining hall and kitchen and $2,000 for laundry building.

**Oppose Control by Tulane.**—A meeting was held recently in New Orleans of physicians connected with the visiting staff of the Charity Hospital, but not connected with the teaching corps of Tulane University, at which an organization was formed to oppose legislation tended to transfer control of the institution to Tulane. Dr. Homer Dupuy was elected president and Dr. L. M. Prevost, secretary.——Members of the Orleans Parish Medical Society of the visiting staff of Charity Hospital have adopted resolutions indorsing the action of the State Medical Society regarding the control of Charity Hospital. These resolutions demand a searching legislative investigation of the system in which the medical work of the hospital is managed.

**Legislation Wanted by Dowling.**—Dr. Oscar D. Dowling, Shreveport, president of the State Board of Health, has made the following recommendations to the legislature: One or more sanitary engineers, for extermination of mosquitoes; establishment of a bureau of vital statistics and demography; sufficient appropriation for the employment of adequate inspection force including general inspectors, food and oil inspectors and qualified veterinarians; establishment of a health, educational and publicity division; revision of food and drug regulations; in cities over 15,000 the establishment of a medical milk commission, under control of the State Board of Health; a child hygiene division; extension of facilities for laboratory work; medical inspection service for the schools jointly with State Education Department; enforcement of laws relative to local boards of health and local health officers.

## MARYLAND

**Personal.**—Dr. Curtis F. Burnam, Baltimore, and V. M. Richards, Washington County, have been appointed members of the board of managers of the Maryland State Tuberculosis Sanatorium.——Dr. John R. Downes, Preston, has been appointed health officer of Caroline County.

### Baltimore

**Remsen's Retirement.**—On the retirement of Dr. Remsen from the presidency of the Johns Hopkins University, his colleagues of the various faculties presented him with a series of resolutions prefaced by eulogistic addresses.

**Welch Entertains Physicians.**—Dr. William H. Welch gave a dinner at the Baltimore Country Club, June 9, to twenty fellow physicians in honor of Surgeon General Torney, U. S. Army, Col. Wm. C. Gorgas, U. S. Army, and Surgeon General Rupert Blue, U. S. P. H. & M.-H. Service.

**Personal.**—Dr. Thomas A. Ashby has been given the honorary degree of LL.D. by Washington and Lee University.——Dr. Charles F. Blake has received the honorary degree of A.M. from the University of Ohio.——Dr. S. J. Crowe sailed for Europe, June 14.——Dr. H. S. Greenbaum sailed for New York from Bremen, June 15.——Loyola College has conferred the honorary degree of LL.D. on Dr. Charles O'Donovan, the degree of A.M. on Dr. Leonard K. Hirshberg and the degree of A.B. on Dr. Emil Novak.

**Faculty Changes.**—The following appointments and promotions in the faculty of the Medical Department of Johns Hopkins University are announced: Dr. Herbert M. Evans, now associate, to be associate professor of anatomy; Dr. Charles R. Essick, now instructor, to be associate in anatomy; Dr Thomas P. Sprunt, now instructor, to be associate in path ology; Dr. Samuel J. Crowe, now assistant, to be associate in surgery; Dr. Lloyd P. Shippen, now assistant, to be instructo in hygiene and bacteriology; Dr. Henry A. Stephenson, now assistant, to be instructor in obstetrics; Dr. David M. Davis assistant in pathology; Dr. Henry H. Hazen, assistant i dermatology; Dr. George B. Jenkins, assistant in anatomy; Dr Roy D. McClure, assistant in surgery; Dr. Holland N. Steven son, assistant in pathology, and Dr. Everett D. Plass, assistan in obstetrics.

## MINNESOTA

**Asks New State Hospital.**—The State Board of Control wil ask the legislature to make an appropriation for a fourth stat hospital for the insane, as the hospitals at Rochester, St. Pete and Fergus Falls are overcrowded.

**Hospital for Indians.**—Representative Miller has introduce a bill in congress appropriating $100,000 for the Chippew Hospital; $85,000 of this to be used for equipment, and $15,00 to be used for maintenance the first year.

**Physicians' Building for Minneapolis.**—Property at Nicolle and Twelfth Streets was recently sold to Mr. Moses Zimme man, who will improve the site with a building to cost abou $150,000 to be used for offices of physicians and surgeons.

**Sanatorium Needs Funds.**—The State Board of Visito recently examined the State Tuberculosis Sanitarium, Wa ker, reported that lack of funds made it impossible to fill th institution to its capacity, and recommends that a larg appropriation to this be made.

**To Segregate Communicable Diseases.**—Dr. P. M. Hall, healt officer of Minneapolis, has suggested the plan to the Board Charities and Correction of establishing a number of sma hospitals in the vicinity of Hopewell Hospital, in each which one particular form of communicable disease may treated.

**Trachoma Spreading Among Whites.**—Trachoma, which h affected the Indians of White Earth Reservation, is now sa to be prevalent among the miners of Iron Range. The Hibbi Board of Health reports that among miners of the ran are immigrants who have come from localities where the di ease is prevalent, and fears that it may spread to the scho children.

**Personal.**—Dr. and Mrs. William J. Mayo, Dr. and M Christopher Graham and Dr. and Mrs. Donald Balfour, Roc ester, have returned from Europe.——Dr. and Mrs. Charles Mayo, Rochester, sailed for Europe, June 3.——Physicians

Red Wing recently gave a farewell banquet in honor of Dr. F. W. Dimmitt, who is about to move to Yoakum, Tex.——Dr. Charles H. Hunter has resigned from the faculty of the University of Minnesota.——Dr. O. F. Lang, Faribault, has resigned as physician to the Minnesota School for the Feeble-Minded.

**Permanent Health Officer at Rochester.**—The offer of the State Board of Health of the State of Minnesota to establish a permanent health officer for Rochester has been accepted by the city council and by the agreement Dr. Charles H. Mayo is to continue as health officer, and the money appropriated will be used to employ an assistant who will give his entire time to the work under the authority of Dr. Mayo. The State Board, Civic League and the City of Rochester each pay one thousand dollars a year toward defraying the expenses of the department.

## MISSOURI

### St. Louis

**Personal.**—Dr. Eugene L. Opie, professor of pathology in Washington University, has been appointed dean of the medical school, vice Dr. George Dock, relieved of this duty at his own request.——Dr. I. D. Kelly has returned from Vienna.

**Hospital News.**—The hospital board has appointed forty-three interns for the city institutions, effective July 1.——The board decided to leave the location of the new hospital for infectious diseases to the municipal assembly and to authorize an ordinance for the hospital between the present city infirmary and the city sanatorium.——A permit was issued June 7 for the erection of the building of the Barnes Hospital to cost $150,000.

## NEW JERSEY

**Pediatric Election.**—The third annual meeting of the New Jersey State Pediatric Society was held in Spring Lake, June 10, and the following officers were elected: president, Dr. Alexander McAlister, Camden; vice-president, Dr. Martin Synnott, Montclair; secretary, Dr. Elmer G. Wherry, Newark, and treasurer, Dr. B. van D. Hedges, Plainfield (reelected).

**Personal.**—Dr. Oliver Grimshaw, Swedesboro, sustained severe injuries by being run over by his automobile which he was cranking.——Dr. C. B. Smith, Washington, was injured in Easton, Pa., June 8, while cranking his automobile.——Dr. William Spickers, Paterson, who was operated on for appendicitis, June 6, in the Paterson General Hospital, is reported to be in a critical condition.——Dr. J. William Hughes has been appointed a member of the City Council of Atlantic City.

## NEW YORK

**For Albany Hospital.**—The sale of flags on Flag Day resulted in a net fund of $13,432 for the building fund of the Maternity Hospital of the Roman Catholic diocese of Albany.

**Fire in Hospital.**—Nurses and orderlies of Flushing Hospital, June 6, put out a fire in the annex of the hospital before firemen reached the institution, and without any panic being caused.

**Home for Sick Babies.**—A home for sick babies is to be maintained by the Visiting Nurses' Association of Syracuse and the plan has the hearty coöperation of the physicians of the city.

**New Officers.**—Medico-Chirurgical Society of Central New York, thirty-third annual meeting held in Utica, June 5: president, Dr. F. C. Watson, Cazenovia; secretary-treasurer, Dr. E. A. Gayde, Utica.

**Hospital for Tonawandas.**—The secretary of the State Charities Aid Association recommends that a hospital be erected for the use of Tonawanda and North Tonawanda to cost $30,000 and with accommodation for twenty patients.

**Former Health Board Secretary Dies.**—Thomas A. Stewart, for many years secretary of the State Board of Health and afterward a special examiner in the State Comptroller's office, Albany, died at his home in Geneva, June 5, from acute gastritis.

**Personal.**—Dr. P. L. Alden, Hammondsport, put an aeroplane to practical use June 9, to answer an emergency call on the other side of Lake Keuka.——Dr. J. R. Sturtevant, Theresa, is reported to be convalescent.——Dr. M. S. O'Brien, Syracuse, who has been ill for several days, is reported to be convalescent.——Dr. J. W. Conway, Hornell, has sailed for Europe.

### New York City

**Large Sum for Cancer Research.**—A scientist has added $100,000 to the endowment fund of the General Memorial Hospital for the Treatment of Cancer and Incurable Diseases, to be used for the maintenance of twenty free beds for cancer patients.

**New Dispensary.**—The Hospital for Deformities and Joint Diseases announces that $36,500 has been raised toward the construction of the new dispensary building. Jacob H. Schiff and Felix and Paul M. Warburd have each contributed $2,500 toward the fund. The new building will be the third which has been found necessary within the past five years.

**Another Hospital Planned.**—The Federation of Russian-Polish Hebrews of America have purchased a plot of land at One Hundred and Thirteenth Street and Columbus Avenue, on which a hospital will be erected at a cost of $150,000, which will be called the Beth-David Hospital. The association is maintaining a temporary dispensary at Lexington Avenue and One Hundred and Fifteenth Street.

**Hospital Appeals for Funds.**—The Mount Sinai Hospital has issued an appeal for contributions from donors, patrons and members, which states that the expenditures of the institution are more than $440,000 a year and that annual donations and dues amount only to about $130,000. The appeal also asks for contributions toward a fund to be used for the establishment of a convalescent home in the suburbs.

**Guild Plans for Summer.**—St. John's Guild has issued an announcement that its work for the season has begun. The guild's floating hospital, the *Helen Juilliard*, will make the usual daily trips to the seaside home at New Dorp, S. I., where there are accommodations for 360 patients. Tickets are distributed, through the Department of Health, the dispensaries, day nurseries and churches, and it is said that no mother with a sick baby is ever turned away.

**Medical College Commencements.**—On June 5, the College of Physicians and Surgeons of Columbia University conferred the degree of doctor of medicine on eighty-five graduates, Dr. Nicholas Murray Butler making the address and bestowing the degrees.——The University and Bellevue Hospital Medical College on the same day graduated a class of eighty students.——The Cornell University Medical College held its commencement exercises June 7, and conferred degrees on eleven students, President Schurman of the University addressing the students and conferring the degrees.

**Typhus Now Reportable.**—The May *Bulletin* of the New York Department of Health quotes from the recently published studies of Doctors Anderson and Goldberger of the United States Public Health and Marine-Hospital Service and from the ensuing discussion which have brought out conclusively that the so-called Brill's disease is a less virulent form of typhus and that the disease is endemic in this city. The Department of Health expresses the opinion that in view of the conclusive evidence as to the true nature of Brill's disease, it would seem wise to discontinue the use of that term. In view of the fact that many physicians are not familiar with the disease the *Bulletin* describes the symptoms and course of this mild form of typhus and reminds the profession that typhus is a reportable disease.

**Personal.**—Dr. A. J. Rongy was tendered a dinner on May 25 in honor of his appointment as attending gynecologist to the Lebanon Hospital.——Dr. Charles McKinley, ambulance surgeon of the Harlem Hospital, was injured in a collision between one of the Harlem Hospital ambulances and a Third Avenue car.——Among those who have sailed for Europe during the past week are: Dr. and Mrs. Eugene W. Candidus, Brooklyn; Dr. Charles H. Jaeger, Dr. and Mrs. P. H. Williams, Dr. and Mrs. H. Holbrook Curtis, Dr. Ellsworth Elliott, Jr., and Dr. and Mrs. Frank Hartly.——Dr. W. E. Joiner, Brooklyn, who recently moved to Seattle, Wash., has been appointed surgeon of the steamship *Minnesota*, which sailed from Seattle, June 18, for Japan, China and the Philippine Islands.——Dr. Isaac S. Hirsch, New York City, sailed for Europe, May 30.

**Urge Need of New York Hospital.**—The Committee on Public Health, Hospitals and Budget of the New York Academy of Medicine has submitted an argument to the Board of Estimate and Apportionment asking that immediate action be taken in the matter of granting permission to use a site acquired some time ago for the erection of a hospital for contagious diseases in the Bronx. In 1911 the Board of Estimate and Apportionment granted an appropriation of $250,000 for the erection of such a hospital, but a protest from property holders in the vicinity has prevented carrying out the proposed plan. The argument of the committee shows that both the Willard Parker Hospital and the Kingston Avenue Hospital, Brooklyn, are overcrowded from December to May and are too far distant from the Bronx and that such a hospital will not be a menace to those residing in the vicinity.

**New Milk Station System.**—At a recent meeting of the Association of Infant Milk Stations it was proposed to change the name of the various organizations now working together for the purpose of lowering the infant mortality in this city to the Infant Welfare Association. This is to be done in order to indicate the broadened work of the organization, which proposes, in addition to distributing milk and educating mothers, to make the milk station the center for looking after every physical need of the child in the tenements, including hospital accommodations, dispensaries, nurseries, outings and ice distributing agencies. The New York Milk Committee has turned over its milk stations to the Board of Health and will devote its efforts to conducting a campaign of educational publicity. The New York Diet Kitchen Association, one of the agencies cooperating with the Infant Welfare Association, is endeavoring to raise $50,000 in order to assist with the work and has just received a contribution of $700 from one donor. Nathan Straus announces that he will open ten additional milk stations as his part in the work. All of these agencies make their work supplementary to that of the Board of Health and by this system of cooperation avoid any duplication of work.

### Buffalo

**New Officers.**—Buffalo Academy of Medicine, Section on Pathology: president, Dr. Guy L. McCutcheon; secretary, Dr. A. A. Thibaudeau.

**Money for District Nurses.**—The District Nursing Association on June 5 inaugurated a campaign to raise $16,000 for carrying on the work during the coming year.

**Superintendent Chosen for Tuberculosis Hospital.**—Dr. Otto R. Eichel, head of the Tuberculosis Division of the Buffalo Department of Health, was first on the eligible list in the examination recently held for superintendent of the J. N. Adam Memorial Hospital for Incipient Tuberculosis, Perrysburg; Dr. Clarence L. Hyde was second, and Dr. Horace LeGrass was third. The hospital expects to be ready to receive patients in the early autumn.

**Alumni Meeting.**—The thirty-seventh annual meeting of the Alumni Association of the Medical Department of the University of Buffalo was held May 31, and the following officers were elected: president, Dr. Henry C. Buswell, Buffalo; vice-presidents, Drs. William R. Palmer, Johnsonburg, Pa., John A. Stapleton, Rochester, Norman T. Bernam, Buffalo, M. J. Wilson, Warsaw, N. Y., and Julius Richter, Buffalo; secretary, Dr. D. C. McKenney, Buffalo; treasurer, Dr. W. E. Jacobs, Buffalo, and trustee, Dr. Benjamin F. Rogers, Buffalo.

**Personal.**—Dr. Frederick C. Busch has resigned as professor of physiology in the University of Buffalo to accept the position of clinician at the New York Institute for the Study of Malignant Diseases, and has been succeeded by Dr. Frederick H. Pratt.——Dr. Herbert U. Williams has been elected dean of the Medical Department of the University of Buffalo, vice Dr. Mathew D. Mann, resigned.——Dr. DeWitt H. Sherman has succeeded Dr. Eli H. Long as professor of materia medica and therapeutics in the University of Buffalo.——Dr. E. J. Meyer has been elected president of the Board of Managers of the new John H. Pryor Hospital.——Dr. John F. Fairbairn sailed for Europe, May 24.

## NORTH DAKOTA

**Personal.**—Dr. Gordon St. Clair, Glen Ullin, has been appointed a member of the staff of Shipman Hospital, Ely, Minn.——Fire in Minot, May 16, destroyed the offices of Drs. Andrew Carr and E. M. Ransom.

## PENNSYLVANIA

**Contract Awarded for Sanatorium.**—The contract for the last of the buildings at the Cresson State Tuberculosis Sanatorium has been awarded for $61,975. This contract includes twenty cottages, two bath houses, four pavilions and a stable. The institution is expected to be ready to receive patients in September. When the twenty cottages are completed the sanatorium will be able to accommodate 320 patients.

**Memorials.**—At a meeting of the Harrisburg Academy of Medicine, May 31, resolutions were adopted on the death of the late Dr. John Herr Musser, Philadelphia, an honorary fellow of the academy, and copies of the resolutions were directed to be sent to Mrs. Musser.——A memorial is also being prepared by the academy for the late Dr. William Wilson Rutherford, whose portrait was presented to the academy by his daughter some time ago.

**Hospital News.**—The Mid-Valley Hospital, Blakely, was thrown open for inspection, May 30 and 31, and is now open to receive patients. This hospital supplies the need of the thousands of miners in the district lying between Scranton and Carbondale, which has heretofore been without accommodation. The hospital has cost thus far, about $60,000 for building and equipment, all but $18,000 of which has been collected by private subscription.——Ten members of the staff of Sewickley Hospital are said to have resigned, May 30, on account of alleged mismanagement of the institution.

**Personal.**—Drs. Lawrence Litchfield and Frederick H. Rhodes have been made members of the Moral Efficiency Commission of Pittsburgh and will make a study of social conditions in the city with especial reference to vice and to suggest recommendations and remedies.——Dr. J. Donald Iams, Sheraden, has been elected president; Dr. Allan M. Kerr, vice-president, and Dr. F. B. Edmundson, secretary-treasurer of the School Medical Inspectors of Pittsburgh.——Dr. T. A. Brundage, Harford, who has been seriously ill, is reported to be convalescent.——Dr. William Kemmerer, Danielsville, is ill at his home with catarrhal pneumonia.——Dr. J. K. White, New Brighton, is critically ill with cerebral hemorrhage.——Dr. T. C. Fitzsimmons, Waymart, who has been in charge of the State Hospital for Criminal Insane, has been elected permanent medical superintendent of the Institution.——Dr. W. Rowland Davies, Scranton, was operated on for appendicitis in the Lackawanna Hospital, May 25.

### Philadelphia

**Australian Physician in Philadelphia.**—Dr. James N. Barrett, Melbourne, Australia, who is making a tour of the United States, has recently been the guest of Dr. L. Webster Fox at his home in Haverford.

**Fund for Education of Deaf.**—To raise the $250,000 necessary for the proposed Archbishop Ryan Memorial Institute for the Education of the Deaf, the president of the association has addressed a letter to every adult Roman Catholic in Philadelphia asking for a contribution of at least one day's wage or income for this charity.

**Neighborhood House to Open Roof Garden.**—The Southwark Neighborhood House at Front and Ellsworth Streets, in the heart of a most congested district, plans, if sufficient funds can be obtained, to open a roof garden as a sleeping place for ailing babies and their mothers. At present, this institution runs a day nursery on its roof, and has a modified milk station.

**Annual Outing of Physicians.**—Three hundred members of the Philadelphia Clinical Association were present at the annual outing held in Washington Park, June 13. Dr. Edward S. Saylor was in charge of the lawn tennis contest; Dr. Louis H. Jacob was in charge of the baseball game; Dr. E. K. Mitchell had charge of the bowling and shuffle-board contest, and Dr J. O. Arnold was in charge of the rifle contest.

**Personal.**—Dr. Melvin M. Franklin was given the degree of LL.D. at Villanova College, recently.——Dr. John Albert Kolmer has been awarded the Philadelphia Pediatric Society's prize of $100 for his essay entitled "Studies in Diphtheria."——Dr. John G. Clark, Robert G. LeConte, George E. de Schweintz and R. Norton Downs have sailed for Europe.——Dr. Charles Henry Liebert is reported to be seriously ill with pneumonia.

**Physical Education.**—In connection with the School of th University of Pennsylvania, a course in the theory and practice of physical education is being held at the University gymnasium. In addition to the technical subjects designed especially for the training of teachers, courses are held in the practice of elementary and advanced gymnastics, dancing an swimming. The school will be in charge of the instructor i gymnastics of the University of Pennsylvania, with associate as special instructors.

**Pier Hospitals Opened.**—Dr. Joseph S. Neff, Director of Public Health and Charities, opened the recreation piers at the foo of Chestnut and Race Streets, June 15. Many children visite the playground, but there were no patients for the hospita At the present time there is only $2,500 available for th maintenance of these hospitals, which is hardly enough to kee them open until the middle of July. Last year $5,000 wa appropriated by Councils for their use. A number of improv ments have been made in the accommodations of the Rac Street Pier, which last year had room for only thirty-seve babies, while now eighty can be accommodated.

**Small-Pox Case Causes Extensive Quarantine.**—In additi to establishing a rigid quarantine for two weeks at the Phil delphia General Hospital, the Bureau of Health, June 12, went over the route taken by Rufus Farrer, a small-pox patient admitted to the Philadelphia General Hospital. He stayed on a farm at West Chester when he complained of feeling ill, then went to the city on a trolley car, stopping at a Lombard Street house. Every patient at the hospital has been vaccinated and forty persons in the Lombard Street house also. The State Health Commissioner was also notified and has taken steps to quarantine the farm at West Chester.

**Babies' Hospital Opened.**—The Babies' Hospital, organized three years ago by physicians for the free care of infants under three years of age afflicted with enteritis, opened at Wynnefield, in Fairmount Park, June 17. This hospital is entirely independent of all other institutions and gets no support from the city, and its capacity is limited only by the extent of the private contributions. At present the capacity is about seventy-five but there is room for twice that number, were money sufficient for the care and treatment. This season several additions have been made: several portable shelters on the lawns for the use of mothers, called to the hospital when the babies need their presence; a special diet kitchen has been arranged and two trained nurses installed; a system has also been arranged under which discharged patients will be watched over by visiting nurses after they have returned to their homes. This has been done with the cooperation of Dr. Joseph S. Neff, Director of Public Health and Charities. Dr. John F. Sinclair is treasurer of the body of physicians who organized the hospital independently and contributed largely to its maintenance.

## VIRGINIA

**Bell Day a Success.**—The total receipts of "Bell Day" for the benefit of the Virginia Home for Incurables, Richmond, are said to have exceeded $3,500.

**Small-Pox in Hospital.**—Small-pox of mild type is reported to have broken out in the Southwestern State Hospital, Marion, where fifty cases have been reported.

**New Building Opened.**—The new building of the University College of Medicine, Richmond, was opened for public inspection, May 22. A tablet was also unveiled by the Confederate Memorial Literary Society, in memorial of the fact that the residence of Alexander H. Stephens, vice-president of the Confederacy, stood on the site of the college building.

**Personal.**—Dr. Ennion G. Williams, Richmond, has been reappointed State Health Commissioner of Virginia.——Dr. H Norton Mason, Richmond, has been commissioned as captain of M. C. Va. Vol., and assigned to duty with the Richmond Light Infantry Blues.——Dr. Joseph Bear has been appointed resident physician in the Memorial Hospital, Richmond.——Dr. J. J. Hulcher has resigned as ambulance surgeon at the city hospital and will practice in Richmond.

## GENERAL

**American Sanatorium Association.**—The American Sanatorium Association held its seventh spring meeting at Washington, D. C., May 29. The subjects discussed were: sanatorium nursing, sanatorium discipline, medical records, amusements and entertainments. Committee reports were presented on nomenclature, a minimum standard of clinical laboratory work and routine medical work.

**Neurologists Hold Meeting.**—At the annual meeting of the American Neurological Association held in Boston, May 30-June 1, the following officers were elected: president, Dr. Pearce Bailey, New York City; vice-presidents, Drs. Philip Zenner, Cincinnati, and J. W. Courtney, Boston; secretary-treasurer, Dr. Alfred Reginald Allen, Philadelphia (reelected), and directors of council, Drs. W. N. Bullard, Boston, Charles W. Burr and William G. Spiller, Philadelphia.

**National Society of Anesthetists.**—On June 6, at Atlantic City, during the meeting of the American Medical Association, and following a symposium on anesthesia, the National Society of Anesthetists was organized, Professor Yandell Henderson of Yale, chairman of the commission on anesthesia of the American Medical Association, occupying the chair. Those assembled for the symposium, acting as a committee of the whole, proceeded to organization and elected the following officers for the year 1912-1913: president, James T. Gwathmey, New York; vice-presidents, Charles K. Teter, Cleveland, F. H. McMeechan, Cincinnati, Yandell Henderson, New Haven; secretary, William C. Woolsey, 88 Lafayette Avenue, Brooklyn; treasurer, Harold A. Sanders, Brooklyn. The constitution and by-laws were ordered to be drawn by the executive committee and submitted for adoption to the society at its next meeting. The society calls on all those who are actively interested in this work to join its ranks, and assist in developing the subject of anesthesia to greater perfection and more uniform safety.

**Association for the Study of Epilepsy.**—The National Association for the Study of Epilepsy and the Care and Treatment of Epileptics, held its eleventh annual meeting at Vineland, N. J., in connection with that of the American Association for the Study of the Feeble-Minded. The association voted to accept the periodical *Epilepsia* as its official organ and elected the following officers: president, Mr. W. C. Graves, Chicago; vice-presidents, Drs. A. S. Priddy, Lynchburg, Va., and H. A. Weeks; secretary-treasurer, Dr. J. T. Munson, Sonyea, N. Y., and chairman of the executive committee, Dr. J. M. Murdock, Polk, Pa.

**Bequests and Donations.**—The following bequests and donations are announced:

Western Reserve University, Cleveland, has completed its endowment fund of $1,000,000 for the medical school, $250,000 of which was contributed by John D. Rockefeller.

Presbyterian Hospital, New York City, $25,000, by the will of Mrs. Bella Hiden.

Jefferson and Howard hospitals and Hospital for Diseases of the Stomach, Philadelphia, each $5,000, by the will of the Countess Clara Roberts Galli.

Hebrew Charities of Philadelphia, the income of a trust fund of $75,000, and non-Hebrew charities of the city, the income of a trust fund of $15,000, by the will of the late Samuel Kohn.

**New Honors to Colonel Gorgas.**—In presenting Col. William C. Gorgas, M.C., U. S. Army, for the honorary degree of doctor of laws at the commencement exercises of Johns Hopkins University, June 11, Dr. William H. Welch made the following remarks: "In behalf of the Academic Council I have the honor to present for the honorary degree of Doctor of Laws, Dr. William Crawford Gorgas, Colonel in the Medical Corps of the United States Army, member of the Isthmian Canal Commission and chief sanitary officer of the Isthmian Canal Zone, formerly president of the American Medical Association, physician and sanitarian of the highest eminence, who by his conquests of pestilential diseases has rendered signal service to his profession, to his country and to the world. With high administrative capacity and with full command of the resources of sanitary science Colonel Gorgas has given to the world the most complete and impressive demonstration in medical history of the accuracy and the life-saving power of our knowledge concerning the causation and mode of spread of certain dreaded epidemic and endemic diseases. He it was who, by application of the discoveries of Major Reed and his colleagues of the Army Yellow Fever Commission, was mainly instrumental in freeing Cuba of yellow fever, and he it is who, in spite of obstacles and embarrassments, has made the construction of the Isthmian Canal possible without serious loss of life or incapacity from disease—a triumph of preventive medicine not surpassed in importance and significance by the achievements of the engineer. In the conquest of science over disease, in the saving of untold thousands of human lives and human treasure, in the protection of our shores from the once ever-threatening scourge of yellow fever, in the reclamation to civilization of tropical lands—in results such as these are to be found the monuments of our laureate, his victories of peace, to which this university now pays tribute by such honor as it can bestow."

## FOREIGN

**International Congress of Comparative Pathology.**—The first international congress of this kind is to convene at Paris, October 17 to 23 of this year. M. Grollet, rue Villejust 42, Paris, France, is the secretary general.

**Other Deaths Abroad.**—In addition to those mentioned elsewhere, the profession has lost recently Dr. E. Lambotte, aged 56, professor of surgery at the university of Brussels and former president of the Société Médico-Chirurgicale du Brabant, member of the board of health of his province, leader in the organization of the profession in Belgium, and honorary member of the English College of Surgeons. Oxford also conferred an honorary degree on him. He was a pioneer in several lines of surgical work. His friends claim the priority for him of the button for entero-anastomosis (*Annales de la Société Médico-Chirurgicale du Brabant*, 1888), radical treatment of gastric ulcer (1894), intravesical segregation of the urine, and insufflation of the lungs (1904).——Dr. J. J. Petersen, professor of history of medicine at the university of Copenhagen, and author of important historical works, has died, aged 71.

## LONDON LETTER

*(From Our Regular Correspondent)*

London, June 1, 1912.

### Extension of the London School of Tropical Medicine

The importance of the work done by the London School of Tropical Medicine has been shown from time to time in previous letters to The Journal. As the school and hospital have now become too small for the increasing demands made on them, it has been decided to extend them. For this purpose $500,000 will be required and its collection has been begun. The laboratory accommodation will be increased so as to provide room for 100 students; at present the capacity is only for fifty-five. Fifteen more bedrooms will also be provided for students. The $500,000 will be distributed under four heads: endowment, new buildings, research and the provision of a nursing home for patients suffering from tropical diseases. There is a large number of government officers, clerks, foremen, etc., who require treatment for tropical disease by specialists, but are unable to pay the fees of an ordinary nursing home. Eight beds are at present available for this class of patients but they are insufficient. The charges will vary from $5 to $15 a week according to the patient's means. A munificent bequest of $50,000 by Lord Wandsworth for medical research has been allocated by his trustee for research in tropical medicine. It will take the form of a research scholarship in tropical medicine which will be administered by the London School of Tropical Medicine. Under the terms of the trust a preference is to be shown to British subjects. The tenure is to be for two years with a year's possible extension. Failing a suitable candidate the school committee may use the current revenue of the scholarship for forwarding some definite object of research in tropical medicine. The scholar is to present a report of his work annually, not later than two months after the expiration of each year of his holding the scholarship. In the event of his proving unsatisfactory his holding of the scholarship will be terminated.

### Foundation of a Research Hospital at Cambridge

Some five years ago a committee of some of the leaders of the profession—Sir Clifford Allbutt, Sir William Osler, Sir Jonathan Hutchinson, Sir Victor Horsley and others—was formed for the study of special diseases. The object was to investigate maladies which, although not immediately fatal to life, incapacitate the sufferer from active work and which in consequence of their chronicity cannot be treated for long periods and sufficiently investigated in general hospitals. The first disease taken up was rheumatoid arthritis. A house in Cambridge was used as a small hospital in which the most modern equipment was provided for investigation, and in which sufferers from the disease were treated. Already some 4,000 cases of rheumatoid arthritis have been carefully recorded, observed, photographed and chemically analyzed. A small hospital called The Research Hospital has now been built and thoroughly equipped. It has been opened by Dr. R. C. Brown, of Preston, to whose munificence it is largely due. It is in the Georgian style and is delightfully situated at a little distance from the town. On the ground floor is a consulting-room and library, three research rooms, *x*-ray apparatus and dark room. On the first floor are four wards, balconies for the patients, sisters' room, bath-rooms, etc.

### Action of a Clerk Against His Employers on the Allegation That He Contracted Tuberculosis in an Insanitary Office

A curious and apparently unprecedented case has been tried, in which a clerk sued his employers for damages, alleging that he had contracted phthisis through their neglect to provide proper accommodation in the room in which he worked, or, in the alternative, through allowing the room to be overcrowded. He had been employed in a large store since 1900. He worked for five years in the trading office and was then transferred to the deposit office, a room 8 feet high with a calculated cubic space of 166 cubic feet for each clerk. There was one window and about fifty clerks were engaged in the room at the same time. It was alleged that the office was dangerous to health and a nuisance, within the meaning of the Public Health Act. On the other hand, the employers maintained that they were under no duty to provide any particular kind of accommodation for their clerks. They further alleged that even if the accommodation was disagreeable or unsuitable the plaintiff was under no obligation to remain in their service. Dr. Leonard Hill gave evidence to the effect that the ventilation and general conditions of the room were satisfactory and that the contraction of phthisis by the plaintiff was not due to any neglect on the part of the defendant. The judge after summing up put the following questions to the jury which were answered as indicated: 1. Were the conditions of the office injurious to the health of the persons employed in it? Yes. 2. Were they so to the knowledge of the defendants? No. 3. Was the office so overcrowded as to be injurious or dangerous to the health of the inmates? Yes. 4. Was the plaintiff in consequence of the conditions prevailing in the office disabled from following his employment? No. 5. Did the plaintiff agree to incur the risk of continuing his employment in the office? Yes. On these findings judgment was given for the defendants.

### The Tropical Diseases Bureau

The reports of the Sleeping-Sickness Bureau, established by the government for the purpose of collecting and diffusing information on this deadly disease, have been referred to from time to time in The Journal. It originated in the International Conference on Sleeping-Sickness held in London in 1907 and again in 1908 to concert measures for the control of the disease, which was spreading rapidly in tropical Africa. The bureau has performed most useful work. It has issued thirty-six numbers of a bulletin, containing an account of current work in the field and laboratory on sleeping-sickness and other diseases due to trypanosomes, maps of the distribution of sleeping-sickness and the tsetse flies, an exhaustive bibliography, a popular pamphlet on the means of prevention of sleeping-sickness, and more recently, bulletins on kala-azar. These publications have had a wide circulation. Of the monthly bulletin 1,100 copies are issued, of which about half go to Africa. The bureau has gradually collected a library containing 360 volumes and 1,500 pamphlets, most of which relate to trypanosome diseases. It has initiated the despatch of several expeditions to investigate sleeping-sickness in tropical Africa and has supplied information to many inquirers. It soon became evident that what was being done for sleeping-sickness could be done for tropical diseases generally. Physicians in the tropics are unable to consult the numerous papers published in many languages all over the world. Even in London few have time to read, much less digest, the vast mass of new literature on tropical diseases. Arrangements have now been made to expand the bureau, which in future will be known as the Tropical Diseases Bureau. This will entail increased expenditure, the funds for which will be found by the imperial government, the Indian government, the Sudan government, the Union of South Africa, Ceylon, the Federated Malay States, Southern Nigeria, the Gold Coast, Sierra Leone, the Gambia, Fiji, Trinidad and Jamaica. The annual available sum is approximately $15,000. The bureau will deal with all exotic diseases prevalent in tropical and subtropical regions and will publish at frequent intervals a tropical diseases bulletin. The director will have the help of an assistant director and a number of experts, who will be responsible for the different subjects and will furnish for the bulletin authoritative reviews and summaries of published papers. Thus the most recent researches on every tropical disease in every country, new methods of treatment, improved means of prevention will quickly become available for the remote worker in the tropics. The tropical diseases of animals will be treated in a separate publication. The committee includes such well-known authorities as Sir Patrick Manson, Sir David Bruce, Sir William Leishman and Sir J. Rose Bradford. Veterinary science will be represented by Sir John Macfadyean and Mr. Stewart Stockman. The bulletin will be supplied free to medical and veterinary officers of India and the subscribing colonies; to others it will be sold. The present library in which current files of all the journals of tropical medicine are to be found forms the nucleus of a good tropical diseases library. It is expected to grow rapidly and to become of great value to medical officers home on leave from the tropics.

### The Care of the Feeble-Minded

Though ample legislation exists with regard to the insane the feeble-minded whose mental condition is not so bad as t warrant certification for detention in an asylum have receive little attention from the state. A bill on the subject has now been introduced by the government. It is estimated that in England and Wales, with a population of 32,500,000, there are about 150,000 mentally defective persons, apart from certifie lunatics. Of these, nearly one half are urgently in need o provision, either in their own interests or for the public safety There are numbers of mentally defective persons whose training is neglected, over whom no sufficient control is exerted an whose wayward and irresponsible lives are productive of crime injury to themselves and others and of expenditure wasteful t the community and to individual families. In some localities a "permissive" system of public education is available for a limited section of mentally defective children, but is supplemented by no subsequent provision or control and is consequently often misdirected and unserviceable. Many are committed to prisons for repeated offenses, which, being the manifestations of a permanent defect of mind, there is no hope of repressing. A royal commission was appointed in 1904 to investigate the problem of the feeble-minded, and reported in 1908. It suggested the creation of a system by which the mentally defective should at an early age be brought into touch with some friendly authority, trained and, as far as need be, supervised during their lives, in cooperation with their relatives, when that is to their advantage, or, when desirable, detained and treated in some measure as wards of the state. The problem has received a good deal of public attention and such associations as the Charity Organization Society and the Eugenics Education Society have been active in the dissemination of knowledge and the suggestion of remedies. The bill mentioned above sets up a body of commissioners (not to exceed six, of whom one at least must be a woman) to be a central authority for the control of the feeble-minded. They will coordinate and supervise the administration of local authorities, certify, supervise and inspect institutions for defectives and provide institutions for defectives of criminal propensities. The local authorities will be under an obligation to deal with all defectives in their districts. Possibly, in the future, the lunacy department may be amalgamated with the board of commissioners now set up, so that there will be but one central authority for all forms of mental derangement. It is not proposed to interfere with the feeble-minded who are properly cared for in their own homes, but with the following classes: (1) those who are found wandering about neglected or cruelly treated; (2) those who commit crimes; (3) those who are habitual drunkards; (4) children discharged at the age of sixteen from schools for detectives; (5) those who in the interests of the community should be deprived of the opportunity of procreation. The following are deemed to be defectives within the meaning of the act: (a) idiots, i. e., persons so defective from birth or an early age that they cannot guard themselves against common physical dangers; (b) imbeciles, i. e., persons who can guard themselves against physical dangers, but who are rendered incapable of earning their living by congenital mental defect; (c) feeble-minded persons, i. e., those who are capable of earning their living under favorable circumstances but incapable of competing with their fellows or of managing their affairs with ordinary prudence; (d) moral imbeciles, i. e., persons who from an early age display some mental defect coupled with vicious or criminal propensities on which punishment has little or no deterrent effect; (e) mentally infirm persons, i. e., those who through mental infirmity arising from age or the decay of their faculties are incapable of managing themselves or their affairs.

## PARIS LETTER

*(From Our Regular Correspondent)*

Paris, May 31, 1912.

### Statistics on the French Population in 1911

The *Journal Officiel* has recently published very discouraging statistics on the French population in 1911. In 1911, there was an excess of 34,869 deaths while the year before there was an excess of 71,418 births. This difference is due, on one side, to the diminution of births (742,114 infants reported living in 1911 against 774,390 in 1910) and, on the other side, to the increase in the number of deaths (74,011 greater in 1911 than in 1910). The deaths have been more numerous in 1911 than in 1910 in almost all the departments. In proportion to the population, the Norman departments, as in the preceding years, furnished the greatest mortality. The notable increase in the proportional number of deaths in France as compared with many other countries is because France is one of the countries in which there are the greatest number of aged people and chiefly because of the small birth-rate of recent years.

Although the birth-rate is low, France is among the countries in which the number of marriages is relatively large. In 1911, 307,788 marriages were registered. The constantly increasing number of divorces reached 13,058, slightly more than in 1910.

The birth-rate is low in many countries at the present time, but in no country is it so low as in France. Among the many measures suggested to check this increasing depopulation, the most recent is the proposal which M. Messimy, former minister of war, has made to the bureau of the chamber of deputies. M. Messimy believes that a premium at the birth of every child born of the same mother, reckoning from the fourth, would increase the number of births. This premium would be $100 (500 francs) of which one-half would be paid to the mother at the birth of the child and the other half deposited in the national pay-office for pensions, in order to insure her an income from it during life. The mother could, however, collect the sum at once, or devote it to assure her self a subsequent pension, which, in this case, would naturally be much greater. In order to meet the expenses which the premium of 500 francs or subsequent annual income would involve, M. Messimy proposes either to resort, entirely or partially, to the regular budget-resources or to place a special tax on bachelors as well as on heads of families without children or having only one child.

### The Abuse of Flour as a Food for Infants

In the meeting of the *Academie de Médecine*, May 28, Dr. Rosseau-Saint-Phillippe, physician of the hospitals of Bordeaux, urged the necessity of prolonging breast-nursing and the artificial bottle-nursing. The addition of flour, with which the new feeding is started, should be made at the proper time, with moderation and with prudence. These flours are not, indeed, without some inconvenience; they ferment, and therapeutic artifices become expedient to aid their digestion and absorption. The chief danger of flour-foods, used unseasonably and improperly, is constipation. It would be desirable if flour intended as a food for infants were prepared aseptically and kept in cases with daily amounts measured out. The normal growth and health of the child is not proved by scales and weight alone. There are other important points which the physician alone can interpret; also the bringing-up of the child, to whatever class he belongs, ought to be entirely in the hands of the physician. The tendency of many parents to "push" the child's weight should be counteracted. The most healthy child is not the one who eats the most, but the one who eats the best. On the whole, the second alimentation of infancy, possibly less dangerous than the first, is no less important, and the child of from one to two years should be watched and directed almost as carefully as the infant from one day to a year.

### Instruction in Medical Ethics

The Congrès des praticiens, held at Paris and at Lille, has voted that instruction in deontology be requested in all the medical colleges and schools. Up to the present time this has remained a dead letter. But Dr. Lacassagne, professor of forensic medicine in the Faculté de médecine de Lyon, has recently published the outline of a course in deontology in twelve lectures which he will give very soon. The first lecture will be devoted to the duties of physicians toward society; the recent social laws (assistance for the aged, the infirm and the incurable; inspection of children receiving charitable protection and assistance; societies of mutual aid; free choice of the physician; fees for visits, subscriptions, contract). The second lecture will treat of the duties of the physicians and medical students toward the sick (visits, consultations and operations). The subsequent lectures will deal with medical secrecy; the duties of physicians toward their confrères and their relations with dentists, pharmacists, midwives, nurses and assistants; the rights of physicians; the methods of defense and protection of physicians (medical syndicates, etc.).

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, May 31, 1912.

### Personal

Professor Dürck, until a short time ago director of the pathologic institute at Jena and for the last few months prosector of the pathologic institute of a municipal hospital in Munich, has assumed the direction of the pathologic institute at Rio de Janeiro.

### The Emperor's Fresh-Air Home for Poor Children

In his effort to give evidence of his patriotic care for the lower classes, especially the laborers, the emperor recently decreed that a convalescent home *(Erholungsheim)* for needy children of the working classes should be erected on the coast of the Baltic Sea. The daughter of the mayor of Berlin, who has done excellent service in philanthropy, has undertaken the establishment of the home. In all, three buildings are to be erected, each of which will accommodate fifty children. It is planned to care for about 800 children in the home yearly. (A cabled despatch in the newspapers states that although the emperor is interested in many charities, this is the first enterprise for children in which he has taken the entire initiative and provided all the funds from his own private purse.)

### Exposition of Hygiene at Stuttgart

The authorities at Stuttgart are planning to have an exposition of hygiene in 1914, and have selected for the preparation and conduct of the exposition Dr. Ingelfinger, the creator of the popular department "Der Mensch" (Man) at the Dresden International hygiene exposition which excited great interest.

### Association of Specialists in Digestive and Metabolic Diseases

May 27 a meeting for organization of specialists in digestive and metabolic diseases was held at Hamburg, in which seventy German specialists participated. It was determined to hold such meetings yearly but it was expressly stated that no separation from the congress for internal medicine is intended. Ewald of Berlin, Schmidt of Halle, Boas of Berlin, Weintraud of Wiesbaden, Starck of Carlsruhe and Pariser of Homburg were selected as the first executive committee. The first scientific meeting is to be held after the annual session of the association of scientists *(Naturforscherkongress)* in September, 1913, at Homburg, and will continue two days. Two main addresses from the field of pathology of metabolism in diseases of digestion were provided for.

### Memorial for Robert Koch at Tokyo

A memorial service for Robert Koch was recently held at Tokyo. In the ceremony, which took place in the temple dedicated in honor of Koch by Kitasato, and which conformed to the Shinto ritual, the widow of Koch, the German ambassador, and many scientists participated. (Shintoism is the primitive cult of the Japanese, and in its essence is a species of ancestor-worship.)

### Influence of Housing Conditions on the Origin of Rickets

At the May meeting of the Society of Social Medicine, a Berlin physician, Dr. G. Levy, made some statements regarding the relations between overcrowding and rickets, which are of interest. Among 1,000 children investigated by the speaker, a family of three to eight persons occupied a single room as living and sleeping room and kitchen in fifty-one cases, while in thirty-five cases three to twelve persons lived in two rooms, of which one was also used as the kitchen; in 532 cases, from two to ten persons occupied an apartment of two rooms, one of which was used solely as the kitchen, and in 350 cases from two to thirteen persons lived in apartments of two rooms and a kitchen. He concludes from his statistics that the frequency and severity of rickets increases in proportion to the number of persons occupying the rooms. It is, therefore, he asserted, the serious duty of the state to regulate by legal means the hygiene of dwellings by obligatory inspection of dwellings, in view of the insufficient care exercised in this matter, and in view of the important relations between overcrowding and development not only of rickets, but also of tuberculosis and with infant mortality. Levy declared that, judging from the experience gained in the oversight of tuberculosis, women would seem to be especially well suited for the inspection of dwellings, since they can exercise a skilled oversight over the hygiene of the home and can exert a better influence on the housewife. The national health insurance societies should also, he said, be required to provide funds for the building of sanitary small dwellings at a moderate rate of interest.

In the very lively discussion which followed this paper, the majority sustained the speaker in his position regarding the relation of housing conditions and rachitis, but others took the stand that this disease depends more on heredity and a certain constitutional taint than on bad housing conditions.

## VIENNA LETTER

*(From Our Regular Correspondent)*

Vienna, May 31, 1912.

### Definition of Medical Practice

As no valid law in this country strictly defines the meaning of medical practice, thus giving free rein to quackery in a high degree, the Union of Medical Councils (Aertztekammertag) has adopted the following definition, which is being suggested to the government as covering the problem and which will appear in the "Health Act" now in consideration: "Medical practice in the meaning of the law is every act which requires the possession of a medical diploma of doctor of medicine. It comprises not only the art of healing, i. e., the application of the results of medical science on the human body by a doctor of medicine, but also all the doings of a medical expert, the prophylactic actions of medical men for the purpose of prevention of disease, the teaching of medical science (anatomy, physiology), the opening and the embalming of dead bodies, the experiments of bacteriologic chemistry and on living bodies as well as vivisection and animal experimentation for the purpose of ascertaining a diagnosis, and the writing of medical books." The ministry will have to decide, in cooperation with the board of health and the medical councils, in case any other action or dealings should in the future be considered doubtful in its nature, whether such dealing belongs to the realm of medical practice. Laymen will be permitted to perform medical acts only in exceptional cases and then only under the supervision and responsibility of medical men; but in urgent cases—*periculum in mora*—in which medical help is needed at once, a layman may do medical acts.

### Foot-and-Mouth Disease in Austria Extinct

The public was informed recently, by a report of the ministry of agriculture, that an epidemic of foot-and-mouth disease, which raged in this country for over two years, has been finally suppressed. More than 30 per cent. of all the cattle had been affected and the mortality was high. Another disagreeable feature was the necessity of quarantining all the cattle where a case had appeared. Therefore, the largest part of the Austrian and also the Hungarian cattle had to be declared unfit for human use. The result was a scarcity of meat with the usual rise of prices, as the existing laws do not permit the importation of living cattle or meat. In previous letters it has been stated that this was one of the reasons responsible for the falling rate of meat consumption (per head) in Vienna. In spite of the extent of the epidemic among cattle, only very few instances of human mouth-and-foot disease were observed. In those cases in which diagnosis was verified, preferably by the opinion of experienced veterinary surgeons, the symptoms were general malaise, with eruptions on the mucous membranes of the mouth and upper digestive tract, and pyrexia, lasting from five to twelve days. Rashes and vesiculæ on the hands, fingers and forearms, sometimes also a general erythema were seen usually after the fourth day. In some cases consumption of milk and butter from infected dairies could be proved, although it could not be stated positively that this was the only method of infection in these instances. No death among human patients was due to this disease, although the illness at times was very severe.

### Hypnotic Experiments in Court

Recently two criminal cases were heard in the Vienna chief court of justice, in which the accused persons pleaded "not guilty," for they pretended to have acted under the hypnotic influence of unknown persons. In the course of hearing, the counsel for the accused in the first case asked the medical attendant of this man to show the court how susceptible the accused was to hypnotic experiments. Dr. Weiner, a specialist in neurology and psychology, forthwith hypnotized the man and, to the amazement and horror of the lay audience, the prisoner, a man charged with forgery of documents relating to his alleged nobility, proceeded to do whatever he was bidden by the doctor. The experiment was quickly discontinued and the physicians of the court declared that the prisoner was not really under hypnotic influence, for some cardinal points of this condition were not present. In another case, when a man had set on fire the wood-store of a larg railway company a few months ago and thus nearly burned a whole district of Vienna, the accused also pleaded hypnotic unconsciousness. It appeared that years ago he had really been hypnotized several times by a man who held publi exhibitions, and that the prisoner had done all sorts of strang things when under the influence of any will stronger than his own. The hypnotic experiments to which he had been subjected were also narrated to the court, but no experiment wa made as the court disapproved of it. In both instances, however, judgment was given against the accused persons, as th judges were satisfied that the offenses were committed by th prisoners of their own accord. Much discussion followed th occurrences and among physicians the possibility of hypnoti crimes was admitted. The general opinion among lawyers i not yet favorable to this admission. But once doubt has bee aroused, it may be safely assumed that the problem will nc be allowed to rest until it is settled.

## Miscellany

**Diagnosis of Gastric Cancer.**—The conclusions of C. Klieneberger's monograph on this subject are rather pessimistic (*Sammlung klinischer Vorträge*, Nos. 652-3). He says that an early diagnosis is usually out of the question at present; gastroscopy and serology still fail us. The patients come to the surgeon generally with the cancer in an advanced stage after a long latent period or after they have long been under treatment on a mistaken diagnosis. An exploratory laparotomy, not for diagnosis but to determine the best technic for removal of the growth, offers, he declares, the best prospects for a cure to date. Even at the best, however, the mortality of an exploratory laparotomy is still 4 per cent.; the mortality of resection—the only radical operation—ranges from 15 to 40 per cent., and the operative mortality of a palliative gastroenterostomy is still higher. Only from a tenth to a third of those who survive the operation have a chance of escaping recurrence, although the operation permits a somewhat longer survival. Klieneberger's own experience includes 421 cases of gastric cancer. The average age of the male patients was 51½ and of the women 49¾, but thirty-eight men and ten women were under 40. One woman of 28 and four men between 25 and 29 had inoperable gastric cancer. Trauma seemed to have been a factor in six cases and in eighteen one parent had had cancer and in ten cases a brother or sister, thus showing a hereditary tendency in 6⅔ per cent. In 6 per cent. there was a history of old hemorrhage suggesting an ulcer, and in 16 per cent. the patients had been treated for stomach disturbances, pains, vomiting, etc., or a "weak stomach." None of the new tests for cancer is absolutely reliable, but in connection with other findings may prove instructive, examining the stools for occult blood, applying also the Salomon test, roentgenoscopy, analyzing the formed elements in the blood and examining the urine and stomach content. A palpable tumor is not a contraindication to operative measures except that tumors in the lesser curvature offer less favorable prospects. In dubious cases fluctuation in the temperature may point to a gastric cancer. The temperature ranged above normal at times in 195 of his cases. Glandular metastasis was evident in 8 per cent. and metastasis elsewhere, in rectum, skin, pleura or peritoneum, in 25 per cent. A tumor was evident in over 50 per cent. of the total cases. In only 41 cases did an operation offer a chance for success, and resection was done in seven of these; two patients died soon after the operation and three had recurrence after eighteen months; two are still in good health to date (over a year).

**Treatment of Acute Effusion in the Knee.**—Kendirdjy has applied in seven cases the method which Willems found so successful in thirty-four cases of traumatic hemarthrosis or acute hydrarthrosis. The knee is painted with iodin and the fluid is withdrawn by puncture under local anesthesia of the spot where the needle is to be inserted. The puncture hole is painted anew with iodin and a light protecting dressing applied and the patient gets up from the table and begins to walk at once. He is instructed to exercise the joint, walking half an hour the first day and lengthening the walks each day, with exercises to work the triceps and prevent atrophy of it. Massage may also be useful as an adjuvant. In one case the patient was not seen until the fifth day after the hemarthrosis had developed, and although perfect function was restored yet the triceps a month later showed a little atrophy. Kendirdjy's article on the subject was published in the *Presse Médicale Belge*, 1912, lxiv, 315.

**No One Can Be Compelled to Submit to an Operation.**—A workman at Basel, Switzerland, was incapacitated by an industrial accident and the court awarded him the usual proportional pension. The proprietor of the industrial establishment appealed the case, presenting expert testimony that a certain operation would cure the man and restore his earning capacity, but the workman would not consent to the operation. The upper court recently decided that no one can be compelled to submit to an operation.

## Marriages

James R. Wattleworth, M.D., Yale, Ill., to Miss Emma Lincoln, of Oblong, Ill., at Effingham, Ill., May 22.

Everett Aldrich Gladman, M.D., Fulton, N. Y., to Miss Ellen M. Emerick, of Syracuse, N. Y., May 22.

Charles Paul Snyder, M.D., Titusville, Pa., to Miss Adelaide Poole Bailey, of Philadelphia, June 5.

Warren Walker, M.D., Philadelphia, to Miss Helen Corbit Perot, of Germantown, Philadelphia, June 4.

Horace E. Crockett, M.D., Los Angeles, Cal., to Miss Katherine Cahill, of St. Louis, Mo., recently.

Norman B. Reeser, M.D., to Miss Carry A. Gochnauer, both of Camp Hill, Pa., at Baltimore, May 30.

Elliott Calendar DuMars, M.D., Peoria, Ill., to Miss Edith Woods, of Grand Rapids, Mich., June 5.

Earl M. Smith, M.D., Danvers, Mass., to Miss Abbie M. Hartley, of Amsterdam, N. Y., June 5

James Robert Care, M.D., Norristown, Pa., to Mrs. Florence K. Meyer, of Overbrook, Pa., June 6.

Paul F. Pershing, M.D., to Miss Myra Mock, both of Altoona, Pa., at Pittsburgh, May 21.

J. Forrest Burnham, M.D., to Miss Mattie Belle James, both of Lawrence, Mass., June 9.

Ernest Arthur Dale, M.D., to Miss Edna Beatrice Johnson, both of Danville, Ill., June 2.

John W. Oden, M.D., to Miss Martha Grady, both of Blackshear, Ga., in November last.

Aloysius S. McNerney, M.D., to Miss Carlyn Phister, both of Philadelphia, June 4.

Glen E. Wright, M.D., Chicago, to Miss Ella Kelly, of Flushing, N. Y., June 8.

Lidia B. Russell, M.D., Denver, and C. A. Appegarde, in Golden, Colo., May 29.

Harold Neuhof, M.D., to Miss Olga Goldsmith, both of New York City, June 4.

## Deaths

**John L. Short, M.D.** University Medical College of Kansas City, Mo., 1885; formerly professor of physiology, ophthalmology, and otology in Columbia Medical College, Kansas City; a member of the thirty-eighth General Assembly of Missouri; physician and surgeon in charge of the Grace Hospital and Retreat for Women, and the Versailles Eye, Ear, Nose and Throat Dispensary; died in the Flint (Mich.) Sanitarium, recently, as the result of injuries received in a runaway accident six years ago.

**John Arthur Irwin, M.D.** University of Dublin, Ireland, 1875; M.R.C.S., England, 1876; fellow of the London Obstetrical Society and member of the British Medical Association; a fellow of the New York Academy of Medicine; a surgeon of volunteers during the Spanish-American War; formerly president of the British Schools and Universities Society; died at his home in New York City, June 1, from cirrhosis of the liver, aged 58.

**Samuel Shaw Stewart, M.D.** Jefferson Medical College, 1861; for more than a half century a practitioner of Allegheny County, Pa.: assistant surgeon of the One Hundred and Twenty-Third, and surgeon of the Fifty-Sixth Pennsylvania Volunteer Infantry during the Civil War; formerly a member and officer of the Medical Society of the State of Pennsylvania; died at his home in Edgewood Park, May 29, aged 81.

**LeRoy Wendell King, M.D.** University of Michigan, Ann Arbor, 1899; of Lowville, N. Y.; a member of the American Medical Association and president of the Lewis County (N. Y.) Medical Society; who was operated on for appendicitis at the City Hospital, Watertown, four weeks ago; died in the Ogdensburg State Hospital, May 29, aged 37.

**George H. Strowbridge, M.D.** University of Oregon, Portland, 1897; formerly a member of the city council of Portland, and surgeon of an army transport between San Francisco and Manila during the Spanish-American War; died at his home in Portland, May 31, from cerebral hemorrhage, aged 45.

**Joseph Foster, M.D.** University of Michigan, Ann Arbor, 1894; of Lansing; lecturer and demonstrator in the Eye, Ear, Nose and Throat Department of his alma mater; oculist to the Lansing City Hospital; oculist and aurist for the Michigan school for the Blind and the Michigan State Industrial School for Boys; died in Harper Hospital, Detroit, June 2, from pneumonia, aged 53.

**Harry Ross Coover, M.D.** Jefferson Medical College, 1886: of Harrisburg; a member of the Medical Society of the State of Pennsylvania; physician and coroner of Dauphin County and chairman of the legislative committee of the State Coroners' Association; died in the Harrisburg Hospital, June 3, from intestinal obstruction, aged 51.

**Israel Bedell, M.D.** New York University, New York City, 1863; assistant surgeon of the Sixth Ohio Volunteer Infantry throughout the Civil War; from 1880 to 1897 a practitioner of Nebraska City, Neb.; died at his home in Wheeling, W. Va., May 28, from cerebral hemorrhage, aged 78.

**William M. Gay, M.D.** Southern Medical College, Atlanta, Ga., 1881; a member of the Medical Association of the State of Alabama; formerly president of the Chambers County Medical Society and health officer of Chambers County; died at his home in Talladega, May 25, aged 65

**John W. Hoyt, M.D.** Eclectic Medical Institute, Cincinnati, 1851; formerly professor of chemistry and medical jurisprudence in his alma mater, and governor of the Territory of Wyoming; died at the home of his son in Chevy Chase, Md., May 23, from senile debility, aged 81.

**William H. Olds, M.D.** University of California, San Francisco, 1881; a member of the Medical Society of the State of California and a pioneer practitioner of Spokane, Wash.; was shot and instantly killed by his wife, at his home in Spokane, May 28, aged 54.

**Albert F. McVety, M.D.** Queens University, Kingston, Ont., 1886; M.R.C.S. England, 1887; a member of the American Medical Association and College of Physicians and Surgeons of Ontario; died at his home in Toledo, Ohio, June 9, from acute gastritis, aged 58.

**James Thomas Boyd, M.D.** Starling Medical College, Columbus, Ohio, 1849; professor in a medical college in St. Louis from 1879 to 1885 and since that time a practitioner of Indianapolis; died at his home, May 21, from senile debility, aged 89.

**Abraham Feingold, M.D.** University and Bellevue Hospital Medical College, New York City, 1911; house surgeon in St. Marks Hospital, New York City; died in that institution, May 19, from meningitis complicating typhoid fever, aged 22.

**Charles Fuller Leslie, M.D.** Medical School of Maine, Brunswick, 1874; a member of the American Medical Association; for many years a prominent practitioner of Kansas; died at his home in Clyde, June 1, from heart disease, aged 65.

**Edwin L. Wood, M.D.** University of Buffalo, N. Y., 1888; a member of the American Medical Association; for several years a member of the staff of the Jackson Sanitarium, Dansville, N. Y.; died in Beausoil, France, June 2, aged 51.

**John Fife, M.D.** New York University, New York City, 1882; a member of the American Medical Association, and since his graduation a practitioner of Red Bluff, Cal.; died at his home, May 30, from hemorrhage of the stomach, aged 62.

**William A. Beirnger, M.D.** Rush Medical College, 1900; a member of the American Medical Association; assistant to the chair of laryngology in the Chicago Policlinic; died at his home in Chicago, June 3, aged 40.

**William T. Campbell, M.D.** Saginaw Valley Medical College, Saginaw, Mich.; formerly a clergyman of the United Presbyterian Church; died at his home in Rushville, Ind., April 10, aged 75.

**Charles T. Orner, M.D.** Jefferson Medical College, 1867; a member of the American Medical Association; died at his home in Bloomington, Ill., April 26, aged 65.

**Joseph C. Bonzinger, M.D.** University of Maryland, Baltimore, 1863; died at his home in Baltimore, May 4, from heart disease, aged 68.

**Carey Fenton Marshall, M.D.** New York University, New York City, 1879; died at his home in Lynn, Mass., May 31, aged 57.

**Andrew Stephen Shorb, M.D.** Pulte Medical College, Cincinnati, 1879; died at his home in Los Angeles, Cal., May 20.

**Alfred Richmond, M.D.** Detroit Medical College, 1872; died at his home in Claremont, Cal., recently, aged 68.

**Thurman L. Wagner, M.D.** College of Physicians and Surgeons, Chicago, 1903; of St. Louis; an $x$-ray specialist; died in Wabash, Ind., May 28, from malignant disease, believed to have been due to prolonged exposure to the $x$-ray, aged 35.

**Francesco G. Calivia, M.D.** Eclectic Medical College of the State of New York, 1911; of New York City, who was shot by an unknown assassin in the hallway of his home, May 22, died in the Gouverneur Hospital, May 23, aged 24.

**John Marks Stewart, M.D.** Queens University, Kingston, Ont., 1882; a member of the town council of Chesley, Ont., from 1887 to 1897 and reeve from 1897 to 1902; died at his home May 25, from heart disease, aged 53.

**Andrew Harper Caldwell, M.D.** University of Virginia, Charlottesville, 1909; of Hot Springs, Ark.; died in the Presbyterian Hospital, Memphis, Tenn., May 17, after an operation for appendicitis, aged 28.

**Asher S. Bender, M.D.** Medico-Chirurgical College of Philadelphia, 1899; was found dead in his office in Charleroi, Pa., May 31, it is believed from the effects of poison, self-administered, aged 34.

**Thomas Blackstone, M.D.** Bellevue Hospital Medical College, 1873; a member of the American Medical Association, and a trustee of the Ohio University; died at his home in Circleville, June 5, aged 64.

**Frederick E. Rabe, M.D.** New York Homeopathic Medical College, New York City, 1883; a member of the New York Pathological Society; died at his home in New York City, May 21, aged 58.

**John H. Miller, M.D.** Jefferson Medical College, 1842; who was in active practice in Missouri and Colorado until 1900; died at his home in Littleton, Colo., June 1, from pneumonia, aged 92.

**James L. Stewart, M.D.** University of Arkansas, Little Rock, 1895; a member of the Arkansas Medical Society; died at his home in Spadra, May 26, from abscess of the lung, aged 56.

**John Smallbrook Howkins, M.D.** University of Maryland, Baltimore, 1897; a member of the American Medical Association; died at his home in Savannah, Ga., May 25, aged 54.

**George J. Friedrichs, M.D.** Tulane University, New Orleans, 1883; a dentist and practitioner of New Orleans; was killed in a street-car accident in that city, May 31, aged 82.

**Rudolphus A. Sloan** (license, Tenn., 1889); surgeon in the Confederate service during the Civil War; died in his home at Chattanooga, May 28, from nephritis, aged 81.

**Fletcher Gilpin, M.D.** Jefferson Medical College, 1866; of Newfoundland, Pa.; died at the home of his daughter in Westfield, N. J., May 29, from nephritis, aged 69.

**Charles E. Quire, M.D.** Rush Medical College, 1870; and since that time a practitioner of Lynnville, Ia.; died at his home in that place, May 25, aged 69.

**John Wright Ostrander, M.D.** College of Physicians and Surgeons, New York City, 1866; died at his home in Brooklyn May 22, from heart disease, aged 68.

**Mary Pile Silver** (license, Utah, five years of practice 1894); a prominent Mormon practitioner of Salt Lake City died at her home, May 11, aged 77.

**Thomas Dunn McConnell, M.D.** Miami Medical College. Cincinnati, 1883; burgess of Prospect, Pa.; died at his home i that place, June 2, aged 57.

**Aquilla Nebeker, M.D.** Eclectic Medical College of Pennsylvania, Philadelphia, 1870; died at his home in South Philadelphia, May 27, aged 69.

**Seymour Syria Williams, M.D.** University of Michigan, Ann Arbor, 1888; died at his home in Kansas City, Mo., May 1 from catarrhal pneumonia.

**E. H. Bratton, M.D.** (license, Tenn. 1889) one of the olde practitioners of Lafayette; died recently at his home in tha place, aged 73.

**Samuel G. Rogers, M.D.** Indiana Eclectic Medical Colleg Indianapolis, 1885; died at his home in Darlington, Ind., Ma 27, aged 55.

**John Lewis Herbert, M.D.** Louisville (Ky.) Medical Colleg 1881; died at his home in Hanoverton, Ohio, June 1, aged 5

**James E. Smith, M.D.** Eclectic Medical Institute, Cincinna 1878; died at his home in Mt. Carmel, Ill., April 20, aged 7

**J. T. Riley, M.D.** Physio-Eclectic Medical College. Cincinna 1883; died at his home in Orangebury, S. C., May 21, aged 5

**Pierce J. O'Brien, M.D.** Albany Medical College, 1898; di at his home in Troy. N. Y., May 26, aged 38.

# The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

## TURNER OBESITY CURE

### Another Fraudulent Fat-Reducing Concern. Incidentally, the Vanadium Chemical Company. How Turner Works Both the Public and the Doctors

A few weeks ago we devoted some space to an "obesity cure" fraud of Denver conducted under the name Marjorie Hamilton. As was explained at the time, there are on the market several fake so-called drugless treatments for fat reduction. They are the natural outgrowth of the versatility of quackery. The public has been warned of the dangers of taking thyroid extract, the basis of most of the "obesity cures" of four or five years ago, until it has become unprofitable to market these preparations. Medical fakers, ever ready to take advantage of popular prejudice or fear, have turned their energies to the exploitation of the so-called drugless treatments. We say "so-called" because, as a matter of fact, they are in no sense of the word, drugless.

The Dr. Turner Company of Syracuse, N. Y., sells the "Dr. Turner Triplex System of Flesh Reducing," or, as the later letter-heads have it, the "Dr. Turner Triplex System of Weight Reduction." Its letters are signed—by rubber stamp—F. Turner, M.D. "Dr." F. Turner tells the public through the newspapers that he is a "physician, scientist and traveler who has won fame and world-wide renown through his writings and scientific researches." He further states that he "was one of the fattest men" in Philadelphia. He was so fat, that:

> "With practically a death sentence staring him in the face and a wife and family to support, Dr. Turner thought hard."

As a result of his hard thinking he "finally made a most wonderful scientific discovery" by which he was able to make his fat disappear "at the rate of a pound a day, sometimes more."

> "His method is simple, yet thoroughly scientific. There are no medicines or drugs to be taken, nothing to wear, no physical culture or violent exercises, no Turkish baths, sweating, purging, starving diets or weakening methods of any kind."

Before discussing "Dr." Turner's "cure," it may be worth while to refer briefly to "Dr." Turner himself. While the obesity cure concern at Syracuse, N. Y., is sending out what purport to be personal letters signed, F. Turner, M.D., Turner s really living at Pittsburgh, Pa., where he is engaged as general manager of the Vanadium Chemical Company in exploiting so-called ethical proprietaries to physicians.

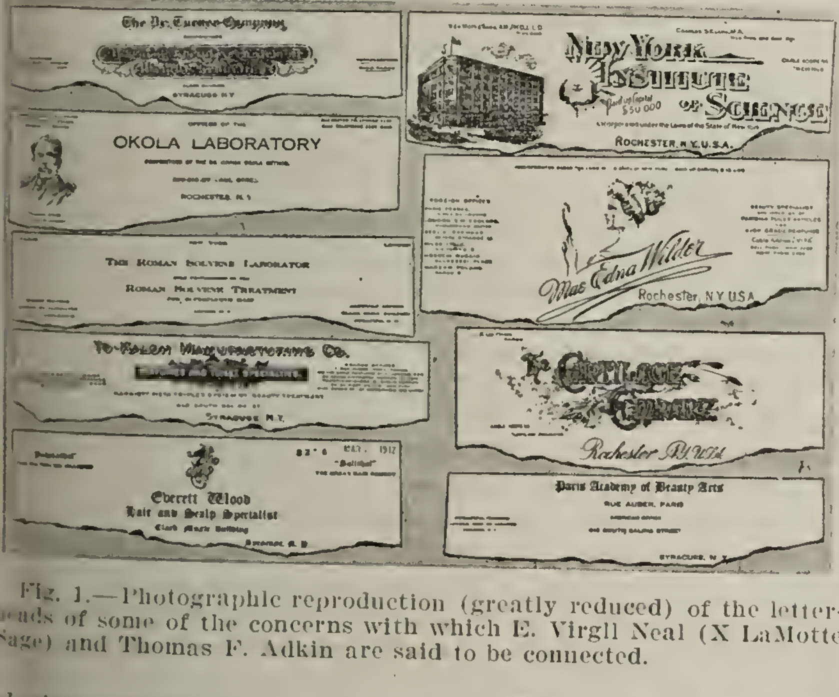

The Dr. Turner Company
Syracuse N.Y.
New York Institute of Science
Paid up Capital $50 000
Rochester, N.Y. U.S.A.
Okola Laboratory
Rochester, N.Y.
The Roman Solvene Laborator
Roman Solvene Treatment
Mae Edna Wilder
Rochester, N Y USA
To-Kalon Manufacturing Co.
Syracuse N.Y.
Cartilage Company
Rochester N.Y. U.S.A.
Everett Wood
Hair and Scalp Specialist
Paris Academy of Beauty Arts
Rue Auber, Paris
Syracuse, N.Y.

Fig. 1.—Photographic reproduction (greatly reduced) of the letterheads of some of the concerns with which E. Virgil Neal (X LaMotte Sage) and Thomas F. Adkin are said to be connected.

As a matter of fact, the Dr. Turner Company of Syracuse is but one of a group of enterprises that are said to be the offsprings of the fertile brain of an individual known as E. Virgil Neal, in collaboration with one Thomas F. Adkin. Here are a few of the names under which the Neal-Adkin mail-order concerns advertise:

*To-Kalon Manufacturing Company*, makes you beautiful.
*Cartilage Company* (K. Leo Minges), makes you tall.
*Harriett Meta*, eradicates your wrinkles.
*Everett Wood*, grows hair on bald heads.
*Roman Solvene Laboratory*, removes superfluous hair.
*Mae Edna Wilder*, removes double chins.
*Okola Laboratory*, cures sore eyes.
*Corsetiere*, makes corsets.
*Paris Academy of Beauty Arts*, mail-order course in bust developing.
*Dr. Turner Company*, makes fat people thin.
*New York Institute of Science*, mail-order course in hypnotism and magnetic healing.

### A PRINCE OF QUACKERY

E. Virgil Neal is a picturesque figure in the world of quackery. He came into the limelight in 1905 as president of the "Force of Life Chemical Company." This fraudulent concern was investigated by the federal authorities from whom it received a heavy coat of whitewash when it was found that an influential New York politician—Gen. James R. O'Beirne—was connected with it. The publicity given, however, proved its undoing. During the same period, Neal, also conducted a bank which is said to have furnished capital for small publishing houses, the loans mostly being paid by advertising space in the publications. Previous to his connection with the Force of Life Company, Neal conducted the "New York Institute of Physicians and Surgeons," which the government declared fraudulent. He was also connected with the "Columbia Scientific Academy" which purported to be a "school" of palmistry. Earlier still, Neal is said to have traveled over the country under the alias, X. LaMotte Sage, giving exhibitions of hypnotism to ten-cent audiences. After the Force of Life concern went out of existence, Neal organized the Neal Biscuit Company which later changed its name to the American Health Products Company. At present, we find X. LaMotte Sage, president of a fake concern, the "New York Institute of Science," which gives correspondence courses in hypnotism and magnetic healing. From what has been said, it is evident that "Dr." F. Turner is but a figurehead in the obesity company that bears his name.

### ASK $25; TAKE $2

Those who write to the Dr. Turner Company regarding his Triplex System of Weight Reduction receive a letter printed in imitation typewriting and so designed as to give the impression that it is a personal communication. After detailing the dangers and terrors of obesity, Turner offers to send his treatment for $25 or, if the purchaser will sign a "contract of secrecy," he will send it for $10. In a postscript to this first letter, he says:

> "$10 is positively the lowest price for which I shall ever sell this treatment."

Ten days later the second form-letter comes, which contains no reduction in the price of the treatment. A month later the third form-letter offers the treatment for $5. While three weeks later, form-letter number four brings the price down to $4. In another month the fifth form-letter arrives making a price of $3. Another four weeks elapses and form-letter number six offers to send "the entire treatment, nothing omitted, on receipt of only $2." A money order for two dollars was sent and by return mail there was received "Dr. Turner's Triplex System of Weight Reduction." The "system" consisted of twenty-six sheets of imitation typewriting and a box of tablets.

The first two pages of the "manuscript" explain why the "Dr. Turner's Triplex System of Scientific Weight Reduction" is the only safe and rational treatment and why all other "treatments" are either dangerous or worthless. Turner would impress you with the vast gulf that exists between obesity cures exploited by non-medical men and that offered by F. Turner, M.D.:

> "A reputable and thoroughly responsible physician—unlike some obscure and unscrupulous individual who can hide behind a fictitious name and easily disappear over night, if necessary—has his reputation, his license, his practice and everything dear to him and worth living for, to lose beyond recall should be deal otherwise than honestly and honorably with his patients."

Of course the purchasers of the Turner obesity cure outfit may be expected to be duly impressed with the fact that the concern is operated by a "reputable and thoroughly responsible physician." They have no means of knowing that "Dr." Turner whose signature appears on all the letters they receive from the obesity cure of Syracuse, N. Y., is "Dr." Francis M. Turner, the general manager of the Vanadium Chemical Company of Pittsburgh, Pa., which exploits proprietaries to physicians. Neither have they any means of knowing that F. Turner, M.D., runs little risk of losing "his reputation, his license, his practice."

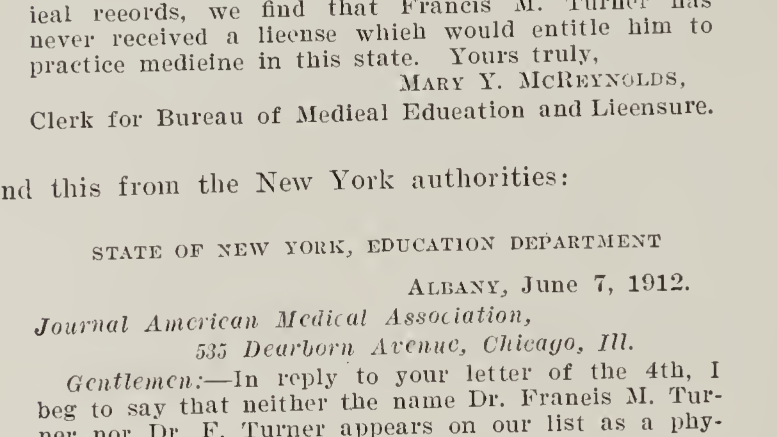
The following letter from the Bureau of Medical Education and Licensure of Pennsylvania was received in answer to an inquiry as to whether "Dr." Francis M. Turner was licensed to practice in Pennsylvania:

> COMMONWEALTH OF PENNSYLVANIA
>
> May 8, 1912.
>
> *Journal American Medical Association,*
> *Chicago, Ill.*
>
> *Dear Sirs:*—Upon careful examination of our medical records, we find that Francis M. Turner has never received a license which would entitle him to practice medicine in this state. Yours truly,
>
> Mary Y. McReynolds,
> Clerk for Bureau of Medical Education and Licensure.

And this from the New York authorities:

> STATE OF NEW YORK, EDUCATION DEPARTMENT
>
> Albany, June 7, 1912.
>
> *Journal American Medical Association,*
> *535 Dearborn Avenue, Chicago, Ill.*
>
> *Gentlemen:*—In reply to your letter of the 4th, I beg to say that neither the name Dr. Francis M. Turner nor Dr. F. Turner appears on our list as a physician in New York State. Yours truly,
>
> Augustus S. Downing,
> First Assistant Commissioner of Education.

The states of New York and Pennsylvania are the only ones, apparently, from which Turner does business. If he is licensed in neither one of them, it is fair to assume that he has no license to lose; without a license, he cannot legally practice and therefore has no practice to lose; and if, without license or practice, he so advertises as to convey the idea that he has both, he cannot have very much reputation to lose.



The Vanadium Chemical Co
Pittsburgh, Pa.

Dr Francis M Turner

Fig. 2.—Photographic reproduction of the business card used by "Dr." Francis M. Turner in his capacity as general manager of the Vanadium Chemical Company.

Pages three, four and five of the "Triplex System" give in detail what purports to be Turner's personal experience with obesity. Briefly, his story is that at the age of 27 he began to gain weight and by the time he was 43 and weighed 254 pounds he "awoke at last to a thorough realization" of the fact that he was becoming obese. Dr. Turner's awakening produced effects that closely resembled a similar awakening in Marjorie Hamilton's case, whose cure for fatness has been referred to before. When Marjorie realized that she had become fat, she says that she studied "into the long weary hours of night and tried experiment after experiment." When "Dr." Turner discovered his obeseness, he—but let him speak for himself:

> "I studied and experimented, often working blindly day and night, as I never had worked before."

Like Marjorie he was successful in perfecting "the most wonderful treatment for obesity ever discovered." Like Marjorie's, too, Turner's "treatment" is radically different from all accepted theories.

### WHAT THE TREATMENT IS SAID TO BE

The Turner "treatment" should be considered not only in the light of what it is but rather by comparison between what it is and what those who purchase it are led to believe it is. Some quotations from advertisements will make plain what those who send in the $25—or less—for the Triplex System may expect to get for their money:

> "You eat what you want whenever you want it."
>
> "I do not purge you nor give you any drugs whatever."
>
> "No drugs, medicines, starvation diet, exercising or apparatus used."
>
> "There are no medicines or drugs to be taken, nothing to wear, no physical culture or violent exercises, no Turkish baths, sweating, purging, starvation diet or weakening methods of any kind."

### WHAT THE TREATMENT REALLY IS

Such are the claims under which the Turner "obesity cure" is sold. Both by inference and by direct statement they justify the prospective purchaser in believing that the use of purgatives, the following of any special diet or the carrying out of any set exercises do not form any part of the Turner treatment. After he has parted with his money, however, he finds, as in the case of the Marjorie Hamilton "treatment" that he is to do all of the things which he has been led to believe were neither necessary nor part of the "cure." Briefly the Turner System requires:

*Dieting.*—Potatoes and a large list of other commonly eaten vegetables are interdicted. Nothing containing ordinary wheat flour such as bread, biscuits, cake, etc., nor any cereal or cereal products may be taken. Sugar in any form must not be taken but Dr. Turner's saccharin tablets at fifty cents a bottle may be used instead. Various kinds of fish, fried, hard boiled, or omeletted eggs, fried meat of any kind, veal, pork, ham, bacon and various other meats, pies, pastries, prunes, bananas, any kind of sweets and a score of other things—all are prohibited by the Dr. Turner treatment which is sold under the specific claim: "You eat what you want whenever you want it."

*Purging.*—The user of the Turner treatment is recommended to take artificial Carlsbad, Vichy or Kissingen Salts. The Marjorie Hamilton treatment recommended the same thing with this difference: that while the Hamilton concern suggeste that the patient buy the salts at the drug-store, Turner sell the product himself. For those who prefer their catharti in tablet form, he has "prepared in the form of a small and extremely palatable chocolate-flavored tablet" which he i willing to sell "at the special low price of $1" for 100. Tha the patient may be more likely to purchase these tablets, h sends a few along with his "treatment." A cursory examina tion of the tablets in the Association's laboratory indicate that the essential drug they contain is phenolphthalein. I addition to the phenolphthalein tablets and saline purgatives Turner recommends enemas. All this the purchaser learn after having spent money for the "treatment" sold under th claim "I do not purge you nor give you any drugs whatever."

*Exercising:* The purchaser of the "Triplex System" is als instructed to stand before an open window both on rising i the morning and on retiring at night and take one hundre deep breaths. He must, in addition, go through a series exercises with the arms and trunk and in addition "take long brisk walk" morning and evening. But he bought th "treatment" under the claim that "no exercising" was nece sary!

### THE FOOD TABLET HUMBUG

So much for the discrepancy between what is offered and what is furnished. In the Marjorie Hamilton fake the part of the treatment that was relied on by the manufacturers to be a good "repeater" was the "Healthtone-Obesity Powder" which was claimed to "dissolve fat"; in the Turner humbug the tablets which come with the printed instructions are the means whereby the Dr. Turner Company expects to squeeze additional dollars from those who are foolish enough to purchase the "Triplex System." Two lots of tablets accompany each treatment, one labeled "Concentrated Food Tablets" and the other labeled "Special Food Tablets." The two kinds differ only in color, each being about the diameter of a silver dime. The "concentrated food tablets" are a dirty white color, while the "special food tablets" are a mottled gray. Both lots of tablets were submitted to examination in the Association's laboratory and the chemists submitted the following report:

### LABORATORY REPORT

*Dr. Turner's Concentrated Food Tablets:* The tablets weigh about 1.18 gm. each or approximately 18 grains. They are grayish-white in color with a faintly, sweetish, ginger-like taste. Qualitative tests demonstrated the presence of milk sugar, casein, calcium salts, starch, ginger, fats and powdered talc. Quantitative examination indicated the presence of the following substances in the amounts given:

| | |
|---|---|
| Starch and ginger (mostly starch) | 1.51 per cent. |
| Talc | 1.83 per cent. |
| Ash (exclusive of talc) | 6.09 per cent. |
| Water (loss at 100 C.) | 5.59 per cent. |
| Fat (ether extract) | 0.60 per cent. |
| Milk sugar | 47.00 per cent. |
| Casein and other proteins (N × 6.38) | 32.67 per cent. |

The chief constituents of the tablets, therefore, are milk sugar and casein. A product of similar composition would result from the evaporation of "skimmed milk." Hence, it is possible that Turner's concentrated food tablets are nothing more than milk from which the most of the fat has been removed, the resultant whey subsequently evaporated, the residue powdered and made up into tablets by means of a little talc, starch, and a trace of ginger.

*Dr. Turner's Special Food Tablets:* The tablets weigh about 1.25 gm. each or about 19 grains. Their color is somewhat darker than the "Concentrated Food Tablets" but their taste is similar. Qualitative tests indicated the presence of the same constituents as were found in the "Concentrated Food Tablets." The quantitative examination indicated the presence of the following substances in the quantities given:

| | |
|---|---|
| Starch and ginger (mostly starch) | 0.84 per cent. |
| Talc | 0.99 per cent. |
| Ash (exclusive of talc) | 6.33 per cent. |
| Water (loss at 100 C.) | 5.08 per cent. |
| Fat (ether extract) | 0.60 per cent. |
| Milk sugar | 49.65 per cent. |
| Casein and other proteins (N × 6.38) | 31.00 per cent. |

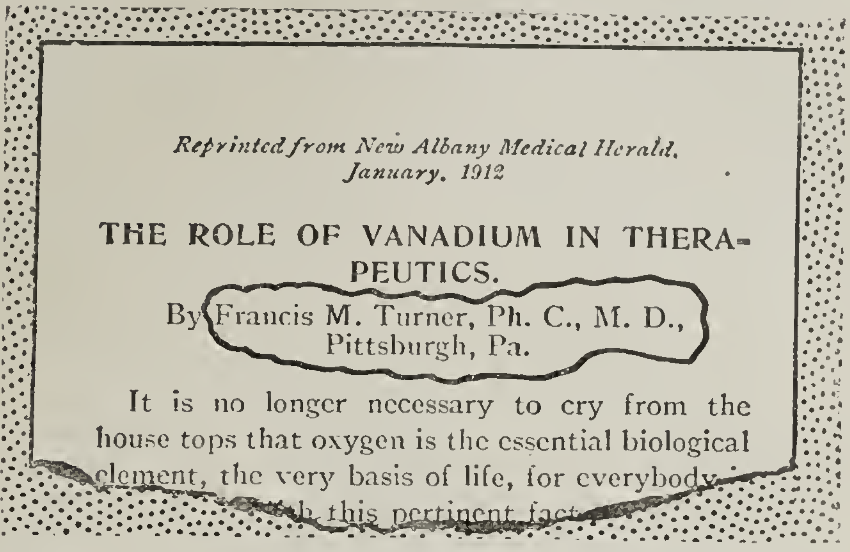
Examination shows that there is practically no difference in composition between the "Concentrated Food Tablets" and the "Special Food Tablets."

What then is the value of these tablets of dried whey? The answer is forthcoming in the follow-up letters that came subsequent to the purchase of the original "treatment." The first letter of this kind comes the day after the "system" itself has been delivered, and bears the following warning:

> "Be careful not to underestimate the importance of the concentrated food tablets I have sent you. I do not guarantee the success of my treatment unless these are taken."

A little more than two weeks later another letter comes urging that an additional $8 be sent for which the Dr. Turner Company will furnish "two full months' treatment or just twice the quantity of treatment you received at first." This can only mean, of course, that the eight dollars is for a double supply of "Concentrated Food Tablets." If this offer is not taken, another letter comes three weeks later recommending "an additional course of treatment." Turner's price for this additional course of treatment is $25, but he is "so anxious to have you continue this treatment until your weight is fully and completely reduced to its normal standard" that he will send it to you "for the exceptionally low price of $5." Should you still be obdurate, another letter comes about a month later offering the same thing for $3. The value of the "concentrated food tablets"—to the concern selling them—is thus evident. They form the "repeaters" which every successful patent medicine faker finds so necessary as a dividend producer.

To revert again to the "Triplex System": In addition to limiting the diet, going through a series of exercises, using saline purgatives and enemas, the Turner system described what it calls "other aids to reduction." The "other aids" are the "To-Kalon Keapshape Reducing Corset" which Dr. Turner is willing to arrange to have you purchase "direct from the manufacturers at a much lower price than it could be bought for at a retail store." The special reduced price is $12.00. The reader will recognize in the name To-Kalon one of the many companies which E. Virgil Neal is said to control. The other "aid to reduction" recommended by Dr. Turner is the "Neal Reducing Belt" of which he says he "cannot speak too highly." The belts contain "medicated obesity pads." "In many cases fat begins to soften perceptibly and fairly seems to melt away when the belt and pad have been worn only a few days." He advises the purchase of two belts. "This plan is recommended for many reasons," not the least of which, we opine, is the fact that the Dr. Turner Co. participates in the profits of their sale—regular price $15.



*Reprinted from New Albany Medical Herald,*
*January, 1912*

THE ROLE OF VANADIUM IN THERAPEUTICS.

By Francis M. Turner, Ph. C., M. D.,
Pittsburgh, Pa.

It is no longer necessary to cry from the house tops that oxygen is the essential biological element, the very basis of life, for everybody [illegible] this pertinent fact

Fig. 3.—The Vanadium Chemical Company, of which "Dr." Francis M. Turner is general manager, sends out a leaflet containing an article by "Francis M. Turner, Ph.C., M.D.," extolling the therapeutic value of vanadium.

### SUMMARY

Such is Dr. Turner's Triplex System of Weight Reduction. The various deceptions practiced by the concern may be summarized:

1. The public is told that "Dr." Turner is a Philadelphia physician and a "scientist and traveller who has won fame and world-wide renown through his writings and scientific researches." The Pennsylvania authorities deny that Turner is, or ever was, licensed to practice medicine in that state and the New York authorities declare that he has no license there. Turner is unknown as a scientist and his claim to being a "traveller" apparently rests on no more substantial evidence than the fact that he used to be a travelling salesman. He has won neither fame nor renown, either through his writings or researches and the only "writings" bearing his name, so far as we can discover, are his "obesity cure" letters and "treatment" and an advertising leaflet entitled "The Rôle of Vanadium in Therapeutics" issued by the company of which he is general manager.

2. The purchaser is given the impression that he will receive treatment and advice from a reputable licensed physician; instead he receives a set of printed instructions and worthless tablets from a business concern organized by men who are engaged in various other fraudulent mail-order enterprises.

3. The victim is led to infer that dieting is unnecessary and not a part of the treatment: "You eat all you want whenever you want it." He finds, after parting with his money, that to follow the "treatment" he must cease eating many commonly-used articles of food.

4. He pays his money on the understanding that purging is unnecessary and is foreign to the "treatment"; he discovers—after payment—that various saline purgatives are recommended which the concern itself offers to furnish—for an additional cash consideration.

5. He buys the system under the belief that no "physical culture" exercises need be indulged in, only to find that a system of calisthenics and a "long brisk walk" morning and evening besides "breathing exercises" are actually part of the "treatment."

6. The purchaser is deceived into believing that the dried whey tablets furnished by the company have a definite value in bringing about the desired reduction; he is further cajoled into buying additional supplies of these utterly worthless products.

7. He may be further wheedled into buying a "To-Kalon Keapshape Corset" or a "Neal Reducing Belt."

Founded on deception, maintained by falsehood and perpetuated by fraud the Dr. Turner Obesity Cure belongs in the same category as the Marjorie Hamilton "cure." In fact, there is but little difference between the two. From the standpoint of the medical profession, the Turner concern is the more contemptible because of the attempt to use the title M.D. as a means of lending an air of respectability to an altogether disreputable business. From the standpoint of the public there is nothing to choose between them; they are both humbugs and in either case the public's money is obtained under false and fraudulent pretenses.

# Correspondence

### "Louder, Please."

The recent Atlantic City meeting of the American Medical Association again indicates that the prevailing ailment among the members who read papers is vocal insufficiency, if I may be permitted to make this addition to our medical nomenclature. A full-grown man ought to be able, with a little practice, to make himself heard 100 feet away. If he were speaking to one man across a large hall he would have no difficulty in making that man understand. It is distressing to listen to a paper read in so low a voice that only part of it can be heard, and it is unpardonable for a man to inflict his paper on a society unless he is willing to read it in a clear, strong voice. This is not much to ask and it is essential. Otherwise, his paper should be read by title only, leaving the printer to do the rest.

C. J. Douglas, M.D., Dorchester, Mass.

### Who First Sutured the Human Heart?

*To the Editor:*—In the "Cyclopedia of American Medical Biography" by Dr. Howard A. Kelly (vol. 1, p. 31) occurs the following: "The successful operation for an incised wound of the heart reported by Marks (*Med. Fortnightly*, 1893, vi) is probably the first operation ever reported for suture of a heart wound. G. T. Vaughan gives priority to Farina of Rome, 1896, (The Journal A. M. A., Feb. 6, 1909, p. 429). . . . Vaughan's table showed up to 1901, 150 operations."

There are several errors in this statement. In the first place, Dr. Marks' article was published in the *Medical Fortnightly*, 1893, volume iii, instead of volume vi. In the second place, my table of suture of wounds of the heart showed 150 operations up to 1908 instead of 1901. In the third place, the statement that Dr. Marks' case was "probably the first operation ever reported for suture of a heart wound is not sustained by the references given. I have carefully read Dr. Marks' article in the *Medical Fortnightly*, in which he reports two cases of stab wound of the heart treated by him. There is not one word about suturing the heart or even of operating on the heart—the wounds in the *chest* having been simply packed with gauze. I yield to none in my feeling of pride in the achievements of American surgeons, but I believe that credit should go where it belongs and in this case, so far as I have been able to ascertain, it belongs to Guido Farina of Rome. His original article, "Sutura del Ventricolo Destro," may be found in the *Bollettino della reale Accademia Medica di Roma*, 1896-7, xxiii, 248.

George Tully Vaughan, Washington, D. C.

### Caffein as a Cause of Goiter

*To the Editor:*—The remarkable frequency of goiter in youths applying for examination, preliminary to enlistment, inaugurated a series of questions, one of which—"What beverages do you drink?"—in every instance brought out the answer, "Coca-Cola." The stimulating action of caffein may or may not be the cause of this condition; it is, nevertheless, suspicious. In examining thousands of men, aged from 17 to 28, this defect has caused a large number of rejections, and I am more pronouncedly of the opinion that the suspicion formed some years ago—i. e., caffein stimulation—is well founded. In questioning these men, I do not suggest; I simply prod until I get the information, and it has never been lacking.

L. L. von Wedekind, M.D., U. S. Navy, Chicago.

### President Jacobi's Address

*To the Editor:*—President Jacobi's speech in The Journal, June 8, is a masterpiece of eloquence and good common sense, and in my judgment should be put into pamphlet form and distributed among the medical profession. It bears reading several times and is well worth the year's subscription price.

Louis H. Freedman, M.D., Crowell, Texas.

[Comment.—We shall be glad to send a reprint of President Jacobi's address to any one who will send a stamped directed envelope.—Editor.]

# Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

### ABDOMINAL TUBERCULOSIS AND CERVICAL ADENITIS

*To the Editor:*—A child of 18 months developed a non-febril cervical adenitis which was not tender. Under iodin externally an an alterative internally this disappeared in five days. In two week attention was called to an edema of the left leg, and examinatio showed a large tumor in the lower part of the abdomen an enlargement of the kidneys. The child died in six weeks and post mortem examination showed tuberculosis of the retroperitonea glands and a tumor mass the size of a doubled fist, in which wer embedded the ureters, causing hydronephrosis of both kidneys. I it possible that this condition of the peritoneal glands could hav been caused within two weeks by the treatment used in the cervica adenitis?

J. L. T.

Answer.—In all probability, the tuberculosis of the abdomen which produced the enlargement of the kidneys and edem of the leg had existed for more than two weeks. It is no possible to say whether the infection was transmitted to th abdomen from the cervical gland. It is possible that by massage of such glands some bacilli might have been forced int the circulation, but, in our opinion, it is not reasonable t attribute the infection of the retroperitoneal glands to th treatment.

### THE PAN-AMERICAN MEDICAL CONGRESS

*To the Editor:*—In The Journal, June 1, 1912, p. 1698, a announcement appears of the Sixth Pan-American Medical Congres to be held at Lima, Peru, August, 1913. The name and address its secretary are omitted. Kindly supply this, as that will enab such members of the profession as desire to participate in the co gress to enroll and obtain such information as they may require.

Dr. Alfred E. Regensburger, San Francisco.

Answer.—The secretary of the International Executi Committee of the congress is Dr. Ramon Guiteras, 80 Madis Ave., New York City. Further particulars may be obtain from the editor of the local medical journal, the *Croni Medica*, Dr. E. Bello, Apartado postal 629, Lima, Peru.

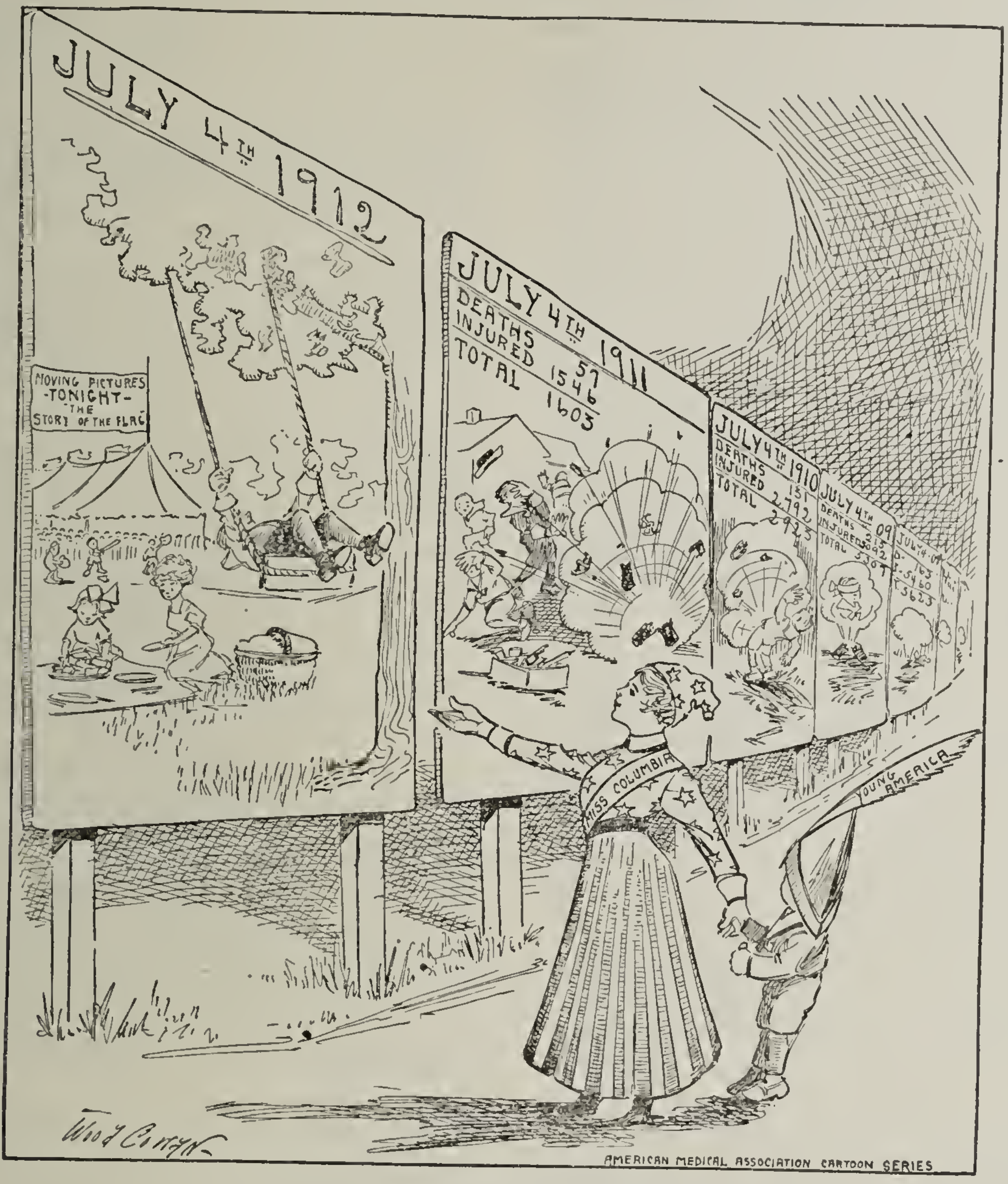
## Medical Economics

This Department Embodies the Subjects of Post-Graduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

### IS A CHILD WORTH AS MUCH AS A HOG?

An excellent editorial under the above heading appeared in the March issue of the *Maryland Medical Journal.* The creation of a Bureau of Child Welfare by the federal government is an example which will, we hope, be followed by all of our states, until all the facts regarding child labor are known, and until in all of our states provision is made for the welfare of our "little citizens." Meanwhile, such editorials as this are of value in arousing public and professional sentiment. The editor says:

OUR NATIONAL BIRTHDAY, PAST AND PRESENT



The Young Pilgrim's Progress:
From Noise and Danger to Games and Safety

> Well worth the earnest attention of our best alienists is that peculiar process of reasoning by which the father, on becoming a legislator, devotes his energies to the increasing of the state's revenues, but entirely forgets the right of the child. The particular phobia besetting members of the legislature when questions of child labor are raised is not confined to the state of Maryland alone. Spasmodically, it is true, the lawmaker recollects that the child of to-day is the parent of to-morrow, and a protective law goes through. But, usually it is ignored, or the loopholes by which it may be evaded are so numerous that it is ineffective.
>
> With the advent of machinery it was thought that the millennium was near at hand. With manual labor reduced to a minimum the public confidently expected that life would be lighter, easier and healthier. But contrary to expectations, machinery, while undoubtedly the greatest civilizing agent in the world's history, has added to, rather than decreased the misery of the laboring classes. It was soon found that a child could be taught to swing the levers which controlled the action of a machine, therefore a child was employed at lower wages than those demanded by an adult, and the same amount of work ground out. It soon became apparent that the younger the child the less the wage and the greater the profit to the employer; and the result—little boys and girls of extremely tender age—in some instances the worker being under ten years of age—were employed. If the years of playtime were taken from the child, and he were paid a wage which would enable him later to gain the education necessary to comfortable living, the system might be condoned, but under existing conditions the little benighted creatures are often paid $2 a week and less and are often forced to work fourteen to fifteen hours a day in order to squeeze the last drop of productiveness from them, and are therefore unable to lay aside anything for their future betterment. The heathen in Africa, although he gives his boy hot iron to hold in order to harden his palms, lets him run most of the day to develop his limbs and body; the coal-miner of America sets his boy, all but just from the cradle, on a little black seat all day long, where he must keep his eyes glued to the long chutes down which the coal glides, and pick out each piece of slate he sees. All day long in a dark, gloomy, dirty room, the air heavy with the coal dust, nothing around him but long chutes and other boys like himself, too occupied to talk, the little backs bowed over, nothing to think about but the coal before him; too tired at night to do anything but sleep the minute his supper is over, and this unceasing grind, day in and day out—and the members of his state legislature cannot see why he does not grow up an enlightened man, a credit to the community, when schools are free and they have passed bills for appropriations for playgrounds the child never sees, and parks whereof he knows nothing. While perhaps the work in which children are engaged in states where there are no coal-mines is cleaner, it is surely no more elevating, no more healthy, and no less dwarfing to mind, and soul and body. On Sundays the child gets out and sees richer people enjoying themselves, and unconsciously, the first seeds of anarchy are sown in his mind, ready to spring forth when he reaches maturity and talks with boys raised under similar conditions and equally discontented with life. Meantime the legislators wrangle eloquently over such questions as "what constitutes a Democrat?"
>
> Sooner or later the people of this state must awaken to the fact that a child has rights, and that those rights are not being recognized. The well-to-do parent will see that there are thousands who know nothing of the comforts he has been able to bestow on his own little ones, and the comparison will awaken his sympathies and energies for the comfort of those who have no one to fight their battles. "The children want to work; they want the money"—it's true, but what child would not love to have the moon to play with if he could get it? And what parent does not have to refuse the child something in order to protect its body from physical injury? Yet there are children who have no one to protect them. These little children—the parents of to-morrow—dwarfed to-day, stunted in mind and body—what will their progeny be? Long hours of labor; childish play unknown; sullenness, discontent and rebellion born of an undefined sensation of injustice—these will be instilled into the child with which to-morrow must reckon.
>
> Stringent laws are enacted to keep the San José scale from our apple trees; the most ignorant farmer in the state may receive explicit instructions from the State Department of Agriculture concerning the sort of crop best for his land, and if his hog is ill, the state rushes advice to him lest the hog die; but a hog is a hog, whereas a child is only a child.
>
> This question of child employment is a burning one in every state of the Union. The law of Maryland exempts this class and that class until there are hardly any classes to which it does apply. The ultimate fate of the state is wrapped in its

proper solution. No nation can survive if its inhabitants are weaklings, and if for no other reason than pride in our national fate the influential people—most especially the physician who hourly and daily sees the evils of the present state of affairs—should spare no effort in forcing the legislative bodies of this country to enact competent laws looking to the protection of the child.

## AN OPEN LETTER TO PRESIDENTIAL CANDIDATES

The following letter has been sent to President Taft, and also to Colonel Roosevelt, Governor Wilson, Governor Harmon, Senator LaFollette, Hon. Champ Clark, and Hon. Eugene V. Debs, candidates for the presidential nomination, by Miss Alice Lakey, chairman of the Food Committee of the National Consumers' League:

Cranford, N. J., June 11, 1912.

The Food Committee of the National Consumers' League desires to obtain from you some statement as to your intention in regard to the future of the Food and Drugs Act of June 30, 1906.

This law would have afforded consumers complete protection under its provisions from the evils of adulterated, misbranded, poisonous and harmful foods, drugs, liquors and medicines, had it not been betrayed, as was demonstrated by Dr. Wiley's resignation.

Is the policy to continue of relaxing the enforcement of the law in favor of certain privileged manufacturers?

Is the policy to continue of letting Mr. McCabe decide legal questions connected with the enforcement of the act, or is the law to be enforced only through the courts, as was intended when the act was first enacted?

Is Secretary Wilson to be continued in office and to have the power to stop the enforcement of the law, notably in the case of the sulphuring of fruits, when he announced that "this law has got to stop?"

Was it intended that the Secretary of Agriculture alone should have the power of life and death over the pure food law?

Is it just to consumers to retain in office Secretary Wilson and Messrs. McCabe and Dunlap, when these men have steadily upheld the special interests to the disadvantage of the pure food law and the detriment of the consumer?

If you are elected to the high office of President of these United States, will you remove from office these faithless officials who have steadily favored the weakening of the law, who have permitted its fundamental principles to be violated? These are the questions that vitally concern consumers.

We ask you what you will do, so that we may know what is to be the fate of the greatest law for the protection of the home ever enacted in this country.

I have the honor to remain,

Very truly yours,

Alice Lakey,

Chairman, Food Committee, National Consumers' League.

The following letter has also been sent to the members of the League:

Cranford, N. J., June 4, 1912.

Dear Madam:

Enclosed please find reprints from *Collier's*. As you know it was largely through the united action of the General Federation of Women's Clubs and the National Consumers' League that public sentiment was aroused which resulted in the passage of the pure food bill.

Can we not now unite and save the law from destruction?

Will your organization ask President Taft for the removal from office of Secretary of Agriculture, James Wilson, Solicitor George B. McCabe and Dr. F. L. Dunlap, the three men responsible for the wrecking of the pure food law?

Will you consider the appended resolution, passed and published by the Food Committee in October, 1911, and endorsed by the executive board of the National Consumers' League at the meeting held at the National Arts' Club, in New York, on May 17, 1912?

We hope that the General Federation of Women's Clubs will take similar action at the biennial in San Francisco.

Sincerely yours,

Alice Lakey,

Chairman, Food Committee.

RESOLUTION

Whereas, the acceptance of Dr. Harvey W. Wiley's resignation as Chief of the Bureau of Chemistry is the most serious blow that has befallen Pure Food Legislation, and

Whereas, Dr. Wiley has stated that his resignation was due to the fact that the differences between him and his superior officers respecting the enforcement of the pure food law were so irreconcilable that the fundamental principles of this, one by one, have been paralyzed and discredited; that interests engaged in the manufacture of misbranded and adulterated foods and drugs have escaped punishment; that officials who secretly plotted his destruction were retained in office after his exoneration of charges made against him, therefore be it

*Resolved*, That we, the food committee of the National Consumers's League, deeply deploring the disorganized condition of the Department of Agriculture, which renders the strict enforcement of the pure food law impossible, urge upon President Taft the need of the immediate removal from office of Secretary of Agriculture James Wilson, Solicitor George B. McCabe and Dr. F. L. Dunlap, as these three faithless officials have been directly responsible for the complete breaking down of the pure food law.

# Book Notices

Treasury of Human Inheritance. Parts 7 and 8. Section 15a. Dwarfism. By H. Rishbieth, M.A., M. D. (Cantab.), F.R.C.S. (Eng.), and Amy Barrington. Paper. Price, 15 shillings net. Pp. 573, with plates and illustrations. University of London, Francis Galton Laboratory for National Eugenics. Eugenics Laboratory Memoirs 15. London: Dulau & Co., 37 Soho Square, W.

This elaborate volume from the Francis Galton Laboratory for National Eugenics contains a study of the various forms of dwarfism—ethnic dwarfs, achondroplasiacs, the dwarfism of rickets, myxedema, cretinism, and ateliosis or true dwarfism. The subject is treated from all points, including the historical, and a long list of paintings of dwarfs by famous painters is given. The pedigrees of all reported cases, together with eight graphic plates of pedigrees and thirty-five plates of photograph and *x*-ray illustrations are given of the various classes of dwarfs. Although this is a book of nearly 600 pages exclusive of the illustrations, it represents only a very small fraction of the scope of the investigations of the Eugenics Laboratory.

The Story of a Doctor's Telephone—Told by His Wife. By Ellen M. Firebaugh. Cloth. Price, $1.25. Pp. 239. Boston: Roxburgh Publishing Company, 1912.

This is a pleasing little story of the experiences of a doctor's wife in answering the office telephone, which was connected with the residence for her convenience. Her trials are amusingly related. Some patients took it as a personal injury that she answered the telephone at all and refused to give name or telephone number, evidently thinking that the doctor's business was not his wife's affairs. Others asked her regarding the advisability of having operations, or wanted her to prescribe. The story concludes with a little "preachment" on the dangers and causes of ophthalmia neonatorum.

Transactions of the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics. Tenth Annual Meeting, Volume 8. Paper. 1911.

This pamphlet contains the papers read at the tenth annual meeting of the National Association for the Study of Epileps and covers not only the medical and surgical aspects of the disease, but also gives a summary of the legislation in the different states on the care and management of epileptics, an sets forth suggestions and ideas for legislation still needed Heredity, the industrial status of epilepsy, the Binet-Simo system of testing as applied to epileptics, and practical paper on the management of institutions are also included.

Proceedings of the Second Annual Conference on the Problem of the Exceptional Child, 1911. National Association fo the Study and Education of Exceptional Children. Paper. Price t Non-Members, $1.50. Pp. 190. Secretary, Waldemar H. Groszman Watchung Crest, Plainfield, N. J.

This pamphlet of 190 pages contains the papers read an the discussions held at the second annual conference of th National Association for the Study and Education of Excep tional Children. The papers are by teachers, judges and othe interested and working directly in the care of children, an reflect the importance which this subject of the care of tl abnormal and subnormal child is attaining. The pamphlet illustrated by a number of half-tones.

# *Medical Education and State Boards of Registration*

## COMING EXAMINATIONS

Alabama: Capitol, Montgomery, July 9. Chairman, Dr. W. H. Sanders.

Arizona: Phoenix, July 1-2. Sec., Dr. Anell Martin.

Colorado: State House, Denver, July 2. Sec., Dr. David A. Strickler, 612 Empire Building.

Connecticut: Regular, City Hall, New Haven, July 9-10. Sec., Dr. Charles A. Tuttle, 196 York Street; Homeopathic, Grace Hospital, New Haven, July 9. Sec., Dr. Edwin C. M. Hall, 82 Grand Avenue; Eclectic, Hotel Garde, New Haven, July 9. Sec., Dr. T. S. Hodge, 19 Main Street, Torrington.

Indiana: Room 57, State House, Indianapolis, July 9-11. Sec., Dr. W. T. Gott.

Maine: State House, Augusta, July 16-17. Sec., Dr. Frank W. Searle, 776 Congress Street, Portland.

Massachusetts: State House, Boston, July 9-11. Sec., Dr. Edwin B. Harvey, Room 159, State House.

Missouri: Gymnasium of the St. Louis University, St. Louis, June 24-26. Sec., Dr. Frank B. Hiller, State House, Jefferson City.

New Hampshire: State House, Concord, July 9-10. Regent, Mr. H. C. Morrison, State Library.

New Mexico: The Capitol, Santa Fé, July 8-9. Sec., Dr. J. A. Massie.

New York: June 25-28. Chief of Examinations Division, Mr. Harlan H. Horner, Department of Education, Albany.

North Dakota: University of North Dakota, Grand Forks, July 2. Sec., Dr. G. M. Williamson, Grand Forks.

Oklahoma: Oklahoma City, July 9. Sec., Dr. J. W. Duke, Guthrie.

Oregon: Portland, July 1. Sec., Dr. E. B. McDaniel, 704 Electric Building.

Pennsylvania: Philadelphia, Pittsburgh and Harrisburg, June 24-27. Secretary of Bureau of Medical Education and Licensure, Nathan C. Schaeffer, Harrisburg.

Rhode Island: State House, Providence, July 11. Sec., Dr. Gardner T. Swarts.

South Dakota: Deadwood, July 10. Sec., Dr. L. G. Hill, Watertown.

Texas: Austin, June 27-29. Sec., Dr. J. D. Mitchell, Fort Worth.

Utah: Salt Lake City, July 1-2. Sec., Dr. G. F. Harding, 310 Templeton Building.

Vermont: Burlington, July 9-11. Sec., Dr. W. Scott Nay, Underhill.

Washington: High School, Tacoma, July 2. Sec., Dr. F. P. Witter, Traders' Block, Spokane.

West Virginia: Capitol Bldg., Charleston, July 8-10. Sec., Dr. H. A. Barbee, Point Pleasant.

Wisconsin: Madison, July 9-11. Sec., Dr. John M. Beffel, 3200 Clybourn Street, Milwaukee.

## Alabama January Report

Dr. W. H. Sanders, chairman of the Alabama State Board of Medical Examiners, reports the written examination held at Montgomery, Jan. 9-12, 1912. The number of subjects examined in was 10; total number of questions asked, 80; percentage required to pass, 75. The total number of candidates examined was 50, of whom 29 passed, including one osteopath, and 21 failed. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| University of Alabama | (1911) | 75, 77, 77, 82 |
| Birmingham Medical College (1910) 75; | (1911) | 78, 78, 78, 79, 80, 83. |
| Atlanta School of Medicine | (1910) | 75 |
| Bennett Medical College, Chicago | (1911) | 80 |
| Northwestern University Medical School | (1910) | 88 |
| Rush Medical College | (1911) | 86 |
| Kentucky School of Medicine | (1907) | 79 |
| Tulane University of Louisiana (1907) 87; | (1911) | 75, 76 |
| University of Maryland | (1904) | 76 |
| University and Bellevue Hospital Medical College | (1911) | 87 |
| Ohio-Miami Medical College | (1911) | 82 |
| Woman's Medical College of Pennsylvania | (1876) | 75 |
| Universities of Nashville and Tennessee | (1911) | 81, 85 |
| Meharry Medical College | (1911) | 78 |
| University of Nashville | (1908) | 82 |
| Vanderbilt University | (1911) | 76 |

FAILED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Birmingham Medical College (1910) 71; | (1911) | 66 |
| Howard University, Washington, D. C | (1910) | 73 |
| Atlanta School of Medicine | (1911) | 62 |
| Medical College of Georgia | (1911) | 54 |
| Louisville National Medical College | (1910) | 60 |
| Tulane University of Louisiana (1909) 71; (1910) 59, 70; | (1911) | 67, 70. |
| Leonard Medical School | (1910) | 68 |
| University of Tennessee | (1908) | 70 |
| University of the South | (1907) | 64 |
| Chattanooga Medical College (1908) 67; | (1910) | 62 |
| Vanderbilt University | (1911) | 66 |
| Meharry Medical College | (1910) | 67 |
| Memphis Hospital Medical College (1910) 66, 66; | (1911) | 66 |

## California April Report

Dr. Charles L. Tisdale, secretary of the California State Board of Medical Examiners, reports the written examination held at San Francisco, April 2-5, 1912. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 79, of whom 56 passed, including 9 osteopaths, and 23 failed, including 5 osteopaths. Two other candidates were licensed on the basis of honorable discharge from United States services. The following colleges were represented:

PASSED

| College | Year Grad. | Per Cent. |
|---|---|---|
| Cooper Medical College, San Francisco | (1911) | 77.5, 87.6 |
| University of California (1910) 82.4; | (1911) | 85.4, 86.2 |
| College of P. and S., Los Angeles | (1910) | 80.2 |
| University of Colorado (1897) 86.6; | (1911) | 82.7 |
| Denver and Gross College of Medicine | (1904) | 83.1 |
| Denver College of Medicine | (1891) | 85 6 |
| George Washington University | (1907) | 77.9 |
| College of Physicians and Surgeons, Chicago (1888) 88.5; (1893) 80; (1904) 76.2; (1905) 79.3; | (1908) | 77.4. |
| Rush Medical College | (1911) | 79.4, 81, 81.1 |
| Northwestern University Medical School | (1911) | 75 |
| Hering Medical College | (1910) | 75 |
| Indiana University, School of Medicine | (1909) | 75 |
| State University of Iowa, College of Medicine (1900) 82.4; (1901) 80; | (1908) | 80.9. |
| University of Maryland | (1910) | 86 |
| University of Michigan, Dept. of Med. and Surg. (1892) 87.6; (1904) 76.1; | (1911) | 88. |
| University of Minnesota, Coll. of Med. and Surg. (1899) 85.4; | (1908) | 88.7. |
| Missouri Medical College | (1890) | 87.1 |
| Washington University. St. Louis | (1897) | 93 |
| John A. Creighton Medical College | (1910) | 82.9 |
| Albany Medical College | (1902) | 97.5 |
| Columbia University, College of Physicians and Surgeons (1896) 78.6; (1905) 83.9; | (1907) | 78.7. |
| Eclectic Medical Institute, Cincinnati | (1899) | 86.1 |
| Cleveland College of Physicians and Surgeons | (1910) | 76.3 |
| Hahnemann Med Coll. and Hospital, Philadelphia | (1894) | 76.6 |
| Medico-Chirurgical College, Philadelphia | (1906) | 78.6 |
| Jefferson Medical College | (1906) | 75 |
| University of Nashville | (1909) | 81.3 |
| Marquette University, Milwaukee | (1897) | 8.8 |
| University of Athens, Greece | (1899) | 80 |
| University of Naples, Italy | (1903) | 86.4 |

FAILED

| College | Year Grad. | Per Cent. |
|---|---|---|
| College of P. and S., San Francisco | (1911) | 69.5 |
| Keokuk Medical College, College of P. and S. | (1903) | 59.5 |
| University of Louisville | (1905) | 65.6 |
| Hospital College of Medicine, Louisville | (1906) | 72.8 |
| College of P. and S., Baltimore | (1882) | 64.5 |
| Detroit College of Medicine | (1894) | 71.3 |
| American Medical College, St. Louis | (1898) | 67.7 |
| Washington University, St. Louis | (1905) | 68.6 |
| Barnes Medical College | (1893) | 52.5 |
| Marion Sims College of Medicine | (1897) | 67.7 |
| New York University Medical College | (1893) | 68.6 |
| Laura Memorial Woman's Med. Coll., Cincinnati | (1903) | 57 |
| Starling Medical College | (1903) | 63.8 |
| University of Oregon | (1905) | 67.1 |
| Medico-Chirurgical College, Philadelphia | (1895) | 68.1 |
| University of Pennsylvania (1879) 77.2;* | (1902) | 74.1 |
| University of Naples, Italy | (1903) | 49 |

* Fell below 60 in one or more branches.

The following questions were asked:

### ANATOMY

Answer ten questions only. 1. Discuss the deep epigastric artery, giving its origin, course, branches and principal structures with which it is in relation. 2. Describe the relationship of the bony points of the elbow when forearm is fully extended and when forearm is in extreme flexion. 3. Describe the renal circulation. 4. Give the distribution of the following intercostal nerves, second, sixth, seventh, tenth and twelfth. 5. Describe the azygos veins. 6. Describe the lymphatics of the mediastinum. 7. Describe the popliteal space, giving boundaries, relations and contents. 8. Describe the origin, course and distribution of the phrenic nerve. 9. Discuss the anatomy of the appendix as an etiologic factor in causing appendicitis. 10. Describe the vesical trigone. 11. Describe (a) the internal abdominal ring; (b) the external abdominal ring. 12. Give the relations of the common carotid artery in the neck.

### BACTERIOLOGY

Answer ten questions only. 1. How is the material obtained which is used to counteract the effect of the bite of a rabid dog? 2. What rôle do bacteria play in the production of ptomaines? 3. What happens if a rabbit is infected with a virulent culture of *Bacillus anthracis?* Explain in detail. 4. What produces glanders, relapsing fever, plague, osteomyelitis, favus? 5. How does tetanus toxin injected into a muscle produce muscular spasm? 6. Define complement, amboceptor, symbiosis, endotoxin, antigen. 7. State how you would determine the nature of a dysentery. Give detail of findings. 8. How does the hookworm usually gain access to the intestine? Give two ways. 9. Discuss, not over one page, *Spirochæta pallida.* 10. How would you determine the presence or absence of pathogenic germs in a punctured wound? 11. How do tapeworms propagate? 12. How would you distinguish between a case of tertian malarial fever and one of estivo-autumnal fever? Describe findings.

### CHEMISTRY AND TOXICOLOGY

Answer ten questions only. 1. Name and describe the chief compounds of sodium. 2. What reaction takes place when carbon dioxid and lime water are brought together? Give the equation. 3. Give the properties of chlorin. State its source and mention the most important of its compounds that are used in medicine. 4. Describe four tests for ammonia. 5. Give the chemical formula and chemical name of laughing-gas. How is the compound made? 6. How would you combine cream of tartar, baking-soda and cornstarch to make baking-powder? 7. How do you determine whether a given white powder is HgCl or $HgCl_2$? 8 Describe collodion and celluloid. 9. Name the three classes of carbohydrates; what compounds do they include? 10. How is oxalic acid made? What is the antidote for oxalic poisoning? 11. Give two methods for distinguishing tartaric acid from citric acid. 12. What antidote, and in what quantity, should be given for poisoning by iodin? By lunar caustic?

### GENERAL DIAGNOSIS

Do not give pathology or treatment unless necessary for diagnosis. 1. Give the etiology and symptoms of acute pulmonary edema. 2. Differentiate hydrocele from inguinal hernia. 3. (a) What may cause enlargement of the cervical lymphatic glands? (b) Give differential diagnosis between any two of these conditions. 4. Differentiate osteomyelitis of a long bone from acute rheumatism. 5. Describe the appearance of the eruption in (a) measles; (b) scarlet fever; (c) rubella: (d) herpes zoster; (e) urticaria. 6. Describe manic-depressive insanity. 7. Describe a typical attack of croupous pneumonia. 8. Describe epidemic cerebrospinal meningitis. 9. (a) What diseases show a low hemoglobin index? (b) Give the diagnosis of uncinariasis. 10. Describe a complete method for examination of the chest when pulmonary tuberculosis is suspected. 11 Describe the tuberculin tests. Discuss their value briefly. 12. Define (a) embolism; (b) thrombosis. Give symptoms of pulmonary embolism.

### GYNECOLOGY

Answer ten questions only. 1. How would you differentiate phlegmonous vulvitis from pudendal hernia? 2. Pointed condylomata, diagnosis and etiology. 3. How would you differentiate a small ovarian cyst from an inflammatory exudation on the broad ligament? 4. What are the methods of replacing the retroverted or retroflexed uterus when movable? 5. Differentiate impaction of feces, pelvic peritonitis and cellulitis. 6. What is the pathology of (a) hydrosalpinx; (b) hematosalpinx diagnosis? 7. How would you differentiate inversion of the uterus from a polypus? 8. What are the results of untreated inversion of the uterus? 9. Mention some of the causes of sterility in women. 10. What are the precautions to be observed in the employment of a pessary? 11. A hot vaginal douche. For what is it used? How administered? Give technic. 12. What are the symptoms of atresia vaginæ?

### HISTOLOGY

Answer eight questions only. 1. (a) Name the stages into which the process of karyokinesis is divided; (b) describe the formation of the acromatic spindle. 2. What features would enable you to distinguish a section made transversely to the tip of the tongue from one made perpendicularly through the skin and subcutaneous tissue of the back of the hand? Make drawings. 3. Describe the histologic characteristics of a longitudinal section of the trachea made perpendicularly to the surface of the mucous membrane. Make drawing. 4. What do you understand by the following terms: (a) neurone, (b) dendrite, (c) axone, (d) implantation cone. (e) tigroid granules? 5. Describe the relation that exists between the small stellate and the cells of Purkinje in the molecular layer of the cerebellum. Make drawings. 6. Describe the distribution of the branches of the renal artery in the kidney. 7. Describe a section made perpendicularly through a solitary lymph follicle such as is found in the colon. Make drawing. 8. Name and describe the different varieties of cartilage found in the human body and name a location where an example of each may be found. Make drawings. 9. Name the structures found in the portal canals of the liver. Make a sketch showing the difference in structure, size and relative position. 10. Name and describe the different varieties of white blood-cells. Illustrate by drawings. 11 and 12. Identify two slides.

### HYGIENE

Answer ten questions only. 1. What conditions, climatic and social, should be thought of in reference to a locality to which you would send a case of pulmonary tuberculosis? 2. What are some of the sequelæ of constipation? What hygienic and dietary regimen would you recommend to prevent constipation? What weight of feces should the normal man pass in twenty-four hours? 3. Name three mineral springs resorts in the United States (preferably in California) with brief statements of the special virtues of each. 4. What are the arguments for and against cremation as a method of disposing of the dead? 5. Name three species of tapeworm of which man is the host. In what food are they found? 6. Describe hookworm. In what section of the country is it most prevalent? What should be done to prevent it? 7. What is the object and modus operandi of traps on waste pipes? How does sewer gas act inimicably to health? What are the symptoms of sewer gas poisoning? 8. What is the period of quarantine required after the latest exposure to infection in (1) small-pox; (2) scarlet fever; (3) diphtheria? 9. State the methods by which typhoid fever may be transmitted. 10. Define the meaning of the terms endemic, epidemic and sporadic. 11. What is the most important requirement that should be made by the state and municipality in order to maintain a pure milk-supply? 12. Name four men whose discoveries during the eighteenth and nineteenth centuries did the most toward the protection of the health of mankind.

### OBSTETRICS

Answer ten questions only. 1. What are the (a) primary and (b) secondary dangers of ectopic gestation? 2. Discuss the matter of cesarean section in presence of sepsis or in suspect cases. What other alternatives have you? 3. What is the greatest danger from retained placental remains after delivery? 4. What are the four cardinal points of presentation? Give number into which each are divided. 5. What do you understand by a compound presentation, and how would you manage it? 6. Give the number and names of the joints of the obstetric pelvis. 7. In gonorrhea or suspect cases what means during labor would you pursue to avoid puerperal infection? 8. Describe the delivery of the shoulders in head presentation where the perineum is threatened. 9. How would you differentiate between septic lymphangeitis and septic phlebitis in the puerperal stage? 10. Discuss the matter of craniotomy on living child. When, if ever, are you justified? 11. Give the attachments of the peritoneum to the uterus. What are the other supports of the uterus? 12. Describe the mode of an intra-uterine irrigation following labor, and give conditions justifying or demanding this measure.

### PATHOLOGY

Answer eight questions only and identify four slides. 1. Of what is pus composed? Describe its formation and development. 2. After traumatic injuries, name three structures or tissues which are likely to be replaced by normal tissues and three which will be replaced largely or entirely by scar tissue. How will this scar tissue differ from normal tissue? 3. After death from long-continued or chronic malarial poisoning, what organic changes will be found? 4. Describe the structural or organic changes which take place in the heart as the result of arteriosclerotic disease of the coronary arteries. 5. What organic changes are likely to result from severe and long continued asthma? 6. How does the condition in bronchial pneumonia differ from the condition found in lobar-pneumonia, and what differences, if any, in the causes producing these two conditions? 7. Locate and describe the changes which occur in Landry's paralysis (acute ascending paralysis) and name principal causes. 8. Locate and describe the changes in multiple neuritis and give the principal causes. 9. Describe the changes in the skin in acute and chronic eczema. 10. Discuss the relationship between arteriosclerosis and chronic interstitial nephritis.

### PHYSIOLOGY

Answer ten questions only. 1. What changes take place in the neuron on the central side of a lesion? 2. Discuss the inhibition of reflexes. 3. Give proofs of the existence of sensory nerves in muscles. 4. Describe the (a) accommodation reflex: (b) light reflex of the sphincter pupillæ. 5. What are the functions of the leukocytes and under what normal conditions is there a variation in number? 6. From what and how is lymph derived? 7. What causes the tonicity of the heart muscle? 8. Describe the aspiratory action of the thorax. 9. Describe the nervous mechanism of vomiting. 10. What are the functions of saliva? 11. What is the function of the parathyroids? 12. What are the functions of carbohydrate food?

# Medicolegal

## Injunction Against Stable Not Licensed by Board of Health

*(Trowbridge et al. vs. Tupper (Mass.). 96 N. E. R. 1096)*

The Supreme Judicial Court of Massachusetts holds that the proposed use of a building as a stable could be enjoined after the board of health of the city of Worcester had refused a license therefor. The court says that it has held constitutional the statute of that state which makes it unlawful for any person to "erect, occupy or use for a stable any building in a city whose population exceeds 25.000. unless such use is licensed by the board of health of said city. and in such case only to the extent so licensed," while jurisdiction in equity is conferred on the superior court "to restrain such erection, occupation or use." The statute was designed to protect the health and comfort of the community and should receive a construction which the plain meaning of the words imports. If there is reasonable certainty that a building is to be unlawfully occupied and used for the stabling of horses, the public authorities need not delay action until the purpose of the owner, or those in control, has been accomplished. but may, under the last provision quoted, prevent the attempted creation of a statutory nuisance, even if no actual injury to the public has been inflicted.

The evidence in this case justified the finding of the judge, that it was the defendant's intention to occupy and use, as a stable for horses, the building which he had erected, and whether the board of health acted arbitrarily and unjustly in refusing him a license could not be reviewed in these proceedings for injunction against such use. Nor was evidence of the excellent sanitary conditions of the building, or of its complete plumbing and appointments and mode of construction, or that stables of other persons located in more densely populated sections of the city had been licensed, admissible. The statute makes no distinction of this nature, and if the board in the instances to which the defendant referred had exhibited partiality, or want of sound judgment, the defendant was answerable only for his failure to comply with the law, to which the board's alleged delinquencies were no defense.

Under the statute a criminal prosecution could be instituted only in the name of the commonwealth, or if an information in equity had been presented it must have been in the name of the attorney general. The authority to preserve the health of the inhabitants is lodged in the municipality, and the members of the board are officers of the city. It is for this reason that suits to enforce the orders of a board of health for the removal, suppression and abatement of a nuisance, or for its prevention, have uniformly been brought in the name of the city or town, since the decision in Winthrop vs. Farrar, 11 Allen, 398. The plaintiffs in this case were described and prosecuted as a board of health, but the bill was in effect in behalf of the city of Worcester, so that it might be amended to make the city in form the plaintiff.

### Defective Complaint in Action for Malpractice in Prescribing Heroin

*(Billesbach vs. Larkey (Cal.), 120 Pac. R. 31)*

The Supreme Court of California affirms a judgment rendered for the defendant, after his special demurrer to the third amended complaint was sustained, and leave to amend further was refused. The complaint alleged that the defendant was a physician and was employed to cure the named plaintiff of a malady from which she was suffering. In the course of his professional duties toward her he gave her a prescription for the taking of heroin. It was alleged that he "carelessly and negligently" did that, but there was no fact alleged tending to show wherein the prescription was improperly or carelessly given in the first instance. The only negligent act set forth was that after she had been taking that drug for some two months, getting the prescription refilled at a drug-store, as needed, the druggist refused to refill it again without special authority from the defendant, and that thereupon the defendant carelessly, unskilfully and negligently instructed the druggist to refill the prescription for her whenever she wanted it, without bothering the defendant each time, and that he did not revoke that instruction for more than a year thereafter, and that the plaintiff, being ignorant of the deleterious effect of the drug, continued to get the prescription refilled and to take the drug for fourteen months thereafter, whereby she was made sick and weak and was seriously injured in body and mind. The court says that while the pleading might be sufficient to withstand a general demurrer, the court could not regard it as sufficient to inform the defendant of the particular act of negligence charged against him, when the objection was taken by a special demurrer pointing out the uncertainty. The complaint was clearly defective in that it could not be determined from it whether the heroin was negligently and improperly prescribed for the malady, or whether it was properly prescribed for the malady, but was directed by the prescription to be taken in an improper manner, or in improper quantities, or with improper frequency. It did not give, or attempt to state, the contents or substance of the prescription. It did not allege how often or in what quantities the drug was to be taken, nor how often or in what quantities it was taken. It did not aver that heroin was not adapted to the cure or alleviation of the disease from which the plaintiff was suffering. It is one thing to give medicine in an improper manner, another thing to give it too often, another thing to give it in too large quantities, and still another to direct or permit its use to be too long continued. The proof which would meet one of these charges might be essentially different from that necessary to meet another. The defendant had a right to demand that the plaintiff inform him which of these acts constituted the negligence charged against him.

### Medical Witnesses for Plaintiff Only

*(Grant vs. New Orleans Railway and Light Co. (La.), 56 So. R. 897)*

The Supreme Court of Louisiana holds that where a woman, suing for damages for personal injuries resulting from an accident, has the benefit of the testimony of medical men, selected by her, as to her actual condition just after the accident, and at the time of the trial, and the defendant is denied such benefit, by reason of her objecting to an examination by physicians selected by it, or appointed by the court, the testimony of the plaintiff's witnesses stands much on the same footing as would that of an expert accountant, named by one litigant, in a case in which the other litigant had been denied all access to the account constituting the subject of the litigation.

# Society Proceedings

## COMING MEETINGS

Michigan State Medical Society, Muskegon, July 10-11.
Washington, Idaho and Oregon associations, Portland, July 5-8.
West Virginia State Medical Association, Webster Springs, July 10-12.

## STATE MEDICAL SOCIETY OF WISCONSIN

*Sixty-Sixth Annual Meeting, held at Wausau, May 21-24, 1912*

The President, DR. JOHN M. DODD, Ashland, in the Chair

A list of the newly elected officers was published in THE JOURNAL,

### Gonorrhea, with Special Reference to Its Prophylaxis and Sequelæ

DR. CHESTER M. ECHOLS, Milwaukee: Women suffering from gonorrhea may be grouped into three classes: (a) public prostitutes; (b) more respectable women who acquire the disease through clandestine relations; (c) the innocent. It is impossible to eliminate gonorrhea by regular examination by physicians. Medical supervision has proved a fiasco in the large Continental cities. We have no definite or certain cure for gonorrhea. Prophylaxis should be secured by warning those suffering from gonorrhea against marrying. Individual instruction is valuable as a prophylactic measure. Surgical sequelæ of gonorrhea in women can largely be prevented by rest in bed, with proper local treatment.

#### DISCUSSION

DR. WILLIAM F. WHYTE, Watertown: Municipal registration and examination do not prevent the disease. This has been proved by the situation in Vienna and other continental cities. Careless inspection and difficulty of diagnosis are the cause. Moral and religious teaching and the avoidance of the saloon are the best means of prophylaxis.

DR. HORACE M. BROWN, Milwaukee: Ignorance of immigrants is a frequent cause of the spread of venereal disease.

DR. CARL W. DOEGE, Marshfield: Gonorrheal salpingitis may sometimes be cured so that the patient may bear children.

### The Value of Overriding as a Method of Curing Diphtheria Carriers

DR. W. F. LORENZ and DR. M. P. RAVENEL, Madison: In many cases of diphtheria germs persist in the throat for long periods of time in spite of use of antiseptic gargles and washes. In such cases they transmit the disease to others. Overriding with cultures of *Staphylococcus aureus* was proposed by Schiotz in 1909. It has been successfully tried a number of times. The State Hygienic Laboratory issues such cultures free. In the clinical employment of the staphylococcus spray, untoward effects or sequelæ were absent.

#### DISCUSSION

DR. C. A. HARPER, Madison: The method is a very valuable and effective one, as our experience has proved.

DR. CHARLES GORST, Mendota: Ordinarily the staphylococcus spray will destroy the germs of diphtheria in the throat of a carrier.

DR. M. P. RAVENEL, Madison: The cultures used are very virulent.

### Differential Diagnosis Between Those Conditions Simulating the Symptom-Complex of Neurasthenia

DR. ARTHUR W. ROGERS, Oconomowoc: Diagnosis is frequently difficult and requires repeated examination and daily observation. On proper interpretation of the significance of symptoms in many of the incipient cases depends the outcome. Neurasthenia is a fatigue neurosis. Distinguish between neurasthenia and paresis. Do not confuse neurasthenia with true hysteria. The most important morbid condition which is sometimes confused with neurasthenia is dementia præcox. The syndrome of dementia præcox begins in childhood, and we are dealing with a mental disturbance, while neurasthenia is more often a disease of mature years. Treatment depends not only on the diagnosis but on the prognosis. A more careful and intelligent consideration of mental diseases will develop greater prophylactic measures and increase the proportion of recoveries among the insane.

DISCUSSION

**Dr. A. J. Patek**, Milwaukee: The especial point to be considered is prophylaxis. It is a grave error to consider and treat mental diseases as purely functional. Hysterical symptoms frequently mask organic conditions. Mental symptoms should be treated prophylactically. Symptoms of dementia præcox should be recognized and treated early. Diseases of the mind should not be regarded or treated as functional.

**Dr. E. F. Lorenz**, Madison: Early recognition of the treatment of the condition is all important. Various tests should be used to differentiate carefully between neurasthenia and dementia præcox.

**Dr. Charles Gorst**, Mendota: In Mendota we have a hospital for the insane. We try to employ the best methods of treatment, avoiding restraint and the use of quieting drugs. Our percentage of cures is large. Early treatment is the basis of recovery.

### Antityphoid Vaccination, Its Use and Value

**Dr. M. P. Ravenel**, Madison: The vaccine is injected under the skin by means of an ordinary hypodermic syringe. The general symptoms are headache and malaise, with a moderate amount of fever for twenty-four hours. No bad results have been noted. Injections should only be made in those who are healthy and free from fever. The vaccine is borne well by women and children. The period of immunization is about two and one-half years. The dead germs in the vaccine are destroyed in the tissues and no vaccinated person could become a carrier.

DISCUSSION

**Dr. L. M. Warfield**, Wauwatosa: I do not believe that we make any mistake when we vaccinate all individuals who are exposed to typhoid, provided we do not vaccinate individuals already ill with the disease. In vaccinating one is really giving the fever in a mild form.

**Dr. Edward Evans**, LaCrosse: I would make two points: 1. Use only two injections if effective. 2. Do not make the injection into the abdomen.

**Dr. C. A. Harper**, Madison: Antityphoid vaccination is a great benefit. Typhoid is on the increase, especially in the country districts and in the South.

### The Auscultatory Blood-Pressure Phenomenon

**Dr. Louis M. Warfield**, Wauwatosa: The sounds at present differentiated are known as phases. The first phase is a sharp sound; the second has a murmur with a rapid sharp sound, the third, a loud, snappy sound; the fourth, a sudden transition from former to an appreciable dull sound; the fifth is disappearance of all sound. A loud third phase indicates a strongly acting heart.

DISCUSSION

**Dr. A. J. Patek**, Milwaukee: The value of peripheral resistance is too little understood. Any instrument that will enable us to put a proper value on the heart's functioning capacity is going to be the instrument of the future.

**Dr. L. M. Warfield**, Wauwatosa: The bell of the stethoscope should not be more than 20 mm. in diameter. The auscultatory method referred to in the paper is impossible to follow where there is any great amount of noise.

### A City Health Department

**Dr. J. M. Fürstman**, LaCrosse: City health departments should do preventive work and should be under the charge of a health officer, who should receive sufficient compensation to enable him to devote all his attention to the work. Politics should be eliminated. Proper laboratory facilities should be given. The health officer should be a physician of special training in sanitation and hygiene. Contagious diseases should be systematically investigated and kept down. Milk should be inspected carefully. There should be medical inspection and supervision of schools. Insanitary conditions should be eliminated.

DISCUSSION

**Dr. H. E. Dearholt**, Milwaukee: Communicable disease is a problem of community life, and the responsibility lies with the government. State, county and city governments have been absurdly niggardly in the employment and payment of health officers. The best men possible should be secured, and they should be paid sufficiently so that they will devote their exclusive attention to the work.

**Dr. J. H. White**, U. S. P. H. and M.-H. Service: Competent, exclusive and well-paid service by health officers is the solution of the problem.

**Dr. G. E. Seaman**, Milwaukee: A course of instruction in public health has been organized in the University of Wisconsin, from which much good is expected to be derived. There will soon be an active demand for trained sanitarians, and the course in the university should be well patronized.

**Dr. Edward Evans**, LaCrosse: In LaCrosse a health department has been established, which is doing splendid work, and is absolutely independent of politics.

**Dr. G. Windesheim**, Kenosha: Kenosha has just established a public health department on model lines, from which much is expected. We will employ as health officer a graduate of the public health course in the University of Wisconsin.

### The Growing Importance of Preventive Medicine

**Dr. Joseph H. White**, U. S. P. H. and M.-H. Service: Preventive medicine has become a positive duty. All the people must be educated to our aims. The places of human habitation must be drained. Refuse must be rendered harmless, and polluted water must not be permitted; infectious patients must be isolated, homes must be screened, children should be schooled in the laws of health. In our educational work we must reach all the people. The work of the medical scientist is supplemented by the work of the practical sanitary engineer. We should find a way to prevent pollution of our soils. The sanatorium is the best and truest friend of the people.

### The Pathology and Diagnosis of Acute Surgical Diseases of the Abdomen

**Dr. D. R. Connell**, Beloit: The most common of these diseases are acute appendicitis, ruptured extra-uterine pregnancy, ulcer of the stomach and duodenum, acute surgical diseases of the pancreas and the gall-bladder and its ducts, strangulation of the intestine and Lane's kink. Pancreatitis is a much more common disease than was formerly supposed, and we are now in about the same stage as regards that disease that we were twenty years ago in respect to appendicitis. Early and accurate diagnosis is of the utmost importance.

### Symptoms and Diagnosis of Pathologic Conditions of the Cecum and Terminal Ileum

**Dr. Neil Andrews**, Oshkosh: The pathologic condition refers to what is known as Lane's kink, Binnil's pericolitis, Jackson's membrane, cecum mobile and inflammation of the appendix. The symptoms are well defined, and consist of pain, tenderness on pressure, constipation, indigestion, retardation of food through the intestinal tract. In diagnosis one must differentiate it from salpingitis on the right side, ovaritis, movable and tender kidney and cholecystitis.

DISCUSSION

**Dr. W. W. Kelly**, Green Bay: We are not justified in interfering with these abnormal bands, unless we are satisfied that they are producing conditions which lead to interference with normal function.

**Dr. C. H. Nims**, Oshkosh: The bismuth meal, permitting the use of the *x*-ray, is a most important means of diagnosis. Under normal conditions the passage of this meal through the alimentary canal is characterized by great precision with reference to time, and any interference with that precision is indicative of abnormal conditions.

### National Importance of Eugenics

**Dr. Frank I. Drake**, Madison: Public and private philanthropy have failed to check the growth of degeneracy. Stirpiculture should be the watchword of the future. Knowledge of human biology is requisite for enlightened statesmanship.

## COLLEGE OF PHYSICIANS OF PHILADELPHIA

*Meeting held May 1, 1912*

The President, Dr. George E. deSchweinitz, in the Chair

### A Year's Work in Appendicitis

Dr. John B. Deaver: During the past year I have removed 561 chronically diseased appendices without a death. In the same time there have been 356 cases of acute appendicitis with eight deaths. It is not long since we all thought that a purge should be administered in the initial stages of the disease, but we have come to realize that the contents of the bowel play practically no part in the continuation of the disease, while the peristalsis induced by purgation has proved to be a most unfavorable factor, defeating the end and principle on which our treatment is based—anatomic and physiologic rest. The purgative is more deadly than the scalpel. Among 259 adults there were seventy-nine who had a history of being purged before admission. Of these seventy-nine all but two, at the time of operation, showed appendices that were either perforated, gangrenous, acutely ulcerated or surrounded by an abscess. Among the seven patients in the series who died, five were purged before admission; 97.5 per cent. of those drastically purged showed the severest kinds of appendicular disease. Among 100 children the same rule holds. Especial care is necessary in the treatment of appendicitis in children. It is frequently overlooked because of the prevalence of colics and gastro-intestinal derangements among the young.

The medical treatment of acute appendicitis, in my opinion, consists of diagnosis, avoidance of purgative or laxative medicine, the institution of anatomic and physiologic rest, and immediate preparation for removal of the appendix.

Anatomic and physiologic rest are secured by the following measures: (1) Complete rest, preferably in the sitting posture to aid in the gravitation of exudates, if any, toward the pelvis. (2) Absolute prohibition of anything by mouth, including water and ice, as well as nourishment, in order to quiet peristalsis. (3) Gastric lavage to relieve the stomach of accumulated fluids, preventing in large degree toxemia, vomiting and peristalsis. (4) The constant instillation of normal salt solution by rectum, according to the method devised by Murphy. This diminishes thirst and supplies the need of water. (5) Ice-bag over the abdomen to quiet pain, to assist in keeping the patient quiet and more particularly to discourage meddling examinations. Drugs are not necessary; usually they are disadvantageous. When morphin is necessary it should be given only in a minimum dose after decision for operation has been made. In the rare cases in which operation is impossible it may, of course, be given in accordance with the indications.

In the treatment of periappendicular abscess I still believe n the method of extraperitoneal approach when feasible. Many abscesses have as a part of their retaining wall the parietal peritoneum of the right iliac fossa or the loin. Here a safer and simpler plan is to open directly into the abscess hrough the abdominal wall. The proposal to relieve all dhesions is contrary to reason and results. It is drainage ather than the breaking up of adhesions that cures. We are best when we work with Nature rather than flout her fforts and substitute our own works for those of our Creator.

As a corollary to this attitude regarding periappendicular bscess I take issue with those surgeons who never leave the ppendix. In the 356 operative cases of acute appendicitis he appendix was not removed in fifteen cases (4.2 per cent.). t need not be left in any patient whose abdomen can be losed so securely as to obviate incisional hernia. Even were t possible by removal of the appendix to secure better closure would not remove it in certain cases. I always make an ffort to find the appendix, but there is a limit beyond which will not go even in the interest of thoroughness, believing hat a living patient with an appendix is better than a dead atient without an appendix.

In cases of spreading peritonitis which is still local we ould operate at once. If we fail to operate in this early stage diffuse peritonitis is likely to result, and from an experience covering the whole development of the modern treatment of peritonitis I say that we cannot treat this condition by operation. I have washed, wiped, drained with gauze, tubes, employed antiseptics, and run the gamut of active procedures proposed for treatment, and I can only echo the words of an English surgeon that "the more thorough the operation, the more quickly the patient dies." Masterly inactivity with appropriate treatment will tide the patients over the crisis, allow victory in the remote areas of the peritoneum, and localize the infection in the neighborhood of the appendix, where it may be dealt with to greater advantage and with every prospect of success. The treatment is the same as that already spoken of as anatomic and physiologic rest.

### Death Following Two Cases of Operative Fixation of Fracture of the Shaft of the Femur

Dr. John B. Roberts, Philadelphia: A man, aged 50, with an alcoholic history, sustained a fracture below the trochanters which was difficult to treat by apparatus. Two days later two metal plates were applied to the bone after exposure through an 8-inch incision. The apposition was obtained by traction exerted by compound pulleys. Suppuration of the wound occurred, and the man died of chronic sepsis complicated with alcoholic delirium about nine weeks later. Another man, aged 60, in good general health, with no alcoholic history obtained, was subjected to operative treatment for comminuted fracture involving the shaft of the femur below the trochanters and the neck. One plate was used to hold the main fragments in position. The operation was done eight days after injury. The patient died of chronic sepsis twenty-one days after operation. Pus was found in the medullary canal and among the muscles.

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## ASSOCIATION OF AMERICAN PHYSICIANS

*Twenty-Seventh Annual Meeting, held at Atlantic City, N. J., May 14-15, 1912*

*(Continued from page 1777)*

### The Symptoms of Acute Coronary Obstruction

Dr. James B. Herrick, Chicago: Sudden obstruction of a coronary artery or any of its large branches is not necessarily fatal, though sudden death often follows such an accident. The view that the coronary arteries are without significant functionating anastomoses is disproved by anatomic studies including stereoscopic skiagraphs of hearts with injected coronaries, and studies of hearts made translucent by special methods. Experiments on lower animals, as well as postmortem examination on man, prove, not only that anastomoses exist, but also that a sudden obstruction of even a large branch is not necessarily immediately fatal. Clinical observation affords additional proof. An accurate symptomatology of coronary thrombosis cannot be drawn. In some cases death is instantaneous; in others it causes angina pectoris and is followed by rapid cardiac weakness and death. Probably obstruction of smaller branches may be followed by mild precordial pains and comparatively trifling symptoms. Other cases with obstruction of large vessels have a sudden angina-like pain, but death either does not occur or is delayed many hours or days. In these cases, the ones especially under discussion, the pain is extremely severe, like angina, though it may be high in the epigastrium. Shock, collapse, vomiting and tympany make the condition not unlike some abdominal accident such as perforation of gastric ulcer or acute pancreatitis. The pulse is generally rapid, very weak and the heart tones feeble. An acute emphysema at times adds to the difficulties of diagnosis. The mind is commonly clear. An acute pericarditis may occur later. The status anginosus may be present or the pain may leave and the patient feel able to leave the bed. In some instances recovery occurs. In others death follows in a few hours or after several days. It is important that the condition be recognized, as it enables a more accurate prognosis to be made and also leads to a more rational therapy, especially in the way of prolonged rest and the use of digitalis rather than nitroglycerin.

### DISCUSSION

Dr. E. Libman, New York: I have been in the habit of classifying lesions we generally meet in the coronary arteries as follows: Besides the recent thrombosis and embolisms there are cases with partial or complete obstruction by plaques. These are specially to be found in men who have been heavy cigar-smokers. If the occlusion by the plaque is incomplete, it may be made complete by a thrombus. In some cases the symptoms are due to a narrowing of the orifice of the arteries by plaques due to atherosclerosis, or puckering. Some patients with closure of the coronary artery live not only for weeks but for months. They present a remarkable facial appearance from which the diagnosis can in some cases be adduced. They have a peculiar dirty, ashen color. Samsom referred to it as "a leaden overcast" (but he believed it to be due to disease of the aorta itself). It is valuable to recognize the condition, when possible, because such patients are apt to succumb at any time and particularly after operative procedures.

## Edema of the Liver with Experimental Nephritis (Cantharidin)

Dr. Eugene L. Opie, St. Louis: The possibility that changes in the liver have a part in the functional disturbances which accompany nephritis has been suggested by the occurrence of edema of the liver and gall-bladder in association with experimental nephritis caused by cantharidin. By measurement of the lymph-flow from the thoracic duct the attempt has been made to determine the relation of this edema to the production of lymph and to its flow through the lymphatics and sinuses of the lymph-nodes. Coincident with the onset of edema of the liver and gall-bladder there is diminution or complete cessation of the flow of lymph from the thoracic duct. At a later period, about one and a half hours after the administration of the drug, lymph flow from the thoracic duct resumes and then greatly exceeds its normal activity. During the early period of diminished flow histologic examination of the regional lymph-nodes of the liver shows the existence of fibrinous plugs frequently formed about cells (in part endothelial) which have been destroyed by the poison. In view of the occurrence of edema, it is probable that the renal irritant causes from the beginning increased flow of lymph which finally overcomes the obstruction interposed by the occluded lymph-channels. Glycosuria occurs in association with the action of cantharidin and is more marked in proportion to the severity of a proportionate intoxication. Changes in the liver causing liberation of sugar from the liver offer a more plausible explanation than that which refers the appearance of sugar to renal changes. The occurrence of edema of the liver and the increased flow of lymph caused by the renal poison add weight to the view that the edema of nephritis is referable to the poison which causes the renal lesion and is not secondary to disturbances of renal function.

## Clinical Experience in the Drug Treatment of Edema

Dr. Joseph L. Miller, Chicago: The drugs selected were digitalis, theocin and strophanthin. The patients had been in the hospital for a week or more so that the element of rest could be largely eliminated. In all the cases of cardiac incompetency, as a rule, digitalis had very little effect on the edema. What we did notice was the marked improvement in dyspnea, which is in contrast with what we found in regard to certain other drugs. In a number of other cases in which we gave strophanthin ampules, containing 0.1 mg., there was only a slight increase in the diuresis. The patients would pass very little more urine. They received great relief from dyspnea. We had ten patients with interstitial nephritis, seven of whom had received digitalis or strophanthin, to whom we gave theocin, four grains, three times a day. The diuresis appeared in from nine to eighteen hours. In these nine cases the average daily output, which had been 644 c.c., increased to 2,105 c.c. after theocin was started. While these patients rapidly got rid of their edema, their dyspnea was not always modified. Here we found that theocin had absolutely no effect. When the kidney has reached the point where it will no longer secrete urine, all of our ordinary measures are of little effect. It was shown that in severe cases in which the kidney fails to secrete fluids it is hard to increase excretion. We used Fischer's solution without success.

### DISCUSSION

Dr. H. A. Hare, Philadelphia: The remarks which have just been made in regard to our diuretics in renal disease carry out the idea that there could not be secretion if you did not have a glandular tissue that will carry it out. If the secreting tissue is gone, I do not see how we can expect any drug treatment to produce any effect. The more I study the influence of various diuretic drugs on the urinary flow the more convinced I am that, unless at the same time we influence the hepatic function, we will fail to get results. I believe that there is a relation between the liver and the kidney which is much closer than we think at the present time. It is of little value to make the patient pass a large quantity of fluid unless at the same time we can increase the output of solids. A much more efficient way is by purgation or tapping.

Dr. F. P. Kinnicutt, New York: My own clinical experience is entirely corroborative of Dr. Miller's experience as to the comparative effect produced by digitalis, strophanthus and theocin. In other words, our experience has been in the use of digitalis and strophanthus in this group of cases that we do not get marked relief in dyspnea, but no increased diuresis. On the contrary, with theocin we get increased diuresis, but without improvement of the dyspnea.

Dr. Theodore C. Janeway, New York: Dr. Miller's careful observation on these drugs ought to emphasize the very great importance of kidney function investigations which are being carried on in regard to both water and salt excretion and examination of these test substances. If we could get to the point at which we could discriminate in the group of edemas due to excreting substance and the group of edemas which are due to definite water or salt excretion, it would go very far to simplify the treatment of these patients. The problem of the water and salt management of these cases is a matter of vast importance and complexity. I have seen cases in which the response of salt restriction was admirable. Water is the best diuretic there is if the patient can excrete water.

Dr. E. Libman, New York: When the agents discussed by Dr. Miller do not cause diuresis, I am accustomed to try some of the older diuretics, and often a striking result is obtained I remember a patient, treated by Dr. J. Rudisch ten year ago with oil of juniper, a drug that must be used with grea caution. The patient was water-logged for months and al the ordinary diuretics had been used. The juniper cause so marked a diuresis that the edema entirely disappeare and the patient was doing well when seen several month later. In several cases I have seen splendid results from th use of the infusion of apocynum. I usually give it by rectum diluted with water.

Dr. S. J. Meltzer, New York: Dr. Miller has brought ou the fact on the selective action of drugs worth noting. Caffei and digitalis are stimulants for the heart, but caffein caus dilatation of the blood-vessels of the kidney while digital does not. It would be very well that physicians give digital and caffein together in such cases.

Dr. S. Solis Cohen, Philadelphia: There is one drug whic in my own hands has been quite satisfactory when combin with digitalis, and that is spartein. It has a distinct influen in reducing blood-pressure, in enlarging the volume of t peripheral arteries and markedly increases the flow of uri and solids. It is also the practice of empirical physicians combine with digitalis one of the vegetable diuretics, pref ably potassium citrate, and very much better results can obtained when these two methods are associated than wh either is used alone. I have found it of considerable advanta clinically to rotate in the use of these drugs, using a caff preparation and spartein, either in alternation or on success days.

Dr. D. L. Edsall, St. Louis: I would like to ask Dr. Mil if he has seen any positive bad results from theocin. It is strongest stimulant we have to the renal secretion. I ha been rather impressed that in some cases in which there is primary disease it may cause increase in albumin and casts and renal irritation. Does Dr. Miller find that correct?

DR. J. L. MILLER, Chicago: I have never seen any bad results following the use of theocin, except the nausea. It causes marked disturbance in the stomach so that we found it advisable not to administer it for more than two or three days, then to discontinue its use and afterward to begin again. In none of these cases did we find injury to the kidney. In many of these cases the urine was examined microscopically and there was no apparent increase in the blood or character or number of the casts. While it is true that we are taught that it is sometimes dangerous in nephritis to administer strong diuretics, it has been shown that the diuretic action is due to the effect on the blood-supply so that, after all, these drugs may not be dangerous.

## Complete Permanent Heart-Block in Auricular Fibrillation Following the Use of Digitalis

DR. ALBERT E. TAUSSIG, St. Louis: In auricular fibrillation, digitalis slows the pulse by producing partial heart-block, thus interfering with the passage to the ventricle of some of the very numerous and irregular auricular impulses. In some cases, if the digitalis is pushed, complete heart-block may result, with the establishment of the very slow, regular rhythm characteristic of this affection. Ordinarily this condition of complete heart-block is temporary and ceases a few days after the administration of digitalis is discontinued. It may happen, however, if there is an organic lesion interfering with the conductivity of the bundle of His, that the administration of digitalis is followed by the establishment of a complete and permanent heart-block, possibly because the drug gives the *coup de grâce* to the already diseased bundle.

### DISCUSSION

DR. H. A. HARE, Philadelphia: If digitalis is given in partial heart-block, there is very great danger of producing complete heart-block. On the contrary, in complete heart-block, digitalis speeds up the ventricle and is a useful remedy.

DR. JAMES TYSON, Philadelphia: I have had very satisfactory results in irregular heart action with atropin, which I have found invaluable; I should substitute it for digitalis in many conditions in which the latter drug is usually given. I think our further knowledge will lead us to use less digitalis in irregular heart cases.

DR. L. F. BARKER, Baltimore: Perhaps we can use digitalis and atropin together very well. Digitalis combines with the heart muscle direct and also combines with the vagus, and is therefore myotrophic and vagotrophic in its effect. When we need digitalis we can give atropin with it and throw out vagotrophic and myotrophic influences.

DR. GEORGE DOCK, St. Louis: In regard to the use of digitalis in such cases, it seems to me important to remember that, if we are making proper examinations, including the use of the polygraph, the use of digitalis is not only safe in these cases, but certain to bring a secure condition to our knowledge. If I am not mistaken about Dr. Mackenzie's work on digitalis in such cases, it is still in the experimental stage. I think he is not entirely satisfied with the use of digitalis in auricular fibrillation, but his work is very careully and systematically done in order to get light on it. In getting heart-block in such a case one must not too quickly draw the conclusion that the patient has a complete lesion of the His bundle and that incradicable damage has been done by the digitalis. I do not agree with those who think hat one can have symptoms of complete or severe disease of he His bundle without any heart disease at all. I believe hat there is a great deal in large doses of strychnin. I reported a few years ago a case in which there were severe symptoms without complete degeneration; then the patient d Stokes-Adams symptoms and remained with permanent eart-block for two years. The man was able to do his work for two years with his pulse always below 30 and died suddenly one night while washing his hands. During that me he was always perfectly well, provided he was taking /20 of a grain of strychnin. If he went without it, his pulse would intermit for one-fourth of a minute.

## Clinical and Pathologic Observations on Subacute Bacterial Endocarditis

This paper, by Dr. E. Libman, New York, was also presented before the American Society for the Advancement of Clinical Investigation, a report of which will appear in THE JOURNAL later.

## Acute Rheumatic Fever and the Arteries

DR. OSKAR KLOTZ, Pittsburgh: There appears to be a fairly definite form of arterial disease which is associated with rheumatic fever in its different stages. The arteries react to the irritant in the form of a true inflammation. This reaction is to be observed in the adventitia and the outer portion of the media. In the acute stages the inflammatory exudate is of the non-suppurative variety in which the lymphoid cells are the most prominent, the lesions involving chiefly the smaller arteries, the larger arteries being damaged chiefly by inflammation which travels along the vasa vasorum. The fixed tissues in the neighborhood of the small arterioles are damaged or even destroyed, but abscesses are not formed. In the aorta and heart the destruction involves chiefly the muscle and elastic elements. In the early stages the intima is affected by a slight superficial fatty change and in the chronic stage it proliferates, giving rise to a nodular endarteritis. The repair following the inflammatory process of the media and adventitia is by fibrous tissue. Thus the aorta in chronic rheumatism is disturbed by a patchy fibrosis, or chronic productive mesaortitis, and has, therefore, lost much of its elasticity and may become subject to diffuse dilatation.

## The Clinical Analysis of Some Disturbances of the Autonomic Nervous System

DR. LEWELLYS F. BARKER, Baltimore, and DR. F. J. SLADEN, Baltimore: In eighteen cases we have analyzed the symptoms referable to disturbances of the autonomic system. The autonomic nervous system includes all the paths going to smooth muscles and secreting glands, and embraces both the sympathetic nervous system and the so-called craniosacral autonomic system. The paths between the cerebrospinal axis and the periphery are constructed of at least two neurons, a proximal one with a medullated preganglionic fiber, and a distal one with a non-medullated postganglionic fiber. The connection between the two neurons can be interrupted functionally at the synapse by nicotin. Continuous innervations exist, during life, in each of the two systems, and, normally, the regulation of the reciprocal antagonists is such that a sort of equilibrium is maintained as a resultant of the tonus in both systems. How this tonus is maintained is not known. It seems probable that both neural and clinical influences play a part. Among these eighteen cases there were some patients who were predominantly vagotonic, others who were predominantly sympatheticotonic, and in many of the cases signs of overactivity in each of the two systems were met with, so-called mixed states. Among the clinical signs pointing to excessive tonus in the craniosacral system may be mentioned: A. Mid-brain portion: Contracted pupil, accommodation spasm, wide lid-slits, von Graefe's sign; B. Hind-brain portion: Salivation, lacrimation, bradycardia, slowed conductivity of vagal origin in the His bundle, pulses irregularis respiratorius, vasomotor anginal attacks, hypotension, bronchial asthma, irregular types of breathing, laryngeal crises, inactive gag reflex, hyperacidity and hypermotility of the stomach, cardiospasm and pylorospasm, spastic constipation or nervous diarrhea; C. Sacral portion: Spasm of the anal sphincter, dysuria, due to spasms of the detrusor of the bladder, and certain genital phenomena; D. General: Sweating, eosinophilia, pigmentation, increased carbohydrate tolerance, excessive reaction to pilocarpin, absence of epinephrin glycosuria. That the conception of vagotonic is in accord with earlier therapeutic discoveries, and may help to guide us to a rational therapy in many cases is illustrated by the well known effects of atropin on spasms (e. g., in bronchial asthma, in hyperacidity, in ulcer of the stomach, in gastric crises, etc.). The good effects of atropin in vagus inhibition of the heart and in sweating are well known. The effects of epinephrin on bronchial asthma, biliary colic and the diarrheas of Basedow's and Addison's diseases are also easily understood in the light of this generalization.

DISCUSSION

Dr. S. Solis-Cohen, Philadelphia: This admirable exposition confirms some observations of my own. I have recently changed the title under which I placed my cases from vasomotor ataxia to vasomotor autonia. I would like to emphasize the fact that these phenomena are largely ataxic. In my first paper I divided them into spastic, paretic and mixed, and the mixed group is the largest one we see clinically. Graves' disease is the largest group of pure paretic diseases. Raynaud's disease, when pure, is an example of the nonparetic. But even in Graves' disease the phenomena are frequently mixed, and we will find the sympatheticotonic and the vagotonic type mixed in certain cases of apparently extreme types of the nervous system.

Dr. L. B. Wilson, Rochester, Minn.: During the last three or four months we have been repeating the work of Gley of the University of Paris, consisting of the injection of extracts of human thyroids into the vascular system of dogs, and we have been able to corroborate it. Gley has been able, not only to produce a fall in blood-pressure by injection of thyroid extract, but also to inhibit the vagus. He has succeeded in doing this only by the injection of fluid from exophthalmic goiters.

## Studies on the Peripheral Pulse

Drs. A. W. Hewlett, J. G. Van Zwaluwenburg and J. H. Agnew, Ann Arbor: This study of the volume of the pulse was made in the arm when the venous outflow was momentarily obstructed by a suitable pressure cuff. In a normal young individual, during exposure to cold, the main portion of the blood enters the arm during the primary systolic pulse-wave, while during the remainder of the pulse-period, little, if any, blood enters the arm. When the individual is comfortably warm, the primary wave is increased in size and most of the blood enters with this wave. When the individual is uncomfortably warm, the primary wave remains large, but the inflow is rapid throughout the whole pulse period. This seems to be due to a relaxation of the finer arterioles. When nitroglycerin is given in medicinal doses, the primary wave is maximal, whether the individual is exposed to heat or cold. In the latter case there is a marked reflux wave immediately following the primary wave. This is due to a relaxation of the main arteries without a corresponding relaxation of the arterioles and can be explained only by a reflection of the pulse wave from the periphery. The large arteries act like an elastic bag from which no adequate outlet through the finer arterioles is possible.

## The Symptomatology and Early Diagnosis of Thrombophlebitis

Dr. Lewis A. Conner, New York: Among 1,540 cases of typhoid treated in the New York Hospital thrombophlebitis was observed in over 5 per cent., and there is much reason to believe that this figure fails to represent its actual frequency. The condition seems to begin usually in the small veins of the legs and feet, and the classical symptoms of femoral phlebitis may be lacking altogether or appear only late in the course of the affection. Pulmonary embolism and infarction are frequent complications of such thrombophlebitis, and occur usually at an early stage of the affection, often many days before any signs of phlebitis are apparent. Such emboli are almost always small, and seem to come from the newly forming thrombi in veins which are not yet completely occluded. Large, fatal pulmonary emboli are very rare. Among seventy-eight cases of proved thrombophlebitis, pulmonary embolism was observed in twenty-nine (33 per cent.). In two-thirds of these latter cases the pulmonary symptoms appeared before the phlebitis was recognized. The symptoms appear suddenly and may be slight or severe. They include pain, cough, dyspnea, cyanosis, bloody expectoration, etc. The physical signs may be those of a slight, dry pleurisy, of lobar pneumonia or of extensive plastic pleurisy. Pulmonary symptoms suggestive of embolism occurred in a number of cases of typhoid in which no frank signs of phlebitis were observed. It is safe to say that most of the pulmonary and pleural complications of the later weeks of typhoid are of embolic nature and arise from phlebitis, either latent or obvious. The post-typhoid "septic" chills are, in most cases at least, associated with the presence of thrombophlebitis. It seems probable that the condition known as "tender toes" is related in some way to thrombophlebitis in the sole of the foot, as phlebitis and "tender toes" are very frequently associated. It is suggested that "tender toes" may be due to a neuritis of the plantar nerves which is caused by extension of the inflammation of the plantar veins which run in close proximity.

DISCUSSION

Dr. F. P. Kinnicutt, New York: Since my attention was called to this condition by Dr. Conner, a study of several cases presenting clinical phenomena similar to those described has convinced me of the probable correctness of the explanation which he offers. In the matter of "tender toes," the consensus of opinion is that it is due to a neuritis, but the suggestion that the neuritis was a secondary process seems very reasonable. The sequence would be a thrombophlebitis, a periphlebitis and extension of the inflammation to the nerve branches immediately contiguous to the affected vein.

Dr. E. Libman, New York: For some years I have suspected that the sharp temperature rises and the chills seen in cases of typhoid, particularly toward the latter part of their course, might be due to thromboses. In such cases blood-cultures are often negative.

Dr. W. S. Thayer, Baltimore: I have long been interested in the relation between the post-typhoid chill and the unaccountable rise of temperature and later appearance of thrombosis. One point that Dr. Conner has forgotten is the frequency of pulmonary thrombosis in these cases. I have in several instances seen thrombosis of pulmonary arteries and not anywhere else could it be found.

Dr. B. Sachs, New York: In the senile and presenile perio these conditions are extremely frequent, although very generally overlooked. I am very certain that many of the condi tions, not only of moderate paresis, but particularly of pai occurring in older persons, are distinctly due to the conditio of thrombophlebitis in the lower extremities. Cases of thi sort are also similar to the anatomic conditions found i erythromelalgia. Some years ago it was supposed that th neuritis was the primary condition, but now it is establishe that thrombophlebitis is the primary condition and the neur itis is entirely secondary.

## Fatal Cases of Postoperative Embolism

Dr. Louis B. Wilson, Rochester, Minn.: We have tabulate our cases up to September, 1899, and no fatal case of embolis occurred during those ten years. There were over 6.000 maj operations done. On Sept. 13, 1899, our first case of sept embolism occurred, and we have had forty-seven in abo 57,000 cases. We had one fatal case in over 1,200 operation Why did we have none in the first 6,000 when we were d to have five? There was no material change in the operator the same operators were doing the work. There was change in the anesthetists. There was no material change the nurses. There was no material change in the anesthetic ether by the drop method had been used from the beginnin no material change in the convalescence. The patients we all gotten up as soon as possible. That has been the poli of the institution since it was founded. There were t possible reasons which suggested themselves. During t first twelve years of the clinic nearly all operative cases we drawn from the private practice of the staff. Very f referred patients were operated on and consequently th received were operated on earlier than are now refer patients. Second, in going over the regions in which ope tions were performed, we find that while the average p centage of mortality of all cases during the last twelve ye has been 0.08 per cent., in operations on the stomach, gall-bladder and intestines it has been three times as large.

### An Experimental Study of the Retention of Foreign Protein by the Kidney

Dr. R. M. Pearce, Philadelphia: Extracts of the kidneys of normal rabbits prepared one, two, three and four days after the intravenous injection of egg-albumin and horse-serum have the power to sensitize guinea-pigs to a second injection of these proteins, the sensitization to first- and second-day extracts being constant and of great degree, that of the third day less marked and sometimes lacking, and of the fourth day only rare and always weak. Comparative studies of the power of the blood, liver and kidney to sensitize indicate that this sensitization depends on the contents of foreign protein in the circulating blood and not on its accumulation or fixation in the tissues of an organ. This opinion is supported by other experiments in which the sensitizing power of the blood and of the extracts of unwashed kidneys was compared with the sensitizing power of extracts of washed kidney. The weak sensitizing power of washed kidney extract is taken as evidence that foreign proteins of the kinds used are not closely bound to the tissues of the kidney, and, if these results may be applied to nephrotoxic protein, it follows that nephritis is not due to selective and persisting fixation of a protein by the renal cells, but is due to the action of such protein merely during the process of its elimination. In experimental acute nephritis of the type due to uranium nitrate, the power of sensitization to that of egg-albumin is prolonged for twenty-four hours and in the chromate type for forty-eight hours, thus indicating that in nephritis, of the acute type at least, the elimination of a foreign protein is delayed. Attempts to study by the same methods the elimination of vegetable and bacterial proteins have failed.

#### DISCUSSION

Dr. M. J. Rosenau, Boston: It seems to me very clear that this protein matter is in the blood rather than fixed in the tissues of the liver and kidneys. The work interested me from the standpoint of using anaphylaxis, and, as to the use of this as an instrument, I am prompted to throw out the caution that we have as yet no delicate means of determining when anaphylaxis is present or absent. The methods so far are crude. There must be evident indications on the reacting pig before we can say whether the reaction has occurred or not. That is one point in the particular biologic phenomenon which needs to be cleared up in order to make it a more delicate means of determining some of these things for which the reaction is used. Further, it is not a quantitative test at all, merely a qualitative test.

Dr. L. F. Barker, Baltimore: The experiments are very interesting as throwing light on the time required by the protein to go through the kidney. In the normal kidney the length of stay in the epithelium is very short. It is exceedingly interesting to experimental physiologists that the kidney is able and eager to get rid of foreign proteins from the blood. Egg-albumin and bacterial proteins are excreted.

### The Principles of Treatment in Nephritis

Dr. Martin H. Fischer, Cincinnati: All the changes that characterize nephritis are colloid-chemical in nature and are due to a common cause, namely, to an abnormal production or accumulation of acid (and substances that act like acid) in the kidney. To this are due the albuminuria, the morphologic changes in the kidney, the associated formation of casts, and the changes in the quantitative output of water and dissolved substances by the kidney. All nephritides are parenchymatous nephritides and differ only in that the changes in some are general (parenchymatous nephritis), while in others they are local (chronic interstitial nephritis). The fact that healthy kidney tissue exists between the patches of parenchymatous nephritis in the latter case accounts for the scarcity of urinary signs in the latter disease. The relief of nephritis depends on a removal of as many as possible of the conditions that are responsible for the abnormal production or accumulation of acid in the kidney, and a direct combating of the acid condition and its effects on the kidney. To this end there are indicated alkali to neutralize the acid, salts, including sodium chlorid, to reduce the effects of the acid on the kidney, and water that this may be present in a "free" state for urine. The generalized edema, the "uremia," etc., which are usually regarded as secondary to the kidney disease are really part and parcel of the same intoxication. They represent in other organs what in the kidney is called nephritis.

#### DISCUSSION

Dr. T. C. Janeway, New York: There is one change of rather marked importance, which Dr. Fischer has not duplicated in any way in his acid experiments, which deserves consideration, namely, the presence of fat of a peculiar kind in the tubular epithelium, showing evidence of cell degeneration taking place. Dr. Fischer makes the positive statement that the abstraction of sodium chlorid from the diet of man or animal results in the occurrence of evidence of nephritis or of tubular epithelium degeneration. That is absolutely negatived by some very important experiments reported by Dr. Joslin some years ago (*Arch. Int. Med.*, July, 1908, i, 615).

Dr. A. E. Taylor, Philadelphia: I was the original subject on whom salt-free diet experiments were conducted. I obtained in my own person effects which were not obtained in the men following my experiment. The point is true that so far as I and the men who followed me were concerned we had no symptoms of nephritis. Although there was a profound disturbance of the body due to salt abstraction, there were no symptoms of nephritis. This is not a fair criticism. It is surprising how animals will resist, at times, salt abstraction and it is possible that, if the experiment were continued over a longer period, the patient would develop the renal lesions which might be due to salt abstraction.

Dr. James Tyson, Philadelphia: In quite a long experience I have grown to adopt the administration of alkalies as the very first measure with a view to attacking the symptoms in what is commonly called acute nephritis; not that I am invariably successful, but this method has proved to be the least unsuccessful method in the treatment of these cases. In all the efforts I have made to determine whether abstraction of sodium chlorid reduces edema, I have failed—this, perhaps, from lack of training in scientific accuracy.

### Some Clinical Aspects Observed in the Study of a Thousand Cases of Ulcer of the Stomach and Duodenum

Dr. Julius Friedenwald, Baltimore: The thousand cases occurred in 12,598 patients affected with various gastric disturbances. The largest proportion occurred in patients between the ages of 20 and 50, and the greatest number between 20 and 30. There were 676 females and 324 males. As to occupation, thirty-one were cooks, eighteen were workers in metal, twelve were workers in porcelain, eight were miners, twenty-eight were tailors, fifteen were shoemakers, nineteen were blacksmiths; a definite history of trauma was elicited in twenty-three cases. Anemia was present in at least 65 per cent. of all cases. A history of alcoholism was obtained in 21.4 per cent.; of syphilis in 5.2 per cent. The gastric secretion presented a normal acidity in 46 per cent., hyperacidity in 30 per cent, subacidity as well as anacidity in 23 per cent.; hyperacidity was proportionately more frequent in females, and subacidity in males. As a rule, in acute ulcers, and especially those accompanied by recent hemorrhage the acidity was high, while in the old chronic forms of ulcer the acidity was low. Pain was present in 94 per cent. of all cases, and was most marked in those accompanied by a hyperchlorhydria. It appeared in 223 instances within the first hour after taking food, in 188 between one and two hours, and in 491 after two hours. An epigastric tender area was present in 908 cases; a tender point to the right or left of the median line in forty-one; a dorsal tender area together with an epigastric tender spot in 523; a dorsal tender area alone in twenty-five; no tender area at all in twenty-six cases. Vomiting occurred in 676 cases. It was proportionately much more frequent in those instances in which pain appeared early, and in those accompanied by a high acidity. Gastric hemorrhage was present in 228 cases while melena occurred twice as frequently as hematemesis. Of 539 cases in which the feces were examined for occult blood, 467 gave one or more positive reactions.

### Acquired Stenosis of the Duodenum; a Statistical Study with the Report of a New Case

Dr. J. M. Anders, Philadelphia: The causal conditions are divisible into two groups—benign and malignant. About 20 per cent. of the aggregate number of cases were dependent on malignant disease of the duodenum, pancreas and other adjacent structures. Of the benign forms, the greater number were occasioned by duodenal ulcer. In twenty-nine instances, constriction of the duodenum was the result of compression by the root of the mesentery. Other factors in the production of duodenal stenosis of benign character were peritoneal adhesions and bands, gall-stones, cysts of the pancreas, kinking, hematoma of the pancreas and ovarian cyst. A point of interest is that about 70 per cent. of the cases were of intraduodenal origin.

### Tertiary Syphilis of the Liver

Dr. Thomas McCrae, Baltimore: Syphilis of the liver presents a very varied clinical picture with prominent general symptoms in many cases, of which loss in weight is marked. The duration of the symptoms may be prolonged and there may be periods of improvement. Fever is a common occurrence. There are features suggestive of hepatic disease in the majority of the cases. Enlargement or tumor is the most common. This may suggest other conditions, especially malignant disease. General enlargement and the occurrence of nodules or large rounded masses are the most common. A striking feature is the relatively marked enlargement of the left lobe as compared with the right. The diagnosis may be obscured by other diseased conditions or the liver condition may be interpreted wrongly. Ascites is sometimes a difficulty. Knowledge of the features of hepatic syphilis and the therapeutic test are important aids. Treatment can influence the syphilitic process but not its results (cirrhosis, amyloid). The treatment is the usual therapy for syphilis, with special emphasis placed on the administration of potassium iodid. In many of the cases this alone was given with a perfect result. No difference could be observed when mercury was added, but it seems wise to give both drugs. Dramatic results, such as almost immediate disappearance of the fever, reduction in the size of the liver and nodules, and rapid gain in the general state and weight, were seen when iodid alone was given. One patient gained 25 pounds in a month. Salvarsan was given to three patients, in doses of 0.5 or 0.6 gram, and in two of these mercury and iodid were not given in order that the effect could be watched. Improvement followed in both cases but not so rapidly as was the case with iodid alone or mercury and iodid. In the third case all three were given. We must recognize that in some cases, while we can influence the syphilitic process in the liver, we cannot prevent or materially affect the resulting cirrhosis unless the cases are seen early and recognized.

#### DISCUSSION

Dr. M. Howard Fussell, Philadelphia: I saw a man with a mass as large as an infant's head apparently in the left lobe of the liver. Everybody thought it was certainly carcinoma. Administration of inunctions caused the disappearance of the tumor before five weeks.

Dr. J. M. Anders, Philadelphia: Cases of syphiloma on the surface of the organ are, according to certain writers, rare. This does not accord with my own personal experience. With one or two exceptions the tumor has been attached to the left lobe of the liver. This is a point which should ever be borne in mind.

Dr. Theodore C. Janeway, New York: There is one point of diagnosis my father laid stress on, namely, the peritoneal friction rub due to the perihepatitis over the gummatous nodule which will be found if searched for.

Dr. George Dock, St. Louis: Years ago in discussing continued fever of obscure origin I reported a case of syphilis of the liver illustrating that feature. I recently saw another case in which I was able to help the patient by remembering my former experience. The patient was immediately put on large doses of iodid, the nocturnal pains stopped almost at once, the liver went down, but the tumor remained as a stony hard mass in the same region, showing about the same resistance to *x*-rays. In these cases the therapeutic test is advisable.

### Diabetes Insipidus

Dr. James B. Herrick, Chicago: In a case of diabetes insipidus of four years' standing, in an adult male, because of certain cerebral symptoms and in order to investigate as to possible lesion of the hypophysis, lumbar puncture was made, less than 5 c.c. of clear fluid escaping slowly and under low pressure. A remarkable drop in the amount of urine followed and a rise in specific gravity. Before lumbar puncture the daily amount of urine had been from 7,000 to 11,000 c.c. and the specific gravity 1.001. For four weeks after the puncture the amount averaged 1,500 c.c. and the specific gravity 1.015. The features of especial interest in the case were the possible etiology in hypophyseal disease and the sudden change in the urine following lumbar puncture. The latter feature had a bearing on the question of the ability of the kidney in this disease to pass a concentrated urine, a point especially emphasized by Erik Meyer. This clinical experience seemed to show an ability of the kidney of diabetes insipidus to pass such urine, at least under certain conditions.

### The Advantages and Disadvantages of the Intravenous, Intramuscular and Subcutaneous Injections of Antitoxin

Dr. W. H. Park, New York: The rapidity of absorption varies as follows: At the times stated below a given dose of antitoxin will give an amount of antitoxin in the blood as follows:

| | 6 Hours. | 12 Hours. | 24 Hours. | 48 Hours. |
|---|---|---|---|---|
| Intravenous ...... | 120 | 100 | 100 | 80 |
| Intramuscular .... | 6 | 24 | 40 | 45 |
| Subcutaneous ..... | 3 | 12 | 20 | 25 |

The effectiveness of antitoxin, quantitatively considered, is in proportion to the amount in the blood current. During the first twenty-four hours one part given intravenously is worth eight parts given subcutaneously and four intramuscularly. In practice, intramuscular injections often act as subcutaneous ones, probably because the serum escapes from the muscle. No accidents have followed over 100 intravenous injections. The difficulty of giving is the only objection. In severe cases of diphtheria and in all cases of tetanus the antitoxin should be given intravenously.

### Immunity Against Trypanosomes

Dr. F. G. Novy, Ann Arbor, Mich.: The measures which aim at the control of the trypanosomal diseases of man and animal may be directed against the insect carrier, or against the vertebrate carrier which constitutes the natural reservoir of the virus, or they may be directed against the causative organism either by the introduction of trypanocidal agents (chemotherapy), or by resort to methods of immunization. Of the four measures immunization by means of suitable vaccines, if practicable, would be of first importance even if an efficient chemotherapy were developed. In the various attempts at immunization made by other workers, the parasites as found in the blood of an infected animal are injected either living or dead into the animal to be immunized. The successful cultivation of trypanosomes raised the hope that pure cultures could be obtained which would be at once attenuated and immunizing. This hope has been fully realized in the case of *Trypanosoma lewisi*. Cultures of this organism when grown in the laboratory for three years or more become attenuated to such an extent that the injection of any amoun of the living growth fails to produce an infection. The production of a living vaccine against a protozoal disease is thus realized for the first time. The availability of the method for the more strictly pathogenic trypanosomes remains to b established. The work of the past two years shows that *T. brucei* can become attenuated in similar manner.

# *Association News*

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## PROCEEDINGS OF THE ATLANTIC CITY SESSION

*(Continued from June 15, page 1913)*

### *Fifth Meeting—June 6, 1912*

The House of Delegates met at 2:10 p. m. and was called to order by the President. The Secretary called the roll, and 104 delegates responded. The minutes of the previous meeting were read and approved.

#### Supplementary Report of the Committee on Credentials

Dr. D. Chester Brown, Connecticut, Chairman, presented a supplementary report from the Committee on Credentials, showing that 135 delegates had been seated. He then presented the following:

The finding of the Committee on Credentials of the House of Delegates of the A. M. A. with reference to the contested seat in the Illinois delegation:

A full hearing of all those present and desiring to speak was given by your committee, who beg to make the following report and to file with this report the stenographic minutes of the hearing.

Illinois is entitled to nine delegates in the House. Six delegates presented credentials and were duly seated. Two alternates presented the credentials of the delegates for whom they were elected alternates and on the back the credentials were duly endorsed by the delegate authorizing the alternate to act for him. Three other alternates present themselves to fill this vacant seat in the Illinois delegation with credentials that authorize them to act for their principals and in each case it is stated on the credential who that principal is. On consulting the roster of the House, it is found that each of the principals designated is already seated.

The ninth delegate has not appeared, neither has his alternate, the only alternate not otherwise disposed of.

The question raised by a portion of the Illinois delegation is as to a question of fact. The statement is made that individual alternates were not designated to act for individual delegates in the event of the absence of the delegate, but that any one of the nine alternates presenting would be entitled to the seat.

This is based on recollection of an action thought to have been taken by the House of Delegates of the Illinois State Association, but has no documentary evidence in its support.

Your committee therefore submit that no competent credential has been presented for the contested seat and therefore declare it vacant.

Your committee would call attention to the fact that no standing rules have been submitted to them for their guidance, and would therefore recommend that the House adopt the following as standing rules for guidance of the Committee on Credentials and that copies of these rules be printed and sent to each member of the Committee on Credentials at least one week preceding the meeting of the House.

*Rule 1.*—Credentials shall be of two parts. The first part shall be sent to the office of the Secretary of the American Medical Association by the secretary of the constituent association and shall be a list of delegates for that association, with an alternate designated for each delegate to act in his stead when so authorized by the principal.

*Rule 2.*—Each delegate shall be furnished with a credential by the secretary of the association by which he is elected on a prescribed form furnished by the Secretary of the A. M. A. which shall give the date and term for which he was elected and who was elected to act as alternate for him in case of his inability.

*Rule 3.*—A delegate, on presenting himself to the Committee on Credentials, may be seated even though he may not present part 2 of his credential, provided he is properly identified as the delegate who was elected by his association and whose name appears on the Secretary's record.

*Rule 4.*—No alternate may be seated unless his credentials meet the same requirements as designated for the delegate and he can show written evidence that he is empowered by his delegate to act for him.

D. C. Brown, Chairman.
E. J. Goodwin,
F. A. Tucker,
E. A. Vanderveer,
H. W. Van Allen.

Dr. William L. Noble, Illinois, moved that the report be adopted, and that the recommendations be concurred in.

Motion seconded and carried.

#### Election of Officers

The election of officers being in order, Dr. A. B. Cooke, Nashville, Tenn., nominated for President, Dr. John A. Witherspoon, Nashville, Tenn.

The nomination of Dr. Witherspoon was seconded by Pennsylvania, New York, Montana, Massachusetts, Missouri, Virginia, Texas, Ohio, Wisconsin, Oregon, California, Utah, Indiana, New Mexico and Illinois, after which Dr. Edward Jackson, Colorado, moved that the nominations be closed and the Secretary cast a ballot for the House of Delegates.

Motion seconded and carried.

The secretary then cast the ballot of the House for Dr. Witherspoon and he was declared duly elected.

Other officers were likewise nominated and duly elected as follows:

First Vice-President, Dr. Philander A. Harris, Paterson, N. J.
Second Vice-President, Dr. John L. Heffron, Syracuse, N. Y.
Third Vice-President, Dr. H. M. McClanahan, Omaha.
Fourth Vice-President, Dr. Henry D. Fry, Washington, D. C.
Secretary, Dr. Alexander R. Craig, Chicago.
Treasurer, Dr. William Allen Pusey, Chicago.
Trustees, Dr. M. L. Harris, Chicago; Dr. C. A. Daugherty, South Bend, Ind.; Dr. W. T. Councilman, Boston.
Member of the Judicial Council, Dr. George W. Guthrie, Wilkes-Barre, Pa.
Member of Council on Health and Public Instruction, Dr. Walter B. Cannon, Boston.
Members of Council on Medical Education, Dr. James W. Holland, Philadelphia; Dr. W. D. Haggard, Nashville, Tenn.

#### Associate Members

The Secretary presented the list of applicants for associate membership endorsed by the sections and on motion of Dr. A. W. McAlester, Missouri, duly seconded and carried, the Secretary was instructed to cast the ballot of the House in each case in which the applicant is eligible for associate membership in the American Medical Association, i. e., when the applicant is not eligible to membership in his component state associations.

The President nominated as officers of the Section on Orthopedic Surgery, Dr. Newton M. Shaffer, New York, Chairman; Dr. John Ridlon, Chicago, Secretary.

On motion, duly seconded, these nominations were confirmed.

#### Report of Reference Committee on Sections and Section Work

Dr. Wesley T. Mulligan, New York, Chairman, presented the following report of the Reference Committee on Sections and Section Work:

Your committee has received a request from the Section on Pharmacology and Therapeutics asking that the House of Delegates instruct the Chairman of the Council on Health and Public Instruction to endeavor to secure a modification of our American patent laws, eliminating produce patents on chemicals used as medicine.

The committee recommends favorable action to the House of Delegates.

We have also received a communication from the Section on Surgery asking that the American Medical Association, through its component bodies, inaugurate a system of organized inspection and classification of all American civil hospitals. This was acted on by the House of Delegates at its meeting on Wednesday afternoon, and no further action is deemed necessary.

For the Committee,

Wesley T. Mulligan, Chairman.

On motion, duly seconded, the report was adopted.

#### Report of Reference Committee on Hygiene and Public Health

Dr. Oscar Dowling, Louisiana, Chairman, presented the report of the Reference Committee on Hygiene and Public Health, as follows:

The Reference Committee on Hygiene and Public Health, on the matters referred to it, respectfully reports and recommends:

That the appointment of a committee to draft a standard law for the prevention of ophthalmia neonatorum be referred to the Council on Health and Public Instruction with power to act.

That the resolution regarding Principles of Medical Ethics requires no further action on the part of the House.

That methods of procedure for the prevention and control of tuberculosis be approved and referred to the Council on Health and Public Instruction.

That action was taken last year on resolution regarding venereal disease.

That resolutions regarding a pure milk-supply be referred to the Council on Health and Public Instruction.

That the appointment of a committee on industrial hygiene be referred to the Council on Health and Public Instruction with a recommendation for early and favorable consideration.

Respectfully submitted,
Oscar Dowling, Chairman.
Edward Jackson.
V. H. Stickney.
L. W. Littig.
John Champlin.

On motion, duly seconded, the report was adopted.

### Report of Reference Committee on Legislation and Political Action

Dr. William A. Evans, Illinois, Chairman, presented the Report of the Reference Committee on Legislation and Political Action in the form of extracts from the minutes of the reference committee.

In regard to annual conferences, it was moved that it is the sense of this committee that the Chairman of the Council on Health and Public Instruction, the Chairman of the Council on Medical Education, and the Chairman of the Section on Preventive Medicine be requested to hold a conference with reference to the advisability of holding the joint conference on education and legislation at the annual session of the American Medical Association.

As to the remainder of the report from the last paragraph, bottom of page 78 of the handbook and to page 79, the recommendation of the committee is that they be stricken from the report as not within the province of the Council.

There was also referred to us the report of the Committee for Arranging for Public Meetings and Lectures in Atlantic City, and in view of the action of the House of Delegates in covering this point there is no reason why it should be considered further, and therefore the committee recommends that this report and all reference to it be stricken from the files.

On motion, duly seconded, the report of Council was adopted as amended by striking out the last paragraph.

Moved and seconded that the report of the Committee to Arrange for Public Meetings at Atlantic City be laid on the table. Carried.

Moved and seconded that the resolution urging the enactment of laws limiting traffic in opium and cocain be referred to the Standing Committee on National Health Organization. Carried.

### Report of Committee on National Department of Health

On motion, the report of the Committee on National Department of Health was adopted, together with a resolution that the President of the American Medical Association be empowered to reform the committee in such a way as to increase its efficiency, taking from or adding to its membership as he may see fit; that this committee perfect such an organization as is best suited for its work, and that the Board of Trustees be instructed to make the necessary appropriation of funds for its expenses.

W. A. Evans, Chairman.

A motion was made to adopt the recommendations contained in the minutes of the Reference Committee. Seconded.

Dr. E. J. Goodwin, Missouri, moved to amend by substituting in the last recommendation contained in the minutes regarding an appropriation for defraying the expenses of the Committee on National Department of Health the word "may" for "be instructed to" after the words "Board of Trustees" and before "make the necessary appropriation." Motion seconded and carried.

On separate motions duly seconded and carried, the other recommendations contained in the minutes of the reference committee were adopted.

Dr. William A. Evans, Illinois: Inasmuch as we have acted on the report of the Council on Health and Public Instruction on two separate days, I now move the adoption of the Report of the Council on Health and Public Instruction as amended. Motion duly seconded and carried.

### Report of Reference Committee on Reports of Officers

Dr. Hubert Work, Colorado, Chairman, presented the report of the Reference Committee on Reports of Officers, as follows:

Your Reference Comittee on Reports of Officers takes the greatest pleasure in endorsing the resolution referred to it yesterday based on the suggestion made by President Jacobi, and recommends its adoption as follows:

Whereas, The universal experience of thousands of years has established the knowledge that deluges and freshets have changed the surface of the globe, and exterminated people or impoverished them; and

Whereas, In many cases such calamities could be referred to the disappearance of the forests; and

Whereas, The recent freshets and floods of the Mississippi have resulted in the devastation of thousands of square miles, the deaths of hundreds of people, the starvation and invalidism of thousands, and the impoverishment of hundreds of thousands of people for the present and for generations to come; be it

*Resolved*, That the American Medical Association urge the Government of the United States and the individual states to take immediate steps in the direction of extensive reforestration of the country and thereby to protect, if only in the future, the country against the return of similar calamities.

For the committee,
Hubert Work, Chairman.

On motion, duly seconded, the report was adopted.

### Report of Reference Committee on Miscellaneous Business

Dr. W. E. Anderson, Virginia, Chairman, presented the report of the Reference Committee on Miscellaneous Business, as follows:

1. Reporting on resolution offered by Dr. H. D. Arnold of Massachusetts, i. e., that the President appoint a Committee on Anesthesia to consist of five members, for the purpose of continuing investigations on anesthesia, and that the Board of Trustees be requested to appropriate money for this purpose.

The Reference Committee recommends the approval and adoption of resolution as offered.

2. Referring to the communication from the Section on Preventive Medicine and Public Health presented to the house by Dr. Dowling yesterday, the Reference Committee recommends the approval of the communication and suggests that it be referred to the Council on Health and Public Instruction with a recommendation for early and favorable action.

For the committee,
W. E. Anderson, Chairman.

On motions, duly seconded, each section was adopted.

### Report of Committee on Reapportionment

The Secretary presented the following report of the Committee on Reapportionment:

Your Committee on Reapportionment recommends to the House that the apportionment for the next three years shall be on the basis of one delegate for every 700 and fraction thereof of membership of the constituent state associations.

The committee appends a table recording the present apportionment, the number of members of the different state associations reported by the secretaries of these state associations as of April 1, 1912, and an apportionment made on the basis of 675 and fraction thereof and of 700 and fraction thereof. The apportionment based on a representation of one delegate for every 700 and fraction thereof members distributes 149 voting delegates of the House of Delegates.

[The table is on the opposite page.]

Respectfully submitted,
Edwin Walker.
J. L. Crook.
J. Z. Shedd.
J. B. Murphy.
Alex. R. Craig.

| | Present Apportionment. | No. Members State Association, April 1, 1912. | One delegate to every 675 and fraction members. | | | One delegate to every 700 and fraction members. | | |
|---|---|---|---|---|---|---|---|---|
| | | | Delegates. | Gain. | Loss. | Delegates. | Gain. | Loss. |
| Alabama | 3 | 1,693 | 3 | .... | .... | 3 | .... | .... |
| Arizona | 1 | 128 | 1 | .... | .... | 1 | .... | .... |
| Arkansas | 2 | 969 | 2 | .... | .... | 2 | .... | .... |
| California | 3 | 2,030 | 4 | 1 | .... | 3 | .... | .... |
| Colorado | 2 | 822 | 2 | .... | .... | 2 | .... | .... |
| Connecticut | 2 | 840 | 2 | .... | .... | 2 | .... | .... |
| Delaware | 1 | 107 | 1 | .... | .... | 1 | .... | .... |
| Dist. of Columbia | 1 | 580 | 1 | .... | .... | 1 | .... | .... |
| Florida | 1 | 339 | 1 | .... | .... | 1 | .... | .... |
| Georgia | 2 | 1,408 | 3 | 1 | .... | 3 | 1 | .... |
| Idaho | 1 | 104 | 1 | .... | .... | 1 | .... | .... |
| Illinois | 9 | 5,609 | 9 | .... | .... | 9 | .... | .... |
| Indiana | 4 | 2,264 | 4 | .... | .... | 4 | .... | .... |
| Iowa | 3 | 1,978 | 4 | 1 | .... | 4 | 1 | .... |
| Kansas | 2 | 1,150 | 2 | .... | .... | 2 | .... | .... |
| Kentucky | 4 | 2,437 | 4 | .... | .... | 4 | .... | .... |
| Louisiana | 2 | 1,002 | 2 | .... | .... | 2 | .... | .... |
| Maine | 1 | 637 | 1 | .... | .... | 1 | .... | .... |
| Maryland | 2 | 1,106 | 2 | .... | .... | 2 | .... | .... |
| Massachusetts | 6 | 3,342 | 5 | .... | 1 | 5 | .... | 1 |
| Michigan | 3 | 2,239 | 4 | 1 | .... | 4 | 1 | .... |
| Minnesota | 2 | 1,364 | 2 | .... | .... | 2 | .... | .... |
| Mississippi | 2 | 958 | 2 | .... | .... | 2 | .... | .... |
| Missouri | 5 | 3,047 | 5 | .... | .... | 5 | .... | .... |
| Montana | 1 | 233 | 1 | .... | .... | 1 | .... | .... |
| Nebraska | 2 | 885 | 2 | .... | .... | 2 | .... | .... |
| Nevada | 1 | 65 | 1 | .... | .... | 1 | .... | .... |
| New Hampshire | 1 | 490 | 1 | .... | .... | 1 | .... | .... |
| New Jersey | 3 | 1,508 | 3 | .... | .... | 3 | .... | .... |
| New Mexico | 1 | 164 | 1 | .... | .... | 1 | .... | .... |
| New York | 11 | 7,066 | 11 | .... | .... | 11 | .... | .... |
| North Carolina | 2 | 1,126 | 2 | .... | .... | 2 | .... | .... |
| North Dakota | 1 | 388 | 1 | .... | .... | 1 | .... | .... |
| Ohio | 7 | 3,580 | 6 | .... | 1 | 6 | .... | 1 |
| Oklahoma | 2 | 1,089 | 2 | .... | .... | 2 | .... | .... |
| Oregon | 1 | 419 | 1 | .... | .... | 1 | .... | .... |
| Pennsylvania | 9 | 5,728 | 9 | .... | .... | 9 | .... | .... |
| Rhode Island | 1 | 370 | 1 | .... | .... | 1 | .... | .... |
| South Carolina | 2 | 688 | 2 | .... | .... | 1 | .... | 1 |
| South Dakota | 1 | 272 | 1 | .... | .... | 1 | .... | .... |
| Tennessee | 3 | 1,373 | 3 | .... | .... | 2 | .... | 1 |
| Texas | 5 | 3,081 | 5 | .... | .... | 5 | .... | .... |
| Utah | 1 | 227 | 1 | .... | .... | 1 | .... | .... |
| Vermont | 1 | 336 | 1 | .... | .... | 1 | .... | .... |
| Virginia | 3 | 1,630 | 3 | .... | .... | 3 | .... | .... |
| Washington | 2 | 817 | 2 | .... | .... | 2 | .... | .... |
| West Virginia | 2 | 561 | 1 | .... | 1 | 1 | .... | 1 |
| Wisconsin | 3 | 1,651 | 3 | .... | .... | 3 | .... | .... |
| Wyoming | 1 | 118 | 1 | .... | .... | 1 | .... | .... |
| Canal Zone | 1 | 80 | 1 | .... | .... | 1 | .... | .... |
| Hawaii | 1 | 79 | 1 | .... | .... | 1 | .... | .... |
| Philippine Islands | 1 | 108 | 1 | .... | .... | 1 | .... | .... |
| Sections and Government Services | .... | ........ | 17 | .... | .... | 17 | .... | .... |
| Total | .... | ........ | 152 | .... | .... | 149 | .... | .... |

On motion of Dr. Thomas D. Davis, Pennsylvania, the apportionment recommended was adopted.

### Report of Committee on Awards for Scientific Exhibit

Dr. H. A. Royster presented the report of the Committee on Awards for Scientific Exhibit, as follows:

Your committee begs leave to submit the following report:

1. In view of the very superior excellence of the two research exhibits, one by Morton H. Fisher on experimental nephritis and another on experimental endocarditis by E. C. Rosenow, it is the opinion of a majority of your committee that a gold medal be awarded to each of these gentlemen.

2. We recommend the award of a gold medal to E. Libman for the best exhibit of general nature, a series of hearts showing bacterial endocarditis.

3. We recommend the award of certificates of honor to the following:

A. W. D. Gatch, Indiana University School of Medicine, Indianapolis. Experimental intestinal anastomosis.

B. J. Shelton Horsley, Richmond, Va. Experimental suturing of blood-vessels.

C. The Lying-In Hospital, New York. Exhibits showing pathologic conditions of the prenatal and lying-in state.

D. Miscellaneous Exhibit of the Army Medical Museum.

E. Department of Sanitation of the Isthmian Canal Commission. Malaria and amebic dysentery.

F. John A. Sampson. Photograpic enlargements showing carcinoma of the uterus and blood-supply of uterine fibroid.

G. Harvard University Medical School. Exhibits showing by photographs and photomicrographs

Trypanosomes as parasites,
Phagedenic ulcer by S. B. Walbach,
Photomicrographs showing pathologic histology of heart, kidney and blood-vessels, by F. B. Mallory.

H. Mayo Clinic. Series of photomicrographs showing:

Diverticulitis of the sigmoid.
Pathology of the prostate.
Gastric contents.
X-ray series showing:
  Lane splints and transplantation of bone.
  Esophageal lesions.
  Gastro-intestinal conditions.
  Stereoscopic plates of tuberculosis.
  Intrathoracic thyroid.

E. J. McKNIGHT.
HUGH T. PATRICK.
H. A. ROYSTER.

On motion of Dr. Joseph D. Martin, Louisiana, seconded by Dr. D. Chester Brown, Connecticut, the report was adopted.

### Report of Committee on Transportation and Place of Session

Dr. J. R. Pennington, Chairman, presented the report of the Committee on Transportation and Place of Session.

Dr. Curran Pope and Dr. Arthur T. McCormack, Kentucky, spoke in favor of Louisville for the place of next meeting; Dr. George D. Head, Dr. R. C. Dugan, Dr. Donald Campbell and Dr. Charles Lyman Greene spoke in favor of Minneapolis, after which Louisville and Minneapolis were placed in nomination for the place of the next annual meeting. A ballot was taken which resulted in the selection of Minneapolis. On motion of Dr. Curran Pope, the vote in favor of Minneapolis was made unanimous.

### Dr. Jacobi's Address

Dr. Jacobi then addressed the House expressing his appreciation of the work of the House.

Dr. Arthur T. McCormack, Kentucky, offered the following resolution:

*Resolved*, That the gratitude of the House of Delegates be extended to Dr. Conaway and his associates in the profession of Atlantic City and to the governor and people of New Jersey for their cordial and splendid treatment of the members and guests of the Association.

Motion seconded and carried.

There being no further business, on motion of Dr. Thomas D. Davis, Pennsylvania, the House of Delegates then adjourned, *sine die*.

## *Members of House of Delegates in Attendance*

[The figures indicate the number of delegates to which the state is entitled.]

ALABAMA—3
Seale Harris..........Mobile
Lewis C. Morris..Birmingham
E. D. Bondurant......Mobile

ARIZONA—1

ARKANSAS—2
G. A. Warren.....Black Rock
Morgan Smith....Little Rock

CALIFORNIA—3
O. D. Hamlin.......Oakland
George A. Hare.......Fresno
George H. Kress..Los Angeles

COLORADO—2
Hubert Work.........Pueblo
Edward Jackson......Denver

CONNECTICUT—2
D. Chester Brown...Danbury
E. J. McKnight.....Hartford

DELAWARE—1

DISTRICT OF COLUMBIA—1
G. Wythe Cook...Washington

FLORIDA—1
Jos. Y. Porter...Jacksonville

GEORGIA—2
Edgar G. Ballenger...Atlanta
T. J. Charlton......Savannah

HAWAII—1

IDAHO—1

ILLINOIS—9
Hugh T. Patrick.....Chicago
Albert L. Brittin.....Athens
John A. Robison.....Chicago
W. L. Noble.........Chicago
A. C. Cotton........Chicago
George S. Rainey.....Salem
Rufus J. Coultas.....Mattoon
Clifford U. Collins.....Peoria

INDIANA
Miles F. Porter....Ft. Wayne
F. A. Tucker......Noblesville
J. Rilus Eastman.Indianapolis
Edwin Walker.....Evansville

IOWA—3
Max Witte..........Clarinda
L. W. Littig......Davenport
M. N. Voldeng......Cherokee

ISTHMIAN CANAL ZONE—1
William C. Gorgas.....Ancon

KANSAS—2

### KENTUCKY—4

Curran Pope.......Louisville
A. T. McCormack.Bowling Gr'n.
J. W. Ellis........Masonville
J. N. McCormack.Bowling Gr'n.

### LOUISIANA—2

Oscar Dowling....Shreveport
Jos. D. Martin..New Orleans

### MAINE—1

E. H. Bennett.........Lubec

### MARYLAND—2

G. Lane Taneyhill...Baltimore
R. B. Warfield.....Baltimore

### MASSACHUSETTS—6

F. H. Thompson...Fitchburg
F. G. Wheatley..N. Abington
Hugh Cabot..........Boston
Horace D. Arnold.....Boston
H. G. Stetson......Greenfield
H. W. Van Allen..Springfield

### MICHIGAN—3

F. W. Robbins.......Detroit
R. R. Smith....Grand Rapids
Arthur D. Holmes....Detroit

### MINNESOTA—2

George D. Head..Minneapolis
R. C. Dugan...........Eyota

### MISSISSIPPI—2

J. W. Young........Grenada

### MISSOURI—5

E. J. Goodwin.....St. Louis
R. M. Funkhouser..St. Louis
A. W. McAlester..Kansas City
C. R. Woodson....St. Joseph
H. L. Reid........Charleston

### MONTANA—1

Donald Campbell.......Butte

### NEBRASKA—2

A. R. Mitchell.........Lincoln
E. A. Steenburg.......Aurora

### NEVADA—1

M. A. Robison.........Reno

### NEW HAMPSHIRE—1

John Z. Shedd..North Conway

### NEW JERSEY—3

Edward Guion..Atlantic City
C. R. P. Fisher..Bound Brook
Alexander McAllister..Camden

### NEW MEXICO—1.

W. R. Tipton..East Las Vegas

### NEW YORK—11

A. T. Bristow......Brooklyn
Edward E. Cornwall.Brooklyn
Leo H. Newman......Albany
James W. Fleming..Brooklyn
Wesley T. Mulligan..Rochester
Edgar A. Vander Veer.Albany
Wendell C. Phillips.New York
Dwight Murray.....Syracuse
James P. Warbasse.Brooklyn
William D. Johnson..Batavia
Grant C. Madiel..Ogdensburg

### NORTH CAROLINA—2

J. F. Highsmith..Fayetteville

### NORTH DAKOTA—1

Victor H. Stickney.Dickinson

### OHIO—7

J. E. Tuckerman....Cleveland
E. J. March.........Canton
J. H. J. Upham....Columbus
C. L. Bonifield....Cincinnati
W. J. Means........Columbus
Auguste Rhu..........Marion
H. C. Haning.........Dayton

### OKLAHOMA—2

W. F. Wright..........Tulsa
E. S. Lain....Oklahoma City

### OREGON—1

K. A. J. MacKenzie.Portland

### PENNSYLVANIA—9

Thomas D. Davis..Pittsburgh
T. S. Arbuthnot....Pittsburgh
F. W. Frankhauser...Reading
W. T. Hamilton..Philadelphia
G. W. Guthrie..Wilkes-Barre
T. B. Appel........Lancaster
John R. Lowman..Johnstown
M. H. Fussell...Philadelphia
Luther B. Kline....Catawissa

### PHILIPPINE ISLANDS—1

### RHODE ISLAND—1

John Champlin......Westerly

### SOUTH CAROLINA—2

John L. Dawson...Charleston
E. A. Hines.........Seneca

### SOUTH DAKOTA—1

T. B. Smiley......Mt. Vernon

### TENNESSEE—3

Jere L. Crook.......Jackson
A. B. Cooke........Nashville
S. M. Miller........Knoxville

### TEXAS—5

Joe Becton.........Greenville
J. H. McCracken..Min. Wells
Holman Taylor....Fort Worth
W. B. Russ......San Antonio

### UTAH—1

Sol G. Kahn..Salt Lake City

### VERMONT—1

### VIRGINIA—3

C. M. Miller.......Richmond
W. E. Anderson....Farmville
John S. Davis.....University

### WASHINGTON—2

J. E. Else..........Pullman

### WEST VIRGINIA—2

F. L. Hupp........Wheeling
P. A. Haley........Charleston

### WISCONSIN—3

Charles S Sheldon....Madison
A. H. Levings.....Milwaukee
John F. Pember...Janesville

### WYOMING—1

## Delegates From the Sections

### PRACTICE OF MEDICINE

J. A. Capps..........Chicago

### SURGERY

H. A. Royster..Raleigh, N. C.

### OBSTETRICS AND GYNECOLOGY

H. G. Wetherill........Denver

### OPHTHALMOLOGY

Hiram Woods ......Baltimore

### LARYNGOLOGY, OTOLOGY AND RHINOLOGY

W. S. Bryant..New York City

### DISEASES OF CHILDREN

..........................

### PHARMACOLOGY AND THERAPEUTICS

Reid Hunt..Washington, D. C.

### PATHOLOGY AND PHYSIOLOGY

..........................

### STOMATOLOGY

G. V. I. Brown.....Milwaukee

### NERVOUS AND MENTAL DISEASES

A. E. Sterne......Indianapolis

### DERMATOLOGY

Grover W. Wende......Buffalo

### PREVENTIVE MEDICINE AND PUBLIC HEALTH

W. A. Evans.........Chicago

### GENITO-URINARY DISEASES

Richard F. O'Neil......Boston

### HOSPITALS

Frederick A. Washburn.Boston

## Delegates From Government Services

Jefferson R. Kean..U. S. Army
Edward R. Stitt....U. S. Navy
John W. Kerr..............
...U. S. P. H. and M.-H. S.

## *Reference Committees of the House of Delegates*

### SECTIONS AND SECTION WORK

Wesley T. Mulligan..New York
K. A. J. MacKenzie...Oregon
Hugh Cabot ....Massachusetts
Thomas D. Davis.Pennsylvania
A. H. Levings......Wisconsin

### RULES AND ORDER OF BUSINESS

W. R. Tipton.....New Mexico
A. R. Mitchell......Nebraska
G. A. Warren........Arkansas
C. R. P. Fisher....New Jersey
G. L. Taneyhill......Maryland

### MEDICAL EDUCATION

J. H. J. Upham..........Ohio
H. D. Arnold...Massachusetts
Reid Hunt.............D. C.
G. W. Guthrie...Pennsylvania
A. T. Bristow.......New York

### HYGIENE AND PUBLIC HEALTH

Oscar Dowling .....Louisiana
John Champlin...Rhode Island
Edward Jackson.....Colorado
V. H. Stickney..North Dakota
Lawrence Littig.........Iowa

### LEGISLATION AND POLITICAL ACTION

W. A. Evans.........Illinois
Morgan Smith ......Arkansas
A. B. Cooke........Tennessee
Jefferson R. Kean..U. S. Army
W. C. Gorgas......Canal Zone

### AMENDMENTS TO CONSTITUTION AND BY-LAWS

A. T. McCormack....Kentucky
William B. Russ........Texas
Seale Harris ........Alabama
S. G. Kahn...............Utah
William L. Noble......Illinois

### REPORT OF OFFICERS

Hubert Work .. ....Colorado
J. W. Young.... ..Mississippi
Donald Campbell ...Montana
W. W. Richmond....Kentucky
E. A. Hines...South Carolina

### CREDENTIALS

D. Chester Brown..Connecticut
E. A. Vander Veer...New York
H. W. Van Allen.Massachusetts
E. J. Goodwin.......Missouri
J W. Fleming......New York

### MISCELLANEOUS BUSINESS

W. E. Anderson......Virginia
J. F. Highsmith.North Carolina
R. R. Smith.......Michigan
P. A. Haley.....West Virginia
W. A. Jones.........Minnesota

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## *The Sections at Atlantic City*

The total registration at the Atlantic City Session was 3,598, an increase of 325 over the number of registrations there in 1909.

Below are given two summaries, one by Sections, and one by States.

### REGISTRATION BY SECTIONS

| | |
|---|---|
| Practice of Medicine | 979 |
| Surgery | 907 |
| Obstetrics, Gynecology and Abdominal Surgery | 258 |
| Ophthalmology | 335 |
| Laryngology, Otology and Rhinology | 206 |
| Diseases of Children | 151 |
| Pharmacology and Therapeutics | 59 |
| Pathology and Physiology | 109 |
| Stomatology | 34 |
| Nervous and Mental Diseases | 143 |
| Dermatology | 67 |
| Preventive Medicine and Public Health | 142 |
| Genito-Urinary Diseases | 95 |
| Hospitals | 25 |
| Registrations without specifying any one Section | 88 |

### REGISTRATION BY STATES

| | | | |
|---|---|---|---|
| Alabama | 24 | Nevada | |
| Arizona | 3 | New Hampshire | 1 |
| Arkansas | 15 | New Jersey | 30 |
| California | 41 | New Mexico | |
| Colorado | 26 | New York | 56 |
| Connecticut | 75 | North Carolina | 3 |
| Delaware | 17 | North Dakota | |
| District of Columbia | 73 | Ohio | 20 |
| Florida | 7 | Oklahoma | |
| Georgia | 24 | Oregon | |
| Idaho | 1 | Pennsylvania | 99 |
| Illinois | 153 | Rhode Island | 3 |
| Indiana | 85 | South Carolina | 1 |
| Iowa | 45 | South Dakota | |
| Kansas | 5 | Tennessee | 3 |
| Kentucky | 33 | Texas | |
| Louisiana | 22 | Utah | |
| Maine | 10 | Vermont | |
| Maryland | 125 | Virginia | 5 |
| Massachusetts | 155 | Washington | |
| Michigan | 75 | West Virginia | |
| Minnesota | 52 | Wisconsin | 5 |
| Mississippi | 3 | Wyoming | |
| Missouri | 70 | Philippine Islands | |
| Montana | 10 | Nicaragua | |
| Nebraska | 18 | Canal Zone | |

The Atlantic City session completes the first ten years which the present system of registration by sections has be in force. A summary of the attendance at the sections duri this decade may be of interest. The total registration these ten years is 34,563, and the average attendance is 3,45 The registration in the various sections and the yearly avera in each is as follows:

| Section | Total | Average |
|---|---|---|
| Practice of Medicine | 8,767 | 877 |
| Surgery | 10,146 | 1,015 |
| Obstetrics, Gynecology and Abdominal Surgery | 2,782 | 278 |
| Ophthalmology | 2,555 | 256 |
| Laryngology, Otology and Rhinology | 1,436 | 144 |
| Diseases of Children | 1,324 | 132 |
| Pharmacology and Therapeutics | 492 | 49 |
| Pathology and Physiology | 649 | 65 |
| Stomatology | 432 | 43 |
| Nervous and Mental Diseases | 1,139 | 114 |
| Dermatology | 705 | 71 |
| Preventive Medicine and Public Health | 913 | 91 |
| Genito-Urinary Diseases | 113 | .. |
| Hospitals | 25 | .. |

The Section on Genito-Urinary Diseases, established two years ago, had a registration of 18 in 1911, and 95 in 1912.

The Section on Hospitals, established last year, had a registration of 25 this year.

A Section on Orthopedic Surgery was established this year and will hold its first meeting next year.

The difference between the sum of the totals of those registered in the Sections for the past ten years and the total registration, 34,563, is accounted for by the fact that each year a number fail to specify any one Section, that is, they either do not designate any Section, or mark more than one on their registration card.

Registrations at the various sessions in the last ten years were as follows:

| | | |
|---|---|---|
| 1903 | New Orleans, La. | 2,006 |
| 1904 | Atlantic City, N. J | 2,890 |
| 1905 | Portland, Ore. | 1,678 |
| 1906 | Boston, Mass. | 4,722 |
| 1907 | Atlantic City, N. J | 3,713 |
| 1908 | Chicago, Ill. | 6,446 |
| 1909 | Atlantic City, N. J | 3,273 |
| 1910 | St. Louis, Mo | 4,084 |
| 1911 | Los Angeles, Cal | 2,153 |
| 1912 | Atlantic City, N. J | 3,598 |
| | Total attendance, 1903-1912, inclusive | 34,563 |

During the past ten years the average registration of 3,456 has been surpassed at half of the meetings, viz.: the Boston session in 1906; the Chicago session in 1908, and the St. Louis session in 1910 and the Atlantic City sessions of 1907 and 1912. The registration at Chicago, 6,446 still stands as the high water mark for attendance.

## Notice on Section Transactions

Those who desire copies of the 1912 Transactions of any of the sections, but whose names are not on the permanent subscription list, should order at once, as printing has already commenced. Only enough are printed to supply what is considered the probable demand, and each year some persons order too late to be supplied. Each volume is a cloth-bound book containing the articles and discussions in that particular section. The price, when ordered in advance, is $1.00 a volume, payable at time of delivery.

It is to be remembered that one may give a permanent order for Transactions; and those specified are sent, from year to year, until the order is cancelled. Address orders to the American Medical Association, 535 Dearborn Avenue, Chicago.

## Minutes of Sections

The minutes of the proceedings of the various sections which held meetings at the Sixty-Third Annual Session, held at Atlantic City, June 4-7, 1912, are given below—except those of the Section on Stomatology, which had not been received when these pages went to press.

## SECTION ON PRACTICE OF MEDICINE

### TUESDAY, JUNE 4—AFTERNOON

Dr. Wilder Tileston, of New Haven, Conn., called the meeting to order.

Dr. Thomas D. Coleman, Augusta, Ga., read a paper on "Arteriosclerosis." Discussed by Drs. L. F. Bishop, New York; G. W. McCaskey, Fort Wayne, Ind.; Henry O. Marcy, Boston; James M. Anders, Philadelphia; DeLancey Rochester, Buffalo; M. A. Cohn, Brooklyn, N. Y.; Marvin L. Graves, Galveston, Tex.; Tom A. Williams, Washington, D. C., and Thomas D. Coleman, Augusta, Ga.

Drs. Ray Lyman Wilbur and Thomas Addis, San Francisco, read a paper on "Urobilin: Its Clinical Significance."

Dr. Walter L. Bierring, Des Moines, Iowa, read a paper on "Chloroma: A Clinical Study of Two Cases." Discussed by Drs. Alfred Stengel, Philadelphia; E. Libman, New York; Wilder Tileston, New Haven, Conn., and Walter L. Bierring, Des Moines, Iowa.

Drs. Alfred Stengel and Henry K. Pancoast, Philadelphia, read a paper on "Treatment of Leukemia and Pseudoleukemia with X-Rays." Discussed by Drs. James Tyson, Philadelphia; Walter L. Bierring, Des Moines, Ia.; Carleton, (?), New York; Elliott P. Joslin, Boston; A. J. Quimby, New York; Alfred Stengel, Philadelphia, and Henry K. Pancoast, Philadelphia.

Drs. J. A. Capps and J. L. Miller, Chicago, read a paper on "Clinical Observations on an Epidemic of Sore Throat Due to Streptococcus."

Dr. David J. Davis, Chicago, read a paper on "Bacteriologic Study of Streptococci in Milk in Relation to Epidemic Sore Throat." Discussed by Drs. Robert Bruce Preble, Chicago; Louis P. Hamburger, Baltimore; Howard Anders, Philadelphia; J. N. Hall, Denver; E. C. Rosenow, Chicago; W. W. Tompkins, Charlton, W. Va.; Wilder Tileston, New Haven, Conn.; J. A. Capps, Chicago; J. L. Miller, Chicago, and David J. Davis, Chicago.

Drs. C. L. Cummer and Richard Dexter, Cleveland, read a paper on "Relation of Aortitis to Syphilis, and the Importance of Its Recognition." Discussed by Drs. DeLancey Rochester, Buffalo; N. B. Potter, New York; Kennon Dunham, Cincinnati; L. F. Bishop, New York; Arthur D. Dunn, Omaha, Neb.; Walter L. Bierring, Des Moines, Iowa, and C. L. Cummer, Cleveland.

### WEDNESDAY, JUNE 5—MORNING

The following were appointed on the Nominating Committee: Drs. James S. McLester, Birmingham, Ala.; Ray Lyman Wilbur, San Francisco, and Elliott P. Joslin, Boston.

Dr. Elliott P. Joslin, Boston, read a paper on "Personal Experience with Diabetes Mellitus Patients Living Ten or More Years." Discussed by Drs. Theodore C. Janeway, New York; J. A. Lichty, Pittsburgh; G. W. McCaskey, Fort Wayne, Ind.; Joseph L. Miller, Chicago; Louis J. Heyn, Cincinnati, and Elliott P. Joslin, Boston.

Drs. L. F. Barker and W. L. Estes, Jr., South Bethlehem, Pa., read a paper on "Family Hematoporphyrinuria and Its Association with Chronic Gastroduodenal Dilatation and Thyreopathy."

Dr. Theodore C. Janeway, New York, read a paper on "An Analysis of 500 Cases Showing High Blood-Pressure." Discussed by Drs. L. F. Barker, Baltimore; L. F. Bishop, New York; Edward E. Cornwall, Brooklyn, N. Y.; Howard Fussell, Philadelphia; N. B. Potter, New York, and Theodore C. Janeway, New York.

Dr. E. C. Rosenow, Chicago, read a paper on "Immunization in Pneumonia and Other Pneumococcus Infections." Discussed by Drs. B. W. Warren, Black Rock, Ark.; J. Solis Cohen, Philadelphia; DeLancey Rochester, Buffalo; J. A. Lichty, Pittsburgh, and E. C. Rosenow, Chicago.

Dr. Elsworth Smith, St. Louis, read a paper on "Pleural Vomicæ with a Report of Fourteen Cases." Discussed by Drs. Theodore C. Janeway, New York; Samuel Robinson, Boston; A. A. Gillette, Rome, N. Y., and Elsworth Smith, St. Louis.

Dr. Mary E. Lapham, Highlands, N. C., read a paper on "Treatment of Pulmonary Tuberculosis by Compression of the Lung." Discussed by Drs. Samuel Robinson, Boston; S. A. Knopf, New York; C. L. Minor, Asheville, N. C.; F. M. Pottenger, Monrovia, Cal., and Mary E. Lapham, Highlands, N. C.

Drs. Homer F. Swift and Arthur W. Ellis, New York, read a paper on "The Intensive Treatment of Syphilis." Discussed by Drs. Warren Coleman, New York; Gedide A. Friedman, New York, and Theodore C. Janeway, New York.

### WEDNESDAY, JUNE 5—AFTERNOON

Dr. Richard C. Cabot, Boston, read a paper on "Diagnostic Pitfalls." Discussed by Dr. Charles G. Stockton, Buffalo.

Dr. Charles Lyman Greene, St. Paul, Minn., delivered the oration in medicine on “Prognosis in Heart Disease as Affected by Certain Medical Traditions.”

Dr. Warren Coleman, New York, read a paper on “Five Years’ Experience with the High-Calory Diet in Typhoid.” Discussed by Drs. Haven Emerson, New York; J. Solis Cohen, Philadelphia; Howard Fussell, Philadelphia; J. I. Johnson, Pittsburgh; Walter L. Bierring, Des Moines, Iowa; B. W. Warren, Black Rock, Ark.; M. L. Graves, Galveston, Tex., and Warren Coleman, New York.

Dr. Philip Marvel, Atlantic City, N. J., read a paper on “A Plea for the More Frequent Scientific Employment of Physical Therapeutics.” Discussed by Drs. W. G. Schauffler, Lakewood, N. J.; J. Solis Cohen, Philadelphia; A. Bern Hirsh, Philadelphia; Hobart A. Hare, Philadelphia; J. M. Swan, Rochester, N. Y., and P. Marvel, Atlantic City.

Dr. Allen A. Jones, Buffalo, read a paper on “Hunger Pain.” Discussed by Drs. M. A. Cohn, Brooklyn, N. Y.; Walter L. Bierring, Des Moines, Iowa; Wilder Tileston, New Haven, Conn.; Charles G. Stockton, Buffalo, and Allen A. Jones, Buffalo.

### Thursday, June 6—Morning

The following officers were elected: Chairman, Dr. W. Jarvis Barlow, Los Angeles, Cal.; Vice-Chairman, Dr. Thomas McCrae, Philadelphia; Secretary, Dr. Roger S. Morris, St. Louis; Delegate, Dr. Joseph A. Capps, Chicago, and Alternate, Dr. Alexander Lambert, New York.

Drs. Jesse S. Myer and R. D. Carman, St. Louis, read a paper on “Cardiospasm with Sacculation of the Esophagus, with Special Reference to Persistence of the Sac.” Discussed by Drs. H. S. Plummer, Rochester, Minn.; Haven Emerson, New York; G. W. McCaskey, Fort Wayne, Ind.; Charles J. White, Boston; Anthony Bassler, New York, and Jesse S. Myer, St. Louis.

Dr. G. E. Pfahler, Philadelphia, read a paper on “Constrictions of the Bowel: Their Demonstration and Clinical Significance.” Discussed by Drs. Judson Daland, Philadelphia; Anthony Bassler, New York; Charles J. White, Boston, and G. E. Pfahler, Philadelphia.

Dr. Lewis Gregory Cole of New York, read a paper on “The Value of Serial Radiography in the Diagnosis of Gastroduodenal Lesions.” Discussed by Drs. G. E. Pfahler, Philadelphia, and Lewis G. Cole, New York.

Dr. J. W. Weinstein, New York, read a paper on “A New Method of Treatment of Ulcer of Stomach.” Discussed by Drs. A. A. Gillette, Rome, N. Y.; Walter W. Hamburger, Chicago; Julius Friedenwald, Baltimore; Albert E. Roussel, Philadelphia; Louis M. Allyn, Mystic, Conn.; A. W. Calloway, Asheville, N. C.; M. Milton Portis, Chicago; Anthony Bassler, New York; Wilder Tileston, New Haven, Conn., and J. W. Weinstein, New York.

Dr. Walter W. Hamburger, Chicago, read a paper on “Comparative Studies in Cancer and Normal Ferments.” Discussed by Drs. J. W. Weinstein, New York; Gedide A. Friedman, New York, and, Walter W. Hamburger, Chicago.

Dr. H. Z. Giffin, Rochester, Minn., read a paper on “Diverticulitis of the Large Bowel; Clinical Review of Twenty-Seven Cases.” Discussed by Drs. Alfred Stengel, Philadelphia, and H. Z. Giffin, Rochester, Minn.

Dr. Theodore B. Barringer, New York, read a paper on “Prognosis in Cases of Albuminuria With or Without Casts.”

### Thursday, June 6—Afternoon

In the afternoon the Section held a joint meeting with the Section on Surgery. For the papers read see the minutes of that Section.

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## SECTION ON SURGERY

### Tuesday, June 4—Afternoon

The Chairman, Dr. T. W. Huntington, San Francisco, called the meeting to order at 2 p. m.

Dr. L. L. McArthur, Chicago, delivered the oration on surgery, entitled “An Aseptic Route to the Pituitary Body Through the Orbital Vault.”

Dr. T. W. Huntington, San Francisco, read the Chairman’s address, entitled “The Hospital Problem.”

Dr. Parker Syms, New York, moved that the recommendations made in the Chairman’s address be presented to the House of Delegates by the Section delegate for consideration. Seconded and carried.

Dr. G. W. Crile, Cleveland, read a paper on “Results of Operations, Especially Abdominal, Performed on the Principle of Anoci-Association.” Discussed by Drs. G. S. Reed, Syracuse, N. Y.; Joseph C. Bloodgood, Baltimore; James H. Ford, Indianapolis, and G. W. Crile, Cleveland.

Dr. J. M. Flint, New Haven, Conn., read a paper on “Physiologic Basis for Thoracic Operations.”

Dr. S. Robinson, Boston, read a paper on “Surgery of Chronic Infectious Diseases of the Lung.”

Dr. E. M. von Eberts, Montreal, read a paper on “Obliteration of Empyemic Cavities.”

These three papers were discussed by Drs. W. Meyer, New York; Thomas, Philadelphia; Carl Beck, Chicago; S. Robinson, Boston; E. M. von Eberts, Montreal.

Dr. W. L. Rodman, Philadelphia, read a paper on “Abnormal Involution of Mammary Gland.” Discussion by Drs. Wathen (?), Louisville, Ky.; M. F. Porter, Ft. Wayne, Ind.; J. Mitchell, Washington, D. C.; J. C. Bloodgood, Baltimore; Parker Syms, New York; T. W. Huntington, San Francisco; W. L. Rodman, Philadelphia.

### Wednesday, June 5—Morning

Dr. J. S. Horsley, Richmond, Va., read a paper on “A New Method of Suturing Blood-Vessels.” No discussion.

Drs. E. Martin and C. K. Mills, Philadelphia, read a pape on “Asphasia and Agraphia in Some of Their Practical Surgica Relations.” Discussed by Dr. C. K. Mills, Philadelphia.

Dr. A. Carrel, New York, read a paper on “Preservation o Tissues, and Its Application in Surgery.” Discussed by Drs. J S. Davis, Baltimore; F. H. Albee, New York, and A. Carrel New York.

Dr. H. S. Plummer, Rochester, Minn., read a paper on “Car diospasm; Report of One Hundred Cases.” Discussed by Drs J. Meyer, St. Louis; M. Einhorn, New York; A. Bassler, Nev York, and H. S. Plummer, Rochester, Minn.

Dr. W. D. Haggard, Nashville, Tenn., read a paper o “Tumors of the Small Intestine.” Discussed by Drs. D. Stet ten, New York, and A. W. McGlannan, Baltimore.

Dr. J. A. Hartwell read a paper by himself and Dr. J. I Hoguet, New York, on “Experimental Intestinal Obstruction. Discussed by Drs. G. H. Whipple, Baltimore; B. Vincent, Boston; A. McLean, Detroit; J. S. Horsley, Richmond, Va.; F. I Gray, Jersey City, N. J.; M. Einhorn, New York, and J. A Hartwell, New York.

Dr. J. C. Bloodgood, Baltimore, read a paper on “The Rel tion of the Duodenum to Surgery of the Stomach and Colon. Discussed by Dr. J. W. Draper, Rochester, Minn.

### Wednesday, June 5—Afternoon

Dr. T. Rovsing, Copenhagen, Denmark, read a paper c “Gastroptosis and Its Surgical Treatment.”

Dr. W. B. Cannon, Boston, read a paper on “The Functio of the Large Intestine.”

Dr. A. D. Bevan, Chicago, read a paper on “Dilatation of tl Large Bowel.”

Dr. M. L. Harris, Chicago, read a paper on “Adhesions the Colon.”

Dr. J. F. Binnie, Kansas City, Mo., read a paper on “Colon Intoxication.”

Dr. C. H. Mayo, Rochester, Minn., read a paper on “Divert culæ of the Gastro-Intestinal Tract and Their Surgical Impo ance.”

Dr. K. A. J. McKenzie, Portland, Ore., read a paper on “T Rôle of the Movable Kidney in Vascular and Intestin Stasis.”

These seven papers were discussed by Drs. J. Goldthwa Boston; J. N. Jackson, Kansas City, Mo.; T. Rovsing, Cope hagen, and W. J. Mayo, Rochester, Minn.

Dr. Bevan moved that the Section on Surgery extend a vc of thanks to Dr. Rovsing, for his splendid paper. Second and carried.

### Thursday, June 6—Morning

The following officers were nominated and elected: Chairman, Dr. A. F. Jonas, Omaha, Neb.; Vice-Chairman, Dr. W. L. Cousins, Portland, Me.; Secretary, Dr. Dean Lewis, Chicago; Orator in Surgery, Dr. W. D. Haggard, Nashville, Tenn.; Delegate, LeMoyne Mille, Los Angeles, Cal.

Dr. W. Bartlett, St. Louis, read a paper on "Further Experimental and Clinical Work Bearing on the Value of Lane's Bone Plate."

Dr. F. J. Cotton, Boston, read a paper on "Operative Treatment in Joint Fractures."

Dr. W. Darrach, New York, read a paper on "Operative Treatment of Fractures and Dislocations."

Dr. L. W. Ely, Denver, read a paper on "Surgery of Bones and Joints."

These four papers were discussed by Drs. J. B. Murphy, Chicago; J. B. Walker, New York; J. E. Moore, Minneapolis; A. J. Ochsner, Chicago; F. H. Albee, New York; H. W. McGlannan, Baltimore; T. W. Huntington, San Francisco; W. Bartlett, St. Louis; F. J. Cotton, Boston; W. Darrach, New York, and L. W. Ely, Denver.

Dr. R. A. Hibbs, New York, read a paper on "An Operation for Potts' Disease of the Spine." Discussed by Drs. T. W. Huntington, New York; F. H. Albee, New York; Casper, (?), Louisville, Ky., and R. H. Hibbs, New York.

### Thursday, June 6—Afternoon

The following papers were read as a Symposium on Internal Secretions at a joint meeting with the Section on Practice of Medicine:

Dr. H. Cushing, Baltimore: "The Influence of the Secretion of the Pituitary Gland."

Dr. J. H. Pratt, Boston: "The Internal Secretion of the Pancreas."

Dr. D. Marine, Cleveland: "The Anatomic and Physiologic Effect of Iodin on the Thyroid of Exophthalmic Goiter."

Dr. S. J. Meltzer, New York: "The Functional Activities of the Adrenals."

Dr. W. G. McCallum, New York: "Function of the Parathyroid Glands."

The five papers in this symposium were discussed by Drs. C. H. Mayo, Rochester, Minn.; H. S. Plummer, Rochester, Minn.; G. W. McCaskey, Ft. Wayne, Ind.; L. B. Wilson, Rochester, Minn.; J. H. Pratt, Boston; D. Marine, Cleveland, and W. G. McCallum, New York.

### Friday, June 7—Morning

Dr. J. H. Gibbon, Philadelphia, read a paper on "Further Experience with Aneurysmorrhaphy (Matas)." Discussed by Drs. C. A. Powers, Denver; J. F. Binnie, Kansas City, Mo.; Ford, (?) U. S. Army; J. S. Horsley, Richmond, Va.; M. Ballin, Detroit; T. W. Huntington, San Francisco, and J. H. Gibbon, Philadelphia.

Dr. A. G. Sullivan, Madison, Wis., read a paper on "Reconstruction of the Bile-Ducts." No discussion.

Dr. W. D. Gatch, Indianapolis, read a paper on "Certain Problems of Intestinal Anastomosis; an Experimental Study." Discussed by Drs. F. G. Connell, Oshkosh, Wis.; A. L. Soresi, New York; F. D. Gray, Jersey City, N. J.; O. C. Smith, Hartford, Conn.; T. W. Huntington, San Francisco; W. Bartlett, St. Louis; F. T. Murphy, St. Louis; W. D. Haggard, Nashville, Tenn., and W. D. Gatch, Indianapolis.

Dr. H. D. Kistler, Butte, Mont., read a paper on "Thrombophlebitis of the Left Leg." Discussed by Drs. H. A. Royster, Raleigh, N. C., and H. D. Kistler, Butte, Mont.

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## SECTION ON OBSTETRICS AND GYNECOLOGY

### Tuesday, June 4—Afternoon

The Section was called to order at 2:15 p. m., in the Ball-Room of the Steel Pier, by the Chairman, Dr. C. Jeff Miller, New Orleans.

Dr. Miller read the Chairman's address on "The Present Status of the Surgical Treatment of Puerperal Pyemia by Ligation or Excision of Thrombosed Veins."

Dr. R. R. Huggins, Pittsburgh, read "The Ligation or Excision of the Ovarian or Deep Pelvic Veins in the Treatment of Puerperal Thrombophlebitis." Discussed by Drs. Hiram Vineberg, New York; H. J. Boldt, New York; C. O. Thienhaus, Milwaukee, Wis.; T. J. Watkins, Chicago, and R. H. Huggins, Pittsburgh.

Dr. John B. Deaver, Philadelphia, read a paper on "Hysterotomy." Discussed by Drs. E. G. Zinke, Cincinnati; J. B. DeLee, Chicago; H. J. Boldt, New York; E. E. Montgomery, Philadelphia; A. Goldspohn, Chicago; C. S. Bacon, Chicago; C. L. Hall, Kansas City, Mo.; S. M. D. Clark, New Orleans; J. A. McGlinn, Philadelphia; J. H. Carstens, Detroit; T. S. Cullen, Baltimore; Coe, and J. B. Deaver, Philadelphia.

Dr. J. Riddle Goffe, New York, read a paper on "Intra-Abdominal Pressure and the Dynamics of the Female Pelvis." Discussed by Drs. G. H. Noble, Atlanta, Ga.; A. Sturmdorf, New York; A. Goldspohn, Chicago, and J. R. Goffe, New York.

Dr. Walter B. Dorsett, St. Louis, read a paper on "A Simple Operation for Repair of the Female Perineum Based on the Anatomy of the Parts (Illustrated with Lantern Slides)." Discussed by Drs. E. J. Ill, Newark, N. J.; G. H. Noble, Atlanta, Ga.; J. B. DeLee, Chicago; A. Goldspohn, Chicago, and W. B. Dorsett, St. Louis.

Dr. George B. Somers, San Francisco, read a paper on "Uterovaginal Prolapse in Elderly Women; Technic of the Operation (Illustrated with Lantern Slides)." Discussed by Drs. J. H. Carstens, Detroit; J. W. Bovée, Washington, D. C.; C. L. Hall, Kansas City, Mo.; C. O. Thienhaus, Milwaukee, Wis.; H. J. Boldt, New York; R. S. Morton, New York; C. M. Echols, Milwaukee, Wis.; J. R. Goffe, New York; G. H. Noble, Atlanta, Ga.; Cotter; W. O. Henry, Omaha; W. B. Chase, Brooklyn, and G. B. Somers, San Francisco.

### Wednesday, June 5—Morning

Dr. Walter B. Chase, Brooklyn, read a paper on "The Resistance of the Patient as a Guide to Operative Procedures." Discussed by Drs. Wade; H. G. Wetherill, Denver; H. J. Boldt, New York; T. S. Cullen, Baltimore, and W. B. Chase, Brooklyn.

Dr. Horace G. Wetherill, Denver, read a paper on "Incomplete Abdominal Surgery." Discussed by Drs. J. C. Bloodgood, Baltimore; Moore; C. O. Hall, Kansas City, Mo.; W. B. Chase, Brooklyn; H. O. Pantzer, Indianapolis; T. S. Cullen, Baltimore; C. A. L. Reed, Cincinnati; Weber; G. E. Shoemaker, Philadelphia, and H. G. Wetherill, Denver.

Dr. W. Francis B. Wakefield, San Francisco, read a paper on "A Plea for More Careful Technic in Doing Intrapelvic Reconstructive Work." Discussed by Drs. Frank T. Andrews, Chicago; T. J. Watkins, Chicago, and W. O. Henry, Omaha, Neb.

Dr. Curtis F. Burnam, Baltimore, read a paper on "Corpus Luteum Extract, with Suggestions as to Its Use in Gynecologic Practice." Discussed by Drs. John M. Rogers, New York; Charles H. Mayo, Rochester, Minn.; S. M. D. Clark, New Orleans; J. C. Litzenberg, Minneapolis; Novak, and C. F. Burnam, Baltimore.

Dr. Charles A. L. Reed, Cincinnati, read a paper on "The Relation of Pelvic Conditions to Intestinal Displacement in Women." Discussed by Drs. Richard R. Smith, Grand Rapids, Mich.; J. H. Carstens, Detroit; Jackson; Albee; Morris, Marcy, Dorsett, J. B. Deaver, Philadelphia; Benjamin; C. O. Thienhaus, Milwaukee, Wis., and C. A. L. Reed, Cincinnati.

Dr. John G. Clark, Philadelphia, read a paper on "The Coincidence of Cholelithiasis with Gynecologic Diseases." Discussed by Drs. Charles H. Mayo, Rochester, Minn.; Wathen; J. B. Deaver, Philadelphia; Fussell; Marcy; Morris; Truesdale; Benjamin; and John G. Clark, Philadelphia.

### Wednesday, June 5—Afternoon

Drs. J. Riddle Goffe, New York, and Rufus Hall, Cincinnati, were appointed to make up the Nominating Committee.

Dr. Lewis S. McMurtry, Louisville, Ky., read a paper on "Intestinal Complications in Gynecologic Operations." Discussed by Drs. J. W. Bovée, Washington, D. C.; Wathen; J. H. Carstens, Detroit; Marcy; and L. S. McMurtry, Louisville, Ky.

Dr. T. J. Watkins, Chicago, read a paper by himself and Dr. A. H. Curtis, Chicago. Discussed by Drs. David J. Davis, Chicago; H. J. Boldt, New York; J. O. Polak, Brooklyn; C. O. Thienhaus, Milwaukee, Wis.; J. B. DeLee, Chicago; Boyd;

Burns; E. G. Zinke, Cincinnati; Chandler; J. A. McGlinn, Philadelphia; Ritter; Wilmuth; and T. J. Watkins, Chicago.

Dr. Herman J. Boldt, New York, read a paper on "Inflammation of the Fallopian Tubes." Discussed by Dr. R. Hall, Cincinnati.

The following resolution offered by Dr. Joseph B. DeLee, Chicago, was seconded and carried:

> That a committee of three be appointed by the Chair to determine if or not, the uterus should be emptied in cases of infection, with retained secundines, and if so when.

The Chair subsequently appointed: Dr. J. B. DeLee, Chicago, Chairman; Dr. Robert L. Dickinson, New York; Dr. Edward P. Davis, Philadelphia.

Dr. J. Wesley Bovée, Washington, D. C., read a paper on "Gynecologic Drainage." Discussed by Drs. John G. Clark; Marcy; J. H. Carstens, Detroit; F. J. Blondke, St. Paul, Minn.; L. S. McMurtry, Louisville, Ky., and J. Wesley Bovée, Washington, D. C.

Dr. John O. Polak, Brooklyn, read a paper entitled "A Further Study of the End Results of the Conserved Ovary." Discussed by Dr. LeRoy Broun, New York, and continued by Drs. Dorsett; H. J. Boldt, New York; F. J. Taussig, St. Louis; Watkins; H. O. Marcy, Boston; H. P. Newman, San Diego, Cal.; W. B. Dorsett, St. Louis, and J. O. Polak, Brooklyn.

### Thursday, June 6—Morning

The following report of the Nominating Committee was accepted and the gentlemen named elected: Chairman, Dr. F. F. Simpson, Pittsburgh; Vice-Chairman, Dr. Joseph B. DeLee, Chicago; Secretary, Dr. Brooke M. Anspach, Philadelphia; Delegate, Dr. Thomas S. Cullen, Baltimore.

The following resolution was offered by Dr. Robert L. Dickinson, Brooklyn, was carried and directed to be sent to the House of Delegates:

> That this Section recommend the endorsement of a standard metal buttonhole bar or label of small size, bearing the name of the member and his home city.

The report of the Committee on Obstetric Terminology was accepted as follows:

> That the Basel Anatomic Nomenclature (BNA) be accepted as essentially correct Latin for all anatomic terms used in obstetrics and given in the BNA.

In connection with this report, Dr. Robert L. Dickinson, Brooklyn, called attention to a pamphlet issued by the Bellevue Hospital embodying the international nomenclature, and the short Bellevue nomenclature adapted to general use. Dr. Dickinson further moved that the present Committee on Obstetric Terminology be enlarged both as to membership and scope so as to include gynecologic diseases and injuries and the nomenclature of operations.

The resolution was seconded and carried and the following additions to the committee made by the Chair: Drs. Robert L. Dickinson, Brooklyn; Thomas S. Cullen, Baltimore, and Henry P. Newman, San Diego, Cal.

Dr. C. S. Bacon, Chicago, read a paper on "Pulmonary Tuberculosis Complicating Pregnancy." Discussed by Dr. C. L. Minor, Asheville, N. C., and continued by Drs. Brinckner, Dickinson, Brooklyn; Stole; J. C. Litzenberg, Minneapolis; Gates; Burns; H. G. Wetherill, Denver; Brinckner; and closed by Dr. C. S. Bacon, Chicago.

Dr. J. B. Swift, Boston, read a paper by himself and Dr. Franklin S. Newell on "Cardiac Complications of Pregnancy and Labor." Discussed by Drs. Alfred Stengel, Philadelphia, and H. C. Bailey, New York.

Dr. Harold C. Bailey, New York, read a paper by himself and Dr. J. R. Murlin, New York, on "Proteid Metabolism in Pregnancy and the Puerperium." Discussed by Drs. Edward P. Davis, Philadelphia, and H. C. Bailey, Philadelphia.

Dr. Joseph B. DeLee, Chicago, read a paper on "Nephritis in Pregnancy." Discussed by Drs. Henry Schwarz, St. Louis, and J. B. DeLee, Chicago.

Dr. Edward P. Davis, Philadelphia, read a paper on "Drainage of the Kidney, by Incision, for Bacillus Coli Communis Infection in Pregnant and Parturient Patients, with Report of Cases." Discussed by Drs. C. F. Burnam, Baltimore; C. S. Bacon, Chicago; H. D. Furniss, New York; Linder; and E. P. Davis, Philadelphia.

Dr. Palmer Findley, Omaha, read a paper on "Appendicitis Complicating Pregnancy, Labor and Puerperium." Discussed by Dr. John B. Murphy, Chicago.

### Thursday, June 6—Afternoon

Dr. Ross McPherson, New York, read a paper on "The Radical Treatment of Abortion with Results in 3,500 Cases from the Wards of the New York Lying-In Hospital." Discussed by Drs. J. M. Baldy, Philadelphia; F. J. Taussig, St. Louis; Hayden; H. Schwarz, St. Louis, and Ross McPherson, New York.

Dr. Harold A. Miller, Pittsburgh, read a paper on "Difficult and Dangerous Labors; Selecting the Method of Delivery."

Dr. Charles A. Stillwagen, Pittsburgh, read a paper on "Cesarean Section."

These two papers were discussed by Drs. Richard C. Norris, Philadelphia; E. E. Montgomery, Philadelphia; Ross McPherson, New York; E. G. Zinke, Cincinnati; H. Schwarz, St. Louis; Burns; C. S. Bacon, Chicago; M. M. Lucid, Cortland, N. Y.; W. M. Sprigg, Washington, D. C.; A. J. Rongy, New York; H. A. Miller and C. A. Stillwagen, Pittsburgh.

Drs. Robert L. Dickinson and Walter Truslow, Brooklyn, N. Y., read a paper on "Averages in Attitude and Trunk Development in Women and Their Relation to Pain." Discussed by Dr. Robert B. Osgood, Boston.

The appointment was announced of Dr. Palmer Findley, Omaha, as Alternate Delegate.

### Friday, June 7.—Morning

Dr. Sidney A. Chalfant, Pittsburgh, read a paper on "Acetonuria; Its Relation to Postoperative Vomiting in 700 Cases of Ether Anesthesia." Discussed by Drs. John M. Swan, Rochester, N. Y., and Sidney A. Chalfant, Pittsburgh.

Dr. P. Brooke Bland, Philadelphia, read a paper on "Sarcoma of the Vagina." Discussed by Drs. Kepler, Boston, and P. B. Bland, Philadelphia.

Dr. Fred. J. Taussig, St. Louis, read a paper on "Gynecologic Disease in the Insane." Discussed by Drs. T. M. T. McKennan, Pittsburgh; Kepler; Cohn; W. Manton, Detroit; G. L. Hunner, Baltimore; Hardenberger, and F. J. Taussig, St. Louis.

Dr. Henry D. Furniss, New York, read a paper on "Some Types of Ureteral Obstruction in Women." Discussed by Drs. Guy L. Hunner, Baltimore; Toby; Henry D. Furniss, New York.

Dr. C. J. Ladinski, New York, read a paper on the "Treatment of Tubal Gestation." Discussed by Drs. Brooks H. Wells, New York; Brinckner; Manton, and L. J. Ladinski, New York.

On motion, the paper of Dr. Barton Cooke Hirst was referred to the Executive Committee.

Dr. Manton reported that the House of Delegates had granted the change in the name of the Section to "The Section of Obstetrics, Gynecology and Abdominal Surgery."

On motion of Dr. S. A. Chalfant, Pittsburgh, a vote of thanks was tendered the Local Committee on Arrangements for their work for the Section. The motion was amended to include the Chairman and Secretary of the Section.

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## SECTION ON DISEASES OF CHILDREN

### Tuesday, June 4—Afternoon

The meeting was called to order at 2 p. m., in Masonic Hall, by the chairman, Dr. Isaac A. Abt, Chicago. Dr. Abt then delivered his address.

Dr. J. P. Crozier Griffith, Philadelphia, read a paper on "The Ability of Women to Nurse their Children."

Dr. H. M. McClanahan, Omaha, read a paper on "Supplemental Breast-Feeding in Infants."

These two papers were discussed by Drs. David E. English Summit, N. J.; Henry J. Gramling, Milwaukee, Wis.; Thomas S. Southworth, New York; Frank S. Churchill, Chicago; George D. Scott, New York; T. L. Harrington, Milwaukee, Wis. Charles Douglas, Detroit; Francis P. Denny, Brookline, Mass. John Zahorsky, St. Louis; Jules M. Brady, St. Louis, and J P. Crozer Griffith, Philadelphia.

Dr. J. C. Litzenberg, Minneapolis, read a paper on "Long-Interval Feeding of Premature Infants."

Dr. Julius H. Comroe, York, Pa., read a paper on "A Plea for Longer Intervals in Milk-Feeding."

These two papers were discussed by Drs. H. Lowenburg, Philadelphia; D. J. M. Miller, Atlantic City, N. J.; John L. Morse, Boston; L. T. Royster, Norfolk, Va.; David E. English, Summit, N. J.; J. H. Hess, Chicago; Thomas S. Southworth, New York; L. R. DeBuys, New Orleans; John Zahorsky, St. Louis; I. A. Abt, Chicago; J. H. Comroe, York, Pa., and J. S. Litchenberg, Kansas City, Mo.

Dr. John Lovett Morse, Boston, read a paper on "Intestinal Toxemia in the New-Born." Discussed by Drs. David E. English, Summit, N. J.; A. L. Goodman, New York; H. Lowenburg, Philadelphia; Thomas B. Cooley, Detroit; Frank S. Churchill, Chicago; George D. Scott, New York; Herbert M. Rich, Detroit, and John Lovett Morse, Boston.

Dr. J. Ross Snyder, Birmingham, Ala., read a paper on "Pellagra in Children." Discussed by Drs. W. W. Butterworth, New Orleans, and H. M. McClanahan, Omaha.

### Wednesday, June 5—Morning

Dr. Jules M. Brady, St. Louis, read a paper on "The Use of Polycarbohydrates in the Diet of the Young Infant."

Dr. Louis Fischer, New York, read a paper on "Clinical Notes from the Willard Parker Hospital, New York; Intestinal Intoxication."

Dr. Frank C. Neff, Kansas City, Mo., read a paper on "A Series of Infants Fed on a High Percentage Albumin Milk."

Dr. A. L. Goodman, New York, read a paper on "Ileocolitis with Meningeal Symptoms."

These four papers were discussed by Drs. Zahorsky, St. Louis; Charles Douglas, Detroit; J. H. Hess, Chicago; John Lovett Morse, Boston; L. T. Royster, Norfolk, Va.; H. Schwartz, New York; T. S. Southworth, New York; H. Lowenburg, Philadelphia; Roger H. Dennett, New York; Louis Fischer, New York; John Zahorsky, St. Louis; I. M. Brady, St. Louis, and F. C. Neff, Kansas City, Mo.

Dr. Bernard Fantus, Chicago, presented some specimens of "candy medication" of various drugs for administration to children.

Dr. Thomas S. Southworth, New York, read a paper on "The Menace to the Young Child of the Common Infectious Cold." Discussed by Drs. David E. English, Summit, N. J.; John Zahorsky, St. Louis; H. M. McClanahan, Omaha; G. D. Scott, New York; L. Kerr, Brooklyn; J. P. Sedgwick, Minneapolis, and T. S. Southworth, New York.

Dr. Henry Dwight Chapin, New York, read a paper on "The Properties, Uses and Indications of the Various Carbohydrates in Infant Feeding." Discussed by Drs. Charles Douglas, Detroit; J. P. C. Griffith, Philadelphia; L. T. Royster, Norfolk, Va., and H. D. Chapin, New York.

### Wednesday, June 5—Afternoon

Dr. Oscar M. Schloss, New York, read a paper on "Allergy to Common Foods (I) Idiosyncrasy to Hens' Eggs." Discussed by Drs. J. L. Morse, Boston. D. J. M. Miller, Atlantic City, N. J.; R. H. Dennett, New York; John Zahorsky, St. Louis; Charles Douglas, Detroit; H. M. Rich, Detroit; I. A. Abt, Chicago, and O. M. Schloss, New York.

Dr. Fritz B. Talbot, Boston, read a paper on "Tabes Mesenterica in Infants and Young Children." Discussed by Drs. C. H. Johnston, Grand Rapids, and F. B. Talbot; Boston.

Dr. J. P. Crozer Griffith, of Philadelphia, showed a new breast-shield called "infantibus."

Dr. Roger H. Dennett, New York, read a paper on "The Caloric Requirements of Bottle-Fed Infants." Discussed by Drs. G. R. Pisek, New York; F. B. Talbot, Boston; Charles Douglas, Detroit; J. L. Morse, Boston; H. D. Chapin, New York, and R. H. Dennett, New York.

Dr. Thomas B. Cooley, Detroit, read a paper on "The Relation of the Infant Welfare Movement to Pediatrics." Discussed by Drs. Charles Douglas, Detroit: G. R. Pisek, New York; C. H. Johnston, Grand Rapids; L. Kerr, Brooklyn; Howe (?), Albany (?); H. M. McClanahan, Omaha; T. L. Harrington, Milwaukee; John Zahorsky, St. Louis, and T. B. Cooley, Detroit.

Dr. Maurice Ostheimer, Philadelphia, read a paper on "The Value of the Social Service Department to the Children's Dispensary." Discussed by Drs. H. J. Gramling, Milwaukee; M. H. Fussell, Philadelphia; T. B. Cooley, Detroit; D. J. M. Miller, Atlantic City; Charles Douglas, Detroit, and M. Ostheimer, Philadelphia.

Dr. LeGrand Kerr, Brooklyn, read a paper on "Some Reasons for Surgical Failures in Children." Discussed by Drs. F. C. Neff, Kansas City, Mo.; F. W. Pinneo, Newark, N. J., and H. J. Gramling, Milwaukee.

Dr. T. A. Williams, Washington, D. C., read a paper on "Juvenile Psychasthenia." Discussed by Drs. John Zahorsky, St. Louis, and T. A. Williams, Washington, D. C.

### Thursday, June 6—Morning

Dr. Thomas S. Southworth, Chairman Executive Committee, reported the following nominations for the succeeding year: Chairman, Dr. Henry Dwight Chapin, New York; Vice-Chairman, Dr. D. J. M. Miller, Atlantic City, N. J.; Secretary, Dr. Frank C. Neff, Kansas City, Mo., and Delegate, Dr. Charles Douglas, Detroit.

It was moved and seconded that the report of the Executive Committee be accepted. Unanimously carried.

Dr. Richard M. Smith, Boston, read a paper on "Methods of Estimating Kidney Function." No discussion.

Dr. L. T. Royster, Norfolk, Va., read a paper on "Influence of Climate on Summer Diarrhea of Infants." Discussed by Drs. B. R. Hoobler, New York; G. R. Pisek, New York; H. Schwartz, New York; Rawley (?); W. W. Butterworth, New Orleans; John Zahorsky, St. Louis; C. H. Johnston, Grand Rapids; C. Douglas, Detroit; T. B. Cooley, Detroit; T. D. Parke, Birmingham, Ala., and L. T. Royster, Norfolk, Va.

Dr. Thomas D. Parke, Birmingham, Ala., read a paper on "The Effect on Later Development of Severe and Prolonged Illness in Infancy." No discussion.

Dr. L. R. DeBuys, New Orleans, read a paper on "Exophthalmos in Scorbutus." Discussion by Drs. H. M. McClanahan, Omaha; W. W. Butterworth, New Orleans, and L. R. DeBuys, New Orleans.

Dr. Frank W. Pinneo, Newark, N. J., read a paper on "Anesthesia by Pharyngeal Insufflation." Discussed by Drs. J. T. Gwathmey, New York; W. C. Woolsey, Brooklyn, and F. W. Pinneo, Newark, N. J.

### Thursday, June 6—Afternoon

Dr. F. M. Pottenger, Monrovia, Cal., read a paper on "The Relationship Between the Tuberculous Infection in the Child and Clinical Tuberculosis in the Adult." Discussed by Drs. C. G. Amende, New York; S. A. Knopf, New York; Karl Von Ruck, Asheville, N. C.; W. J. Durell, New Orleans; Ritter, (?); H. F. Stoll, Hartford, Conn.; J. H. McKee, Philadelphia, and F. E. M. Pottenger, Monrovia, Cal.

Dr. B. Raymond Hoobler, New York, read papers on "An Automatic Device for Reading Systolic and Diastolic Blood-Pressure in Children," with demonstration of apparatus and "The Effect of Cold Air on the Blood-Pressure of Tuberculous Children." Discussed by Drs. F. M. Pottenger, Monrovia, Cal.; Ritter, (?); B. R. Hoobler, New York.

Dr. Henry F. Stoll, Hartford, Conn., read a paper on "The Diagnosis of Enlarged Bronchial Glands." Discussed by Drs. Ritter, (?); D. J. M. Miller, Atlantic City; G. P. Pisek, New York; B. R. Hoobler, New York, and H. F. Stoll, Hartford, Conn.

Dr. H. Lowenburg, Philadelphia, read a paper on "The Hypodermic Injection of Hematinics in the Treatment of Anemia in Children, with Report of Cases." Discussed by Drs. J. Zahorsky, St. Louis, and H. Lowenburg, Philadelphia.

Dr. Charles Hendee Smith, New York, demonstrated a graphic milk-chart to obtain any combination of fat and proteid. Discussed by Drs. B. R. Hoobler, New York; W. W. Butterworth, New Orleans, and D. J. M. Miller, Atlantic City, N. J.

Dr. Butterworth moved that a vote of thanks be extended to the Chairman and Secretary for the excellent program; also to the readers of the various papers.

Dr. Miller seconded the motion, which was unanimously carried.

## SECTION ON GENITO-URINARY DISEASES

### Tuesday, June 4—Afternoon

The meeting was called to order at 2:20 p. m., the Chairman, Dr. William T. Belfield, Chicago, presiding.

Dr. R. F. O'Neil, Boston, was selected to represent the Section in the House of Delegates.

The following papers were read as a Symposium on Tests of Kidney Function:

Dr. B. A. Thomas, Philadelphia: "The Results of Two Hundred Chromo-Ureteroscopies Employing Indigocarmin as a Functional Kidney Test."

Drs. Martin Krotoszyner and George W. Hartman, San Francisco: "The Practical Value of Blood Cryoscopy for Determination of Renal Function."

Dr. John T. Geraghty, Baltimore: "A Study of the Accuracy of the Phenolsulphonephthalein Test for Renal Function."

The three papers in this symposium were discussed by Drs. Charles E. Barnett, Fort Wayne, Ind.; Francis R. Hagner, Washington, D. C.; William H. Schmidt, Atlantic City; H. D. Furniss, New York; L. E. Schmidt, Chicago; Edwin Beer, New York; Hugh H. Young, Baltimore; A. J. Crowell, Charlotte, N. C.; B. A. Thomas, Philadelphia; M. Krotoszyner, San Francisco, and J. T. Geraghty, Baltimore.

The following papers were read as a Symposium on Renal Surgery and Pathology:

Dr. Thorkild Rovsing, Copenhagen, Denmark: "Renal Tuberculosis, Early and Late Phases."

Dr. George S. Whiteside, Portland, Ore.: "The Use of Tuberculin in the Treatment of Urogenital Tuberculosis."

These two papers were discussed by Drs. Arthur T. Cabot, Boston; William T. Belfield, Chicago; Hugh H. Young, Baltimore; Guy L. Hunner, Baltimore, and T. Rovsing, Copenhagen.

Dr. A. Raymond Stevens, New York: "Pathologic Lesions (Non-Congenital) Associated with Double Ureter. Report of an Unusual Case." Discussed by Drs. Hugh H. Young, Baltimore; Edwin Beer, New York; J. B. Roxby, Swathmore, Pa., and A. R. Stevens, New York.

### Wednesday, June 5—Morning

Dr. B. Alexander Randall, Philadelphia, read a paper on "Unilateral Renal Hematuria."

Dr. John H. Cunningham, Jr., Boston, read a paper on "Influence of the Operation of Resection of the Kidney on the Function of the Organ."

Dr. Hugh Cabot, Boston, read a paper on "The Diagnosis and Indications for Operation in Early Hydronephrosis. Definition of Hydronephrosis."

Drs. John W. Draper and W. F. Braasch, Rochester, Minn., read a paper on "The Function of the Ureterovesical Valve. An Experimental Study Regarding the Feasibility of Ureteral Meatotomy in Human Beings."

These four papers were discussed by Drs. D. H. Stewart, New York; Arthur T. Cabot, Boston; C. W. Hunter, Norfolk, Va.; Martin Krotoszyner, San Francisco; Guy L. Hunner, Baltimore; H. D. Furniss, New York; Francis R. Hagner, Washington, D. C.; Edwin Beer, New York; John H. Cunningham, Jr., Boston; Edgar G. Ballenger, Atlanta, Ga.; A. J. Crowell, Charlotte, N. C.; B. A. Randall, Philadelphia; H. Cabot, Boston, and J. W. Draper, Rochester, Minn.

The following papers were read as a Symposium on Treatment of Tumors of the Bladder:

Dr. Edwin Beer, New York: "The Treatment of Papillary Tumors of the Urinary Bladder with the High-Frequency Current (Oudin)."

Dr. R. F. O'Neil, Boston: "Cancer of the Bladder."

Dr. E. S. Judd, Rochester, Minn.: "The Surgical Treatment of Tumors of the Bladder."

Dr. Francis R. Hagner, Washington, D. C.: "Surgical Treatment of Malignant Tumors of the Bladder Affecting the Fundus or Lateral Walls."

The four papers of this symposium were discussed by Drs. C. M. Harpster, Toledo, Ohio; B. A. Thomas, Philadelphia; W. E. Lower, Cleveland, Ohio; A. L. Chute, Boston; A. G. Rytina, Baltimore; E. O. Smith, Cincinnati; E. Beer, New York; R. F. O'Neil, Boston; E. S. Judd, Rochester, Minn., and F. R. Hagner, Washington, D. C.

### Wednesday, June 5—Afternoon

Dr. Hugh H. Young, Baltimore, called attention to the desirability of sending copies of the Transactions of this Section abroad to journals, libraries and prominent men, and said that this could be done if the members would subscribe one hundred dollars.

The following papers were read as a Symposium on Treatment of Vesical Calculus:

Dr. W. E. Lower, Cleveland, Ohio: "Suprapubic Cystotomy for Vesical Calculi. Indications and Operative Procedure."

Dr. Arthur Tracy Cabot, Boston: "Litholapaxy; the Operation of Choice for the Removal of Stone in the Bladder."

The two papers of this symposium were discussed by Drs. John Myers Swan, Canton, China; A. L. Chute, Boston; Hugh H. Young, Baltimore; Louis E. Schmidt, Chicago; Eugene Fuller, New York; George S. Whiteside, Portland, Ore.; William T. Belfield, Chicago; G. T. Cabot, Boston, and W. E. Lower, Cleveland.

Dr. D. S. Fairchild, Clinton, Iowa, read a paper on "Decapsulation of the Kidney." Discussed by Drs. A. C. Wood, Philadelphia; Louis E. Schmidt, Chicago; Victor G. Vecki, San Francisco, and D. S. Fairchild, Clinton, Iowa.

The following papers were read as a Symposium on Obstacles to Evacuation of the Bladder:

Dr. Charles H. Chetwood, New York: "Contracture of the Neck of the Bladder."

Dr. Hugh Hampton Young, Baltimore: "A New Procedure (Punch Operation) for Small Prostatic Bars and Contracture of the Prostatic Orifice."

Dr. Charles M. Harpster, Toledo, Ohio: "Prostatotomy by the Goldschmidt Method."

Dr. John B. Deaver, Philadelphia: "Impermeable Stricture of Bulbomembranous Urethra (Impermeable to Passage of Instruments)."

The four papers of this symposium were discussed by Drs. G. F. McKim, Cincinnati; Eugene Fuller, New York; E. O. Smith, Cincinnati; Martin Krotoszyner, San Francisco; A. J. Crowell, Charlotte, N. C.; B. Alexander Randall, Philadelphia; C. H. Chetwood, New York; H. H. Young, Baltimore, and C. M. Harpster, Toledo, Ohio.

### Thursday, June 6—Morning

The Chairman announced that the plan of subscribing for copies of the Transactions to be sent abroad through the Smithsonian Institution, as suggested by the Secretary at yesterday's meeting, had received seventy-eight signatures. One hundred were necessary.

A member of the Executive Committee, Dr. Howard A. Kelly, was prevented from attending the meeting, and the chairman appointed Dr. Francis R. Hagner, Washington, D. C., in his place.

The following officers were elected for the ensuing year: Chairman, Dr. Hugh H. Young, Baltimore; Vice-Chairman, Dr. A. L. Chute, Boston, and Secretary, Dr. Louis E. Schmidt, Chicago.

The following papers were read as a Symposium on Genital Pathology and Surgery:

Dr. William T. Belfield, Chicago: "Chairman's Address: Hematogenous Disease of the Genital Organs in the Male."

Dr. Eugene Fuller, New York: "Seminal Vesiculotomy: Its Purpose and Accomplishments."

Dr. Robert H. Herbst, Chicago: "Treatment of Chronic Seminal Vesiculitis by Vasostomy (Belfield Operation)."

There was no discussion on this symposium.

Dr. Emil Goetsch, Baltimore, read a paper on "Influence of the Hypophysis on Growth and Development with Especial Reference to the Genito-Urinary System. Some Experimental and Clinical Facts."

Dr. Oswald S. Lowsley, Los Angeles, read a paper on "The Human Prostate Gland at Birth, with a Brief Discussion of Its Fetal Development. Demonstration of Enlarged Wax Reconstruction."

These two papers were discussed by Drs. Hugh H. Young Baltimore, and O. S. Lowsley, Los Angeles.

Dr. T. B. Futcher, Baltimore, read a paper on "Recent Advances in Our Knowledge Concerning the Causes of Glyco suria." Discussed by Drs. Robert T. Morris, New York; Emil Goetsch, Baltimore, and T. B. Futcher, Baltimore.

Dr. Ernest E. Irons, Chicago, read a paper on "Systemic Gonococcal Infections. A Cutaneous Gonococcus Reaction." Discussed by Drs. Charles E. Barnett, Fort Wayne, Ind.; Louis E. Schmidt, Chicago, and E. E. Irons, Chicago.

Dr. Louis E. Schmidt, Chicago, read a paper on "Surgical Routes of Entrance to the Male Pelvis." No discussion.

### Thursday, June 6—Afternoon

The following papers were read as a Symposium on Syphilis:

Drs. Richard Dexter and C. L. Cummer, Cleveland: "The Importance of the Early Diagnosis of Syphilis."

Drs. Albert Keidel and S. H. Hurwitz, Baltimore: "A Comparison of Extracts of Syphilitic and Normal Tissues by Means of the Wassermann and Epiphanin Reactions."

These two papers were discussed by Drs. A. W. M. Ellis, New York; Kolm, New York; B. C. Corbus, Chicago; S. H. Hurwitz, and R. Dexter, Baltimore.

Dr. Arthur W. M. Ellis, New York: "Nerve Recurrences Following Treatment with Salvarsan."

Dr. B. C. Corbus, Chicago: "Four Years' Experience with the Wassermann Reaction in Practice. A Further Report of Cases Treated from the Standpoint of the Wassermann Reaction with Mercury Alone, with Salvarsan Alone, and by the Combined Method (Salvarsan and Mercury), Including a Preliminary Report on the Noguchi Luetin Skin Reaction."

Dr. Hideyo Noguchi, New York: "The Luetin Reaction."

These three papers were discussed by Drs. B. A. Thomas, Philadelphia; H. J. Nichols, U. S. Army, Washington, D. C.; H. Noguchi; A. J. Crowell, Charlotte, N. C., and B. C. Corbus, Chicago.

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## SECTION ON OPHTHALMOLOGY

### Tuesday, June 4—Afternoon

The Section on Ophthalmology convened in the West Solarium of the Hotel Marlborough-Blenheim, Atlantic City, at 2 p. m. with the Chairman, Dr. Adolf Alt, St. Louis, presiding.

Dr. Alt then read his address, on "Sympathetic Ophthalmia."

Dr. Casey Wood, Chicago, was appointed a member of the Executive Committee in place of Dr. Alvin Hubbell, Buffalo, deceased.

Dr. G. E. DeSchweinitz, Philadelphia, read a paper on "A Clinical Communication on Certain Visual Field Defects in Hypophysis Disease with Special Reference to Scotomas."

Dr. George S. Derby, Boston, read a paper on "Disease of the Optic Nerve in Myxedema: Its Relationship to the Thyroid Gland and to the Hypophysis."

These two papers were discussed by Drs. F. H. Verhoeff, Boston; F. Park Lewis, Buffalo, and T. B. Holloway, Philadelphia.

Dr. Arnold Knapp, New York, read a paper on "The Krönlein Operation as an Exploratory Procedure in Affections of the Orbit."

Dr. Martin B. Tinker, Ithaca, N. Y., read a paper on "The Surgical Treatment of Exophthalmos."

These two papers were discussed by Drs. James Bordley, Jr., Baltimore; Wells P. Eagleton, Newark, N. J.; Lucien Howe, Buffalo; W. C. Posey, Philadelphia; M. L. Foster, New York; Arnold Knapp, New York, and Martin B. Tinker, Ithaca, N. Y.

### Wednesday, June 5—Morning

The following instruments and appliances were presented and described:

Dr. William N. Souter, Portsmouth N. H.: Ophthalmometer adapted to measure the anterior and posterior surfaces of the crystalline lens as well as the cornea.

Dr. Nelson M. Black, Milwaukee: Instrument which adapts the electric light to perimetric measurements, the true spectroscopic colors being shown. Dr. Lucien Howe suggested an improvement in the form of a tube to inclose the electric light, which would enable the patient to look directly at the light without being confused or caused to move the eyes by the reflection of the light on the arc of the perimeter. This improvement makes the instrument a tropometer, as well as a perimeter. Head fixation and a face rim are necessary.

Dr. Mark D. Stevenson, Akron, O.: Lid-clamp of U shape, having its blades covered with rubber tubing, which can be used under local anesthesia without producing much pain. The clamp could be tightened from either side. It is similar to Dr. Wilder's instrument, but was used by Dr. Stevenson without the rubber tubing two years before being described by Dr. Wilder.

Dr. Stevenson also exhibited a small speculum for chalazion operations, etc., made of No. 10 snare wire. It could be improvised for each operation and might be easily regulated as to pressure.

Dr. David W. Wells, Boston: Curet for use in extirpation of the lacrimal sac, the handle of which is made of material of such flexibility that it can be adapted with the fingers to the cavity containing the sac while *in situ*.

Dr. Lucien Howe, Buffalo: Tonometer, consisting of a heavy base containing a clockwork arrangement which revolves a drum on an upright shaft. Another upright contains an arm holding a prism which can be slid up and down by the hand. The prism has attached to it a needle which, as the prism is raised or lowered, records the curve on the drum. The patient sits in front of the instrument, looking through the prism, which is raised until the patient sees a distant small light in duplicate. This represents the height of the curve. This is repeated until the record is complete.

Dr. Adolf Alt, St. Louis, exhibited under the microscope slides of an unidentified parasite which was found in the pus from an eye injured by a meat hook. Dr. Tiedeman, of Washington University, thought it was a claustridium, a parasite akin to the bacillus of malignant edema. The organism is spindle-shaped. Leukocytes in large numbers are seen. It is probably anaerobic as it was taken from the depths of the orbit and was not contaminated with outside organisms. Cultures were not obtained on any of the ordinary mediums tried. The staphylococcus was the only organism found in the cultures.

Dr. Walter Baer Weidler, New York, read a paper on "Pemphigus of the Conjunctiva; with the Report of a Case." Discussed by Drs. Casey A. Wood, Chicago; H. W. Woodruff, Joliet, Ill.; E. L. Jones, Cumberland, Md.; Joseph S. Lichtenberg, Kansas City, Mo.; W. E. Lambert, New York, and W. B. Weidler, New York.

Dr. E. L. Jones, Cumberland, Md., read a paper on "Subconjunctival Injections in Ophthalmic Surgery." Discussed by Drs. G. C. Savage, Nashville; L. Webster Fox, Philadelphia; A. E. Bulson, Jr., Fort Wayne, Ind.; William Zentmayer, Philadelphia; T. W. Moore, Huntington, W. Va.; R. L. Randolph, Baltimore; S. D. Risley, Philadelphia; H. W. Woodruff, Joliet, Ill.; J. A. Donovan, Butte, Mont.; Hiram Woods, Baltimore; D. W. Greene, Dayton, O.; Nelson M. Black, Milwaukee, and E. L. Jones, Cumberland, Md.

Dr. Edgar S. Thomson, New York, read a paper on "Sympathetic Optic Neuritis, with Report of a Case." Discussed by Drs. R. L. Randolph, Baltimore; E. E. Holt, Portland, Me.; Mr. James W. Barrett, Melbourne, Australia; Drs. F. H. Verhoeff, Boston; M. H. Post, St. Louis; S. D. Risley, Philadelphia; Samuel Theobald, Baltimore; Joseph S. Lichtenberg, Kansas City, Mo.; Adolf Alt, St. Louis, and E. S. Thomson, New York.

Dr. H. D. Bruns, New Orleans, read a paper on "Phlyetenular Ophthalmia and Its Etiology." Discussed by Drs. Richard J. Tivnen, Chicago; Arthur G. Bennett, Buffalo; Samuel Theobald, Baltimore; F. H. Verhoeff, Boston; Hiram Woods, Baltimore; Mr. James W. Barrett, Melbourne, Australia; Drs. George S. Derby, Boston; J. A. Donovan, Butte, Mont., and H. D. Bruns, New Orleans.

Dr. Walter E. Lambert, New York, read a paper on "Removal of the Lens in High Myopia." Discussed by Drs. Peter A. Callan, New York; S. D. Risley, Philadelphia; H. D. Bruns, New Orleans; Linn Emerson, Orange, N. J.; William H. Bates, New York; Francis Valk, New York, and W. E. Lambert, New York.

### Wednesday, June 5—Afternoon

Dr. William Campbell Posey, Philadelphia, read a paper on "Orbital Cellulitis from Disease of the Superior Maxilla in Children." Discussed by Drs. F. R. Packard and W. C. Posey, Philadelphia.

Dr. F. H. Verhoeff, Boston, read a paper on "Sclerosis of the Ligamentum Pectinatum and Its Relation to Glaucoma; with Lantern Demonstration." Discussed by Drs. M. Feingold, New Orleans; Walter B. Weidler, New York, and F. H. Verhoeff, Boston.

Dr. Casey A. Wood, Chicago, read a paper on "Nasal Hydrorrhea; Its Relations to Lesions of the Brain and Visual Apparatus." Discussed by Drs. Lucien Howe, Buffalo; Oscar Wilkinson, Washington, D. C., and Casey A. Wood, Chicago.

Dr. Albert E. Bulson, Jr., Fort Wayne, Ind., read a paper on "Some Early Diagnostic Retinal Signs of Arteriosclerosis and Chronic Bright's Disease." Discussed by Drs. F. T. Rogers, Providence; S. D. Risley, Philadelphia; Otto Landman, Toledo, O.; Allen Greenwood, Boston; Wendell Reber, Philadelphia, and A. E. Bulson, Jr., Fort Wayne, Ind.

Dr. William Zentmayer, Philadelphia, read a paper on "Visual Disturbances from Distant Hemorrhage." Discussed by Hiram Woods, Baltimore; E. C. Ellett, Memphis; Samuel Theobald, Baltimore; William M. Sweet, Philadelphia; Adolf Alt, St. Louis, and William Zentmayer, Philadelphia.

### Wednesday, June 5—Evening

Dr. Edward Jackson, Denver, delivered an address: "Provision for the Proper Teaching of Ophthalmology in Medical Schools." Discussed by Drs. S. D. Risley, Philadelphia; F. C. Todd, Minneapolis; T. Chalmers Fulton, Philadelphia, and E. Jackson, Denver.

### Thursday, June 6—Morning

Dr. Charles H. Beard, Chicago, presented an instrument in the form of a trephine for performing sclerotomy in glaucoma. It consisted of two members, an outer sleeve, with the cutting edge on one end, and a central shaft with a very fine screw on the end for fixing the instrument so that it would not move when the cutting was begun, and also for prevention of the loss of the button into the anterior chamber.

Dr. Wendell Reber, Philadelphia, presented an instrument for the control of the cornea and the prevention of vitreous prolapse in operations on the eye. It is an improvement of the disk presented by Dr. Reber two years ago. It consists of a beveled rim of metal which fits over the cornea and is controlled by an attached handle. It may be used also during the insertion of the Ellett corneal stitch. Since using it Dr. Reber has had only 2.5 per cent. of vitreous prolapses in ninety cases.

Dr. Edward C. Ellett, Memphis, read a paper on "Cataract Extraction with Corneal Suture." Discussed by Drs. Mark D. Stevenson, Akron, O.; C. H. Williams, Boston; M. H. Post, St. Louis; William H. Bates, New York, and E. C. Ellett, Memphis.

The Section then went into executive session.

Dr. W. C. Posey, Philadelphia, Chairman of the Executive Committee, announced that the following officers had been elected for 1913: Chairman, Dr. Hiram Woods, Baltimore; Vice-Chairman, Dr. E. S. Thomson, New York; Secretary, Dr. George S. Derby, Boston; Delegate, Dr. Thomas A. Woodruff, Chicago.

On motion the report of the Committee on Nominations was adopted.

Dr. A. E. Bulson, Jr., Fort Wayne, stated that the Knapp Testimonial Fund at present amounted to something like $925. A copy of the Knapp Testimonial Fund medal was exhibited, and it was explained that the medal need not necessarily be given every year, but only for meritorious work in ophthalmology by some member of the Section. Dr. Bulson moved the creation of a committee of three members of the Section not on the program to read and consider the papers offered at this session to determine their merit with a view to awarding the Knapp medal. The names of eleven members of the Section were proposed and a vote was taken by ballot, resulting in the selection for this committee of Drs. S. D. Risley, Philadelphia; Peter A. Callan, New York, and John E. Weeks, New York.

Dr. Bulson explained that an arrangement had been made with Dr. Edward Jackson, editor of the Year-Book, by which if a sufficient number could be guaranteed, the Year-Book would be furnished to contributors of $5 or over to the Knapp Testimonial Fund, and a bound copy of the Transactions of the Section would also be supplied to such contributors without additional charge. He recommended that this arrangement be approved by the Section.

On motion the report of Dr. Bulson for the Committee on the Knapp Testimonial Fund and its recommendations were accepted.

On motion of Dr. G. C. Savage, Nashville, the Committee on the Knapp Testimonial Fund, consisting of Drs. W. C. Posey, Philadelphia, and Albert E. Bulson, Jr., Fort Wayne, Ind., was continued during life or good behavior.

Dr. W. C. Posey, Chairman of the Committee on Pilots, made a report, which was published in The Journal, June 8, p. 1809.

On motion the report was adopted, to be printed in the Transactions of the Section, and the committee was continued.

The report of the Committee on Optometry was read by the Secretary, and was as follows:

> In 1909 the Section on Ophthalmology of the American Medical Association appointed Drs. James Thorington of Philadelphia and J. C. Bossidy of Boston a committee on optometry.
>
> Since that date the committee has endeavored to be of assistance to the medical profession in the various states in which the question of the legal recognition of opticians has been fought.
>
> Inasmuch as the Bulletin of the American Medical Association of Sept. 15, 1911, contains the result of their labors and can be secured when needed by the medical profession, the committee feels that its existence is no longer necessary, and hereby tenders its resignation to the Section.
>
> John C. Bossidy,
> James Thorington,
> Committee.

On motion the report was accepted and the committee discharged.

Dr. Lucien Howe, Chairman, read the report of the Committee on the Ocular Muscles.

On motion the report was received and the committee continued.

Dr. F. Park Lewis, Chairman, read the report of the Committee on the Conservation of Vision, which was published in The Journal, June 8, p. 1805.

On motion the report was adopted and the committee continued.

Dr. Percy Fridenberg, New York, exhibited a new capsulotomy knife and read his paper on "Preparatory Capsulotomy in Extraction of Immature Senile Cataract." Discussed by Drs. Homer E. Smith, Norwich, N. Y.; Howard F. Hansell, Philadelphia; G. C. Savage, Nashville; S. Lewis Ziegler, Philadelphia, and Henry DeWitt Watson, Binghamton, N. Y.

Dr. Samuel Theobald, Baltimore, read a paper on "Suggestions Regarding Some Points in the Technic of Cataract Extraction." No discussion.

Dr. D. W. Greene and J. W. Millette, Dayton, O., read a paper on "Visual Results After the Smith Intracapsular Cataract Operation." Discussed by Drs. D. W. Greene, Dayton, O.; W. R. Parker, Detroit; J. W. Millette, Dayton, O.; Harris G Sherman, Cleveland, O., and Hiram Woods, Baltimore.

Dr. F. Phinizy Calhoun, Atlanta, Ga., read a paper on "Ey Complications Caused by Hookworm Disease, with Specia Reference to the Formation of Cataracts." Discussed by Dr Howard F. Hansell, Philadelphia.

### Thursday, June 6—Afternoon

Dr. Charles H. Beard, Chicago, presented an eye cup fo applying solutions of sodium iodid and calcium chlorid t the eye for clearing up incipient cataract. The solution consists of 5 gm. of each salt and 100 c.c. of water.

Dr. Lucien Howe, Buffalo, read a paper on "Measuremen of Fatigue of the Ocular Muscles." Discussed by Drs. C. J Williams, Boston; G. C. Savage, Nashville; Wendell Rebe Philadelphia, and Lucien Howe, Buffalo.

Dr. Wendell Reber, Philadelphia, read a paper on "Th Findings of the Tropometer in 100 Normal Eyes; Its Val in the Study of Strabismus." Discussed by Drs. Edward Lauder, Cleveland; Francis Valk, New York; A. Duane, New York; G. C. Savage, Nashville, and W. Reber, Philadelphia.

Dr. Alexander Duane, New York, read a paper on "Normal Values of the Accommodation at All Ages: A Statistical Study." Discussed by Drs. S. D. Risley, Philadelphia, and E. E. Holt, Portland, Me.

Dr. John A. Donovan, Butte, Mont., read a paper on "Dangers to and Requirements of the Eyes of the National Marksman." Discussed by Major Paul Stacy Halloran, U. S. Army; Drs. Arthur G. Bennett, Buffalo; W. C. Posey, Philadelphia; Alexander Duane, New York; S. D. Risley, Philadelphia, and John A. Donovan, Butte, Mont.

Dr. John C. Bossidy, Boston, read a paper on "Case of Uniocular Polyopia Existing in Both Eyes." Discussed by Dr. A. E. Davis, New York.

Dr. Burton Chance, Philadelphia, read a paper on "Morgagnian Cataract." Discussed by Drs. E. B. Heckel, Pittsburgh; Lucien Howe, Buffalo; C. A. Clapp, Baltimore; G. C. Savage, Nashville, and B. Chance, Philadelphia.

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## SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

### TUESDAY, JUNE 4—AFTERNOON

The meeting was called to order at 2 p. m. by the Chairman, Dr. George E. Shambaugh, Chicago.

Dr. Shambaugh read the Chairman's address on "The Specialist in Medicine."

Dr. Chevalier Jackson, Pittsburgh, read a paper on "Bronchoscopic Dilatation of Bronchial Stenoses." Discussed by Dr. Emil Mayer, New York.

Dr. Ross. H. Skillern, Philadelphia, read a paper on "Exploratory Needle Puncture of the Maxillary Antrum in 100 Individuals Demonstrating the Marked Dissimilarity Between the Clinical and Post-Mortem Findings." Discussed by Drs. Justus Matthews, Rochester, Minn.; L. W. Dean, Iowa City; Hanau Loeb, St. Louis; Ross H. Skillern, Philadelphia, and W. L. Ballenger, Chicago.

Dr. F. C. Todd, Minneapolis, read a paper on "Ethmoiditis, a Common Sequel of Hay Fever." Discussed by Drs. H. O. Reik, Baltimore; G. W. Richards, Fall River, Mass.; W. L. Ballenger, Chicago; Hanau Loeb, St. Louis; C. F. Welty, San Francisco; F. V. Laurent, Pittsburgh; Otto Freer, Chicago; P. M. Hickey, Detroit; J. F. Klinedinst, York, Pa.; G. F. Cott, Buffalo, N. Y.; Emil Mayer, New York; H. F. Pyfer, Norristown, Pa.; W. E. Sauer, St. Louis, and F. C. Todd, Minneapolis.

Dr. P. M. Hickey, Detroit, read a paper on "The Roentgen Ray in Otolaryngology." Discussed by Drs. Sidney Lange, Cincinnati; C. F. Welty, San Francisco; W. W. Carter, New York; J. E. Logan, Kansas City, Mo.; Wendell Phillips, New York; Otto Glogau, New York; Max Goldstein, St. Louis; G. F. Cott, Buffalo; B. R. Shurly, Detroit, and P. M. Hickey, Detroit.

### WEDNESDAY, JUNE 5—MORNING

The following papers were read as a Symposium on Intracranial Complications.

Dr. Max Goldstein, St. Louis: "Diseases of the Ear which Lead to Brain Abscess."

Dr. James F. McKernan, New York: "Operative Technic for the Relief of Brain Abscess of Otitic Origin."

Dr. F. X. Dercum, Philadelphia: "Diagnosis and Localization of Brain Abscess."

The three papers of this symposium were discussed by Drs. John H. Gibbon, Philadelphia; G. F. Cott, Buffalo, N. Y.; C. F. Welty, San Francisco; Seth MacCuen Smith, Philadelphia; W. P. Eagleton, Newark, N. J.; C. R. C. Borden, Boston; Lee M. Hurd, New York; G. W. MacKenzie, Philadelphia; E. L. Bull, Jersey City; Andrew Timberman, Columbus, O.; Herman Jerecky, New York; W. A. Potter, Detroit; J. A. Stucky, Lexington, Ky.; M. M. Cullum, Nashville, Tenn.; Thomas Hubbard, Toledo; W. L. Ballenger, Chicago; C. M. Miller, Richmond; Max Goldstein, St. Louis; James F. McKernan, New York, and F. X. Dercum, Philadelphia.

The Section offered a vote of thanks to Dr. Dercum for his masterful presentation of the subject from the standpoint of the neurologist.

### WEDNESDAY, JUNE 5—AFTERNOON

Instruments were presented by the following:

Dr. Lee M. Hurd, New York: Tonsil-pillar retractor and dissector, tonsil-grasping forceps, tonsillar hemostatic clamp and curet for going through the cartilage in submucous septal resection.

Dr. H. W. Loeb, St. Louis, for Dr. W. E. Sauer, St. Louis: Modification of the Sluder instrument for removal of tonsils.

Dr. George L. Richards, Fall River, Mass.: Cutting forceps for ethmoidal operations, in which the cutting blade works from behind forward instead of from before backward, as in the usual instruments of this kind.

Dr. J. A. Pratt, Aurora, Ill.: New instrument for direct laryngoscopy in which the illumination is furnished by a battery in the handle of the instrument.

Dr. John J. Sullivan, Jr., Scranton, Pa.: Set of instruments for entering the frontal sinus intranasally—frontal sinus rasps.

Dr. W. L. Ballenger, Chicago; Modification of the Sluder tonsil instrument.

Dr. C. R. C. Borden, Boston, read a paper on the "Use of Salvarsan in Lesions of the Nose, Throat and Ear." Discussed by Drs. George P. Sanborn, Boston; W. Freudenthal, New York; Joseph H. Abraham, New York; G. L. Richards, Fall River, Mass.; Dunbar Roy, Atlanta, Ga.; Emil Mayer, New York, and C. R. C. Borden, Boston.

Dr. Justus Matthews, Rochester, Minn., read a paper on "Relation of Nasal Conditions to Asthma."

Dr. Wolff Freudenthal, New York, read a paper on "Further Experience with Endobronchial Therapy of Asthma."

These two papers were discussed by Drs. E. R. Lewis, Dubuque, Ia.; G. F. Cott, Buffalo, N. Y.; D. J. McDonald, New York; Wolff Freudenthal, New York, and Justus Matthews, Rochester, Minn.

Dr. Homer Dupuy, New Orleans, read a paper on "Treatment of Chronic Laryngeal Stenosis by Prolonged Intubation."

Discussed by Drs. H. L. Lynah, New York; B. R. Shurly, Detroit; E. Mayer, New York, and H. Dupuy, New Orleans.

### THURSDAY, JUNE 6—MORNING

Election of Officers:

The Executive Committee reported the following nominations: Chairman, Dr. Robert Levy, Denver; Vice Chairman, Dr. Norton L. Wilson, Elizabeth, N. J.; Secretary, Dr. Burt R. Shurly, Detroit; Delegate, Dr. Chevalier Jackson, Pittsburgh, and Alternate, Dr. J. F. Barnhill, Indianapolis.

On motion, the Secretary was instructed to cast the ballot for the nominees recommended by the Executive Committee, which was accordingly done.

On motion, the Chairman was requested to act as a delegate from the Section to confer with delegates or committees from other special societies, with reference to the establishment of a special journal.

Dr. Charles Richardson, Washington, D. C., offered a resolution which was adopted requesting the House of Delegates to urge the Pure Food Commission of the United States to have all products of caustic soda and potash sold in the shops with proper poison labels. [There is no record in the House minutes of any action on this.]

Dr. M. M. Cullom, Nashville, Tenn., read a paper on "Refinements Which Render Tonsillectomy Safe, Surgical and Satisfactory."

Dr. Lee M. Hurd, New York, read a paper on "Indications and Contra-Indications in Tonsillectomy."

These two papers were discussed by Drs. T. Chew Worthington, Baltimore; J. T. Gwathmey, New York; Homer DuPuy, New Orleans; G. L. Richards, Fall River, Mass.; F. V. Laurent, Pittsburgh; B. D. Sheedy, New York; J. H. Abraham, New York; Hanau Loeb, St. Louis; W. L. Ballenger, Chicago; F. P. Emerson, Boston; C. F. Welty, San Francisco; W. W. Carter, New York; H. B. Lemere, Omaha; H. P. Pyfer, Norristown, Pa.; G. F. Cott, Buffalo; G. W. MacKenzie, Philadelphia; D. B. McDonald, New York; Ard, (?), Zanesville, Ohio; B. R. Shurly, Detroit; M. M. Cullom, Nashville, Tenn., and Lee M. Hurd, New York.

The following papers were read as a Symposium on Correction of Deformities of the Nasal Septum.

Dr. Otto T. Freer, Chicago: "The Submucous Resection of the Nasal Septum—The Author's Present Perfected Method."

Dr. Charles W. Richardson, Washington, D. C.: "Methods of Correcting Deflections of the Nasal Septum."

Dr. H. W. Loeb, St. Louis: "Indications and Contra-Indications to Resection of the Nasal Septum."

The three papers of this symposium were discussed by Drs. W. L. Ballenger, Chicago; B. D. Sheedy, New York; C. F. Welty, San Francisco; W. W. Carter, New York; Ostram, (?); G. L. Richards, Fall River, Mass.; G. C. Kneedler, Pittsburgh; Otto T. Freer, Chicago; C. W. Richardson, Washington, D. C., and H. W. Loeb, St. Louis.

### THURSDAY, JUNE 6—AFTERNOON

Dr. E. R. Lewis, Dubuque, Ia., read a paper on "A Study of Cellular Change During and After Acute Mastoiditis." Discussed by Drs. Norval H. Pierce, Chicago; Calvin R. Elwood, Menominee, Mich.; C. F. Welty, San Francisco; G. F. Cott, Buffalo; S. Oppenheimer, New York; T. R. Chambers, Jersey City; B. A. Randall, Philadelphia, and E. R. Lewis, Dubuque, Iowa.

The following papers were read as a Symposium on the Surgery of the Labyrinth:

Dr. R. B. Canfield, Ann Arbor: "Diffuse Suppuration of the Labyrinth and the Indication for Operative Interference."

Dr. John D. Richards, New York: "Technic of Radical Labyrinth Surgery."

Dr. Norval H. Pierce, Chicago: "A Plea for Conservative Labyrinth Surgery."

The papers of this symposium were discussed by Drs. G. W. MacKenzie, Philadelphia; C. F. Welty, San Francisco; Otto Glogau, New York; W. L. Ballenger, Chicago; G. E. Shambaugh, Chicago; C. E. Potter, Detroit; B. A. Randall, Philadelphia; R. B. Canfield, Ann Arbor; John D. Richards, New York, and Norval H. Pierce, Chicago.

## SECTION ON PHARMACOLOGY AND THERAPEUTICS

### Tuesday, June 4—Morning

The Chairman, Dr. Torald Sollmann, Cleveland, called the meeting to order in the chapel of the First Presbyterian Church at 2:15 p. m.

Dr. Sollmann then read the Chairman's address.

Dr. Joseph P. Remington, Philadelphia, presented the Address of the Delegation from the American Pharmaceutical Association as follows:

The American Pharmaceutical Association tenders its cordial greetings to the American Medical Association and to its Section on Pharmacology and Therapeutics. The association which our delegation represents was founded in 1852 and the two associations were organized a few years apart. Our association was founded mainly for the purpose of preventing the adulteration in drugs and it sprang into existence because of the great need of protecting the public from imported, adulterated drugs. While this was the essential object, as time wore on other important interests soon developed, but it is a significant fact that the first article in the constitution of the American Pharmaceutical Association remains as follows:

> Its aim shall be to unite the educated and reputable pharmacists and druggists of America in the following objects:
>
> 1. To improve and regulate the drug market by preventing the importation of inferior, adulterated or deteriorated drugs by detecting and exposing home adulterations.

The significance of these facts is emphasized by the present condition of this nation with regard to adulteration, sophistication, and misbranding of medicinal substances and also that the American Medical Association is doing yeoman service in protecting the sick and helpless from the evils which have for so long baffled the efforts of the physician and pharmacist. The Journal of your Association has been waging a successful warfare against great odds in the same direction.

Our pharmacists and physicians have been entirely too lax for centuries in demanding the purest and best drugs in combating disease. Silently, with the utmost secrecy, an army has been at work cheapening and debasing the quality of medicines until the "very elect" have been deceived, but there has been another army to whom as yet but little credit has been given publicly who have been at work openly and persistently, studying analytical chemistry. The reactions which take place between chemical substances have formed the basis for producing reagents, test solutions, indicators, and other agents which now enable the chemist to make accurate analyses of secret remedies and to detect adulterations and impurities, and it has been possible, through the Food and Drugs Acts, to reveal many of the secrets which won ill-gotten wealth for the owner.

Publicity and education have gone hand in hand and the apathy and indifference of the public, as well as professional men, have been succeeded by amazement and finally consternation when the extent of these great frauds has been revealed; but the end is not yet. While much has been accomplished, there must be no wavering; the snake has only been scotched and as long as the powers of evil continue to exist, there will always be that secret, slimy army continually at work. This Section of Pharmacology and Therapeutics embraces in its membership many of those who have enlisted in the opposing ranks.

The American Pharmaceutical Association tenders to its sister body, the American Medical Association, its congratulations for the work which has already been accomplished and with the two national associations joined together, there will come that union from which strength is evolved. May we not hope that a sufficient number of workers will be found marching together, shoulder to shoulder, both facing the common enemy.

Jos. P. Remington, Chairman. G. M. Beringer.
H. M. Whelpley. Otto Raubenheimer.
J. H. Beal. Theodore J. Bradley.
I. V. S. Stanilaus. George E. Norton.
L. F. Kebler. H. H. Rusby.
Delegates.

A motion was made and carried to extend the privileges of the floor to the members of the Delegation from the American Pharmaceutical Association.

The following papers were read as a Symposium on Patents and Trade-Marks:

Mr. M. I. Wilbert, Washington, D. C.: "Report of the Committee of the American Medical Association on the Present Status of the Laws."

Dr. F. E. Stewart, Philadelphia: "The Relation of the Patent and Trade-Mark Laws to Materia Medica Nomenclature."

The two papers of this symposium were discussed by Mr. A. V. Morgenstern, New York; Drs. S. Solis Cohen, Philadelphia; Torald Sollmann, Cleveland; B. Fantus, Chicago; Oliver T. Osborne, New Haven, Conn.; H. C. Wood, Jr., Philadelphia; and Messrs. M. I. Wilbert, Washington, D. C.; H. P. Hynson, Baltimore, and W. A. Puckner, Chicago.

A motion was made by Dr. B. Fantus, Chicago, which after discussion, was passed in the following form:

> That the Chairman appoint a committee of three to draw up resolutions to be presented by the representative of the Section on Pharmacology and Therapeutics to the House of Delegates, to attempt to secure legislation forbidding patents of materia medica articles and permitting patents only of process of manufacture and to request the manufacturers to act in cooperation with the Association in this necessary legislation.

Dr. Torald Sollmann, Chairman, appointed the following committee to draw up the above resolutions: Drs. Oliver T. Osborne, New Haven, Conn.; F. E. Stewart, Philadelphia; B. Fantus, Chicago.

Dr. George Barclay Wallace, New York, read a paper on "The Influence of Pathologic Conditions on Drug Action." Discussed by Drs. S. Solis Cohen, Philadelphia; O. T. Osborne, New Haven, Conn.; E. Lefevre, New York; H. C. Wood, Jr., Philadelphia; Joseph L. Miller, Chicago; W. Salant, Washington, D. C., and Thomas F. Reilly, New York.

Dr. Joseph L. Miller, Chicago, read a paper entitled "How Ca the Science of Therapeutics Be Furthered?" Discussed b Drs. F. E. Stewart, Philadelphia; George D. Kahlo, Frenc Lick Springs, Ind.; John P. Sawyer, Cleveland, O.; S. Soli Cohen, Philadelphia, and W. B. Snow, New York.

Dr. Bernard Fantus, Chicago, read a paper on "Candy Medication." Discussed by Drs. C. L. Graber, Cleveland; F. E Stewart, Philadelphia; Thomas F. Reilly, New York, and B Fantus, Chicago.

A motion was made by Dr. S. Solis Cohen, Philadelphia, an carried, that a copy of the paper by Dr. Fantus on Cand Medication be sent to the Committee on Revision of th

United States Pharmacopeia from the Section on Pharmacology and Therapeutics.

Dr. William L. Clark, Philadelphia, read a paper on "The Uses of High-Frequency Desiccation, Fulguration and Thermoradiotherapy in Therapeutics." Discussed by Drs. G. E. Pfahler, Philadelphia; W. B. Snow, New York; W. H. Schmidt, Atlantic City, N. J.; C. L. Graber, Cleveland, O., and W. L. Clark, Philadelphia.

### Wednesday, June 5—Morning

The following papers were read as a Symposium on Roentgen Therapy:

Dr. Clarence E. Skinner, New Haven, Conn., read a paper on "Practical Application of the Roentgen-Ray to the Management of Malignant Growths." Discussed by Drs. George E. Pfahler, Philadelphia; R. W. Fry, Trenton, Ky.; W. B. Snow, New York; Edward Halman Skinner, Kansas City, Mo.; Alfred L. Gray, Richmond, Va.; Byron C. Darling, New York; R. H. Boggs, Pittsburgh, Pa., and Dr. Skinner, New Haven, Conn.

Dr. Russell H. Boggs, Pittsburgh, read a paper on "Roentgen Treatment of Non-Malignant Diseases." Discussed by Drs. Henry K. Pancoast, Philadelphia; Herbert F. Pitcher, Haverhill, Mass.; Sidney Lange, Cincinnati; Alfred L. Gray, Richmond, Va.; Oliver T. Osborne, New Haven, Conn.; G. E. Pfahler, Philadelphia, and Russell H. Boggs, Pittsburgh.

The following papers were read as a Symposium on the Desirability of a More Restricted Materia Medica from Various Points of View.

Prof. W. A. Puckner, Chicago: "The Unreliability of Unimportant Medicaments" (read by Mr. M. I. Wilbert, Washington, D. C.).

Prof. Henry P. Hynson, Baltimore: "The Pharmacist."

Dr. E. Lefevre, New York: "Medical Instruction," (read by Dr. George B. Wallace, New York.)

Dr. Oliver T. Osborne, New Haven, Conn.: "The Medical Practitioner (The Drugs We Need)."

Mr. M. I. Wilbert, Washington, D. C.: "Report of the Committee on Useful Remedies of the American Medical Association."

The five papers of this symposium were discussed by Drs. F. E. Stewart, Philadelphia; W. D. Calvin, Ft. Wayne, Ind.; H. A. Hare, Philadelphia; Mr. A. V. Morgenstern, New York; Drs. S. Solis Cohen, Philadelphia; M. Clayton Thrush, Philadelphia; L. F. Kebler, Washington, D. C., and Oliver T. Osborne, New Haven, Conn.

### Wednesday, June 5—Afternoon

Dr. Robert N. Willson, Philadelphia, read a paper on "Problems of Venereal Diseases." Discussed by Drs. K. E. Ledbetter, Washington, D. C.; Guy L. Kiefer, Detroit; George M. Sternberg, Washington, D. C.; Sarah J. McNutt, New York; A. Howe, New York; John F. Anderson, Washington, D. C.; H. D. Pease, New York; Elnora C. Folkman, Washington, D. C., and R. N. Willson, Philadelphia.

The following papers were read as a Symposium on Antiseptics and Germicides, at a joint meeting with the Section on Preventive Medicine and Public Health, held in the Olivet Presbyterian Church:

Dr. Norman M. Harris, Chicago: "Intestinal Antiseptics." Discussed by Drs. George M. Sternberg, Washington, D. C.; H. C. Wood, Jr., Philadelphia; J. H. M. Knox, Baltimore, Md., and N. M. Harris, Chicago.

Dr. John F. Anderson, Washington, D. C.: "The Phenol Coefficient of Certain Disinfectants." Discussed by Drs. J. T. Ainslee Walker, London, England; Tilly, (?) Washington, D. C.; W. F. Snow, Sacramento, Cal.; H. D. Pease, New York; B. J. Dryfuss, New York; E. M. Houghton, Detroit, and John F. Anderson, Washington, D. C.

Drs. Samuel Amberg and J. H. Mason Knox, Jr., Baltimore: "The Influence of Sodium Iodoxybenzoate on Reactions of Inflammatory Character." No discussion.

Dr. J. A. Capps, Chicago: "Effect of Iodids on the Circulation and Blood-Vessels." Discussed by Drs. B. Fantus, Chicago, and J. A. Capps, Chicago.

Dr. H. G. Beck, Baltimore: "The Duodenal Medication of Ipecac in the Treatment of Amebic Dysentery." No discussion.

### Thursday, June 6—Morning

The following officers were elected: Chairman, Dr. R. L. Wilbur, San Francisco; Vice Chairman, Dr. J. F. Anderson, Washington, D. C.; Secretary, Mr. M. I. Wilbert, Washington, D. C.; Delegate, Dr. Torald Sollmann, Cleveland, and Alternate, Dr. Reid Hunt, Washington, D. C., thus making the Executive Committee consist of Drs. David L. Edsall, Boston; Lawrence Litchfield, Pittsburgh, and Torald Sollmann, Cleveland.

Dr. Robert A. Hatcher, New York, read a paper on "The Persistence of Action of the Digitalis Bodies."

Dr. Carey Eggleston, New York, read a paper on "Clinical Observations on the Duration of Digitalis Action."

These two papers were discussed by Drs. David Marvin, Burlington, Vt.; L. F. Bishop, New York; R. L. Wilbur, San Francisco; Arthur D. Hirschfelder, Baltimore; E. W. Tully, Philadelphia; Reid Hunt, Washington, D. C.; William Salant, Washington, D. C.; Henry Beates, Philadelphia; Mr. Otto Raubenheimer, Brooklyn; Drs. R. A. Hatcher and Carey Eggleston, New York.

The following papers were read as a Symposium on Drug Standards:

Prof. Joseph P. Remington, Philadelphia: "Report on Progress of the United States Pharmacopeia Revision." No discussion.

Dr. L. F. Kebler, Washington, D. C.: "The Quality of Drugs on the Market."

Prof. R. H. True, Washington, D. C.: "Drug Plant Cultivation."

These two papers were discussed by Prof. Joseph P. Remington, Philadelphia; Dr. C. B. Lowe, Philadelphia; Mr. Otto Raubenheimer, Brooklyn.

Dr. H. C. Wood, Jr., Philadelphia, read a paper on "The Ideals and Limitations of Bio-Assay." Discussed by Mr. Vandarkleed, Philadelphia.

Prof. Henry Kraemer, Philadelphia, read a paper on "The Retail Pharmacist as a Purveyor of Pure Drugs."

Dr. Julius H. Comroe, York, Pa., read a paper on "Prescribing Versus Dispensing."

Dr. M. Clayton Thrush, Philadelphia, read a paper on "An Investigation of Certain Galenical Preparations of the Pharmacopeia of the United States with Special Reference to Their Stability."

These three papers were discussed by Drs. Henry Beates, Philadelphia; F. E. Stewart, Philadelphia, and Mr. Otto Raubenheimer, Brooklyn.

### Thursday, June 6—Afternoon

The following papers were read as a Symposium on Anesthesia in a joint meeting with the Section on Pathology and Physiology:

Dr. Charles Baskerville, New York: "Chemistry of Anesthetics."

Dr. Greeman Allen, Boston: "Spinal Anesthesia."

Dr. James T. Gwathmey, New York: "American Statistics."

Dr. A. H. Miller, Providence, R. I.: "Postoperative Mortality from Anesthetics; the Recorded Death-Rate from Ethyl Chlorid."

Dr. Joseph E. Lumbard, New York: "Practical Helps in Surgical Anesthesia."

Dr. Charles K. Teter, Cleveland: "Principles Involved in the Scientific Administration of Nitrous Oxid with Oxygen, and the Limitations of Nitrous Oxid with Oxygen as a General Anesthetic."

Dr. W. S. Bainbridge, New York: "Spinal Anesthesia."

The seven papers of this symposium were discussed by Drs. F. J. Cotton, Boston; Yandell Henderson, New Haven, Conn.; Wayne Babcock, Philadelphia; R. C. Coburn, New York; Robert H. Ferguson, East Orange, N. J.; T. B. Buchanan, New York; A. F. Erdmann, Brooklyn; F. R. Widdowson, Philadelphia; F. W. Pinneo, Newark, N. J.; F. K. Ream, Chicago; J. W. Heim, Louisville, Ky.; J. F. Anderson, Washington, D. C.; W. S. Bainbridge, New York; C. K. Teter, Cleveland, O.; J. T. Gwathmey, New York, and Charles Baskerville, New York.

## SECTION ON PATHOLOGY AND PHYSIOLOGY

Tuesday, June 4—Afternoon

The meeting was called to order by the Chairman, Dr. Leo Loeb, St. Louis, at 2 p. m.

Dr. Loeb appointed Drs. E. C. Rosenow, of Chicago; Rufus Cole, New York, and John F. Anderson, Washington, as members of the Nominating Committee, to present nominations of officers. He then stated that the following nominations had been made for associate membership in the Association: A. P. Lyon, St. Louis; Walter Garry, St. Louis; Meyer S. Fleisher, St. Louis; Paul Lewis, Philadelphia; A. S. Warthin, Ann Arbor, Mich.; D. Rivas, Philadelphia; R. A. Lambert, New York; George W. Smith, St. Louis; Harvey R. Gaylord, Buffalo; Hans Finssen, Palo Alto, Cal.; Frederick Gay, Berkeley, Cal. It was moved and seconded that these names be transmitted to the House of Delegates for action. Carried.

Dr. Leo Loeb, St. Louis, read the Chairman's address. No discussion.

The following papers were read as a Symposium on Recent Advances in Our Knowledge of the Acute Infections:

Dr. Rufus Cole, New York: "The Nature of Pneumococcus Infection and Immunity." Discussed by Drs. S. J. Meltzer, New York; F. C. Vaughan, Ballimora Mountain, N. Y.; W. D. Robinson, New York; E. C. Rosenow, Chicago; O. O. Hirschfelder, Ballimora Mountain, N. Y., and Rufus Cole, New York.

Dr. Karl K. Koessler, Chicago: "Recent Advances in Our Knowledge of Scarlet Fever." No discussion.

Dr. A. Sophian, New York: "Blood-Pressure Observations in Epidemic Meningitis; Use of Blood-Pressure in Controlling the Administration of Serum." Discussed by Drs. O. O. Hirschfelder, Ballimora Mountain, N. Y.; William Litterer, Nashville, Tenn.; Isaac Levin, New York; L. B. Wilson, Rochester, Minn., and A. Sophian, New York.

Drs. John F. Anderson and Joseph Goldberger, Washington, D. C.: "Recent Advances in Our Knowledge of Measles." No discussion.

Drs. Joseph Goldberger and John F. Anderson, Washington, D. C.: "Some Recent Advances in Our Knowledge of Typhus Fever." Discussed by Drs. G. A. Friedman, New York; (?) Vaughan; Leo Loeb, St. Louis; W. Litterer, Nashville, Tenn., and Joseph Goldberger, Washington, D. C.

Wednesday, June 5—Morning

Dr. Lewis B. Bates, Canal Zone, read a paper on "The Wassermann Test in the Tropics (Canal Zone—Panama)." Discussed by Drs. William Krauss, Memphis; Jane L. Berry, New York, and Lewis B. Bates, Canal Zone.

Dr. Peyton Rous, New York, read a paper on "Demonstration of a Sarcoma Transmitted by a Filterable Agent." Discussed by Drs. Isaac Levin, New York; H. W. Abelmann, Chicago, and Peyton Rous, New York.

Dr. J. W. Vaughan, Detroit, read a paper on "Blood-Changes Caused by the Hypodermic Administration of the Cancer Proteid." Discussed by Drs. J. W. McConnell, Philadelphia; L. J. Hirschmann, Detroit; G. E. McCaskey, Fort Wayne, Ind.; Isaac Levin, New York, and J. W. Vaughan, Detroit.

Dr. Isaac Levin, New York, read a paper on "Immunity and Specific Therapy in Experimental Cancer." Discussed by Drs. William Salant, Washington; J. W. McConnell, Philadelphia; V. S. Vaughan, Detroit; J. W. Vaughan, Detroit; Leo Loeb, St. Louis, and Isaac Levin, New York.

Dr. A. L. Skoog, Kansas City, Mo., read a paper on "Acute Poliomyelitis, Transverse Myelitis Type." No discussion.

Dr. Leonard W. Ely, Denver, read a paper on "The Pathology and Classification of Chronic Joint Disease." Discussed by Dr. William Stotesbury Githens, New York.

Wednesday, June 5—Afternoon

The following papers were read in a Symposium on Mercury and Salvarsan in the Treatment of Syphilis at a joint meeting with the Section on Dermatology and the Scientific Exhibit:

Drs. Homer F. Swift and Arthur W. M. Ellis, New York: "A Study of Antibody Formation in Syphilis."

Dr. J. A. Fordyce, New York: "The Administration of Salvarsan in Syphilis."

Dr. Abner Post, Boston: "The Proper Place of Mercury and of Salvarsan in the Treatment of Syphilis."

Dr. Hideyo Noguchi, New York: "Differentiation of the *Spirochæta pallida* and Other Allied Forms of Spirochetes in Culture."

Dr. Howard Fox, New York: "The Relative Value of Mercury and Salvarsan from a Sociologic Point of View."

The five papers of this symposium were discussed by Drs. W. Allen Pusey, Chicago; A. G. Rytina, Baltimore; E. G. Ballinger, Atlanta, Ga.; Judson Daland, Philadelphia; Richard L. Sutton, New York; B. C. Corbus, Chicago; H. J. Nichols, Washington, D. C.; W. L. Ravitch, Louisville, Ky.; H. Noguchi, H. F. Swift, and J. A. Fordyce, New York.

Thursday, June 6—Morning

The Chairman of the Nominating Committee reported the following nominations of officers of the Section for the ensuing year: Chairman, Dr. A. W. Hewlett, Ann Arbor; Vice-Chairman, Dr. A. S. Carlson, Chicago; Secretary, Dr. William Ophüls, San Francisco; thus making the Executive Committee consist of Drs. Yandell Henderson, New Haven; H. Gideon Wells, Chicago, and Dr. Leo Loeb, St. Louis; Delegate, Dr. Yandell Henderson, and Alternate, Dr. J. W. Vaughan, Detroit.

It was moved and seconded that these nominations be accepted. Carried.

Dr. A. L. Soresi, New York, read a paper on "The Physiopathologic Aspects of the Use of Blood as a Therapeutic Agent." Discussed by Drs. J. Sheldon Forster, Richmond; J. A. Roddy, Philadelphia; LeGrand Kerr, New York; B. Vincent, Boston, and A. L. Soresi, New York.

Dr. J. Harold Austin, Philadelphia, read a paper on "The Rœthlisberger Urinometer for the Study of the Uric Acid of the Blood-Serum." No discussion.

Drs. R. M. Pearce, J. H. Austin and E. B. Krumbhaar, Philadelphia, read a paper on "The Influence of Splenectomy on the Production of Hemolytic Jaundice." No discussion.

Drs. J. Shelton Horsley and C. C. Coleman, Richmond, Va., read a paper on "Experimental Devascularization of Segments of Intestine, with and without Mechanical Obstruction." No discussion.

Drs. Howard T. Karsner and J. Earle Ash, Boston, read a paper on "Studies in Infarction; Experimental Bland Infarction of the Lungs." Discussed by Drs. W. G. MacCallum, New York, and Howard T. Karsner.

Dr. J. H. Austin, Philadelphia, read a paper on "The Use of the Crehore Micrograph in Clinical and Experimental Studies of Cardiovascular Conditions." Discussed by Drs. A. W. Hewlett, Ann Arbor, and J. H. Austin, Philadelphia.

Thursday, June 6—Afternoon

For the papers read in the Symposium on Anesthesia at the joint meeting with the Section on Pharmacology and Therapeutics, see minutes of the latter Section given on a preceding page.

Friday, June 7—Morning

Drs. William Salant and J. B. Rieger, Washington, D. C., read a paper on "The Elimination and Toxicity of Caffein in Nephrectomized Rabbits." Discussed by Drs. Leo Loeb, St. Louis, and William Salant, Washington.

Dr. Creighton Wellman, New Orleans, read a paper on "Experiments with Louisiana Rice as Bearing on the Etiology of Beriberi." No discussion.

Bacteria Supposed to be Concerned in the Production of Leprosy. (Extemporaneous discourse.)

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## SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

Tuesday, June 4—Afternoon

The Chairman, Dr. Rupert Blue, called the meeting to orde at 2:21 p. m.

Dr. Blue then read his Chairman's address and oration. Dis cussed by Dr. Rosalie Slaughter Morton, New York.

Dr. Le Grand Powers, Washington, D. C., read a paper on "Standardizing Health Board Statistics." Discussed by Drs. William F. Snow, Sacramento, Cal.; Alexander C. Abbott, Philadelphia, and Le Grand Powers, Washington, D. C. During the discussion Dr. Snow moved the adoption of a resolution, which was carried, as follows:

> Moved that a committee be appointed by the Chairman of the Section, to consist of those who now are or who have in the past been actively identified with the administration of our municipal and state health departments, to cooperate with the officials of the Bureau of Census and with any committee that may be appointed by the Association of Municipal Health Officers to arrange a scheme of standard or uniform accounts and reports of municipal departments of health, and that the paper submitted this day by Dr. L. G. Powers of the Bureau of Census be respectfully referred to said committee for careful consideration.

The Chairman appointed Drs. W. F. Snow, San Francisco; W. A. Evans, Chicago; H. M. Bracken, Minneapolis; G. T. Schwartz, Providence, R. I., and C. H. Jones, Baltimore, as the committee.

Dr. Rosalie Slaughter Morton, New York, presented the following:

> Whereas, The resolution passed by this Section on June 29, 1911, relating to the establishment in colleges of a course on practical sanitation has not been officially brought to the attention of the Council on Medical Education, I move that the delegate of the Section be instructed to present this resolution to the Council on Medical Education, and to report to this section on Thursday, June 6, 1911, at 9 a. m.

Motion duly seconded and carried.

Dr. H. M. Bracken, Minneapolis, presented motions: (1) for the appointment of a Committee on Resolutions; and (2) for the appointment of a Nominating Committee; which were duly seconded and carried.

Dr. J. W. Kerr, Washington, D. C., had a paper on "The Desirability of Uniform Methods of Procedure in Quarantine Practice, Especially as Relates to the Minor Infectious Diseases," which was read in his absence by Dr. W. C. Rucker, Washington, D. C. Discussed by Drs. Alexander C. Abbott, Philadelphia; G. T. Schwartz, Providence, R. I.; Franklin Royer, Harrisburg, Pa.; William A. Howe, Albany, N. Y.; William F. Snow, Sacramento, Cal., and George Frederick Rinehart, Berkeley, Cal.

The Chairman then announced his appointments for following: (1) Committee on Nominations: Drs. C. A. Harper, Wisconsin; George W. Stoner, New York, and Fritz Rinehardt, California. (2) Committee on Resolutions: Drs. J. F. Hurty, Indianapolis; M. P. Ravenel, Madison, Wis., and Otto P. Geier, Cincinnati.

Dr. William F. Snow, Sacramento, Cal., read a paper on "A Cost-Finding System for Health Departments." Discussed by Drs. Alexander C. Abbott, Philadelphia; Pauline M. Townsend-Hanson, Marshalltown, Ia.; W. C. Rucker, Washington, D. C.

Dr. C. Hampson Jones, Baltimore, adverted to Dr. Kerr's paper of the morning and presented a motion for the appointment of a committee of three, Dr. Kerr as chairman, to study the question of quarantine and report at the next annual meeting; which motion was seconded and carried.

Dr. M. Solis-Cohen, Philadelphia, read a paper on "Reporting of Suspicious Cases by the Laity, a Prerequisite for the Efficient Control of Communicable Diseases." Discussed by Drs. William A. Howe, Albany, N. Y.; Walton Forest Dutton, Carnegie, Pa.; Otis B. Nesbit, Valparaiso, Ind.; Le Grand Powers, Washington, D. C.; Martin Friedrich, Cleveland; Creighton Wellman, New Orleans, La.; Pauline M. Townsend-Hanson, Marshalltown, Ia.; Arthur P. Reynolds, Chicago; M. Solis-Cohen, Philadelphia.

Dr. Walton Forest Dutton, Carnegie, Pa., read a paper on "Laws Relative to the Sanitary Control of Public Eating- and Drinking-Places."

Dr. Guy L. Kiefer, Detroit, read a paper on "The Control of Contagious Diseases in a Municipality."

These two papers were discussed by Drs. Pauline M. Townsend-Hanson, Marshalltown, Ia.; Otto P. Geier, Cincinnati; William A. Howe, Albany, N. Y.; Seneca Egbert, Philadelphia; Mary Dunning Rose, New York; Walton Forest Dutton, Carnegie, Pa., and Guy L. Kiefer, Detroit.

### Wednesday, June 5—Morning

The Chairman appointed Drs. Kerr, Abbott, Royer, Kiefer and Wellman as a Committee on Uniform Methods of Procedure in Quarantine Practice, to report at the 1913 meeting.

The Chairman stated that a number of resolutions adopted last year at the Los Angeles session had been referred to the House of Delegates with favorable recommendation, but the House had not acted thereon; that, therefore, it would be necessary to take them up for final disposition, with request to the House to take action. (See Journal, June 15, p. 1912.)

C. Hampson Jones, Baltimore, moved the readoption of said resolutions and their reference to the House of Delegates; which motion, being duly seconded, prevailed.

W. A. Evans, Chicago, as delegate from the Section to the House of Delegates, asked for instructions concerning the continuance of the midwinter Conference on Health as held last February in Chicago. G. T. Schwartz, Providence, R. I., moved that the delegate be advised that the Section desired that the midwinter meeting be not continued. Motion adopted.

The following papers were then read as a Symposium on Industrial Diseases in a joint meeting with the American Association for Labor Legislation, Mr. Henry R. Seager, president of that organization, in the chair.

Dr. W. Gilman Thompson, New York: "Classification of Occupational Diseases."

Dr. J. A. Fordyce, New York: "Occupational Skin Diseases."

Dr. Charles L. Dana, New York: "Occupational Nerve and Brain Diseases."

Dr. Ellice Alger, New York: "Occupational Eye Diseases."

Dr. Mark D. Stevenson, Akron, Ohio: "Occupational Eye Diseases and Accidents."

Dr. David L. Edsall, Boston: "Industrial Poisoning."

Mr. Henry R. Seager, New York, read a paper on "The Need of Cooperation in Promoting Industrial Hygiene."

The seven papers in this symposium were discussed by Dr. A. M. Harvey, Chicago; Mr. C. C. Curtis, New York; Mrs. Florence Kelly, New York; Dr. C. F. Stokes, Surgeon-General, U. S. Navy; Dr. Pauline M. Townsend-Hanson, Marshalltown, Ia.; Mr. Miles M. Dawson, New York; Prof. S. M. Lindsey, New York; Allen Starr, New York; Dr. Otto P. Geier, Cincinnati; Dr. W. F. Dutton, Carnegie, Pa.; Dr. Charles S. Prest, Waterford, N. Y.; Mr. Henry R. Seager, New York.

Dr. Warren Coleman, New York, offered the following motion, which was seconded and adopted:

> That a petition be presented to the House of Delegates of the Association from the Section on Preventive Medicine and Public Health requesting the appointment of a permanent committee on industrial diseases, to cooperate with the American Association for Labor Legislation in the promotion of the study and prevention of industrial diseases.

### Wednesday, June 5—Afternoon

A joint meeting was held with the Section on Pharmacy and Therapeutics (see minutes on page 1991).

### Thursday, June 6—Morning

The Committee on Nominations reported the following nominations: Chairman and Orator on State Medicine, Dr. H. M. Bracken, Minneapolis, Minn.; vice-chairman, Dr. W. F. Snow, Sacramento, Cal.; secretary, Dr. C. Hampson Jones, Baltimore; delegate, Dr. A. W. Freeman, Richmond, Va., and alternate, Dr. Creighton Wellman, New Orleans.

Dr. W. A. Evans, Chicago, nominated Dr. Guy L. Kiefer, Detroit, as chairman. Dr. Kiefer was elected Chairman and Orator on State Medicine, and the Committee's nominees, Drs. Snow and Jones, vice-chairman and secretary, respectively. The members of the Executive Committee thus became: Drs. J. N. Hurty, Indianapolis; W. A. Evans, Chicago, and Rupert Blue, Washington, D. C.

Dr. W. A. Evans, Chicago, nominated as delegate Dr. M. P. Ravenel, Madison, Wis., who was elected.

Dr. Pauline M. Townsend-Hanson, Marshalltown, Ia., nominated Dr. Rosalie Slaughter Morton, New York, as alternate.

Dr. Creighton Wellman, New Orleans, the committee's nominee, withdrew in favor of Dr. Morton, who was then elected.

Dr. Pauline M. Townsend-Hanson, Marshalltown, Ia., presented the following:

*Resolved*, That the program committee be instructed to arrange for a symposium on the relation of poverty to disease and measures calculated to reduce poverty.

The resolution was discussed by Drs. W. A. Evans, Chicago; Creighton Wellman, New Orleans, La.; Pauline M. Townsend-Hanson, Marshalltown, Ia.; J. H. White, New Orleans, La.; W. F. Snow, Sacramento, Cal., and Joseph Goldberger, Washington, D. C., and seconded and carried.

Dr. C. E. Ford, Cleveland, moved that the Section's delegate be instructed if possible to bring the meeting of the International Congress on Hygiene, which meets in Washington in September, to the notice of the House of Delegates, or, if impossible, then to the Board of Directors, that the American Medical Association may consider the propriety of taking part in the congress. Motion duly seconded and carried.

Dr. Otis B. Nesbit, Valparaiso, Ind., read a paper entitled "Is Scarlet Fever Carried by Books?" Discussed by Drs. W. A. Evans, Chicago; C. E. Ford, Cleveland; Joseph Goldberger, Washington, D. C., and Otis B. Nesbit, Valparaiso, Ind.

Dr. A. J. Wehr, Baltimore, assisted by Shepherd T. Powell, Baltimore, read a paper on "Purification of Water-Supplies for Small Towns" (illustrated by stereopticon). Discussed by Drs. C. Hampson Jones and A. J. Wehr, Baltimore.

Drs. William Royal Stokes and F. W. Hachtel, Baltimore, had a paper on "A Preliminary Report on the Treatment of Baltimore Drinking-Water with Calcium Hypochlorite" (read by Dr. Harry W. Stoner, Baltimore). Discussed by Drs. M. L. Holme, Lansing, Mich.; and Sheppard T. Powell, C. Hampson Jones, and Harry W. Stoner; all of Baltimore.

Dr. Otto P. Geier, Cincinnati, read a paper on "The Application of Medicosociology in Civic Betterment." Discussed by Drs. Rosalie Slaughter Morton, New York; W. A. Evans, Chicago; H. M. Bracken, Minneapolis; C. Hampson Jones, Baltimore; M. P. Ravenel, Madison, Wis.; J. N. Hurty, Indianapolis, and Otto P. Geier, Cincinnati.

Dr. Eleanora S. Everhard, Dayton, Ohio, chairman of the Committee on Public Health Education Among Women, presented a synopsis of the report of the committee to the Council on Health and Public Instruction [given in The Journal, June 8, p. 1810].

Dr. Allan J. McLaughlin, Washington, D. C., had a paper (read by Dr. W. C. Rucker, Washington, D. C.) on "Relation of Interstate Waters to the Spread of Typhoid." Discussed by Drs. H. M. Bracken, Minneapolis, and W. C. Rucker, Washington, D. C.

Dr. J. S. Neff, Philadelphia, read a paper on "Local Typhoid Outbreaks." No discussion.

Dr. Rosalie Slaughter Morton, New York, stated that the Section had referred the resolution regarding the establishment of a course in practical sanitation, endorsed by the Section in 1911, to the Council on Medical Education, and called on the Secretary to read the report received by the Section. The secretary read the report. Discussed by Drs. R. S. Morton, New York; H. M. Bracken, Minneapolis; W. F. Snow, Sacramento, Cal.; J. N. Hurty, Indianapolis; Jane L. Berry, New York, and Dr. Oscar Dowling, Shreveport, La.

W. F. Snow, Sacramento, Cal., moved "That it be the sense of this Section that Dr. Morton, the Vice-Chairman of this Section, be requested to present this matter vigorously before the Council, and to request those members of the Section that she may desire to join her in this presentation," which motion duly seconded, was carried.

Dr. Oscar Dowling, Shreveport, La., read a resolution, relating to inspecting and scoring the cleanliness, etc., of "bakeries, dairies, markets and other food-supply establishments, as well as barber shops, hotels, restaurants, doctors' and dentists' offices, and other places where the health and comfort of people are looked after," and asked that it be forwarded to the House of Delegates. Discussed by Drs. Arthur R. Reynolds, Chicago, and Oscar Dowling, Shreveport, La. The resolution was adopted.

Dr. Oscar Dowling, Shreveport, La., presented "Report of Committee on Venereal Diseases," and moved that it be sent to the proper committee. Carried.

### Thursday, June 6—Afternoon

Dr. Leslie H. Spooner, Boston, read a paper on "Antityphoid Inoculation: Three Years' Experience with its Use in Training-Schools for Nurses in Massachusetts."

Dr. F. F. Russell, Washington, D. C., read a paper on "Typhoid Vaccination in the Army."

Dr. Frank W. Hachtel read a paper by himself and Dr. Harry W. Stoner, Baltimore, entitled "A Further Report on the Preventive Inoculation Against Typhoid in Public Institutions and in Civil Communities."

The three papers of this symposium were discussed by Drs. M. P. Ravenel, Madison, Wis.; Malcolm C. Rose, New York; C. J. Hunt, Harrisburg, Pa.; Leslie H. Spooner, Boston; F. F. Russell, Washington, D. C., and Harry W. Stoner, Baltimore.

Dr. W. C. Rucker, Washington, D. C., read a paper on "The Necessity for Rodent Extermination in American Seaports." No discussion.

Chairman Blue introduced his successor, Dr. Guy L. Kiefer, Detroit, asking him to preside for the remainder of the session. Chairman-Elect Kiefer accordingly took the chair and expressed his appreciation of the honor conferred in his election.

Dr. Richard Cole Newton, Montclair, N. J., read a paper on "A Short Discussion of Some of the Recent Hygienic and Economic Improvements in Dairying." Discussed by Drs. Arthur R. Reynolds, Chicago; Malcolm C. Rose, New York; J. J. Kindred, New York; M. P. Ravenel, Madison, Wis., and Richard Cole Newton, Montclair, N. J.

Dr. C. J. Hunt, Harrisburg, Pa., read a paper on "Results of Epidemiologic Studies of Infection by Typhoid-Colon-Dysentery Groups" (illustrated by stereopticon). Discussed by Drs. C. Hampson Jones, Baltimore; Richard Cole Newton, Montclair, N. J.; A. Parker Hitchings, Glenolden, Pa., and C. J. Hunt, Harrisburg, Pa.

Dr. M. P. Ravenel, Madison, Wis., presented a paper not listed on the program on "The Hygiene of Swimming Pools." This paper was offered after the program had gone to press. It was moved that as the author was present with the paper but as there was not time for the reading the paper be read by title, in accordance with the By-Laws, Chap. XII, Sec. 3. Seconded and carried.

## SECTION ON NERVOUS AND MENTAL DISEASES

### Tuesday, June 4—Afternoon

The meeting was called to order by the Chairman, Dr. Edward D. Fisher, New York, at 2 :30 p. m.

Dr. Fisher then read the Chairman's address, entitle "Injuries of the Spinal Column; With and Without Fractur and Dislocation." No discussion.

Dr. Pearce Bailey, New York, read a paper on "Atypica Dystrophy and Myasthenia." Discussed by Drs. M. Alle Starr, New York; L. J. Leyszinski, New York; Hugh T. Pat rick, Chicago; Tom A. Williams, Washington, D. C., an Pearce Bailey, New York.

Dr. Edward Livingston Hunt, New York, read a paper o "Complications in Tabes Dorsalis." Discussed by Drs. I Harrison Mettler, Chicago; Charles K. Mills, Philadelphia C. R. Ball, St. Paul, Minn.; A. L. Skoog, Kansas City, Mo. Tom A. Williams, Washington, D. C.; Albert E. Stern Indianapolis, and Hugh T. Patrick, Chicago.

Drs. C. H. Frazier and C. K. Mills, Philadelphia, read paper on "Intradural Root Anastomosis for the Relief Paralysis of the Bladder and the Application of the San Method in Other Paralytic Affections." No discussion.

Dr. M. Allen Starr, New York, read a paper on "The Infl ence of Defective Secretion of the Ductless Glands as Cause for Neurosis." Discussed by Drs. F. X. Dercum, Phil delphia; L. Harrison Mettler, Chicago; Edward B. Ange Rochester, N. Y.; C. R. Ball, St. Paul, Minn.; Tom A. W liams, Washington, D. C.; Albert E. Sterne, Indianapoli S. Grover Burnett, Kansas City, Mo., and M. Allen Sta New York.

The Section went into executive session and Albert E. Ster of Indianapolis, was elected as a delegate to represent t

Section in the House of Delegates, vice W. A. Jones of Minneapolis, resigned.

### Wednesday, June 5—Morning

Dr. Hugh T. Patrick, Chicago, read a paper on "Symptomatology of Trifacial Neuralgia." Discussed by Drs. F. W. Langdon, Cincinnati; L. H. Mettler, Chicago; L. J. Leyszinski, New York; Alfred Gordon, Philadelphia; George A. Moleen, Denver; C. R. Ball, St. Paul, Minn.; C. L. Dana, New York, and H. T. Patrick, Chicago.

Dr. A. L. Skoog, Kansas City, Mo., read a paper on "Pathologic Study of a Case of Acute Poliomyelitis."

Dr. M. Neustaedter, New York, read a paper entitled "A Contribution to the Etiology of Poliomyelitis."

These two papers were discussed by Drs. C. L. Dana, New York; Tom A. Williams, Washington, D. C.; E. E. Southard, Cambridge, Mass.; S. Leopold, Philadelphia; Albert E. Sterne, Indianapolis; A. L. Skoog, Kansas City, Mo., and M. Neustaedter, New York.

Drs. James Hendrie Lloyd and S. D. W. Ludlum, Philadelphia, read a paper on "Some Considerations on Primary Lateral Sclerosis." Discussed by Drs. William G. Spiller, Philadelphia; C. L. Dana, New York; Alfred Gordon, Philadelphia; L. J. Leyszinski, New York; Arthur C. Brush, Brooklyn; E. E. Southard, Cambridge; Albert E. Sterne, Indianapolis; J. H. W. Rhein, Philadelphia; J. H. Lloyd, Philadelphia, and S. D. W. Ludlum, Philadelphia.

Dr. C. L. Dana, New York, read a paper on "The Pathology of Little's Disease, with Report of a Case." Discussed by Dr. J. H. W. Rhein, Philadelphia.

Dr. T. H. Weisenburg, Philadelphia, read a paper on "Exhibition of Motion Pictures of Mental Diseases." No discussion.

Dr. Edward Anthony Spitzka, Philadelphia, read a paper on "Some Morphologic Aspects of the Brain with Respect to Race, Sex and Intellect, Illustrated with Appropriate Lantern-Slides." No discussion.

### Wednesday, June 5—Afternoon

Dr. L. Harrison Mettler, Chicago, read a paper on "Multiple Sclerosis."

Dr. F. X. Dercum, Philadelphia, read a paper on "A Case of Multiple Cerebrospinal Sclerosis, Presenting Unusual Mental Symptoms Suggesting Paresis; Clinical and Pathologic Findings."

These two papers were discussed by Drs. C. R. Ball, St. Paul, Minn.; J. F. Fisher, Los Angeles; J. H. Lloyd, Philadelphia, and F. X. Dercum, Philadelphia.

Dr. Charles A. Elsberg, New York, read a paper on "The Anatomic Basis for Technic of the Surgery of Intramedullary Affections of the Spinal Cord, with Report of Cases." Discussed by Drs. Pearce Bailey, New York; M. Allen Starr, New York, and Charles A. Elsberg, New York.

Dr. H. A. Cotton, Trenton, N. J., read a paper on "The Present Status of Histopathology of the Cerebral Cortex in the Various Mental Diseases, With Demonstration." Discussed by Drs. Albert E. Sterne, Indianapolis; E. E. Southard, Cambridge, Mass.; William W. Graves, St. Louis; George H. Moody, San Antonio, Tex., and H. A. Cotton, Trenton, N. J.

Drs. J. W. McConnell and William G. Spiller, Philadelphia, read a paper on "Clinicopathologic Study of Illuminating Gas Poisoning of the Central Nervous System." No discussion.

Dr. Samuel T. Orton, Worcester, Mass., read a paper on "A Case of Extensive Brain Disease from Endarteritis Probably of Syphilitic Origin." No discussion.

Dr. Alfred Gordon, Philadelphia, read a paper on "Adipositas Cerebralis in Relation to Tumor of Hypophysis." No discussion.

### Thursday, June 6—Morning

The Committee on Nominations was appointed as follows: Drs. C. R. Ball, St. Paul, Minn.; A. C. Brush, Brooklyn, and George A. Moleen, Denver.

Dr. C. R. Ball, St. Paul, Minn., read a paper on "Nonne's Four Reactions in Diagnosis of Syphilitic Disease." Discussed by Drs. M. Neustaedter, New York; W. B. Cornell, Hathorne, Mass.; H. T. Patrick, Chicago; A. L. Skoog, Kansas City, Mo.; A. C. Brush, Brooklyn; William W. Graves, St. Louis, and C. R. Ball, St. Paul.

Dr. William Rush Dunton, Jr., Towson, Md., read a paper on "Predementia Praecox."

Dr. William Burgess Cornell, Hathorne, Mass., read a paper on "Cyanosis in Dementia Praecox."

These two papers were discussed by Drs. M. Neustaedter, New York; Katzenellenbogen, New Jersey; B. R. Tucker, Richmond, Va.; L. Harrison Mettler, Chicago; George H. Moody, San Antonio; H. A. Cotton, Trenton, N. J.; C. B. Burr, Flint, Mich.; M. Allen Starr, New York; E. E. Southard, Cambridge, Mass.; W. R. Dunton, Jr., Towson, Md., and W. B. Cornell, Hathorne, Mass.

The Section then went into executive session and the Chairman appointed Dr. Mehlhaus, of New Haven, and Dr. Mettler, of Chicago, on the Executive Committee, in the place of Drs. Jones and Diller, who were absent.

Dr. Arthur C. Brush, Brooklyn, read a paper on "Convulsive Seizures Associated with Postmenstrual Gastro-Intestinal Disorders."

Dr. Edward B. Angell, Rochester, N. Y., read a paper on "The Study of the Urine in Nervousness. A Test of Clinical Importance in Functional Disturbances of the Nervous System."

These two papers were discussed by Drs. Charles W. Hitchcock, Detroit; Katzenellenbogen, New Jersey; George A. Moleen, Denver; Tom A. Williams, Washington, D. C.; Arthur C. Brush, Brooklyn, and Edward B. Angell, Rochester, N. Y.

Drs. Charles E. Atwood and Alfred S. Taylor, New York, read a paper on "A Case of Traumatic Psychosis Associated with an Old Depressed Fracture of the Skull, Frontal Region: Operation; Recovery." Discussed by Drs. L. Pierce Clark, New York; Tom A. Williams, Washington, D. C.; Albert E. Sterne, Indianapolis; S. Grover Burnett, Kansas City; Charles E. Atwood, New York, and Alfred S. Taylor, New York.

Dr. Beverley R. Tucker, Richmond, Va., read a paper on "Some Cases of Hysteria Presenting Symptoms Usually Found Only in Organic Disease." No discussion.

### Thursday, June 6—Afternoon

The Section went into executive session. The following officers were elected unanimously for the ensuing year: Chairman, Dr. Howell T. Pershing, Denver; Vice-Chairman, Dr. W. W. Graves, St. Louis; Secretary, Dr. George A. Moleen, Denver; Delegate, Dr. E. B. Angell, Rochester, N. Y., and Alternate, Dr. George W. Robinson, Kansas City, Mo.

Dr. George A. Moleen, Denver, read a paper on "Erythromelalgia." Discussed by Drs. P. Pierce Clark, New York, and George A. Moleen, Denver.

Dr. L. Pierce Clark, New York, read a paper on "A Clinical Contribution to the Irregular and Unusual Forms of Status Epilepticus." No discussion.

Dr. C. B. Davenport, Cold Spring Harbor, N. Y., read a paper on "Heredity in Nervous Diseases and Its Social Bearings." Discussed by Drs. L. Pierce Clark, New York; A. C. Brush, Brooklyn; Woods Hutchinson, New York; William W. Graves, St. Louis; E. E. Southard, Cambridge; Tom A. Williams, Washington, D. C.; J. N. Hurty, Indianapolis; Warren D. Calvin, Ft. Wayne; H. C. Wood, Jr., Philadelphia; S. Grover Burnett, Kansas City, and C. B. Davenport, Cold Spring Harbor, N. Y.

Dr. Tom A. Williams, Washington, D. C., read a paper on "The Practical Lessons to be Derived from Recent Work on Hysteria." No discussion.

Dr. David Edward Hoag, New York, read a paper on "Pellagra: Its Nervous Manifestations Based on Personal Observations of Several Cases." Discussed by Drs. Paul V. Anderson, Richmond, Va.; George H. Moody, San Antonio, Tex.; B. R. Tucker, Richmond, Va.; Tom A. Williams, Washington, D. C., and D. E. Hoag, New York.

Dr. G. Wilse Robinson, Kansas City, Mo., read a paper on "Unrecognized Tabes and Morphinism." Discussed by Drs. W. B. Swift, Boston; L. H. Mettler, Chicago, and G. W. Robinson, Kansas City.

Dr. N. S. Yawger, Philadelphia, read a paper on "Paranoid Type of Insanity with Jacksonian Convulsions: Syphilitic Pachymeningitis with Microscopic Findings." Discussed by Dr. E. E. Southard, Cambridge, Mass.

## SECTION ON DERMATOLOGY

### Tuesday, June 4—Afternoon

The Chairman, Dr. Charles J. White, Boston, called the meeting to order at 2 p. m. in the Central M. E. Church.

Dr. White then read the Chairman's address, entitled "The Shortcomings of Dermatology."

Dr. M. L. Heidingsfeld, Cincinnati, read a paper on "Benign Epithelioma." Discussed by Drs. Richard L. Sutton, Kansas City, Mo.; H. H. Hazen, Washington, D. C., and M. L. Heidingsfeld, Cincinnati.

Dr. Ludwig Weiss, New York, read a paper on "Parakeratosis Scutularis." Discussed by Drs. Joseph Zeisler, Chicago; William S. Gottheil, New York; W. B. Trimble, New York; A. Ravogli, Cincinnati; L. Duncan Bulkley, New York, and Ludwig Weiss, New York.

Dr. Joseph Zeisler, Chicago, read a paper on "Some Uncommon and Often Unrecognized Forms of Toxic Dermatitis." Discussed by Drs. J. B. Kessler, Iowa City; M. L. Ravitch, Louisville, Ky.; W. B. Trimble, New York; Ludwig Weiss, New York; J. H. Carman, Plainfield, N. J.; J. T. Farrell, Providence, and Joseph Zeisler, Chicago.

Dr. William S. Gottheil, New York, read a paper on "Cancerous Degeneration in Chronic Leg Ulcer." Discussed by Drs. H. H. Hazen, Washington, D. C.; M. L. Heidingsfeld, Cincinnati; A. Ravogli, Cincinnati; L. Duncan Bulkley, New York, and W. S. Gottheil, New York.

Dr. Frank Edward Simpson, Chicago, read a paper on "Kératodermie Blennorrhagique, with Report of a Case." Discussed by Drs. Joseph Zeisler, Chicago; M. L. Ravitch, Louisville; O. H. Foerster, Milwaukee, and F. E. Simpson, Chicago.

Dr. W. B. Trimble, New York, read a paper on "Observations on Keratosis Follicularis." Discussed by Drs. L. Duncan Bulkley, New York; Richard L. Sutton, Kansas City, Mo., and W. B. Trimble, New York.

Dr. Marcus Haase, Memphis, Tenn., read a paper on "Acne." Discussed by Drs. M. L. Ravitch, Louisville, Ky.; H. R. Varney, Detroit; E. S. Lain, Oklahoma City, and M. Haase, Memphis, Tenn.

The chairman announced the following to act as a Nominating Committee: Drs. Isadore Dyer, New Orleans; J. B. Kessler, Iowa City, and William S. Gottheil, New York.

### Wednesday, June 5—Morning

Dr. H. J. F. Wallhauser, Newark, N. J., read a paper on "Pityriasis Rubra (Hebra). Report of a Case." Discussed by Drs. A. Ravogli, Cincinnati; William S. Gottheil, New York; and H. J. F. Wallhauser.

Dr. George Henry Fox, New York, read a paper on "A Broader View of Pityriasis Rosea." Discussed by Drs. A. Ravogli, Cincinnati; Joseph Zeisler, Chicago; H. H. Hazen, Washington, D. C.; Richard L. Sutton, Kansas City, William S. Gottheil, New York, W. B. Trimble, New York; Henry C. Baum, Syracuse; H. J. F. Wallhauser, Newark, and George H. Fox, New York.

Dr. M. L. Ravitch, Louisville, Ky., read a paper on "A Plea for an Earlier Diagnosis of Pellagra." Discussed by Drs. Howard Fox, New York; A. Ravogli, Cincinnati; G. W. Murrell, Richmond, Va.; E. S. Lain, Oklahoma City; Marcus Haase, Memphis; H. H. Hazen, Washington, and M. L. Ravitch, Louisville, Ky.

Dr. A. Ravogli, Cincinnati, read a paper on "Injurious Effects of the X-Ray Applied for Therapeutic Purposes on the Skin." Discussed by Drs. William A. Pusey, Chicago; M. L. Ravitch, Louisville; E. S. Lain, Oklahoma City; William S. Gottheil, New York; Joseph Zeisler, Chicago; C. A. MacMinn, Schenectady, N. Y., and A. Ravogli, Cincinnati.

Dr. Richard L. Sutton, Kansas City, read a paper on "Myomatosis Cutis Disseminata, with the Report of Three Probable Cases of the Condition." Discussed by Dr. M. L. Heidingsfeld, Cincinnati.

Dr. Henry Clay Baum, Syracuse, read a paper on "Hypertrichosis." Discussed by Drs. W. O. Roop, Dayton, Ohio; M. L. Ravitch, Louisville, Ky.; J. B. Kessler, Iowa City; George H. Fox, New York; L. Duncan Bulkley, New York; W. B. Trimble, New York; Joseph Zeisler, Chicago; W. S. Gottheil, New York; J. B. Kessler, Iowa City, and H. C. Baum, Syracuse, N. Y.

### Wednesday, June 5—Afternoon

For the program of the papers read in the Symposium on Mercury and Salvarsan in the Treatment of Syphilis at a joint meeting with the Section on Pathology and Physiology, see the minutes of the latter section, p. 1992.

### Thursday, June 6—Morning

The following officers were elected for the ensuing year: Chairman, Dr. Joseph Zeisler, Chicago; Vice Chairman, Dr. H. R. Varney, Detroit; Secretary, Dr. Howard Fox, New York; Delegate, Dr. Frank C. Knowles, Philadelphia; Alternate, Dr. William T. Corlett, Cleveland.

Dr. L. Duncan Bulkley, New York, read a paper on "Diet and Hygiene in Diseases of the Skin." Discussed by Drs. M. L. Ravitch, Louisville, and L. Duncan Bulkley, New York.

Drs. Harvey P. Towle and Fritz B. Talbot, Boston, read a paper on "The Clinical Histories of Certain Cases of Infantile Eczema which Suggest Disturbance of the Digestion as an Important Causative Factor." Discussed by Drs. M. L. Heidingsfeld, Cincinnati; Isadore Dyer, New Orleans; William T. Corlett, Cleveland; Henry C. Baum, Syracuse; Richard L. Sutton, Kansas City; L. Duncan Bulkley, New York, and Harvey P. Towle, Boston.

Dr. James M. Winfield, Brooklyn, read a paper on "Psoriasis Treated with High Colonic Irrigations and Lactic Acid." Discussed by Drs. L. Duncan Bulkley, New York; M. L. Ravitch, Louisville, and James M. Winfield, Brooklyn.

Dr. Frank C. Knowles, Philadelphia, read a paper on "Psoriasis Familialis." Discussed by Drs. William T. Corlett, Cleveland; James M. Winfield, Brooklyn; Marcus Haase, Memphis, and Frank C. Knowles, Philadelphia.

Dr. J. B. Kessler, Iowa City, read a paper on "Lupus Erythematosus with Superimposed Carcinoma." Discussed by Drs. William A. Pusey, Chicago, and J. B. Kessler, Iowa City.

Dr. William T. Corlett, Cleveland, read a paper on "The Teaching of Syphilis and the Attitude of Hospital Boards Toward that Disease." Discussed by Drs. Abner Post, Boston; John A. Fordyce, New York; William A. Pusey, Chicago; Henry C. Baum, Syracuse; George H. Fox, New York; Isadore Dyer, New Orleans; James M. Winfield, Brooklyn, and William T. Corlett, Cleveland.

Dr. Henry C. Baum, Syracuse, moved that a committee b appointed by the chairman to express the sentiment of th Section as to the needs of improvement in hospital arrangement and modification of the curriculum of medical schools so as to permit the study and treatment of syphilis in a department by itself, this committee to report at the next meeting o the Section. Carried.

The Chairman appointed, as members of this committe William T. Corlett, Cleveland; Abner Post, Boston; and Isadore Dyer, New Orleans.

Dr. Dyer suggested that it be understood that this commi tee, in developing its plans, would be at liberty to solicit th views of any of the members of this Association and of suc other persons as might be deemed advisable.

The Chairman thereupon introduced the newly elected Chai man of the Section, Dr. Joseph Zeisler, Chicago, who on assun ing the chair, thanked the members for the honor they h conferred on him.

## SECTION ON HOSPITALS

### Tuesday, June 4—Afternoon

The Chairman, Dr. W. B. Russ, San Antonio, called t meeting to order at 2 p. m., in the meeting-room of the Hot Rudolph.

Dr. William H. Welch, Baltimore, read an address.

Dr. H. D. Arnold, Boston, read a paper on "A Clinic View of The Special Diet." Discussed by Drs. Fred A. Was burn, Boston; C. A. Drew, Worcester, Mass.; C. N. Coo Wisconsin; W. A. Young, Toronto, Canada; Theodore Pott, Indianapolis; J. O. Skinner, Washington, D. C.; F. M. Ban, New York; John Allan Hornsby, Chicago; C. N. Cook. Nati Mass.; Charles Richard, Washington, D. C.; W. B. Cunni ham, New York, and H. D. Arnold, Boston.

Dr. P. E. Truesdale, Fall River, Mass., read a paper on "The Hospital Versus The Home in the Care of Patients—an Evolution." Discussed by Drs. John H. Gifford, Fall River, Mass.; Fred A. Washburn, Boston; George T. Webber, Olney, Ill., and P. E. Truesdale, Fall River, Mass.

The Chairman announced that nominations were in order for delegate from the Section to the House of Delegates. Dr. Fred A. Washburn was nominated and unanimously elected.

WEDNESDAY, JUNE 5—MORNING

Dr. John B. Murphy, Chicago, read a paper on "Hospital Pathology: Asepsis and Cleanliness from the Clinician's Point of View." No discussion.

Dr. Henry M. Hurd, Baltimore, read a paper on "The Proper Division of the Medical Services of the Hospital." Discussed by Drs. A. J. Ochsner, Chicago; B. L. Dorsey, St. Louis; R. R. Huggins, Pittsburgh; A. G. Barrett, Baltimore; L. H. Taylor, Wilkes-Barre, Pa.; G. de N. Hough, New Bedford, Mass.; P. E. Truesdale, Fall River, Mass.; Harvey Smith, Harrisburg, Pa.; Edward Jackson, Denver, and J. A. Hornsby, Chicago.

Dr. F. A. Washburn, Boston, read a paper on "Problems of Hospital Organization."

Dr. Richard C. Cabot, Boston, read a paper on "Out-Patient Medical Service—The Most Important and Most Neglected Part of Hospital Work." Discussed by Drs. C. A. Drew, Worcester; J. A. Hornsby, Chicago, and C. N. Cook, Natick, Mass.

The Secretary offered a resolution on the securing of an appropriation from the Board of Trustees for the purpose of inspecting and standardizing all hospitals by the character of the scientific work being accomplished in them which was unanimously carried and referred to Dr. F. A. Washburn, the delegate of the Section, to be presented to the House of Delegates.

The resolution was discussed by Drs. Henry M. Hurd, Baltimore; F. M. Bauer, New York; E. E. Munger, Spencer, Iowa; G. W. Greene, Chicago; Alice M. Seabrook, Philadelphia (Women's Hospital); F. A. Washburn, Boston, and A. J. Ochsner, Chicago.

Dr. Washburn moved to amend the resolution so as to read "That the Chairman of this Committee be Dr. Hurd." Dr. Hurd declined to serve.

Dr. Washburn made a motion that the resolution as offered by Dr. Hornsby be replaced by the following:

> "That a committee of three be appointed, one of whom shall be the secretary of this section, and two others appointed by the chair, shall consider the matter of inspection and classifications of hospitals and report at the next section meeting, a year from now."

A vote on the first resolution was called for.

The Chairman called for a vote on the substitute resolution, the result being eight in favor and seven against the resolution, and the same was adopted.

Dr. Ochsner moved that the House of Delegates be requested to ask the Board of Trustees to provide for an appropriation of sufficient funds to meet the expenses of this committee. The motion was unanimously carried.

WEDNESDAY, JUNE 5—AFTERNOON

Dr. Washburn's paper was discussed by Drs. H. V. Howard (discussion read in Dr. Howard's absence by the Secretary); H. M. Hurd, Baltimore; Ellsworth Smith, St. Louis; G. W. Greene, Chicago; C. W. Coons, Wisconsin, and J. A. Hornsby, Chicago.

Dr. Joseph D. Farrar, Philadelphia, spoke on "The Abuse of the Hospital Free Dispensary," and read the following:

HOSPITAL DISPENSARY COMMITTEE

The committee appointed by the Philadelphia County Medical Society to investigate this matter is of the opinion that the hospital dispensaries are being abused, and we think the adoption of the following card, as recommended by the board of directors of said society and as adopted by the New York State Board of Charities, will serve to eliminate those not entitled to free treatment.

Name .......................... Date ....................
Dr. .................................. Number in family ...
Nationality .................. Address ......................
Occupation .................. Man ........... Woman...........
Income .................. Rent .................. This is my .................. application to this dispensary in the year ......
I have been an applicant to no other dispensary in the year ......
(or to the following dispensaries) ..............................
The foregoing statement is in all respects true.
Signature of applicant ..........................................
Admitted ...................... Refused ......................

Very truly yours,
C. B. LONGENECKER, Chairman.
JOSEPH D. FARRAR, Secretary.
E. J. G. BEARDSLEY.
E. W. KELSEY.
G. M. ILLMAN.

It was moved and seconded that the Chairman be asked to appoint a committee of three members to memorialize the House of Delegates, presenting all the data at their command, to investigate the matter. Carried.

THURSDAY, JUNE 6—MORNING

Dr. Isaac A. Abt's paper on "Individual Prophylaxis in Children's Hospitals" was read, in Dr. Abt's absence, by the Secretary.

The Secretary then reported that Dr. Washburn had gone to the House of Delegates and presented the resolution passed by this Section to the House of Delegates, which resolution asked for an appropriation to be spent in an investigation for the standardization of hospitals in this country. The Secretary reported that the House of Delegates referred the resolution to the Board of Trustees. That Committee is composed of Dr. H. M. Hurd, Baltimore, Chairman; Dr. Fred A. Washburn, of the Massachusetts General Hospital; and Secretary Hornsby, of the Michael Reese Hospital, Chicago.

The following nominations were made:

Chairman, Dr. H. B. Howard, Boston, and Secretary, Dr. John Allan Hornsby, Chicago. Each was elected by acclamation.

Dr. F. A. Washburn, Boston, was reelected unanimously to the House of Delegates.

Mr. Michael M. Davis, Jr., Boston, read a paper on "The Efficiency of Out-Patient Work."

Dr. Samuel C. Plummer, Chicago, read a paper on "The Relations of the Hospitals to Corporations Interested in Patients."

Mr. M. L. Bell, Chicago, read a paper on "The Legal Aspects of the Relations of the Hospital to Corporations Interested in Patients."

Dr. Charles Richard, Washington, D. C., read a paper on "Relations of the Civil Hospital to the Military Establishment in Time of Peace; in Time of War."

Dr. E. E. Munger, Spencer, Ia., read a paper on "Hospitals and the Health Problem, with Special Reference to the Necessities of Rural America."

The papers all having been read the discussion of them was taken up in the order in which they were read; they were discussed at length by Drs. J. O. Skinner, Washington, D. C.; J. A. Hornsby, Chicago; Swift; Miss McCallum; Dr. S. C. Plummer, Chicago; Mr. McClain; Mr. Bunn, Youngstown, Ohio; Drs. D. S. Fairchild, Clinton, Iowa; Charles Richard, Washington D. C.; G. W. Greene, Chicago; Hoggenberger, Boston.

## *Current Medical Literature*

### AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### American Journal of Diseases of Children, Chicago

*May, III, No. 5, pp. 277-340*

1 *Tonsils in Childhood. J. G. Wilson, Chicago.
2 *Comparison of Streptococci from Milk and from Human Throat. E. C. Stowell and C. M. Hilliard, Dublin, N. H.
3 *Effect of Cold Fresh Air on Blood-Pressure in Pneumonia of Children. J. Howland, St. Louis, and B. R. Hoobler, New York.
4 *Study of Icterus Neonatorum by Means of Duodenal Catheter. A. F. Hess, New York.

1. **Tonsils in Childhood.**—Wilson discusses the relation of the function of the tonsil so far as we at present know it to

disease, and along these lines indicates the general principles that should underlie treatment. The conclusions which he draws from a discussion of the anatomic embryologic and physiologic data may briefly be stated as follows:

1. Comparative anatomy shows that no matter how the tonsil be shut off from the pharynx by folds or even confined within a special cavity, in all cases a communication with the pharynx has been preserved. This suggests the necessity to tonsillar activity of an intimate relationship with the pharyngeal cavity. 2. Tonsillar activity is to be regarded as most active during developmental life. There is no evidence that the tonsil in the child is a recessive organ. 3. The tonsil cannot be regarded as merely a lymphatic node. Though it presents microscopically adenoid tissue yet its developmental history is different. Further its physiologic activity should at least make us pause before drawing such a conclusion. The justification of an enucleation by the argument that since the tonsil is only a lymphatic gland its activity can be readily replaced by other lymphatic structures, cannot be supported either on physiologic or embryologic grounds. 4. There is reason to believe that the tonsil in the child plays an important rôle in the complex changes which occur at the upper end of the alimentary tract.

Wilson believes that in the child the tonsil is an organ which functionally differs considerably from the same organ in the adult. He therefore distinguished in the life history of the tonsil two periods: (a) before puberty—period of full functional activity; (b) after puberty—period of decreasing functional activity, the gland persisting chiefly as an aggregate of lymph nodules, which are tending to atrophy.

With this distinction in view he believes that the treatment of tonsillar diseases in the child should be as conservative as possible, the younger the child the more conservative. The enlarged tonsil so frequent in early life is not necessarily pathologic. It should rather be regarded as an indication of functional activity. In children many of the symptoms attributed to enlarged tonsils are in the main due to concomitant adenoids. But there are certain well-defined symptoms which indicate when we may well interfere, for example, obstruction to respiration, a liability to frequent attacks of inflammation and chronic toxemia. There is clinical evidence which points to some causal relation between chronic focal infection in the tonsil and arthritic and cardiac affections. While bearing this in mind Wilson finds it difficult to correlate the frequency of focal infection in the tonsil with the infrequency of a concomitant or subsequent arthritic affection. He discusses the infrequency of primary tuberculous disease of the tonsil and its association with the small hypofunctionating organ. This infrequency is the more interesting when we consider the liability of the child to tuberculous invasion, and the anatomic structure and position of the tonsil exposing it to infection in a way that few other organs are exposed. If the soil were as favorable as the bacteria are common, tuberculous tonsils would be the rule and not the exception. He insists that in the child there is evidence to show the more than probable relation of the function of the tonsil to metabolic processes in the upper respiratory and alimentary tracts especially at their junction in the pharynx. The tonsil in the child protects these tracts and is associated directly with their well-being.

2. **Streptococci from Milk and from Human Throat.**—The authors' work shows that streptococci from the human throat and from fresh milk very generally ferment one or more of the sugars, dextrose, lactose, maltose and saccharose, attacking them most readily in the order named. They do not generally ferment raffinose or mannite. The streptococci of the sore throat and the normal throat show no cultural differentiation in relation to the carbohydrates used. Virulence tests might have separated the two groups. The throat streptococci do not readily ferment at 20 C. any of the sugars used, while the milk organisms attack the same sugars and to the same extent at this temperature as at 37 C. This is, perhaps, the most valuable differential feature between chained cocci from these two sources.

3. **Blood-Pressure in Pneumonia of Children.**—The patients whose clinical histories form the basis of this study were treated in the wards of Bellevue Hospital, which are thoroughly ventilated and usually kept at a temperature of about 65 F. (18 C.), or on the balconies outside of the wards. In the wards they were covered lightly with blankets; outside they were clothed in woolen wrappers and covered with many blankets, according to the temperature. Hot water bottles were at their feet and they wore hoods. Only the faces were exposed. None was receiving circulatory stimulation at the time that the readings were made. The effect of cold fresh air in patients with active pneumonia was always to produce a rise in blood-pressure and removal to a warm but well-ventilated ward produced a fall in blood-pressure. The authors never found this to fail, although in one or two instances the variation in pressure was not as noticeable as in most of the cases. The rise is not apparent until half an hour or more, sometimes not until an hour, after being put out of doors and it does not reach its maximum for about two hours. Thereafter the effect is continuous for even as long as thirty hours and there was not observed any tendency for the pressure to fall as if from exhaustion of the effect.

The authors did not make observations on any fatal cases that were treated continuously out of doors and are therefore unable to say what would be the behavior of the blood-pressure in cases growing constantly worse and progressing to a fatal termination. On the other hand, after removal from the cold fresh air the blood-pressure falls rapidly; the fall is apparent in fifteen or twenty minutes and usually reaches its lowest point in an hour, to remain at this minimum unless influenced by the course of the disease, by stimulation, or by the child's again being placed out of doors, when it again rises. In convalescents, on the contrary, the results are usually much less striking and may even be absent. Instead of a rise of 10 or 15 mm. of mercury, the difference is only a few millimeters or none at all. The authors were unable to produce results by putting children out of doors in warm weather; as the temperature increases in the spring and the out-of-doors temperature approaches that of the ward, the effects are less and less marked until none whatever is produced. It would seem therefore, that the all important factor is the cold. They are of the opinion that the influence on the blood-pressure is undoubtedly brought about by reflex stimulation of the vasomotor center by the action of cold air on the skin of the face and on the nasal mucous membrane. No other part of the child is exposed and there is no additional factor that can be supposed to play a part. The symptoms of the death of children from pneumonia are those of vasomotor failure. It is rare to see intense cyanosis, edema of the lungs and evidences of right heart incompetency. Whether under such circumstances cold air would have an influence in assisting the circulation cannot be stated.

4. **Icterus Neonatorum.**—Tests made by Hess by means of the duodenal catheter showed that bile is very rarely excreted during the first twelve hours of life; it was obtained but once in the course of fifty-two tests. Bile excretion during the subsequent twenty-four hours is variable; in cases of marked jaundice it is profuse; in cases not jaundiced it is scanty or absent. The function of excretion gradually becomes fully established during the first week or ten days of life.

Where jaundice manifests itself, it precedes the excretion of bile into the duodenum. Secretion of bile varies within wide limits. In general it is marked when the jaundice is marked. The occurrence of jaundice results from a defective correlation of excretion and secretion. It is generally caused by the inability of the rudimentary excretion to cope with the sudden profuse secretion of bile.

### Journal of Iowa State Medical Society, Washington

*May 15, I, No. 11, pp. 589-652*

5 Management of Cataract Cases. H. B. Gratiot, Dubuque.
6 Parinaud's Conjunctivitis; Report of Two Cases. R. M
Lapsley, Keokuk.
7 Surgical Diseases of Colon. A. M. Pond, Dubuque.
8 Mastoiditis and Allied Affections. L. L. Henninger, Counci
Bluffs.
9 Medical Profession and Public. F. P. Lierle, Marshalltown.
10 Conservatism in Enucleations. C. P. Frantz, Burlington.
11 Acute Osteomyelitis. D. C. Brockman, Ottumwa.
12 Raynaud's Disease. W. C. McGrath, Eagle Grove.

### Monthly Cyclopedia and Medical Bulletin, Philadelphia

*May, XV, No. 5, pp. 257-320*

13 *Surgery of Kidney. W. W. Babcock, Philadelphia.
14 *Epilepsy in Adult Life in Association with Thyroid Disease. M. K. Meyers, Philadelphia.
15 Industrial Status of Epilepsy. M. Woods, Philadelphia.
16 Treatment of Joint Diseases and of Conditions Simulating Them, by Physical Manipulation. L. Von Cotzhausen, Philadelphia.

13. Also published in the *Pennsylvania Medical Journal* for May and abstracted in THE JOURNAL, June 15, p. 1882.

14. **Epilepsy and Thyroid Disease.**—One of Meyers' patients, suffering with exophthalmic goiter, was entirely relieved of her attacks of epilepsy during her successive pregnancies. Another woman is sterile. In a case of epilepsy developing in adult life, unassociated with enlargement of the thyroid, but accompanied by a well-compensated mitral insufficiency, the onset of the epilepsy began at a delayed menstrual period one or two months before the woman became pregnant for a second time, and was aggravated rather than mitigated during her pregnancies. In another case associated at present with mild thyroid enlargement, the epilepsy developed six months after the eclampsia of pregnancy; the patient had previously suffered from an attack of puerperal eclampsia. In three of Meyers' cases there is a distinct enlargement of the thyroid; in all these cases there was a history of enlargement of the thyroid gland in other members of the families. In one other case, however, there was no thyroid enlargement in other members of the family.

In one of these cases enlargement of the thyroid was attended with general obesity. The mental attitude was one of general restlessness, anxiety and forgetfulness of recent events, attended with a rapid, high-pitched, agitated, quavering manner of speech. The woman frequently experienced periods of mental depression, during which she was inclined to weep. For some time after she has had an epileptic convulsion her mind is confused. At the present time she suffers from menorrhagia. Some of the above effects Meyers attributes to the epileptic convulsions *per se*; others, chiefly the obesity, the menorrhagia, and the general disturbance of menstruation, to the thyroid condition. In spite of a curettement the woman remains sterile.

Another of the three patients presents an enlargement of the thyroid associated with mild thyrotoxicosis. None of the patients has as yet received systematic treatment with thyroid extract. The improvement of most of Meyers' epileptics on routine bromid treatment (small doses), moderate restriction of salt, appropriate diet, a sufficient quantity of fluids in the form of milk or water, regularity of habits, and a daily bowel movement has been eminently satisfactory to him.

### Lancet-Clinic, Cincinnati

*May 25, CVII, No. 21, pp. 559-586*

17 *Treatment of Movable Kidney. W. Billington, Birmingham, England.
18 Wearing Glasses. D. S. Reynolds, Louisville, Ky.
19 Present-Day Methods to Determine Cure of Gonorrhea. J. W. Miller, Cincinnati.

*June 1, CVII, No. 22, pp. 587-612*

20 Oral Hygiene Movement.. S. J. Rauch and Others, Cincinnati.
21 Team Work. E. O. Adams, Cleveland.
22 Recurrent Club Feet. H. R. Allen, Indianapolis.

17. Abstracted in THE JOURNAL, Nov. 11, 1911, p. 1636

### Archives of Diagnosis, New York

*April, V, No. 2, pp. 109-208*

23 *Diagnostic Significance of Paravertebral Triangle of Percussion Dulness (Grocco's Sign). F. Smithies, Rochester, Minn.
24 Diagnosis of Lobar Pneumonia. G. R. Butler, Brooklyn.
25 *Delineation of Heart by New Method. R. Abrahams, New York.
26 Sacrococcygeal Sinus (Postanal Dermoid): Review of Thirty-One Cases. H. Z. Giffin and A. Archibald, Rochester, Minn.
27 Early Diagnosis of Perforation of Gastric and Duodenal Ulcer and Its Operative Treatment. B. T. Tilton, New York.
28 *Determining Importance of Loose Kidney. R. T. Morris, New York.
29 *Unfailing Procedure for Diagnosing or Excluding Existence of Ectopic Pregnancy. S. W. Bandler, New York.
30 Diagnosis of Pathologic Conditions in Pelvis of Fat Women. S. D. Jacobson, New York.
31 Indicanuria. A. L. Benedict, Buffalo.
32 Intestinal Indigestion: Some Considerations of Diagnosis. H. Barclay, New York.
33 Neuropathic Constitution an Etiologic Factor in Poliomyelitis. M. Neustaedter, New York.
34 Prognosis in Acute Epidemic Poliomyelitis as to Life and Disability. J. V. Manning, Brooklyn.

23. **Grocco's Sign.**—In cases in which fluid exists in a pleural sac and this fluid impinges on the spine, Smithies says, it is possible to map out, in the average patient, an area of percussion dulness on the side of the spine opposite to that on which effusion may be demonstrated (Grocco's sign). This paravertebral area is an area of relative dulness, and is roughly triangular in outline. It may disappear when the patient changes position, or it may in that event be altered in shape or extent. The triangular area is frequently associated with auscultatory findings similar to those existing in connection with pleural exudate or lung tissue whose air content is altered. Paravertebral dulness may be the result of physical or pathologic conditions other than pleural effusion. These may be intrathoracic or extrathoracic. In intrathoracic disease, as pneumonia, mediastinal tumor, lung abscess and the like, dulness to the opposite side of the spine may be definitely determined. This dulness usually does not satisfy either the physical phenomena or the clinical requirements associated with paravertebral dulness due to free fluid in the pleural sac. The same may be said of paravertebral dulness associated with extrathoracic conditions, e. g., ascites, subphrenic abscess, abdominal tumor, etc. A certain amount of experience with the sign and skill in thoracic percussion is requisite for its proper demonstration. Even where more than common skill is available, the presence of thick parietes, fibroid pleura, improper position of the patient, etc., may mask the area of paravertebral dulness associated with pleural exudate reaching mesially to the vertebral column.

25. **Delineation of Heart.**—This new method described by Abrahams is a method of auscultation, pure and simple. He says: In employing this new procedure the patient may assume any position he pleases, sitting, standing or reclining. After having outlined the size and shape of the supposedly normal heart, place the stethoscope two or more inches beyond the indicated borders of the heart. The stethoscope is preferably placed in the interspaces on either side of the precordial area. The patient is ordered to repeat "one, two, three," or "99" in an ordinary tone of voice. The effect is, that as long as you listen to lung tissue, the figures which the patient repeats will be heard coming from the lungs. As the stethoscope approaches the borders of the heart the voice grows less distinct, and as the borders of the heart are finally reached, instead of hearing the voice coming from the lungs one hears it coming more from the lips. Wherever the ear or the stethoscope reveals a change in the voice, there a mark is made with pen or pencil. These marks are afterwards joined and form a line; this line constitutes the border of the heart, right or left, as the case may be. The whispered sound furnishes the same information as the spoken voice. It is well to employ both so that one may control the other. The upper border of the heart is delineated in the same way; its definition is quite striking.

The superficial area of the heart is outlined by the same method and with the same ease and accuracy, perhaps more so. The stethoscope is carried from the superficial to the deep area while the patient is repeating the conventional figures, either aloud or in a whisper. As long as the instrument traverses over heart covered by lung, lip sound will predominate over lung sound. As soon, however, as uncovered heart is touched all previous sound disappears, the voice and the whisper become completely extra-stethoscopic, as it were. This method it is claimed by Abrahams can be employed advantageously in ascertaining the presence of fluid in the pericardial cavity. Adapting the same procedure it will be found that as soon as the edges of the effusion are reached, both the spoken voice and the whispered sound will terminate abruptly. This abrupt disappearance of sound is pathognomonic of the condition. The amount of the effusion need not necessarily be large to produce this auscultatory phenomenon. Small amounts will do the same, only that when the quantity of fluid is moderate the patient should be placed in the recumbent position in order to level the fluid in the pericardial sac. Abrahams applies this method to the delineation of the solid organs which encroach on the thoracic cavity, like the liver and spleen.

28. **Loose Kidney.**—By what diagnostic sign, asks Morris, may we instantly suspect that a loose kidney is really the precipitating factor, a contributing factor, or the dominating factor in cases of parenchymatous nephritis, of gastric hyperacidity, of congestive appendicitis? By finding the condition of "splint-belly" rigidity of the muscles of the abdominal wall. When we have persistent splint-belly, associated with demonstrable loose kidney, it means that nature is trying to put a splint on the kidney to keep it from moving about and making trouble. Splint-belly, in cases of loose kidney, seems to vary in degree proportionately to the disturbance caused by loose kidney. Some of the patients have abdominal muscles which are rigid day in and day out; in most cases in which loose kidney is a real factor in the patient's discomfort, we may promptly notice on examining the abdomen a rigidity which has a meaning. In patients with diastasis of the rectus muscle and relaxed abdominal walls with visceral ptosis, nature cannot place such a splint on the loose kidney, and we are deprived of the diagnostic sign, but practically this latter group of cases is one in which loose kidney seems to be least important, because general relaxation of all abdominal structures allows general adjustment. Structures out of position seem to accommodate themselves to each other in panptosis.

When the sign of splint-belly points directly toward loose kidney, what is to be done? First, give general abdominal support. This lessens the range of the loose kidney, and all symptoms may change rapidly enough to show that we are on the right road. Having determined that point, the next step is to consider the advisability of having a loose kidney sutured in place instead of depending on abdominal supporters. An operation which can be done frequently in ten minutes or less, with assured permanent fixation of the kidney, is held to be more desirable than the wearing of abdominal supporters, by many patients.

29. **Ectopic Pregnancy.**—The diagnosis in doubtful cases is made by Bandler by the simple procedure of a posterior or anterior colpo-celiotomy, preferably the latter. The uterus is examined with the sound, it may be curetted; the amount and character of the scrapings may be noted; examination of the adnexa may be made under the most favorable opportunity by delicate bimanual touch, and then the peritoneum is exposed or the peritoneal cavity is entered, preferably by the anterior vaginal route, and in this way the uterus, tubes and ovaries are brought into view. The diagnosis is made, and if ectopic gestation is found the operation may be completed by the vaginal path. And if, for any reason, because of technical difficulties, or lack of skill on the part of the operator, or because there is active bleeding going on, the operation is not to be completed vaginally, the vaginal incision is closed and the operation is completed by the abdominal path.

### Southern California Practitioner, Los Angeles

*May, XXVII, No. 5, pp. 205-252*

35 Ethyl Chlorid as a General Anesthetic. C. E. Reynolds, Los Angeles.
36 Los Angeles County Hospital Tuberculosis Problem. C. H. Whitman, Los Angeles.
37 Relation of Certain Pathologic Conditions of Liver and Gall-Bladder to Life Insurance. C. W. Pierce, Los Angeles.
38 Principles and Practice of Spondylotherapy. A. Abrams, San Francisco.
39 Complete Outward Dislocation of Elbow. R. O. Butterfield, Los Angeles.
40 Pernicious Anemia. C. R. Nyberg, Phoenix, Ariz.
41 Physiology of Dinner Table. R. S. Levenson, Los Angeles.
42 Lupus Erythematosus. H. E. Stroud, Los Angeles.

### Medical Record, New York

*June 1, LXXXI, No. 22, pp. 1019-1064*

43 Vertigo as Symptom of Disease of Nervous System. J. Collins, New York.
44 Surgical Management of Nasal Accessory Sinus Disease. L. A. Coffin, New York.
45 Treatment of Carcinoma by Selenium. E. G. Kessler, New York.
46 Treatment of Diseases of Vegetable Parasitic Origin by Deep Muscular Injections of Mercuric Succinimid. B. L. Wright, U. S. N.
47 *Results of Renal Decapsulation for Chronic Nephritis. S. Lloyd, New York
48 Tonsillar Hemorrhage, Causes, Prevention and Treatment. G. H. Cocks, New York.
49 *Identity of Typhus Fever and Brill's Disease. N. E. Brill, New York.
50 Abuse of the Scalpel Edge. D. H. Stewart, New York.
51 *Use of Medicated Suppositories for Vaginal Application. G. W. Kosmak, New York.
52 Diagnostic Use of Gonococcus Vaccine for Gonorrheal Infections. E. H. Eising, New York.

*June 8, LXXXI, No. 23, pp. 1065-1124*

53 *Best Means of Combating Infant Mortality. A. Jacobi, New York.
54 Heliotherapy in Surgical Tuberculosis. G. Austin, Paris, France.
55 Relation of Clinical Professor to Hospital, Community, Medical School and Profession. J. D. Morgan, Washington, D. C.
56 *Thermo-Hydropathic Treatment of Typhoid and Other Inflammatory Conditions. E. S. Goodhue, Holualoa, Hawaii.
57 Significance of Ratio of Free Hydrochloric Acid to Total Acidity in Determining Impaired Motility of Stomach. A. E. Austin, Boston.
58 *Influence of Sodium Chlorid on Hydrochloric Acid of Gastric Juice. S. Floersheim, New York.

47. **Renal Decapsulation for Chronic Nephritis.**—Renal decapsulation for chronic nephritis is recommended by Lloyd. In Edebohls' 102 operative cases thirty-three patients were cured at the time of his report, while in the last nineteen patients (six by Edebohls and thirteen by Lloyd) eight are recorded as free from all clinical and urinary symptoms for six months or more. This makes forty-one cured out of 128 patients which Lloyd regards as being surely a good enough showing to make the operation well worth while.

49. **Identity of Typhus Fever.**—Brill believes that European typhus fever, Mexican typhus fever and Brill's disease have relationships which only knowledge as to their infective agents can clear up.

51. **Medicated Suppositories for Vaginal Application.**—In order to be effective Kosmak says vaginal suppositories ought to be kept in contact with the vaginal vault for a period of at least four or five hours, and this can only be done by adapting their shape to the region in question and by making them of such a size and consistence that they will dissolve slowly. If prepared in the form of a disk about three-eighths of an inch in thickness, slightly concave on one surface to admit the cervix, they can be introduced readily enough with the aid of a speculum, and after being placed against the cervix may be held there by one or two non-absorbent cotton tampons. If they melt slowly their medicinal effect is properly exerted in the region where it is required, and if the patient is directed to remove the tampons at the expiration of say, twenty-four hours, this will not be as disagreeable as with the use of the ordinary glycerin and ichthyol tampons.

53. See The Journal, June 8, p. 1735.

56. **Treatment of Typhoid.**—Baths in water from 108 F. to 110 F., for a period of ten to fifteen minutes, Goodhue says, leave one feeling comfortable, stimulated and without visible perspiration. Over that temperature and for longer periods, there is apt to be perspiration, which makes it necessary to use friction afterwards, and some precaution as to change of temperature. In taking "cold," during the coryza and sneezing period, in the beginning of bronchitis, pharyngitis, myalgias ("aching all over"), he has found the hot bath almost abortive. A stay in water at a temperature of 105 F. for ten minutes, then getting into bed taking a laxative and a diuretic are sufficient to abort these conditions. A neuritis or neuralgia, a painful "stiff neck," are relieved quickly, and in many cases with the attendant anti-rheumatic treatment.

Goodhue has also found the baths efficacious in lumbago, sciatica and tonsillitis. In glandular involvements, with enlarged glands of the groin, axilla, and neck, the baths are beneficial, producing an immediate softening by elimination and absorption and stimulation of the lymphatics generally. In severe tonsillitis, pharyngitis and laryngitis, hot local applications, preferably hot packs, are valuable. Local infections of the hands or feet he treats by placing in very hot boracic acid solutions, but where there is general infection o in localities not easily treated in this way the hot tub-bath is efficacious. The tense and painful tissues are relieved i most cases. In acute nephritis following infectious diseases Goodhue has had most satisfactory results, relieving the condition in a few days. One of the conditions in which hot baths are particularly valuable is in premenstrual affections amenorrhea, malaise, backache, or any of the distressing symptoms due to disturbed circulation at this period. Half an hour in the tub with the water at a temperature of 108 F. will afford great relief. In hemorrhagic conditions, however, the hot bath is contraindicated. In uterine and ovarian affections the beneficial action of heat is well recognized, and equally so, Goodhue thinks, the unsatisfactory results of ordinary douching, when a little spray of water is for a moment thrown against the mouth or neck of the uterus. The ovaries get no benefit at all, and almost all the good that results is the washing out of the secretions.

58. **Influence of Sodium Chlorid on Hydrochlorid Acid of Gastric Juice.**—It is Floersheim's experience that the introduction of sodium chlorid into the system has no special influence on the production of hydrochloric acid by the stomach.

## New York Medical Journal

*June 1, XCV, No. 22, pp. 1125-1176*

59 Upright Position in Ether Operations on Nose, Throat and Other Portions of Head. T. R. French, Brooklyn.
60 Value of Warmed Anesthetics. J. T. Gwathmey, New York.
61 *Intravenous Administration of Phenolsulphonephthalein for Ureter Catheter Study of Renal Function. E. L. Keyes and A. R. Stevens, New York.
62 Unfounded Beliefs Concerning Insanity. M. A. Starr, New York.
63 New Principle in Politzer Vaporizing Method of Administering Anesthetics. R. C. Coburn, New York.
64 Abdominal Distress in Children Beyond Infancy. L. Kerr, New York.
65 Tonsillotomy or Tonsillectomy. E. Danziger, New York.
66 Drop Method of Administering Ether with Special Reference to New Combination Inhaler. H. A. Sanders, New York.
67 Anesthetics in Borough of Manhattan. A. M. Hellman, New York.

*June 8, XCV, No. 23, pp. 1177-1248*

68 *Best Means of Combating Infant Mortality. A. Jacobi, New York.
69 Hygiene of Pregnancy. E. B. Cragin, New York.
70 Pathology of Deaf-Mutism. G. H. Makuen, Philadelphia.
71 *Alopecia; Types and Treatment. I. Dyer, New Orleans.
72 Eugenics and Physician. C. B. Davenport, Cold Spring Harbor, N. Y.
73 Enforcement of Health Laws. T. Darlington, New York.
74 Vaccine Treatment in Ophthalmology. J. H. Clairborne, New York.
75 Some Impositions Practiced on Physician. T. J. Dunn, New York.
76 Paraplegia, Probably Hysterical in Origin. G. Parker, Burin North, Newfoundland.

61. **Renal Function Test.**—A study of twenty-six cases leads the authors to draw the following conclusions: 1. The phenolsulphonephthalein output seems to be little if at all influenced by oliguria or polyuria. The phenolsulphonephthalein percentage agrees as closely as ever with the urea in centigrams (urea percentage multiplied by c.c. of urine). The "delay," i. e., the interval between the injection of the drug and its appearance in the urine, varies widely. Thus in fourteen "normal" kidneys the "delay" varied from two to nine minutes, averaging 4.5 minutes. Yet among thirty-eight "diseased" kidneys no less than twenty-eight showed a delay within the "normal" limits and fourteen of them below the "normal" average, while in two the drug actually appeared in the urine of the diseased kidney, respectively, one and two minutes, before it appeared from the sound one. In the former case, however, microscopic findings, and per cent. excreted excluded all possible error, while in the second case the left kidney, though showing a few pus cells, was probably acting fully as well as its fellow.

But the most striking feature of the "delay" is that it may be approximately equal for two kidneys whose function differs widely. Hence the "delay," whether absolute or relative (as between the two kidneys), is peculiarly misleading and should be taken into consideration only for the purpose of estimating the time at which to begin collecting specimens for phenolsulphonephthalein estimation. When employing intramuscular injections of phenolsulphonephthalein, several times they were chagrined to find that kidneys, which excreted high percentages of phenolsulphonephthalein without cystoscopy, excreted only traces of the drug during an hour when the ureters were catheterized. This inhibition has not occurred after intravenous injection. Indeed so rapid is the output of phenolsulphonephthalein after intravenous injection that accurate readings can almost invariably be obtained in from ten to fifteen minutes after appearance of the color in the urine. Yet the authors feel that enough inhibition may result from cystoscopy to invalidate precise conclusions as to the normality or abnormality of the kidneys from the percentages of phenolsulphonephthalein excreted by ureter catheter even when intravenous injection is employed. Roughly speaking, however, an excretion of 1 per cent. in one minute for the first ten or fifteen minutes is normal.

68. See THE JOURNAL, June 8, p. 1735.

71. **Alopecia.**—The following treatment is recommended by Dyer as a suitable one to be adopted in most cases. The frequent washing of the scalp with green soap or tar, resorcin, naphthol and sulphur soap, and the application of stimulating substances. Of these he mentions chloral hydrate, tincture of jaborandi, spirits of rosemary, cantharides (in tincture and guardedly), tar oils (cade, birch pine, etc.), castor oil, croton oil (in minute quantity), alcohol and chloroform. The use of any application should be intelligent; oily substances used when the scalp and hair are dry; desiccating or alcohol preparations when the hair is oily or the scalp greasy. Combinations may be made antiseptic with resorcin (2 to 5 per cent.), salicylic acid (2 to 5 per cent.), lactic acid (2 to 5 per cent.), bichlorid of mercury (1 to 1,000), or with carbolic acid (not over 2 per cent.) each of which is also somewhat stimulating to hair growth. The use of the high frequency *effluve* in some cases of long standing has proved satisfactory.

## Boston Medical and Surgical Journal

*May 30, CLXVI, No. 22, pp. 799-834*

77 Medical Impressions of America. C. K. Austin, Paris.
78 *Causes for Failures in Treatment of Chronic Joint Diseases and Some Suggestions How Greater Successes Can Be Attained. H. W. Marshall, Boston.
79 Open-Air Treatment in Tuberculosis. J. Lee, Boston.
80 Open-Air Rooms in Springfield. R. B. Ober, Springfield, Mass.
81 Open-Air Rooms. H. D. Chadwick, Westfield, Mass.
82 Maintenance of Isolation Hospitals. W. C. Hanson, Boston.
83 What Happens to Patients Released from State Sanatoria. A. S. MacKnight, Fall River, Mass.
84 Relation Between State and Local Health Authorities. F. G. Curtis, Newton, Mass.
85 Work Treatment for Consumptives. A. T. Cabot, Boston.
86 Fracture of Greater Tuberosity of Humerus by Muscular Action in Child. W. P. Coues, Boston.

*June 6, CLXVI, No. 23, pp. 835-874*

87 Method of Science in Clinical Training. J. H. Pratt, Boston.
88 Hastening of Wound Healing by Means of Skin Grafting and Use of Certain Organic Coloring Matters. J. S. Davis, Baltimore.
89 Chronic Interstitial Nephritis. Acute Indigestion as Important Symptom. M. Seymour, Boston.
90 *Post-Typhoid Dyspepsia. A. Bassler, New York.
91 *Causes for Failures in Treatment of Chronic Joint Diseases, and Some Suggestions How Greater Successes Can Be Attained. H. W. Marshall, Boston.

78 and 91. **Failures in Treatment of Chronic Joint Diseases.**—Speaking of the vaccine treatment for chronic joint conditions Marshall says that in order to gain desired therapeutic effects with vaccines of increased antagonistic qualities in the blood toward specific microorganisms, tissue cells must be irritated by such bacterial poisons; and it seems rather severely taxed in chronic disease in order to get reactions sufficiently great to overcome the resistant bacteria. Microorganisms of chronic diseases are survivors of previous engagements with their host, and have intrenched themselves in the tissues; so that there are dangers of overstimulating the latter, and exhausting their vitalities to a very harmful degree without eradicating the invading parasites. Failures of vaccine treatments, therefore, occasionally presumably mean subsequent accelerations of growth of the microorganisms that are present, and these periods of increased multiplication of bacteria perhaps wouldn't have occurred if vaccines had not been used.

When dealing with vital resistances of tissues that cannot be estimated accurately or quickly and when bacterial parasites are known to have high resistances. Marshall believes that it is wiser to cling to measures of hygienic character that are less likely to do harm if they do no good. It seems safer to influence favorably all normal processes within the body, known and unknown ones, through hygienic combinations than to gain desired results by incompletely understood specific irritants; by toxic substances that may have additional harmful effects, unrecognizable at first, in addition to the properties for which they are administered.' He admits, however, that there are slow, steady gains at times in affected joints when patients are undergoing vaccine treatments. These gains are due apparently to these measures, but in the hands of less skilful administrators the tissues become fatigued and tissue resistances are lowered; moreover, skeptics can say that beneficial effects are mainly due to hygienic measures that are simultaneously carried on. Although vaccines have proven their value in some acute diseases, the limits of their applicability have not been well defined yet, and therefore it seems to Marshall better to rely for the present mainly on hygienic measures in chronic arthritis.

The following essentials are ones which Marshall believes should be used, not simply remembered as sounding interesting or reasonable: (1) Recollection that hygienic measures are physiologic ones, always applicable to every case, and the only effective treatments for some types of arthritis. (2) That health of joints is a matter of physiologic balance between local joint resistances and external factors acting on them. (3) That avoidance of overdosage and fatigue effects from too many or too frequent applications of remedies is necessary. (4) That over-stimulations and straining of vital resistances from simultaneous applications of several remedies in depleted conditions, when there are several defects to be corrected, also must be guarded against. (5) That proper alternations of rest and stimulation never must be neglected. (6) That sequence of events in personal histories and in development of arthritic lesions must be kept in mind. (7) That no long courses of treatments should be prescribed without first experimentally finding out resistances and reactions of each individual, because these cannot be predicted beforehand with certainty. (8) That one step at a time should be taken in an intelligent way, and accurate observations made of the effects of each step; then the next one determined from judgment of the preceding one. Estimation of the probable significance of the results observed at each step must depend on previous knowledge of the physiologic factors known to control health of joints.

90. **Post-Typhoid Dyspepsia.**—In 472 cases seen by Bassler there were 132 instances in which various diseases and conditions were connected with the history in certain suggestive, causative ways. Of these, there were twenty-four instances of typhoid; seventeen of appendicitis and ten of pneumonia. There were four who had had typhoid, appendicitis and pneumonia closely enough associated that differentiation was not possible; and seventy-six cases with other states not considered in this article.

In analyzing these histories it is apparent that in fifteen instances of typhoid the dyspeptic symptoms began within two years after the attack. In six, the beginning dyspeptic symptoms closely followed the fever and had continued with an average duration of the dyspeptic history of over eighteen years. In nine, the dyspeptic symptoms began within two years following the attack of the fever, with an average duration of the continuation of a dyspeptic history of eleven years and six months. Averaging these, it is seen that in the fifteen cases which began with dyspeptic symptoms following the typhoid in a short space of time, to consider a connection between them, the average duration of the dyspeptic history at the time the cases were seen by Bassler was fourteen years and nine months, and that in twenty-four instances of typhoid fever states of chronic dyspepsia followed in 62½ per cent. In the thirteen unoperated cases in which a definite diagnosis of appendicitis had been made at some time previous, states of dyspepsia closely enough associated with the history of appendicitis to be considered in any causative way existed in only six cases, a percentage of slightly over 30, about half of that following typhoid. It therefore seems that states of chronic indigestion follow typhoid twice as frequently as disease of the appendix.

In the pneumonia cases, there was no instance shorter than three years after, at which the dyspeptic symptoms began, and this entire set of cases is considered as having no etiologic connection with dyspepsia.

In these cases, 307 analyses of the urine were made for the typhoid bacilli and in none of them were they found, although the colon bacillus was regularly found present in one case. Of twenty-nine Widal tests of the blood not one gave a reaction that could be considered positive in a diagnostic way. Leucocyte counts were made in all, and in none was this distinctive in any way.

In the six cases in which the typhoid bacillus could not be obtained from the stools, other diagnoses were apparent to account for the dyspeptic symptoms. In five of these, chronic excessive putrefaction in the intestine due to a high content of the *B. coli communis* was apparent. In four of the six cases that were probably chronic gall-bladder infections, a definite tenderness to deep pressure existed in the region of the gall-bladder, although none had any demonstrable enlargement or firm feel to the liver. In three that seemed to be infectious in the intestines, no local tendernesses could be elicited. In all of the nine cases the history of more or less headaches was a feature, and several complained of attacks of "biliousness," these coming on at intervals of every few weeks in the beginning of their dyspeptic history, and after that more often. In three the attacks began with an intense headache, followed shortly by nausea and finally vomiting for several hours, the whole seizure lasting about a day. A feature with all of them was a shortage of ability to withstand mental effort or physical strain. All of the patients in whom the typhoid bacilli were recovered from the stools claimed that they had not had the dyspeptic symptoms before their attacks of typhoid.

### Iowa Medical Journal, Des Moines

*May, XVIII, No. 11, pp. 507-556*

92 Poliomyelitis. J. M. Aiken, Omaha, Neb.
93 Malignant Tumors. J. W. Jobling, Chicago.
94 Tonsillar and Adenoid Affections of School Children. Their Dangers and Proper Correction. F. E. V. Shore, Des Moines.
95 School Sanitation and Medical Inspection of Schools. E. E. Dorr, Des Moines.

### Vermont Medical Monthly, Burlington

*May 15, XVIII, No. 5, pp. 105-130*

96 Cancer of Rectum. D. C. Hawley, Burlington.
97 Small-Pox and Vaccination. H. A. Ladd, Burlington.
98 Some Methods of Laboratory Diagnosis. G. Parmenter, Montpelier.

### Journal of Tennessee State Medical Association, Nashville

*May, V, No. 1, pp. 1-48*

99 Brief Review of Medical Progress. C. J. Broyles, Johnson City.

### Ophthalmic Record, Chicago

*May, XXI, No. 5, pp. 223-274*

100 Brochure on Trachoma. D. W. White and C. E. Treibly, U. S. Army.
101 Treatment of Corneal Ulcers. C. Wray, London, England.
102 Single Rupture of Chorioid Involving Half Circumference of Eye-Ball. F. C. Todd, Minneapolis.

## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### Medical Press and Circular, London

*May 8, XCIII, No. 3809, pp. 475-500*

1 Pruritus Vulva: Its Etiology and Treatment. R. A. Gibbons.
2 Pseudovomiting. A. Mathieu.
3 Continuous Counterirritation. W. J. Midelton.
4 Few Therapeutic Points. H. French.

*May 15, XCIII, No. 3810, pp. 501-524*

5 *Albumin Test of Expectoration in Tuberculosis (Roger's Reaction). J. Levy-Valensi.
6 Tea-Poisoning. N. Neild.
7 Pathology of Interstitial Keratitis in Trypanosomiasis and Syphilis. W. Yorke.
8 National Insurance Act and State Medicine in Ireland. R. J. Rowlette.

5. **Albumin Test in Tuberculosis.**—Levy-Valensi agrees with Roger that in all cases of acute or chronic pulmonary tuberculosis (with the exception of granulia), the sputum at all stages contains albumin. The albumin test yields trustworthy information earlier and more constantly than bacteriologic examination. It affords indications more constantly and more certainly than methods based on the use of tuberculin and enables us to detect the tuberculous nature of certain affections of the respiratory apparatus, viz., bronchitis, emphysema, pleurisy, etc. Every subject who presents albumin

in the sputum is not necessarily tuberculous, but there is great probability of his being so, provided we have excluded pneumonia, bronchopneumonia, pulmonary edema, gangrene, cardiopathies and renal affections.

### Lancet, London

*May 18, XX, No. 20, pp. 1319-1386*

9 Tuberculosis of Conjunctiva: Its Etiology, Pathology and Diagnosis. J. W. H. Eyre.
10 Myeloid Leukemia, Chronic and Acute. P. N. Panton.
11 Treatment of Rodent Ulcer by Carbon Dioxid Snow. E. R. Morton.
12 Intense Neuralgic Pain in Arms After Childbirth. A. C. Geddes.
13 Cystitis and Urinary Antiseptics. C. Williams.
14 *Treatment of Cancer with Selenium. C. E. Walker.
15 Sterile Abscesses Following Use of Tuberculin. D. Forbes and C. Banks.
16 *Hemo-Renal Index. O. Grünbaum.
17 Preparation of Bronchitis Vaccine: Method of Rapidly Obtaining a Pure Culture from Sputum. W. E. M. Armstrong.
18 Health of Europeans in West Africa. A. E. Horn.

14. **Selenium in Cancer.**—Experiments with preparations of selenium were carried out in the Research Department of the Glasgow Cancer Hospital by Walker. Mice and rats with grafted malignant growths of various sizes have been absolutely unaffected by intravenous injections of colloidal selenium, except that they have turned pink within thirty seconds or a minute of the injection, and their excreta have been pink for two or three days. Wassermann's preparation was highly toxic. The colloidal selenium, with or without eosin, is non-toxic. Walker has injected 0.25 c.c into mice and 1 c.c. into rats without any ill-effects. It must be realized in this connection that 0.25 c.c. in a mouse corresponds roughly to 700 c.c. in a man. No effect whatever was produced on the tumors in either mice or rats. Walker found that colloidal selenium is not toxic to monkeys. On the other hand, selenium dioxid is highly toxic. In mice 0.001 gm. causes death in a few minutes. It would appear, then, that colloidal selenium cannot e the substance used by Wassermann, as his preparation is ighly, but apparently irregularly, toxic.

16. **Hemo-Renal Index.**—The quantity of inorganic salts in he urine in the normal individual taking ordinary mixed diet s approximately twice the quantity contained in the blood. The ratio of the quantity of inorganic salts in the urine to he quantity of inorganic salts in the blood goes by the name f the hemo-renal index. With suitable apparatus the time aken to determine the index is less than five minutes. For he last five years Grünbaum has used the following method: 'he fluid, the electric resistance of which is to be estimated, is laced between two disks fixed about 1 mm. apart. These disks onsist of pieces of ebonite 1 cm. in diameter, into the center f which is inserted a disk of platinum 3 mm. in diameter. 'he platinum is connected by a piece of metal with the columns supporting the pieces of ebonite. The platinum is covred with platinum black by running a small current, proued by a difference in potential of three to four volts, from ne disk to the other while they are immersed in a solution onsisting of platinum chlorid, 1 gm.; lead acetate, 0.008 gm., nd distilled water to 22 c.c. The direction of the current is ltered every half minute, and the total time is four minutes. he fluid is held between these disks by capillary attraction. n experiment to show that no error is introduced by varying e quantity of fluid in the cell is shown by the following adings, which were obtained with a solution of salt approachg normal saline: 20 c.mm. of the solution, 70 ohms.; 30, 40, 60, 70, 80, 90 and 110 c.mm., in each case 36 ohms. The last ading was after a drop had fallen from the cell. There are veral details that are essential in collecting the blood and e serum, and without due attention to these the hemo-renal lex is valueless. For convenience these may be tabulated: The patient must be on the ordinary mixed diet, and not on e specially designed for disease of the kidneys, which is ally poor in sodium chlorid contents. 2. The patient must t take any large quantity of fluid shortly before the samples collected. 3. The sample of urine and a sample of rum must correspond; that is taken between 11 and 12 lock; then the sample of blood must be taken at 1 o'clock. ttention to these details has led to results which have ved fallacious.

### British Medical Journal, London

*May 18, I, No. 2681, pp. 1109-1164*

19 *Teaching of Anatomy. A. C. Geddes.
20 *Pyelonephritis of Pregnancy. H. R. Andrews.
21 Etiology of Excessive Vomiting of Pregnancy. J. H. Martin.
22 Fever in New-Born Infant. E. Cautley.
23 *Functional Derangement of Liver. W. Bain.
24 Congenital Absence of Colon. J. Morton.
25 Simple Hemoglobinized Saline Culture Medium for Growth of Leishmania and Allied Protozoa. R. Row.
26 Four Cesarean Sections. G. F. Aldous.
27 Mechanism and Treatment of Shock. H. T. Gray and L. Parsons.

19. **Teaching Anatomy.**—Two questions are put to the clinicians by Geddes: 1. Would it not be a great help to students if all clinical teachers took the trouble to learn at least one recognized name for each structure in the body, instead of making use of local or fancy names that are not to be found in any standard work? 2. Would it not be a great help to students if all clinical teachers were quite sure that the structures they describe at great length are of importance, and in fact really exist? Though pedagogic anatomy is dying, it was full of vigor a short time ago, and some of the things that the clinicians of to-day learned yesterday when they were students were purely pedagogic in origin. Some clinical teachers badger students about wretched little pseudo-anatomic pedagogic points, and suggest that any student who does not know these alleged facts knows no anatomy. After two or three attempts to find what his clinical teacher has described as an essential and a touchstone of knowledge, the student's growing skepticism blossoms into certainty that the clinician was simply talking, and another teacher's reputation vanishes in a blaze of blasphemy.

20. **Pyelonephritis of Pregnancy.**—Andrews agrees with other clinicians that the treatment of pyelonephritis of pregnancy should be as conservative as possible. The general treatment consists of rest in bed, milk diet with plenty of harmless fluids to drink, and regulation of the action of the bowels. Violent purgation must be avoided as being likely to cause miscarriage. Some authorities advise administration of small doses of calomel, for example, grain 1/6 t.d.s. More special treatment includes administration of diuretics and urinary antiseptics, alteration of the reaction of the urine, etc. Diuresis is secured by administration of infusion of buchu and sometimes by digitalis. The most popular urinary antiseptic is hexamethylenamin, of which grains xv to xxx may be given daily. As the organisms are growing in an acid medium the urine should be rendered alkaline or neutral. This is done by administration of potassium citrate, grains xx to xxx t.d.s., or of alkaline waters. Results of vaccine treatment are disappointing, at any rate in acute cases. Pain is treated by warm applications to the loins, and if necessary to the abdomen, by administration of tincture of hyoscyamus m. xxx t.d.s., and by posture. Sometimes great relief is obtained by having the foot of the bed raised one or two feet, while in other cases a sitting posture may be found to give relief. As a rule the pain soon yields to treatment. Interruption of pregnancy should be avoided if possible, and expectant treatment always given a fair trial. If both kidneys are affected, and the condition does not yield to medical treatment, and the patient's general condition is going from bad to worse, it may be necessary to empty the uterus.

23. **Functional Derangement of Liver.**—The chief causes of functional derangement of the liver are summarized by Bain as follows: Dyspepsia, gastro-intestinal disturbance, alcoholic excess, rich and highly-seasoned food, fevers, nervous influences and residence in the tropics. The best method of treatment is to diminish the amount of work the liver has to perform and to facilitate the circulation through it. There must be a limitation of the food supply; but it must be the nutrition of the liver cell, and thereby injuriously affect its activity. A mixed diet is the best, the articles being of simple composition. Three meals a day are advised unless the gallbladder is involved. Carbohydrates and fats should be limited, as the former tend to ferment, and the latter are not easily absorbed if the quantity of bile excreted is diminished. Alcohol should be forbidden. Other irritants such as mustard, pepper, red pepper, horseradish, ginger, cloves, strong meat

broths, large quantities of salt and the empyreumatic substances that are formed in baking and roasting should be avoided. In most cases it will not be necessary for the patient to exercise dietetic self-denial for more than a week. Rest after meals should be enjoined so that the functional hyperemia of the organ is not disturbed. Exercise such as golf is very important. With increased respiratory effort the liver is rhythmically compressed, and the venous blood flows more rapidly to the heart. For those unsatisfactory individuals who take little or no exercise, massage, general and special, is desirable.

### Archives Générales de Médecine, Paris

*April, XCI, No. 4, pp. 293-384*

28 *Deafness of Nasal Origin and Treatment by Reeducation. (Les surdités d'origine nasale et leur traitement rééducateur.) A. Maurice.
29 Spa Treatment of Asthma. (Traitement hydro-minéral de l'asthme.) Debidour.
30 Pathogenesis of Chronic Bronchitis. (Bronchites chroniques et affections des grands systèmes organiques.) Flurin.

28. **Deafness of Nasal Origin.**—Maurice says that a specialist for the ear must first of all specialize on the nose, as three-fourths of all ear affections are in the middle ear (582 of his 772 ear patients). Anything causing a tendency to obstruction in the nose favors development of otosclerosis. Congestion and hypertrophy of the mucosa of the eustachian tube is liable to spread up into the ear and involve the ossicles in the exuberant tissue. The deafness traceable to a nasal affection requires both medical and surgical measures. Every trace of adenoid tissue must be removed and conditions in the nose restored to normal. The membrane of the tympanum and the ossicles must be mobilized and reeducated and, Maurice has devised for this an apparatus, the kinesiphone, which produces from 100 to 4,000 sound waves a second, like those of the human voice, but magnified enough to exert a massage-like action on the hearing apparatus stimulating the circulation and phagocytosis while training the ear to hear more and more acutely. The aim is to mobilize and reeducate an organ which is beginning to grow torpid, rigid and paralyzed. It is roused to new life and functioning by this massage and reeducation by means of regular sound waves of the same length as those of the human voice. But, he adds, "don't wait until the house is all burned down before sending for the fire department."

### Archives des Maladies de l'App. Digestif, Paris

*April, VI, No 4, pp. 181-240*

31 *Sensitiveness of the Colon to Motor Stimulation from a Distance. (De l'excitation à distance de la motricité colique.) H. Surmont and A. Dubus.
32 *Abnormally Small Stomachs. (De la microgastrie.) R. Glenard and F. Jaugeas.

31. **Motor Reactions in Colon to Stimulation from a Distance.**—Surmont and Dubus report extensive experimental research, with a number of tracings, all showing the extreme sensitiveness of the colon to stimuli from distant organs, electric, mechanical, etc. Their findings throw light on the mechanism of constipation, revealing the inhibiting influence on peristalsis from irritations at remote points. One example is the spastic constipation of nasal origin which subsides completely when the turbinate bones are cauterized. The stimuli acting on the colon may come from the upper part of the digestive tract, from the gall-bladder, genital organs, peripheral nerves or mucous membranes, or may even be of purely emotional origin. By careful search for the primary source in every functional or catarrhal affection of the colon, it may be possible to determine their secondary nature and cure by removing the cause when everything at first seemed to point to the colon as the primary and sole organ involved.

32. **Abnormally Small Stomachs.**—In twenty-seven cases in which radioscopy revealed an unusually small stomach, the organ was naturally small with compensating hypertrophy in two cases; in five the stomach had shriveled and shrunk on account of plastic linitis, and in the others the small size was due to adhesions or deformity from various causes. The retraction at a certain point may correspond to symptoms suggesting a neoplasm.

### Archives des Maladies du Cœur, Etc., Paris

*May, V, No. 5, pp. 305-368*

33 *Hypertrophy and Dilatation of the Heart. (Etude sur l'anatomie pathologique du cœur.) S. Widerøe.
34 Endocarditis Nearly Obliterating Left Ventricle. (Endocardite infectieuse pariétale du ventricule gauche oblitérant la plus grande partie de sa cavité.) E. Lenoble and J. Quelme.
35 Chronic Lymphatic Leukemia. (Leucémie lymphatique chronique; lymphomes mesentériques; reaction myéloide du sang et des organes.) H. Esbach and J. Bauer.
36 Mechanism of Reduplication of Second Sound with Mitral Stenosis. (Sur le mecanisme du rythme à trois temps de la sténose mitrale.) C. Pezzi and R. Lutenbacher.

33. **Pathologic Anatomy of the Heart.**—Widerøe reports the findings on examination of the hearts from 311 cadavers, illustrating the way in which the heart stretches and hypertrophies in various pathologic conditions, chronic nephritis, pulmonary tuberculosis, etc. The extent of the changes observed is sometimes astonishing but still more amazing is the way in which the heart often adapts itself to these new conditions. Different diseases influence the heart as a rule in a characteristic manner.

### Archives de Médecine des Enfants, Paris

*May, XV, No. 5, pp. 321-400*

37 *Scarlatinal Lesions in Adrenals and Pancreas. (La surrénalite et la pancréatite scarlatineuses.) L. Tixier and J. Troisier.
38 Gangrene of Leg in Diphtheria. (Cas de gangrène embolique d'un membre consécutive à une angine diphthérique maligne.) E. C. Aviragnet, Blechmann and A. Huber.

37. **Inflammation of the Pancreas and Adrenals in Scarlet Fever.**—Tixier and Troisier review the scanty literature on this subject and then describe in detail the clinical course and necropsy findings in six cases and the clinical course with recovery in four others. Treatment should aim to supply the secretions, the lack of which during the acute inflammation is causing severe symptoms, especially when the adrenals are involved. The symptoms of this are abdominal and cardiovascular, with great prostration. The pain is located in the epigastrium, sometimes accompanied by pain in the lumbar region. The cardiovascular symptoms are tachycardia, abnormally low blood-pressure and tendency to collapse of the heart. These symptoms might also be elicited by myocarditis, but this is comparatively rare in scarlet fever in comparison to the glandular lesions. Asthenia or prostration is also an important sign of adrenal trouble. Treatment should be with epinephrin to remedy the cause. In one severe case in a boy of 10 they gave by the mouth eight drops of a 1 per thousand solution of epinephrin in twenty-four hours, repeating this for six days and the child recovered. The extreme prostration abdominal pain, pulse of 140 and very low arterial pressure came on the fourth day of what seemed at first mild scarlet fever. In another case a previously healthy girl of 11 ha violent fever and delirium three days before the eruption an after its appearance, with tachycardia, a very low blood-pressure and distress in the upper abdomen. She was give sixteen drops of the epinephrin solution, twelve the next da and ten on the following days. A total of sixty-six drops wa given at intervals during a month. The child was left wit patches of a brownish discoloration on the limbs, abdome back and face. The organotherapy gave especially fine result in another case of scarlet fever complicated with diphtheri and streptococcus septicemia. After one dose of adrena extract the blood pressure rose and under diphtheria antitoxi and other measures the child recovered. In one of the case reported a persisting white line was left when the finger na was drawn along the skin of the abdomen. This is generall accepted as a sign of defective adrenal functioning.

### Bulletins de la Société de Pédiatrie, Paris

*April, XIV, No. 4, pp. 153-191*

39 *Chorea and Infection. J. Roux.
40 *Prophylaxis of Measles, Mumps and Chicken-Pox. (La lut contre les maladies benignes.) Nageotte-Wilbouchewitch.

39. **Chorea and Infection.**—In the case reported by Roux child of 11 had acute tonsillitis, followed in two weeks acute mucomembranous colitis which subsided after a week two. One week later acute chorea developed and became ve

severe in the course of a month; then on this became superposed a subacute articular rheumatism and, later, asthma. The chorea and rheumatism gradually subsided and the child was apparently cured by the end of the month—three months after the first onset of trouble. Roux thinks that a single infection was probably responsible for this train of symptoms, and that there is much evidence to sustain the assumption that an attenuated tuberculous infection was responsible for the whole.

40. **Dangers of Prophylaxis of Children's Diseases.**—A number of extensive and severe epidemics of measles happen to be prevailing just now at various points, and Mme. Nageotte queries whether the modern methods of prophylaxis of children's diseases are not breeding up trouble for the future. She says, "In childhood, measles, mumps and chicken-pox are mild and harmless as a rule, but when children are prevented from acquiring these diseases they grow up non-immune. The stream of infection is confined within artificial dikes but the day comes when the dike gives way at some point, and then the waters spread far and wide, carrying devastation to crowds of adult non-immunes. The prevailing epidemics among adults and children are the result of the efficiency of modern prophylaxis. The number of persons rendered immune by having had the disease has been reduced by artificial means, and the others are defenseless when the infection finds an opportunity to take its revenge." She thinks that the plan of keeping the children of a family out of school when one has measles, chicken-pox or mumps, is, to say the least, of extremely doubtful ultimate advantage.

### Journal de Chirurgie, Paris

*April, VIII, No. 4, pp. 365-508*

41 *Estimation of Functional Capacity of the Second Kidney when the First is Tuberculous and Catheterization of the Ureters is Impracticable. (De l'appréciation de la valeur du deuxième rein dans la tuberculose rénal en cas d'impossibilité du cathétérisme urétéral.) M. Guibé.

41. **Estimation of Functional Capacity of Second Kidney.**—Guibé reiterates that the first step is, of course, to examine the total kidney functioning. If this is found defective, there is no use in going farther. But if the total functioning is still fairly good, there are great chances for the patient to benefit from removal of the tuberculous kidney. Chromocystoscopy is a valuable aid but should never be relied on exclusively. It may be possible to introduce the catheter into the ureter through a suprapubic transverse incision into the bladder. The bladder is generally involved in the kidney process so that an opportunity for direct local medication may be an advantage rather than a drawback with this method. Another important aid in diagnosis is transient exclusion of the kidney, that is, diverting the urine outward after artificial obstruction of its ureter. When this is done for twenty-four hours a very good oversight of conditions in the other kidney can be obtained. It is important to bear in mind, however, that the other kidney never functionates to its full capacity under these conditions. This technic exposes to the danger of a fistula and it should never be done on the presumably sound kidney, and only when nephrectomy can follow at once if needed.

### Journal de Médecine de Bordeaux

*April 28, XXIV, No. 17, pp. 257-272*

42 Differential Diagnosis of Malarial and Alcoholic Delirum. (Le diagnostic différentiel des délires paludéen et éthylique.) Hesnard. Commenced in No. 16.

*May 5, No. 18, pp. 273-288*

43 *Case of Hysteric-Traumatic Hemiplegia. G. Bonrepaux.

*May 12, No. 19, pp. 289-304*

44 Post-Mortem Delivery. J. Pery.

43. **Hysteric Traumatic Hemiplegia.**—In the case reported a man of 26 gradually developed the hemiplegia after a bag of coal had fallen on him. There was no bruise on his head nor bloody discharge from the ear and the face was not involved in the hemiplegia. None of the signs of organic hemiplegia were present except Babinski's sign. This was pronounced, and was the only discordant note in the syndrome of functional hemiplegia. The paralyzed limb always felt colder than the other side, and the patient perspired more on the sound side.

### Revue. de Médecine, Paris

*May, XXXII, No. 5, pp. 392-416*

45 Disturbances in Nutrition in Dog After Partial Removal of Pancreas. II. (Recherches sur la dépancréation.) H. Labbé.

### Semaine Médicale, Paris

*May 22, XXXII, No. 21, pp. 241-252*

46 Postoperative Thrombophlebitis Not Necessarily of Septic Origin. (Les thrombophlébites post-opératoires sont-elles de nature septique?) F. Moty.

### Berliner klinische Wochenschrift

*May 13, XLIX, No. 20, pp. 925-972*

47 Importance of Training Medical Students in Psychiatric Diagnosis. (Bedeutung der psychiatrischen Untersuchungsmethodik für die allgemeine ärztliche Ausbildung.) K. Bonhoeffer.

48 Changes in the Pancreas with Diabetes. (Pankreasveränderungen bei Diabetes.) D. von Hansemann.

49 Thorium X in Treatment of Pernicious Anemia and Leukemia. (2 Fälle von perniciöser Anämie und Leukämie mit Thorium X behandelt.) J. Plesch.

50 Death After Treatment with Thorium X. (Zur Frage der Vergiftung mit Thorium X.) F. Gudzent and W. His.

51 Mesothorium in Cancer. (Zur Mesothoriumtherapie bei Krebskranken.) A. Pinkuss.

52 Technic for Inhalation of Radium Emanation. (Ueber die Technik des Nachweises der Anreicherung der Radiumemanation im Blute bei deren Einatmung.) W. Marckwald.

### Deutsche medizinische Wochenschrift, Berlin

*May 16, XXXVIII, No. 20, pp. 929-976*

53 *The General Practitioner and Foreign Bodies in the Air Passages. (Diagnose und Behandlung der in den Luftwegen befindlichen Fremdkörper.) W. Brünings.

54 Improved Technic for Cultivation of Spirochæta Pallida. (Vereinfachte Culturmethode der Spirochaeta pallida aus menschlichem Material.) G. Arnheim.

55 Immunization Against Tuberculosis. (Ueber die Resistenzerhöhung gegen Tuberkulose nach dem heutigen Stand der Immunitätsforschung.) J. Citron.

56 Roentgenotherapy of Myomas. B. Krönig and K. Gauss.

57 Localization of Disease in the Cerebellum. (Die Lokalisation der Kleinhirnerkrankungen.) R. Bing. Commenced in No. 16.

58 Salvarsan and General Paresis. (Salvarsan und Paralyse.) L. Meyer.

59 *Injury of Eyes from Watching Eclipse of the Sun. (Augenschädigung durch Beobachten der Sonnenfinsternis.) W. Feilchenfeld.

53. **Foreign Bodies in the Air Passages.**—Brünings remarks that since the introduction of bronchoscopy the number of foreign bodies found in the air passages has jumped from nineteen in 1900 to 595 in 1911. Certain towns are becoming foci for swallowed and inhaled foreign bodies. As it is absurd to suppose that foreign bodies are being aspirated or swallowed more numerously now than in former years, the deduction is evident that many obscure and wasting affections in the past have been merely the reaction to the presence of an unsuspected foreign body in the air passages or alimentary canal. The fate of the patient depends on whether the physician first consulted thinks of the possibility of a foreign body as responsible for the disturbances observed; they may not suggest anything of the kind and there may be nothing in the history of the case to suggest it. Even if he thinks of this possibility, the physician may shrink from advising bronchoscopy—a prominent surgeon is quoted as having said quite recently that it is a method worthy of admiration but not of imitation, while Brünings insists that it should be applied even on mere suspicion of a foreign body. Over half the cases on record are in children under 5, and the majority are large single bodies, 80 per cent. lodging on the right side, and thus most easily inspected with the bronchoscope. In 1,064 cases compiled from the literature only 20.5 per cent, were spontaneously coughed out, while the mortality in 770 cases was 52 per cent. Brünings thinks that even these figures are far below the reality as countless cases are not published and as still more are never diagnosed. In the esophagus the foreign body does not cause coughing, while in a bronchus there is no pain or interference with swallowing, but there is generally considerable coughing at first or constantly, and there may be more or less suffocation, but the latent phase is especially important as the physician generally sees the patient thus first, and he is liable to be misled by the lack of symptoms. Even if a bronchus is obstructed by a swollen bean, for example, there may be no dyspnea, the other lung acting vicariously for both without attracting subjective attention to its extra work, but palpation will show the vocal fremitus on the side affected materially reduced and accumulation of secretions leads to increasing dulness. Small objects, like a needle, may cause

absolutely no symptoms from their presence, except possibly a reflex restriction of the respiratory movements on the side involved. This is easily detected from a position back of the seated patient looking along the profile of his chest about at the nipple line. When the patient reclines on a table and a cane is laid across his chest, the cane dips down on the side that does not share equally in the excursions of the chest wall. With sound lungs, the main bronchus may be obstructed to a fourth of its normal lumen during the first latent phase without any physical signs from it, even the reduced excursions of that side of the chest being apparent only during very deep breathing. Adults can attend to business and children go on playing without disturbance until some change of position of the foreign body may bring on a sudden spasmodic cough or suffocation. Roentgenoscopy and endoscopy are thus indispensable in many cases in this latent stage, especially in children, although the former is generally useless unless the foreign body is of metal. Direct visual inspection has failed only twice in the last 291 cases on record, and the foreign body was removed by this means in all but 4.5 per cent., Brünings says, insisting that this is the only absolutely reliable means for diagnosis and effectual treatment.. Endoscopy requires no preparation or general anesthesia and in skilled hands is entirely free from danger. It does no harm to use the bronchoscope to confirm a diagnosis by exclusion. In many such cases he has been surprised by the discovery of a foreign body. The earlier the bronchoscopy is done the less interference from inflammatory reaction. Bronchiectasia and putrid secretions, pleurisy and pneumonia are liable to develop later from the irritation and the obstruction. Every case of circumscribed processes of the sort should suggest a possible foreign body, especially when in the lower lobe and no tubercle bacilli or elastic fibers can be found in the sputum. At any stage, however, endoscopy may prove possible and important. He describes his technic for bronchoscopy with illustrations of the instruments he has devised for the purpose. (Some recent articles on bronchoscopy were published in The Journal, pp. 467 and 692).

59. **Injuries of the Eyes During the Eclipse.**—Feilchenfeld states that the weather was so clear during the eclipse of the sun in April that many persons had their eyes injured by watching it without due protection. He reports a number in which the disturbances wêre so severe that the individuals applied for medical aid. The macula showed evidences of intense congestion for a time but no permanent injury seems to have resulted in any instance.

### Medizinische Klinik, Berlin

*May 19, VIII, No. 20, pp. 809-850*

60 Nervous Vomiting. (Ueber nervöses Erbrechen.) L. Kuttner.

61 Balneotherapy of Chronic Cardiovascular Disease. (Balneotherapie der chronischen Herz- und Gefässkrankheiten.) I. Groedel (Nauheim). Concluded in No. 21.

62 Symptomatology and Etiology of Infantile Scurvy. (Barlowsche Krankheit.) B. Bendix.

63 Experiences with Sunlight in Treatment of Surgical Tuberculosis. (Beitrag zur Heilstättenbehandlung der chirurgischen Tuberkulose.) M. Jerusalem.

64 Importance of Under-Pressure Breathing in Treatment of Cardiovascular Disease. (Bedeutung der "Unterdruckatmung" in der Behandlung von Kreislaufstörungen.) O. Bruns.

65 Continuous Flushing of the Large Intestine in Treatment of Acute Dysentery, Etc. (Zur Therapie akuter Dickdarmerkrankungen.) W. Raseliofszky.

66 Microscopic Flora in Impure Drinking Water. (Ueber die pflanzlichen Leitorganismen der Wasserverunreinigung.) W. Wangerin.

67 Treatment of Cerebral Hemorrhage. (Behandlung der Apoplexie.) R. Bing.

### Münchener medizinische Wochenschrift

*May 14, LIX, No. 20, pp. 1081-1136*

68 *Artificial Fecundation. (Ueber künstliche Befruchtung.) A. Döderlein.

69 Arsenic Deposits in Uterine Glands as Cause of Menstruation. (Die arsenspeichernde Funktion der Uterindrüsen als Ursache der Menstruation.) M. Imchanitzky and J. Ries.

70 Hypersusceptibility as Factor in Infection and Immunity. IV. (Rolle der Ueberempfindlichkeit bei der Infektion und Immunität.) A. Schittenhelm and W. Weichardt.

71 Toxin Production from Action of Serum on Organ Extracts. (Giftbildung durch Einwirkung von Blutserum auf art- und körpereigene Organextrakte.) M. Ascoli and G. Izar.

72 *Serodiagnosis of Tumors by Complement Fixation Tests. II. (Ueber Serodiagnostik der Geschwülste mittels Komplementablenkungsreaktion.) E. v. Dungern.

73 Nature of Serum Reaction in Syphilis. (Experimentelle Beiträge zum Wesen der Wassermann-Neisser-Brueksehen Reaktion.) S. Bergel.

74 *Action of Heart and Kidney Tonics with Diseased Kidneys. (Wirkungsweise von Nieren- und Herzmitteln bei nierenkranken Menschen.) M. Hedinger.

75 Ring Scotoma from Watching Eclipse of Sun. (Ueber Ringskotome durch Blendung anlässlich der letzten Sonnenfinsternis.) A. Jess.

76 Limits of Accuracy of Electric Tests of Urine. (Versuche über die Genauigkeitsgrenze der galvanometrischen Bestimmung von Elektrolyten und Harnstoff im menschlichen Harn.) Wunder.

77 Individual Susceptibility of the Skin to the Roentgen Rays. (Zur Frage der individuellen Empfindlichkeit der Haut gegen Röntgenstrahlen.) Thedering.

78 Benefit to be Expected from Operative Treatment of Congenital Coxa Vara. (Was kann man bei angeborener Coxa-vara auf blutig operativem Wege erreichen?) A. Mendler.

79 Case of Transient Collapse Under Hormonal. (Unerwunschte Nebenwirkungen der Hormonaltherapie.) W. Wolf.

80 Prescribing of Hydrogen Dioxid. (Ueber Verordnung von Wasserstoffsuperoxydlösungen.) P. Fiseher.

68. **Artificial Fecundation.**—Döderlein reports a clinical case, the only successful one of six in his experience, and discusses the preferable technic.

72. **Serodiagnosis of Cancer.**—Dungern describes the method with which he has been able to distinguish the serum of patients with cancer, on principles similar to those of the Wassermann reaction. No reaction was obtained in over 200 cases of affections other than cancer, while the reaction was constantly positive in all but seven of 100 cancer patients.

74. **Research on Action of Heart and Kidney Tonics with Kidney Disease.**—Hedinger found that in various forms of nephritis the action of the heart and kidney remedies was directly dependent on the condition of the vessels in the kidneys, exactly as in experimental toxic nephritis.

### St. Petersburger medizinische Zeitschrift

*May 14, XXXVII, No. 9, pp. 135-146*

81 No Benefit from Salvarsan in Leprosy. (Sollen Leprakranke mit Salvarsan behandelt werden?) A. Paldroek.

### Therapeutische Monatshefte, Berlin

*May, XXVI, No. 5, pp. 309-404*

82 *Reform in Advertising of Proprietary Medicinal Articles. (Eine Reform im Arzneivertriebe.) W. Heubner.

83 *Objectionable and Unobjectionable Advertisements in the Medical Press of Germany and Austria. (I. Arzneimittelliste des Deutschen Kongresses für Innere Medizin.) F. Penzoldt, R. Gottlieb, W. Heubner, G. Klemperer and A. Schmidt.

84 *Young Infants in Institutions. (Säuglingspflege.) S. Engel.

85 Methyl-Alcohol Poisoning. (Methylalkoholvergiftung.) O. Schmiedeberg.

86 *Paracentesis from the Rear in Pericarditis. (Eine Modifikation der Herzbeutelpunktion.) H. Cursehmann.

87 Diet Without Milk in Children with Spasmophilia. (Ueber die Durchführung einer milchlösen Kost bei Spasmophilie—Krampfbereitschaft.) W. Raabe.

88 *Eclampsia. (Zur Behandlung der Eklampsie.) Volland.

89 Calcium Salts in Treatment of Asthma, Hay Fever and Allied Conditions. R. Hoffmann.

82-83. **Reform in Advertising Medicinal Articles.**—The organized internists of Germany at the annual meeting in April appointed a committee to examine the advertisements of proprietary medicinal articles and foods that had appeared in twenty-one of the leading German and Austrian medical journals during 1911, for the purpose of detecting false, misleading or exaggerated statements of their therapeutic or other value. The work of the committee was exclusively the examination of the statements in the advertisements; no attempt was made to examine the chemical composition of the articles in question. The committee adopted certain rules to govern the listing of the remedies, as already described in The Journal, May 25, 1912, p. 1613. The *Monatshefte* publishes the entire list of remedies and food preparations the advertising of which appeared to comply with the rules adopted. The list is also published of the remedies and food preparations the advertising of which failed to rule up to the standard. In a third list are given those which are dubious, that is, the committee does not feel qualified to pass judgment without further investigation which is not within the province of the committee to undertake. The three lists, "positive," "negative" and "dubious," fill six pages and include also salves and other medicinal vehicles, serums and vaccines, mineral waters, artificial carbonated and oxygenated baths and radium preparations.

Heubner comments editorially on this as a promising reform in the attitude of the profession to proprietary articles. He says the complaint is frequently heard that the production and advertising of drugs are to a certain extent in hands which are not governed by the same care and faithfulness which should and do inspire the physician. There are a large number of therapeutically worthless preparations on the market which represent a serious injury for practical therapeutics. The life career of each one of the preparations of this kind is limited—on account of its therapeutic inefficiency—but the inexhaustible production of new ones keeps increasing the total. There is also a large number of proprietary articles on the market which are different from what is claimed for them, and they are thus presented under false statements. They may have a great vogue for a long time because they are really therapeutically effectual; only the same results have long been obtained with the same effectual substances in some other guise and generally at far less expense. They represent a burden and disturbing element for the physician in so far as he is misled to ascribe to them new therapeutic possibilities, when in fact none such exist, and for the patient they represent a useless and unnecessarily increased expense. Another group of pharmaceutical preparations are unessential modifications of official substances and their action is woefully exaggerated to set them in some special light or influence opinion in regard to them in some way contrary to the true facts. Competition between manufacturers also leads them to put on the market substances closely allied to those of well established reputation, presenting them as new remedies with specially favorable properties, although it is one of the oldest pharmacologic experiences that substances of closely similar chemical composition have also closely similar actions.

Heubner calls attention in particular to the length of the "dubious" list, that is, those remedies in the advertising of which the committee was unable to decide without more extensive investigation whether they complied with the rules or not. This "dubious" list includes hormonal, pertussin, scopomorphin, endotin and sanatogen among the more familiar names. Heubner remarks that the existence of this list shows how extremely difficult it is to determine the status of a remedy even according to a few definite requirements which manifestly represent only an indispensable minimum. "The need for some place for independent scientific investigation of new medicinal articles, especially in regard to their chemical composition, is here felt most strongly. The three lists of the Kongress für Innere Medizin are to be published again at regular intervals, and this is a promising beginning. We have now a basis for judgment of the advertisements of proprietary preparations, and the publishers of medical journals will thus be enabled to keep their advertising columns free from the grossest frauds." (See Editorial, page 1860.)

84. **Institutional Care of Young Infants.**—Engel discusses the reasons why as a rule infants thrive so much better in the home than in institutions. . Among the points he brings out are that prematurely born infants almost invariably improve and thrive better than others, and he is inclined to ascribe this to the fact that such infants require and receive an exceptional amount of care. He thinks the psychic factor is of not much moment; more important is the lack of quiet. The children do not sleep so sound and are readily awakened by the sights and sounds in an institution, so that if they are inclined to be nervous this tendency is aggravated. He reports research on the number of times infants urinate. He fastened on the child a small urinal with electric connection so that each time any urine was voided it rang a bell as it passed into a jar below. The attendant then recorded the amount and the hour. He found that average infants, with an intake of about 800 c.c. of fluid, urinated from twenty-five to thirty times in the course of twenty-four hours, and with twice this amount of fluid ingested, urinated fifty or sixty times or more. He gives diagrams showing the connection with sleep and feeding. Infants up to a few weeks old, which sleep most of the time, void urine at approximately regular intervals, asleep or awake, but at six months and over only when they are awake, as a rule. These findings show the impossibility of keeping the child constantly dry, and the advantage of having it dry as it is about to drop asleep. When dry and comfortable it sleeps quietly and utilizes the assimilated food much better. Some recent research on the influence of crying on the respiratory metabolism of infants showed that one two-months-old child at rest consumed 10.86 gm. of oxygen and produced 12.12 gm. of carbon dioxid. When the child cried, these figures increased by 44 and 59.4 per cent. This corresponds to an effort of 1657 mkg. done by a child weighing only 2¾ kg. This example teaches how important purposeless movements are for the metabolism of an infant, and the necessity for avoiding useless emotions and movements and the benefit of comfort and rest. In conclusion he compares conditions for infants in institutions and the home to tropical plants brought into a cold climate. Plants that in their southern home grow most luxuriantly, in the northern conservatories have to be managed with the extremest care to make them grow. Thought, effort and expense are required to make infants thrive in institutions as they do naturally in the home without such efforts.

86. **Puncture of the Pericardium.**—Curschmann reports three cases calling attention to the good results of puncture from the back. He was driven to this in the first case by the extreme dilatation of the heart following acute rheumatism, and by the excitement of the patient, a nervous girl of 16. He punctured through the eighth interspace from the rear and siphoned out 350 c.c. of effusion; now, six months later, except for slight modification of the first sound at the apex, the heart and circulation seem normal. Convalescence from the pericarditis was retarded by chorea with stupor and hallucinations, all subsiding in three weeks. In the second case, a man of 50 was relieved by puncture from the rear; Curschmann's only trocar was short and wide and he did not like to introduce it too close to the heart. In the third case there was so much edema in the skin of the left chest that he did not dare to puncture through its unknown depth. He cites his father's case in which a man of 32, otherwise healthy, would not allow puncture and died suddenly before he could be persuaded to permit it. Such cases probably are more frequent than generally supposed; puncture from the rear would rob the procedure of much of its terror for the patient. Such effusions are mainly encountered in young persons after acute rheumatism, and the heart is generally much dilated. The puncture should be done between the left nipple and anterior axillary lines, in the sixth or seventh interspace, or from the rear in the eighth interspace.

88. **Eclampsia.**—Volland reports a case of severe eclampsia at term; on the supposition that it was possibly the result of latent uremia, he gave 5 gm. of sodium salicylate in a rectal enema. Intense sweating followed, the mattress becoming soaked, but the convulsions ceased although there was maniacal agitation for four days until the last trace of salicylic acid had disappeared from the urine. He thinks that assumption of edema of the brain would explain the eclampsia in this case and benefit from diversion of the fluid. The case resembles Zangemeister's experience in three cases of eclampsia in which he trephined and found the intracranial pressure extremely high, and two of the patients recovered afterward.

### Wiener klinische Wochenschrift, Vienna

*May 16, XXV, No. 20, pp. 735-782*

90 Viscosity of the Blood in the Tuberculous. (Viskositätsbestimmungen bei Tuberkulose.) M. v. Eisler and M. Laub.
91 *Bismuth Paste in Treatment of Fistulous Tracts. (Fistelbehandlung mit Beckscher Wismutpaste.) M. Sgalitzer. (Wistmutintoxikation bei Behandlung nach der Methode von Beck.) S. Erdheim.
92 *Sunlight in Treatment of Surgical Tuberculosis. (Zur Heliotherapie der chirurgischen Tuberkulose und Skrofulose.) W. Spitzmüller and H. Peterka.
93 *Blood-Pressure Reducing Action of Hormanal. (Ueber die Wirkung des Hormonals auf die Darmbewegung.) R. Mohr.
94 Changes in the Adrenals After Roentgen Exposures. (Veränderungen an den Nebennieren nach Röntgenbestrahlung.) A. v. Decastello.

91. **Bismuth Paste in Treatment of Fistulous Tracts.**—Sgalitzer reports the experiences with bismuth paste in von Eiselsberg's clinic at Vienna where it has been applied in eighty cases as an aid in diagnosis or treatment during the last two years. He also reviews fifteen cases on record in which the paste has been applied with resulting intoxication, in eight with a fatal outcome. These mishaps, he says, have occurred exclusively (with the exception of one child) in cases in which the fistulous tracts were in the abdomen or chest, or cases of cold abscesses or tuberculous joint affections; no case of intoxication is on record from the use of the paste in bone

processes with fistulas or fistulous openings into lesions in the soft parts not in connection with any natural cavity. No signs of intoxication were noted at Eiselsberg's clinic except slight brief enteritis in one case. But the therapeutic action did not seem to be durable; of the four patients supposed to have been cured by the paste over a year ago, two have since returned with recurrence of trouble and the others have been lost sight of. At the same time, the benefit from the paste in appropriate cases, Sgalitzer emphasizes, surpasses that realized by any other measures known to date. A number of the patients had their earning capacity restored by the treatment. He adds that a great advantage is that the treatment can be applied in the home by any practitioner; it is advisable to supplement it by special care of the mouth. On account of the susceptibility of children to bismuth, he warns that this treatment should not be applied to a child until after failure of all other measures, and the paste should not be over 10 per cent. strength. Among twenty-two patients in the last six months treated with the paste, two were cured of their soft parts fistulous lesion (one an anal fistula); two were much improved (one a soft parts and one a bone fistula); eight were materially improved including three with anal fistulas and five with bone fistulas, while six with bone fistulas were only slightly improved, and four showed no effect from the treatment. In a third of the patients the temperature rose a little for a day or so, evidently the result of stagnation and absorption of the secretion in the fistula.

Erdheim's experience was less favorable, severe intoxication following injection of 60 c.c. of a 33 per cent. bismuth paste for diagnostic purposes in a boy of 9 with a fistula persisting since an operation six years before for empyema of the right side of the chest. After four or five days, signs of bismuth poisoning developed, a chill and high fever, ulceration and line on the gums, with traces of bismuth in the urine. The fistula was cleared out and the child recovered after nine days of severe symptoms, but the fistula is still unhealed, six months later. Erdheim also reviews the literature on the subject of bismuth poisoning. Fever seems to be the earliest and most constant sign of bismuth poisoning, followed by prostration and headache, and possibly discoloration of the wound, glassy swelling of the granulations and the discovery of bismuth in the urine. It is very important in making the injections to refrain from inflicting new injury, tearing the tissues or forcing the paste into spaces beyond. Brandes does not inject the paste but introduces a catheter filled with it to the bottom of the fistula and fills it up thus from below. Erdheim concludes by urging extreme caution, with carefully selected cases, never forgetting that the results are uncertain and that the method is liable to entail severe injury.

92. **Sunlight in Treatment of Surgical Tuberculosis.**—Spitzmüller and Peterka have been applying heliotherapy as an adjuvant to other measures in treating the children in the public children's hospital in upper Austria. They were unable to detect any marked influence from the sunlight treatment; the children from the Vienna slums threw off their tuberculosis in the pure country air and with the good food, regardless of whether they were given systematic exposures to the sunlight or not. They urge that classified records be kept this coming summer of patients treated by the ordinary measures alone and plus the heliotherapy and by the heliotherapy alone, with care to class the patients according to their former environment, the results of any treatment being far more marked among slum children than in those from the homes of the well-to-do.

93. **Action of Hormonal.**—Mohr states that his experimental research on hormonal has established beyond question its pronounced effect in reducing the blood-pressure even with doses proportionately far below those used in the clinic to date. He had an experience with a threatening collapse in a man of 28 after intravenous injection of 14 c.c. of hormonal, and since then, he says, four similar cases have been reported (Kretschmer, Hesse, Rosenkranz and Frischberg), and Madlener has recently reported the death of a patient after injection of 20 c.c. hormonal for paralytic ileus following a myoma operation. Sabatowski's research on dogs has further confirmed the sudden pronounced drop in the blood-pressure after intravenous injection of hormonal. In Mohr's clinical case referred to above, the blood-pressure before the injection was 125 and afterward 100 Recklinghausen.

### Zeitschrift für Urologie, Berlin

*May, VI, No. 5, pp. 337-459*

95 *Insufficiency of the Bladder Resulting from Atrophy of the Prostate. S. Grosglik.
96 Case of Multiple Submucous Myoma of the Bladder. (Leiomyoma vesicae.) A. Götzl.
97 *Nephrectomy for Cystic Kidney. (Polycystische Nierendegeneration.) G. v. Illyes.
98 *Syphilis of the Bladder. (Zur Frage der Harnblasensyphilis.) M. A. Mucharinsky.

95. **Bladder Insufficiency from Atrophy of the Prostate.**—Grosglik has had twenty-three patients, all over 52, who suffered from chronic incomplete retention of urine with dilatation of the bladder and drizzling of urine at night. There was a history of old gonorrhea in eight cases and of syphilis in three. The prostate was not enlarged in any case, and in all but a few was under normal size, but the disturbances were exactly like those from a hypertrophied prostate. In three cases the bladder was opened and the conditions found at the outlet explained the trouble as the result of a mechanical valve-like hindrance to the outflow of urine, the result of shriveling of the gland around the urethra mouth. Resection of the tissue causing the valve-like action restored conditions clinically at once to normal, and there has been no further trouble during the three years to date. Operative treatment of the shriveled prostate is a more difficult matter than enucleation of an enlarged prostate, and before attempting it, all affections of the nervous system which might be responsible for the insufficiency of the bladder must be excluded. The transvesical route is the only permissible technic, he says, in such cases.

97. **Cystic Kidney.**—Illyes had no suspicion of the true nature of the process when he exposed the kidney in a recent case of tenesmus, recurring slight hematuria and pains in the left kidney region. The kidney was found in polycystic degeneration, but as the other kidney seemed to be functioning normally, he removed the diseased organ and the patient rapidly recovered, coexisting chronic prostatitis healing at the same time.

98. **Syphilis of the Bladder.**—Mucharinsky reports a case of secondary syphilitic manifestations located exclusively in the bladder. The cystoscopic picture was not conclusive but the positive Wassermann reaction and benefit from specific treatment confirmed the diagnosis.

### Zentralblatt für Chirurgie, Leipsic

*May 18, XXXIX, No. 20, pp. 673-704*

99 Sterilization of Catgut by Dry Heat. (Einfache Methode der Sterilisation des Catgut durch trockene Hitze.) K. J. Wederhake.
100 Orbital Phlegmon. Hagedorn.

### Zentralblatt für Gynäkologie, Leipsic

*May 18, XXXIII, No. 20, pp. 633-664*

101 Technic for Ventrofixation of Uterus. (Die Ventrovesicofixatio uteri, ihre Bedeutung für die Prophylaxe der Darmeinklemmung und ihre sonstigen Leistungen.) H. Fuchs.
102 *Therapeutic Application of Heat to Interior of Pelvis. (Zur Pelvithermie.) L. Prochownick.

102. **Application of Heat to the Pelvis.**—Prochownik reports very favorable results in twenty-five cases from therapeutic application of dry heat to the interior of the pelvis by means of Flatau's electric apparatus. The local temperature gradually rises to at most 40 C. (104 F.) and stays at this point for three or four hours, while the temperature of the rest of the body is unaltered.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*January 28, XXXIII, No. 12, pp. 113-128*

103 Alimentary Galactosuria in Health and in Febrile Conditions. (Sulla galattosuria alimentare negli individui normali e nei febbricitanti.) G. A. Pari. First part in No. 6.

### Ugeskrift for Læger, Copenhagen

*May 16, LXXIV, No. 20, pp. 769-806*

104 Dislocation of the Shoulder. (Luxatio humeri, dens Prognose og Behandling.) V. Meisen.

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*(Continued on page 22)*

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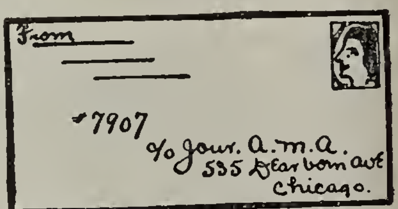

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WANTED — NURSE FOR SEVEN-BED hospital; some out-patient work; must have good personality, ability, character and training; willing to work; state age, weight, height, preliminary education, training and salary expected; send photo and references in first letter; monthly salary, $25 to $50, as per ability; board and room furnished. Add. Odebolt Hospital, Odebolt, Iowa. B

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WANTED—ASSISTANT (WOMAN PREferred) in private laboratory of general practitioner, New York City; mostly serum work; some vaccine and blood; previous training necessary; must be efficient, reliable and permanent; give full particulars and salary. Add. 2950 B, % AMA.

WANTED — A GRADUATE PHYSICIAN under 30 years of age for chief clerk and correspondent in medical director's office of a Chicago life insurance company. Salary $20 per week. State qualifications and experience, if any. Add. 2981 B, % AMA.

*(Continued on page 22)*

*When Prescribing Specify Welch's*

MANY of our physician friends, meaning to give their patients WELCH'S as part of their diet during illness and convalescence, have merely ordered "grape juice"—and the results have not been satisfactory. Be sure to specify

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One important factor in the unfailing excellence and purity of WELCH'S is the policy which governs its making. We begin with the grape on the vine—the luscious Concord which grows to its richest perfection here in the Chautauqua belt. We contract for our choice of the finest clusters in the best vineyards. We designate the day on which our grapes shall be gathered; they must be of the exact ripeness. We pay a bonus in order to have this right. Our process of securing the juice eliminates handling the grapes after we have washed and rinsed them.

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*4-oz. bottle mailed, 6 cents. Sample pint bottle,*
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**The Welch Grape Juice Co., Westfield, N. Y.**

## JOKES—NEW AND OLD

(Continued from page 20)

proving rapidly. The only thing that's really wrong now is the fact that your legs still remain swollen. But that doesn't worry me in the least."

The irascible old invalid drew in a quick, sharp breath.

"No, of course it doesn't," he blurted out. "And if your legs were swollen it wouldn't worry me!"

—o—

### THE FATAL MISPRINT

Dr. Marcus Herz, of Berlin, is credited with saying to a patient who read medical books dilligently in order to prescribe for himself: "Be careful, my friend. Some fine day you'll die of a misprint."—*Current Literature.*

—o—

### HUMORING HER

Lady—"Now, cabby, I wish you to be extremely careful. When you come to a crossing you must wait until the policeman tells you to go on, and if the streets are slippery you must drive very slowly."

Cabby—"All right, mum; I'll be very careful, mum. And in case of a haccident, mum, which 'orspital would you like to be took to?"—*Tit-Bits.*

—o—

### WHAT HAD BEEN TAKEN

A colored man was examined in the dispensatory by one physician, and then another, for some reason, came and took the first one's place. The second physician commenced the examination and asked: "Did the other doctor take your temperature?"

"Ah dunno, sah," the patient answered. "Ah hain't missed nothin' so far but mah watch."

## *Knocks and Boosts*

### DIRECTORY VASTLY IMPROVED

*To the Editor:*—I want to congratulate you on the appearance of the new edition of the American Medical Directory. It seems to me vastly improved in every way. Especially do I want to congratulate you on the appearance of the Physicians' Purchasing Index. This certainly should prove a most excellent help to physicians. The system of cross references is minutely complete. J. A. Lutz, Philadelphia.

—o—

### EVERY MEMBER SHOULD USE IT

*To the Editor:*—A few months ago I sent for "Nostrums and Quackery," and it may be pleasing to you to know that through it I have kept two people from our town from going to the notorious Chamlee at Los Angeles for cancer "cures;" have stopped three people from using "Tuberculozyme," and have exposed Dr. Dyes Mitchella compound to the satisfaction of several users of it. It is a book that every member of the A. M. A. should have and use. Keep up the good work; it certainly is deserving of the greatest praise. Leslie G. Johnson, M.D., Myrtle Point, Ore.

—o—

### WHY NOT SKIP THEM AND READ THE REST?

*To the Editor:*—The Journal contains so many articles of long technical experiments of laboratory men that I really have received very little benefit from their researches. This is good enough for laboratory friends but they do not satisfy the busy country practitioner, so I do not want The Journal until some changes have been made. R. A. Scott, M.D., Cavalier, N. Dak.

—o—

### A SOLDIER IN THE RANKS FOR MEDICAL REFORM

*To the Editor:*—I am pleased with many things in The Journal, but especially with your "reform department." For the uncleanliness of medical journal advertising we have only ourselves to blame, and when we stop our subscriptions, until the insertion of objectionable advertising is stopped, the reform will only be a question of months, or even weeks. In accordance with views expressed in your recent editorials, my subscription to the *Post-Graduate* having expired, I do not propose to renew it,

(Continued on page 24)

**ARMY QUIZ** 9th YEAR

Small class for September army examination commences July 10. Available also for navy and State boards. Average income U. S. physicians $800. Pay of assistant surgeons, army or navy $2000, with books, instruments and quarters furnished. Address

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**EAR, NOSE and THROAT**

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Serum Diagnosis Syphilis, Opsonic Index made. Bloods examined, Vaccines, Luetic Liver extract, Amboceptor and Specific Sera furnished.

Please mention The Journal A. M. A. when writing to advertisers.

(Continued from page 20)

WANTED—IOWA — ASSISTANT PHYSICIAN in State Hospital; salary, $900, with maintenance for the first year; capacity of institution, 1,000 beds. Add. 2997 B, % AMA. B

WANTED—REGISTERED MAN IN STATE of Pennsylvania with hospital experience to take charge of practice in a mining town for two weeks from August 1. Add. 2998 B, % AMA.

WANTED—RESIDENT PHYSICIAN FOR one year's service at the Children's Free Hospital; must be single man of good character, recent graduate and competent to do laboratory work; stipend, $300 a year, with room and board. Send qualifications and references to Dr. Ray Connor, Washington Arcade, Detroit. Mich. B

WANTED — COMPETENT SURGICAL nurse for private surgical hospital of ten beds. Give full particulars regarding age, health, height, weight, experience, etc., and enclose photograph and references in first letter. Salary $40 per month with board, room and laundry. Must come by July 1. The Wise County Sanitarium, Bridgeport, Texas. B

WANTED — SUPERINTENDENT OF THE Ithaca City Hospital, seventy-five beds. Superintendent will also act as superintendent of nurses. Apply to A. T. Kerr, Ithaca, N. Y. B

## LOCATIONS WANTED

WANTED — LOCATION, PRACTICE OR partnership by eye, ear, nose and throat specialist; graduate of leading college, with 10 years' experience in special work, including year's internship as resident surgeon of large eastern eye hospital, and postgraduate courses in Harvard, London and Berlin; only first-class practice will be considered; give full particulars in first letter. Add. 2948 E, % AMA.

WANTED—TO PURCHASE A GOOD LIVE practice in central or southern Michigan; prefer one without property in place of not less than 1,500 population; give full particulars in reply. Add. 2993 E, % AMA.

WANTED — A CAPABLE, ENERGETIC and trustworthy physician wants location in railroad town; 300 to 1,000 people; good surrounding country and roads; northern Illinois or southern Wisconsin preferred; first payment must be reasonable; can furnish references as to character, ability, integrity and honesty; will come for personal interest. Add. 2986 E, % AMA.

WANTED—A LOCATION OR PARTNERSHIP by a radiographer; graduate of an A1 eastern medical school; hospital and sanitarium experience; have had charge of a prominent *x*-ray laboratory for the past few years; references of the best; have some money to invest if necessary. Add. 2942 E. % AMA.

WANTED — LOCATION IN ALABAMA— To do general practice; would consider partnership or practice paying from $3,000 to $5,000 per year; prefer small town or country; am prepared to pay cash for same if satisfactory; several years' experience in hospital and private practice; answer at once. Add. 3002 E, % AMA.

WANTED — TO PURCHASE GENERAL practice in town of 1,000 to 5,000; Ohio or Michigan; must stand strict investigation; state full particulars and price. Add. 2973 E, % AMA.

FOR SALE — GLASS-TOP OPERATING table, wheel stretcher, large glass-top dressing table; small glass-top dressing table, operating stool, irrigating stand, double solution bowl stand; must all be sold; will not break the set; in first-class condition; $100; draying and crating, $10. Add. Mitchell Van & Storage Co., Salt Lake City, Utah. E

WANTED—SURGICAL, GYNECOLOGICAL or general practice offering good opportunity for surgery or paying sanitarium, hospital; opening must be first-class city; I am collecting $20,000 annually in a good little city, but feel that I could do much better in first-class field; will buy all or part. Add. 2890 E, % AMA.

(Continued on page 24)

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is prepared to deal with all classes of chronic ailments, especially cases of gastric and hepatic disorders. Cases of chronic cardiac and renal disease, arteriosclerosis, neurasthenia, locomotor ataxia, chronic constipation, genito-urinary diseases in both men and women. Not all cases are curable, of course, but most excellent results are often obtained in cases which are quite incurable, without all the special advantages afforded by a thoroughly equipped Sanitarium and Hospital.

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**Battle Creek, Michigan**

Gentlemen:

Enclosed is my card. Please send me your Book, entitled The Battle Creek Sanitarium System.

## KNOCKS AND BOOSTS

(Continued from page 22)

and I have written them to this effect. It is we humble soldiers of the ranks who will win the day if we stand together and strike hard enough at the pocketbooks of those whom we have set out to reform. J. L. J.

## *Books Received*

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

The Nervous System. An Elementary Handbook of the Anatomy and Physiology of the Nervous System. For the Use of Students of Physiology and Neurology. By James Dunlop Lickley. M.D., Demonstrator of Anatomy, University of Durham College of Medicine. Cloth. Price, $1.80 net. Pp. 130, with 118 illustrations. New York: Longmans, Green & Co., 1912.

Outlines of Early Development for Obstetric Students. By R. W. Johnstone, M.A., M.D., F.R.C.S.E., Assistant to the Professor of Midwifery, University of Edinburgh. With a Preface by Sir J. Halliday Croom, Professor of Midwifery, University of Edinburgh. Cloth. Price, 1 shilling, 6 pence. Pp. 23, with illustrations. Edinburgh: John Currie, 1911.

General Medicine. Edited by Frank Billings, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, and J. H. Sallsbury, A.M., M.D., Professor of Medicine, Chicago Clinical School. Cloth. Price, $1.50. Pp. 404. Practical Medicine Series. Chicago: The Year Book Publishers, 180 N. Dearborn Street, 1912.

I. Method of Standardizing Disinfectants with and Without Organic Matter. By John F. Anderson and Thomas B. McClintic. II. The Determination of the Phenol Coefficient of Some Commercial Disinfectants. By Thomas B. McClintic. Paper. Pp. 74. U. S. P. H. and M.-H. S., Hyg. Lab. Bull., 82, 1912.

Direct Laryngoscopy, Bronchoscopy and Esophagoscopy. By Dr. W. Brunings. Translated and Edited by W. G. Howarth, M.A., M B., B.C., Surgeon in Charge of the Throat Department at St. Thomas' Hospital, London. Cloth. Price, $5 net. Pp. 370, with Illustrations. New York: William Wood & Company, 1912.

The Hospital Corps Quiz Compend. A Manual for the Hospital Corps, U. S. Army Hospital Corps, National Guard Red Cross Association and for Students and Practitioners. By Frank C. Griffis, M.D., Medical Reserve Corps, U. S. Army. Cloth. Price, $0.75. Pp. 218. Columbus, Ohio: Edward T. Miller Company, 1912.

Common Disorders and Diseases of Childhood. By George Frederic Still, M.A., M.D., F.R.C.P., Professor of Diseases of Children, King's College, London. Second Edition. Cloth. Price, $5.50. Pp. 813, with Illustrations. Oxford Medical Publications. London: Henry Frowde, 1912.

General Surgery. Edited by John B. Murphy, A.M., M.D., LL.D., Professor of Surgery in the Northwestern University. Cloth. Price, $2. Pp. 616, with Illustrations. Practical Medicine Series. Chicago: The Year Book Publishers, 180 N. Dearborn Street, 1912.

Aids to Ophthalmology. By N. Bishop Harman, M.A., M.B., F.R.C.S., Eng., Lecturer in Ophthalmology, West London Post-Graduate College. Fifth Edition. Cloth. Price, $1 net. Pp. 216, with illustrations. New York: William Wood & Co.

Gynecological Nursing. By Arthur E. Giles, M.D., B.Sc., F.R.C.S., Surgeon to the Chelsea Hospital for Women. Cloth. Price, $1.50 net. Pp. 187, with 41 Illustrations. New York: William Wood and Company, 1912.

Elsie Lindtner. A Sequel to "The Dangerous Age." By Karin Michaëlis Stangeland. Authorized Translation by Beatrice Marshall. Cloth. Price, $1.20 net. Pp. 212. New York: John Lane Company, 1912.

Report of Administrative Secretary, Rockefeller Sanitary Commission for the

(Continued on next page)

**WASSERMANN TEST**

**Salvarsan (Ehrlich's 606) administered for physicians by intravenous or intramuscular methods.**

**Autogenous Vaccines—Therapeutic Tuberculins**

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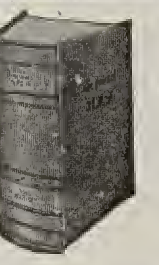

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**A CLASSIFIED Advertisement** inserted in THE JOURNAL will be read by about TWO-THIRDS of the medical profession.

(Continued from page 22)

WANTED — TO BUY AN ESTABLISHED eye, ear, nose and throat practice in city of not less than 10,000, or will give $50 to any doctor, druggist or other person who will inform me of some such suitable location as soon as accepted. Add. 2855 E, % AMA.

WANTED—GENERAL PRACTICE—GOOD city or county seat, preferably in central Indiana; must be a live business, not less than $3,500; have had 14 years' successful village practice; money to invest in suitable property with modern conveniences; prefer house and office connected. Add. 2987 E, % AMA.

### INTERNS WANTED

WANTED—INTERNS — TWO INTERNS at once to complete staff of ten; hospital 200 beds; service largely surgical; term one year; board, room, laundry; chance of promotion to senior position with expense allowance; give age, date, place of graduation and reference. Grace Hospital, Detroit, Mich. D

### PARTNERS WANTED

WANTED—ADVERTISER WISHES PARTNER in electrotherapeutic supply business; established same location 6 years; live western city; would prefer physician wanting to give up practice with knowledge of electrotherapeutics; capital required $2,000; state full particulars first letter; same will be given in return. Add. in confidence, 2996 G, % AMA.

WANTED—AN ENERGETIC YOUNG MAN who wishes to specialize, with some cash to buy an interest in $7,000 a year eye, ear, nose and throat practice; established 12 years; in south Georgia town of 5,000, with half dozen good towns near by; practice gets larger every year; I need a partner or assistant; good opportunity for right man; I prefer young man who has just graduated, wishing to specialize; best reference given and required. Add. 2923 G, % AMA.

### PARTNERSHIP WANTED

WANTED—TO BUY A PARTNERSHIP IN office practice in Chicago or a first-class practice in suburbs; ten years' experience; familiar with all new methods of treatment; can do general surgery, eye and ear work; speak several foreign languages. Add. 2975 H, % AMA.

### SITUATIONS WANTED

WANTED — PHYSICIAN DESIRES SALARIED position in sanitarium, school, laboratory or settlement work; graduate from University of Michigan, department of medicine and surgery and year in general hospital; two in private practice and as resident in school; licensed in two states; can accept position at once. Add. 2999 I, % AMA.

WANTED—POSITION—SALESMAN WITH 15 years' experience, detailing physicians and selling to drug trade is desirious of position; best of references. Add. 2747 I % AMA.

WANTED — POSITION AS ASSISTANT to surgeon, house physician or contrac surgeon work, mine, mill, by experienced physician, aged 32; two years hospita intern, one year laboratory assistant best references furnished; moderate salary expected. Add. 2976 I, % AMA.

WANTED — OCULIST, WHO HAS HA the best training in eye work obtainabl in America, including service as house surgeon in one of the largest eye hospitals desires a position as assistant or associat with an elderly oculist in New York o other large city where there is considerabl operative work. Add. 2777 I, % AMA.

WANTED — IMMEDIATELY — POSITIO as locum tenens, assistant to physicia or in hospital for insane, by physicia aged 34. Graduate College of P. and S Chicago, 1908. Hospital training, fourte months in Peoria State Hospital. Wi experience in Chicago in internal medicin G. U. work and nervous and mental di eases. Hard, conscientious worker. Be of references. Dr. C. E. Mayos, 3 We Ohio Street, Chicago.

(Continued on next page)

## BOOKS RECEIVED

*(Continued from preceding page)*

Eradication of Hookworm Disease. Organization, Activities and Results Up to 1911. Paper. Pp. 38. Washington, D. C.

Aids to Histology. By Alexander Goodall, M.D., F.R.C.P., Edin. Cloth. Price, $1 net. Pp. 135, with illustrations. New York: William Wood & Co., 1912.

American Association of Obstetricians and Gynecologists. Transactions for 1911. Volume 24. Cloth. Pp. 358, with illustrations. Dr. E. Gustav Zinke, secretary, 4 W. 7th Street, Cincinnati.

Studies from the Department of Pathology of the College of Physicians and Surgeons, Columbia University, N. Y. Paper. Volume 12, 1909-1911.

British Association for the Advancement of Science. Report of the Eighteenth Meeting, 1911. Cloth. Pp. 804. London: John Murray, 1912.

Baby's Teeth to the Twelfth Year. By Albert Westlake, D.D.S. Cloth. Price, $0.50. Pp. 95. New York: Mitchell Kennerley, 1912.

Augustus Charles Bernays. A Memoir. By Thekla Bernays. Cloth. Price, $2. Pp. 300. St. Louis: C. V. Mosby Company, 1912.

Commissioner of Indian Affairs. Report for 1911. Cloth. Pp. 295. Washington, D. C.: Government Printing Office, 1912.

Montclair, N. J. Seventeenth Annual Report of the Board of Health, 1911. Paper. Secretary, Mr. Edward Winslow.

Bureau of Science. Tenth Annual Report, for 1911, by Paul C. Freer. Paper. Manila, P. I.

## *The Public Service*

### Medical Department, U. S. Army

Changes during the week ended June 15:

Hall, William E., M.R.C., June 5, granted leave of absence for two months with permission to apply for an extension of one month and twenty days.

Scherer, Carl A., M.R.C., resignation accepted, June 5, 1912.

Michie, Henry C., Jr., lieut., June 5, orders relieving him from duty at Fort Missoula, Mont., and to report for duty at Fort Flagler, Wash., is revoked.

Craig, Charles F., captain, June 10, granted thirty days' leave of absence, to take effect July 5, 1912.

Stone, Frank P., dental surgeon, June 6, reports return to Fort Barrancas, Fla., from temporary duty at Fort Screven, Ga.

Wild, William F., M.R.C., June 11, resignation accepted.

Raymond, Thomas U., lieut.-col., June 11, now on leave of absence in the United States, is relieved from further duty in the Philippines division, to take effect on expiration of said leave, and will then proceed to Fort Slocum, N. Y., for duty.

Wheate, J. H., M.R.C., June 5, reported for temporary duty at presidio of San Francisco; left Boise Barracks, Idaho, June 2, 1912.

Sherwood, Charles E., acting dental surgeon, June 4, returned to presidio of Monterey, Cal., from temporary duty at presidio of San Francisco.

Woodruff, Charles E., lieut.-col., June 7, granted thirty days' leave of absence.

McLellan, George H., lieut., June 8, left Fort McDowell, Cal., on two months' leave of absence, with permission to apply for one month's extension.

Willis, John M., lieut., June 11, left Fort Snelling, Minn., on thirty days' leave of absence.

Page, Henry, major, June 11, ordered to camp, organized militia, Moorehead City, N. C., from July 3 to 12 and July 16 to 25, 1912, for duty as inspector-instructor of North Carolina militia.

Mason, George L., dental surgeon, June 7, granted two months' leave of absence, about July 1, 1912.

Duncan, Louis C., captain, June 13, granted thirty days' leave of absence.

Howell, Walter O., M.R.C., June 13, relieved from duty at Schofield Barracks, H. T.; granted two months and twenty-six days' leave of absence and at expiration of relieved from active duty in the medical reserve corps.

*(Continued on next page)*

**CHRONIC ULCERS OF THE LEGS**

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**DOLOMOL-ICHTHYOL 10%**

*(See "New and Nonofficial Remedies," Page 76, 1911 Edition)*

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*(Continued from preceding page)*

WANTED — SITUATION AS LABORATORY or hospital assistant; recent graduate of an A1 school; one year hospital experience; three months' private practice; good laboratory training; single, excellent habits; best references; prefer middle west; give particulars in first letter. Add. 2964 I, % AMA.

WANTED—POSITION AS SUPERINTENDENT of hospital, by a woman physician who is also a trained nurse; experienced, executive ability, capable of taking full charge and managing all departments; can furnish excellent testimonials. Add. 2913 I, % AMA.

WANTED—A POSITION AS AN ASSISTANT to an eye, ear, nose and throat specialist, by thoroughly competent man; graduate class A school, temperate, of good address and married, or will pay small sum for good location or buy a practice if cheap, but prefers a position; references furnished. Add. 2921 I, % AMA.

WANTED—POSITION AS WOMAN PHYSICIAN in state hospital for insane; experienced; charge of acute service in large institution making all mental and physical examinations for women and managing hydrotherapeutic department; also tubercular, inebriate, epileptic and general sick wards; best references and reasons for desiring change. Add. 2854 I, % AMA.

WANTED—WITHIN CONVENIENT MOTORING distance of Boston, position with physician of good professional ideals and standing; want compensation enough to meet moderate expense account and opportunity to take certain postgraduate courses, beginning September; I am a practicing physician in Colorado and professionally well connected. Add. 2928 I, % AMA.

WANTED POSITION AS LOCUM TENENS or assistant in private or institutional practice, by 1910 graduate of A1 college: have had one year's hospital service and one year's assistantship in mining practice; aged 28, single; will go anywhere, but prefer Iowa; reciprocity in 22 states. Add. 2898 I, % AMA.

WANTED — LADY PHYSICIAN, HAVING great desire to travel, would like position as companion to lady traveling; nursed my mother, who was an invalid, for years; have a special regard for elderly ladies and would give my best attention and am sure could give satisfaction; references exchanged. Add. 2904 I, % AMA.

WANTED — POSITION WITH EYE OR ear, nose and throat specialist; single, aged 26, good habits; state full particulars in first letter. Add. 2903 I, % AMA.

WANTED — ASSISTANTSHIP OR PARTNERSHIP to a surgeon or general practitioner doing surgery, by a university and medical graduate of A1 schools; one year laboratory experience; two years' internship in a large Chicago hospital; three years in general practice and surgery; prefer city of 20,000 or more. Add. 2797 I, % AMA.

### MISCELLANEOUS—WANTED

WANTED—PHYSICIAN—SCANDINAVIAN preferred, or at least one speaking Danish, Norwegian, etc.; fine location and no opposition; nothing to buy; married man preferred and must be reliable and first class. For full particulars add. State Bank, Storden, Minn. (Kniest-Omaha Agency). J

WANTED—BY ABLE WRITER OF MEDICAL articles, popular and scientific, to do editorial or other literary work. Add. 2985 J, % AMA.

WANTED — NEW MEXICO—IN PRETTIEST and healthiest town; sanitarium is needed; have 2 fine stone and brick buildings suitable, with 20 acres ground, young orchard; 600 trees will pay big; official value, $25,000; will sell for $12,500; favorable terms; absolute title; this is a real opportunity; investigate at once. Add. Dr. B, Drawer S, Alamogordo, N. M. J

WANTED — PHYSICIAN — IN IDAHO — Large territory and about 7,000 people in the territory; rich farming country. Add. for particulars M. T. Peck and Son, druggists, Rigby, Idaho (Agency F. V. Kniest, Omaha, Neb.). J

*(Continued on next page)*

## THE PUBLIC SERVICE

*(Continued from preceding page)*

Owen, Leartus J., captain, June 13, relieved from duty at Fort Benjamin Harrison, Ind., and ordered to Schofield Barracks, H. T., for duty.

Munson, Edward L., major, June 13, relieved from duty at the army service school, Fort Leavenworth, Kan., and ordered to presidio of San Francisco for duty.

Bispham, William N., major, June 13, is detailed for duty at the army service school, Fort Leaveuworth, Kan.

### Medical Corps, U. S. Navy

Changes for the week ended June 8:

Whitmore, G. B., P. A. surgeon, detached from U.S.S. *Connecticut* and ordered home to wait orders.

Smith, H. L., P. A. surgeon, detached from receiving ship at New York and ordered to the *Chester*.

Cuthbertson, Roy, P. A. surgeon, commissioned P. A. surgeon from Oct. 12, 1912.

Clark, G. F., P. A. surgeon, commissioned P. A. surgeon from April 14, 1912.

Dragoo, C. H., and Wood, C. C., asst. surgeons, commissioned asst. surgeons from May 4, 1912.

Changes for the week ended June 15:

Baker, M. W., surgeon, detached from the receiving ship at Mare Island, Cal.; granted leave for one month; resignation accepted, to take effect July 19.

Clark, G. F., P. A. surgeon, detached from the *Solace* and ordered to the naval medical school, Washington, D. C.

McMullin, J. J. A., asst. surgeon, detached from the *North Carolina* and ordered to the *North Dakota*.

Whitmore, G. B., P. A. surgeon, ordered to the naval recruiting station, Des Moines, Iowa.

Vickery, E. A., P. A. surgeon, detached from the *Maryland* and ordered to the *St. Louis*.

Rose, M. E., A. A. surgeon, detached from the marine recruiting station, Memphis, Tenn., and ordered to the marine recruiting station at St. Louis.

### U. S. P. H. and M.-H. Service

Changes for the fourteen days ended June 12:

White, J. H., surgeon, and Creel, R. H., P. A. surgeon, detailed to represent the service at the meeting of the American Society of Tropical Medicine to be held at Atlantic City, N. J., June 3-7, 1912.

Wertenbaker, C. P., surgeon, detailed to attend the meeting of the Association of Surgeons of the Southern Railway, to be held at Washington, D. C., June 11-13, 1912.

Ramus, Carl, P. A. surgeon, relieved from duty at the Marine Hospital, Port Townsend, Wash., and directed to report to the Chief Medical Officer, Ellis Island, N. Y., for duty.

Warren, B. S., P. A. surgeon, detailed to represent the service at the annual meeting of the State Board of Health of New Jersey and the Pediatric Society of the State of New Jersey at Spring Lake, N. J., June 10, 1912.

Collins, G. L., P. A. surgeon, relieved from duty at Ellis Island, N. Y., and directed to proceed to South Baltimore, Md., and report to Commanding Officer, Revenue-Cutter *Unalga* for duty.

Frost, W. H., P. A. surgeon, detailed to represent the service at the Second Annual Conference of State Health Officers, at Lawrence, Kan., June 10-15, 1912.

Altree, G. H., acting asst. surgeon, granted thirty days' leave of absence, without pay, from June 20, 1912.

Hollman, H. T., acting asst. surgeon, granted thirty days' leave of absence from June 12, 1912.

Morse, J. F., acting asst. surgeon, granted three months' leave of absence, without pay, from June 1, 1912.

Terry, M. C., acting asst. surgeon, granted thirty days' leave of absence from July 1, 1912.

BOARD CONVENED

Board of medical officers convened to meet at Vancouver, B. C., for the reexamination of alien immigrants. Detail for the board: P. A. Surgeon Carl Ramus, chairman; Acting Asst. Surgeon H. R. Storrs, recorder.

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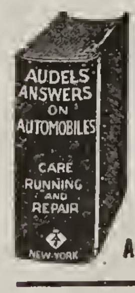

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FOR SALE — COLORADO — $2,000 UNOPPOSED mountain practice; 700 people; mining camps; good fees and collections; healthy climate; hunting and fishing; just the place to gain experience or health; money from the start; don't write unless you mean business; price $500 cash; going to city. Add. 2796 N, % AMA.

FOR SALE—CONNECTICUT—HAVE YOU $5,000. I have made a competency and so can you. Retire because of ill health. Mostly office work; outside practice if wanted. Knowledge of eye, ear, nose and throat necessary. Hospital appointment. Cash or good security required. Add. 2982 N, % AMA.

FOR SALE — ILLINOIS — UNOPPOSED good paying country practice 80 miles south of Chicago; small hustling railway village with extensive first-class country patronage; established thirty years; good opening for drug store in connection; office furniture and practice $300; driving outfit and auto optional; full particulars and reasons given on application to those meaning business. Add. 2974 N, % AMA.

FOR SALE — SOUTHERN INDIANA—$2,500 business in pleasant village of 300; easy competition; gravel roads; best schools and churches; good collections; sell or lease building office; sell office fixtures, drugs, etc., at less than invoice (about $300); cash or good paper; thorough introduction; going to city. Add. 2988 N, % AMA.

FOR SALE—EASTERN INDIANA—$3,000 practice, 9-room residence, 2-room office, good barn, 2 lots, on C. & O. R. R.; price, $2,500; part cash; balance time. Add. J. A. Kramer, M.D., Blountsville, Ind. N

FOR SALE—NORTHERN IOWA—UNOPPOSED $3,500 to $4,500 practice; good town, fine country, largely English-speaking Germans; good stock drugs, office equipment and furniture, except library and instruments, with practice, for $650; collections 95 to 98 per cent.; large territory sure money maker from start; can introduce; reason, other business. Add. 2943 N % AMA.

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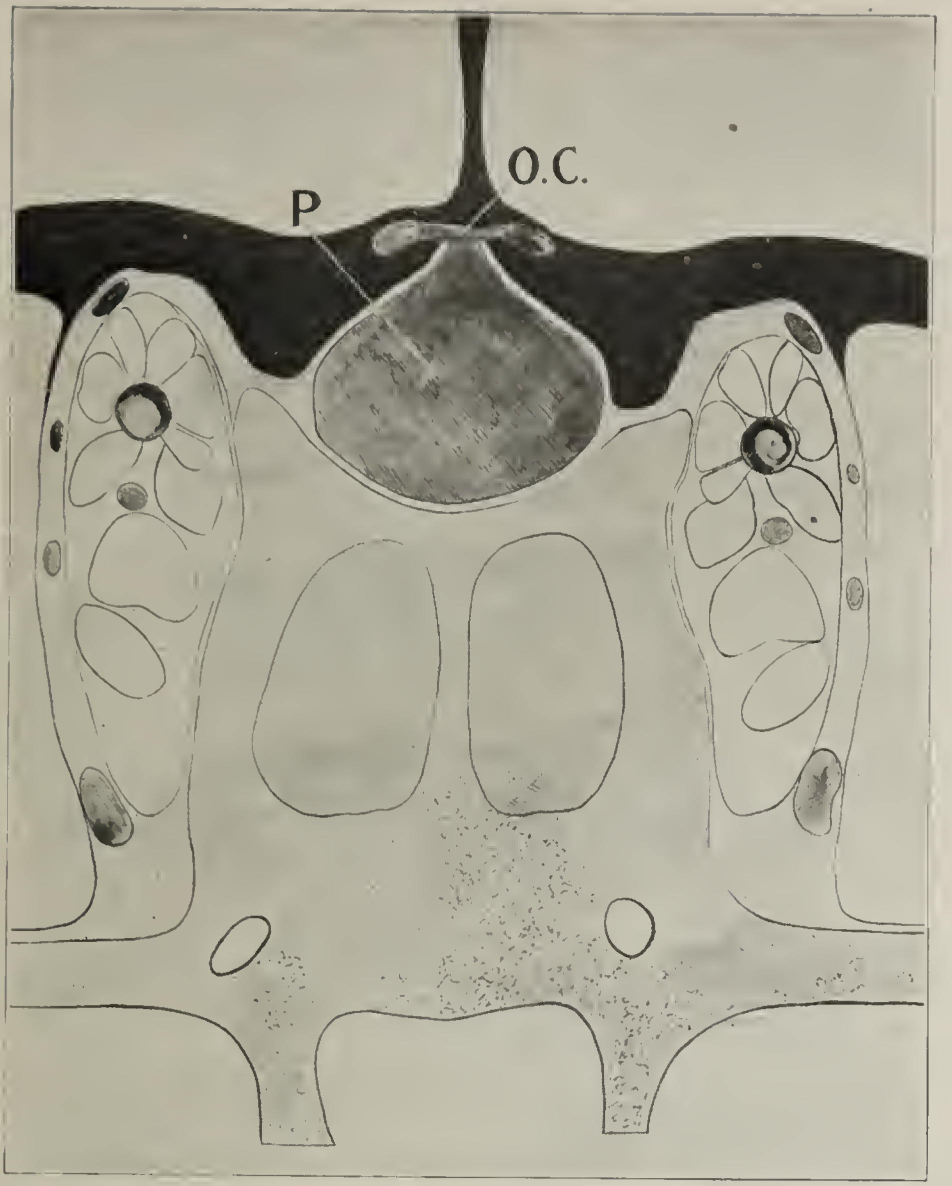

Fig. 1.—Lateral cross-section of brain, showing hypophysis (P) beneath the optic chiasm (O C), as referred to on page 2010.

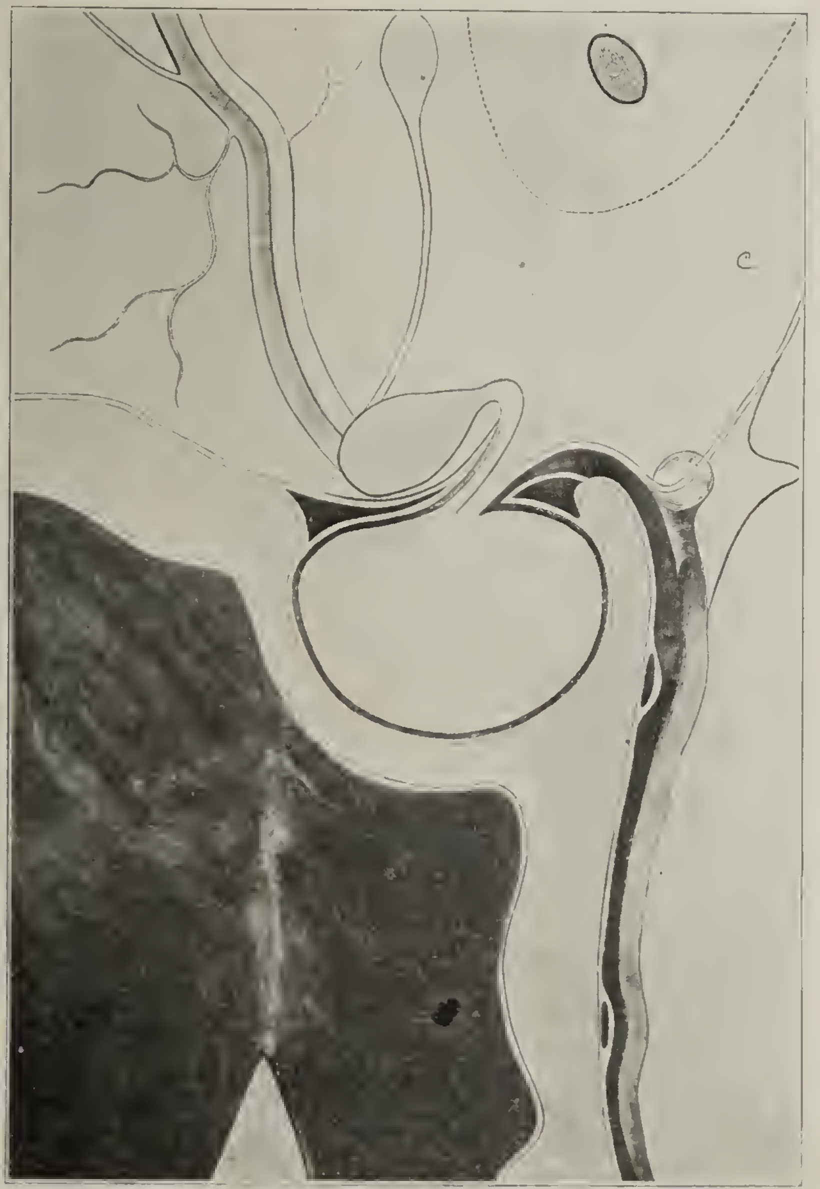

Fig. 2.—Anteroposterior cross-section of brain, showing hypophysis beneath the optic chiasm, as referred to on page 2010.

Illustrating Article on Surgery of the Pituitary Body, by Dr. L. L. McArthur, pp. 2009 to 2011.

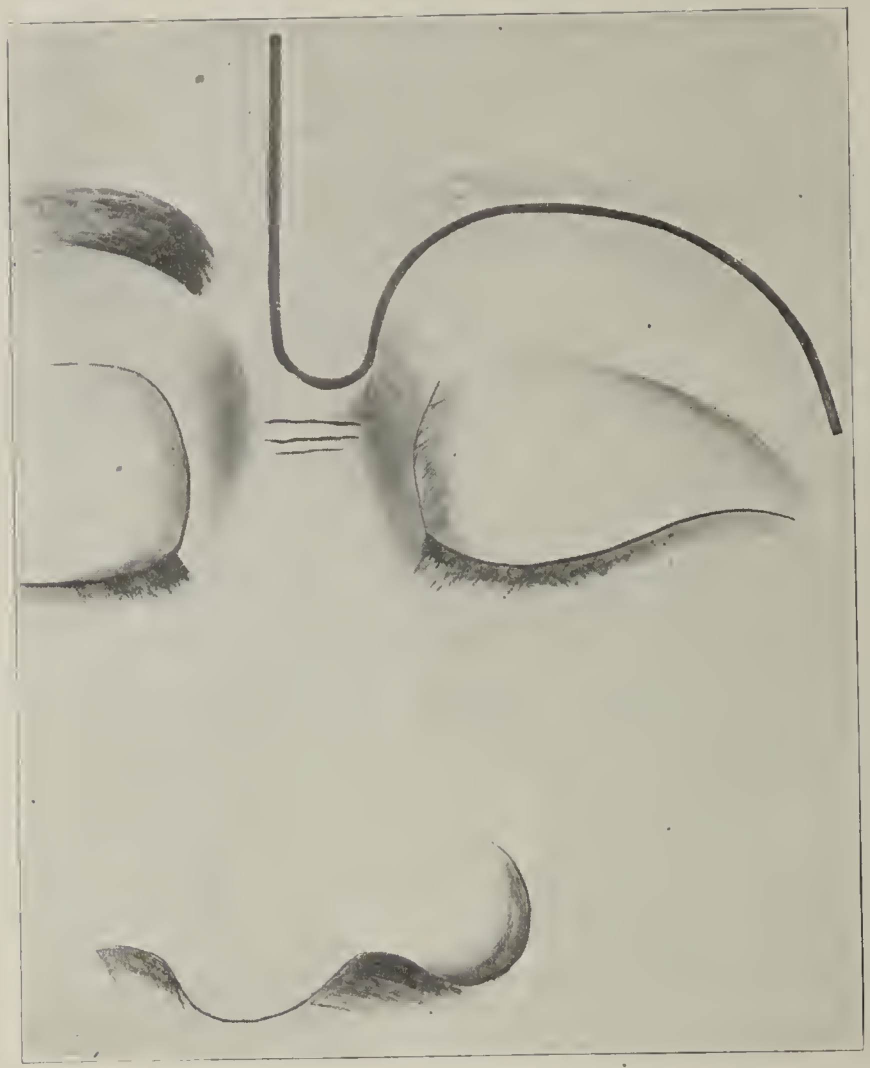

Fig. 3.—Line of incision of the soft tissues in gaining access to the pituitary tumors. See page 2010.

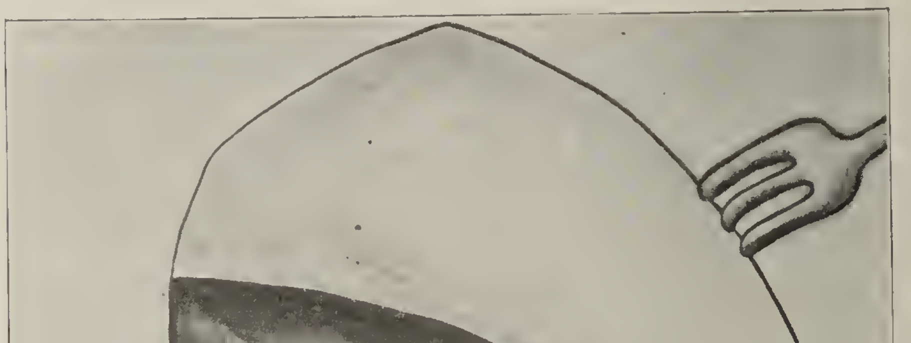

Fig. 4.—Removal of frontal fragment and portion of orbital roof, as described under "Technic."

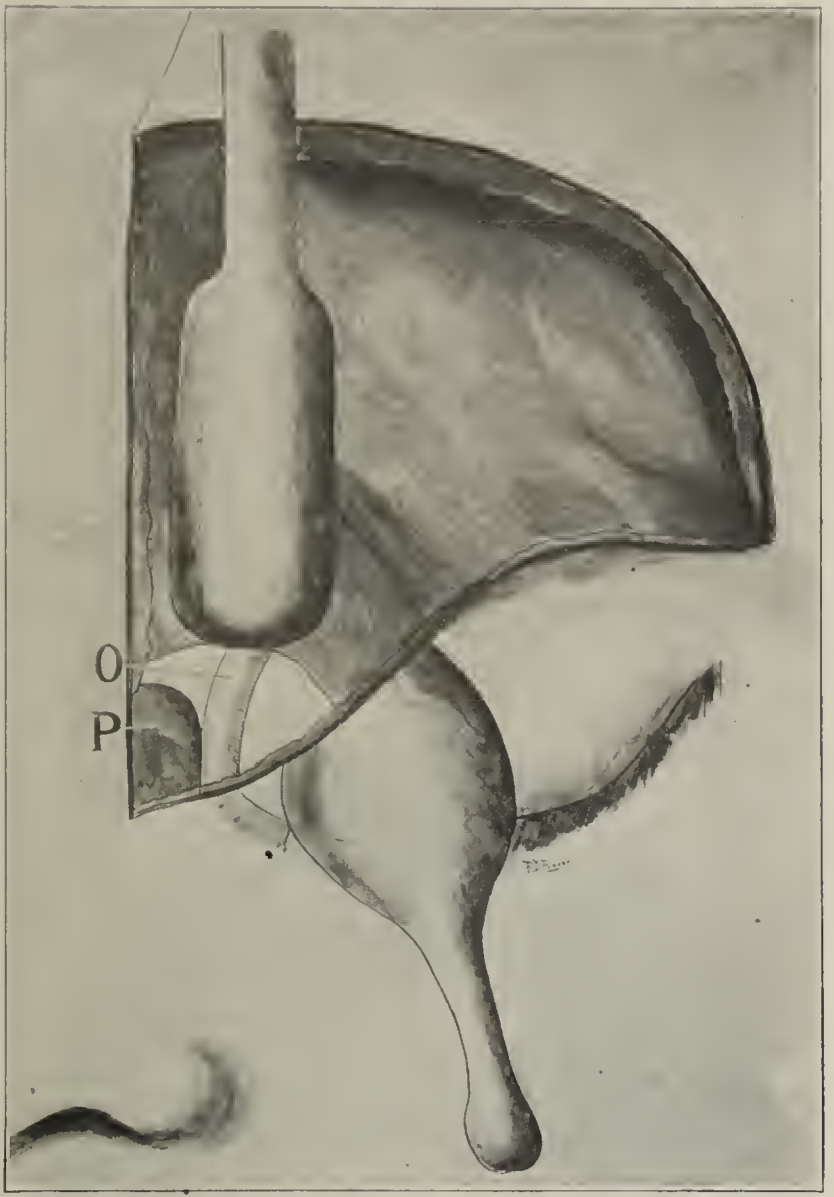

Fig. 5.—Frontal fragment and orbital roof removed, frontal brain retracted upward, eye retracted downward, exposing hypophysis (P) and portion of the optic chiasm (O), through smaller opening in dura. See page 2010, under "Technic."

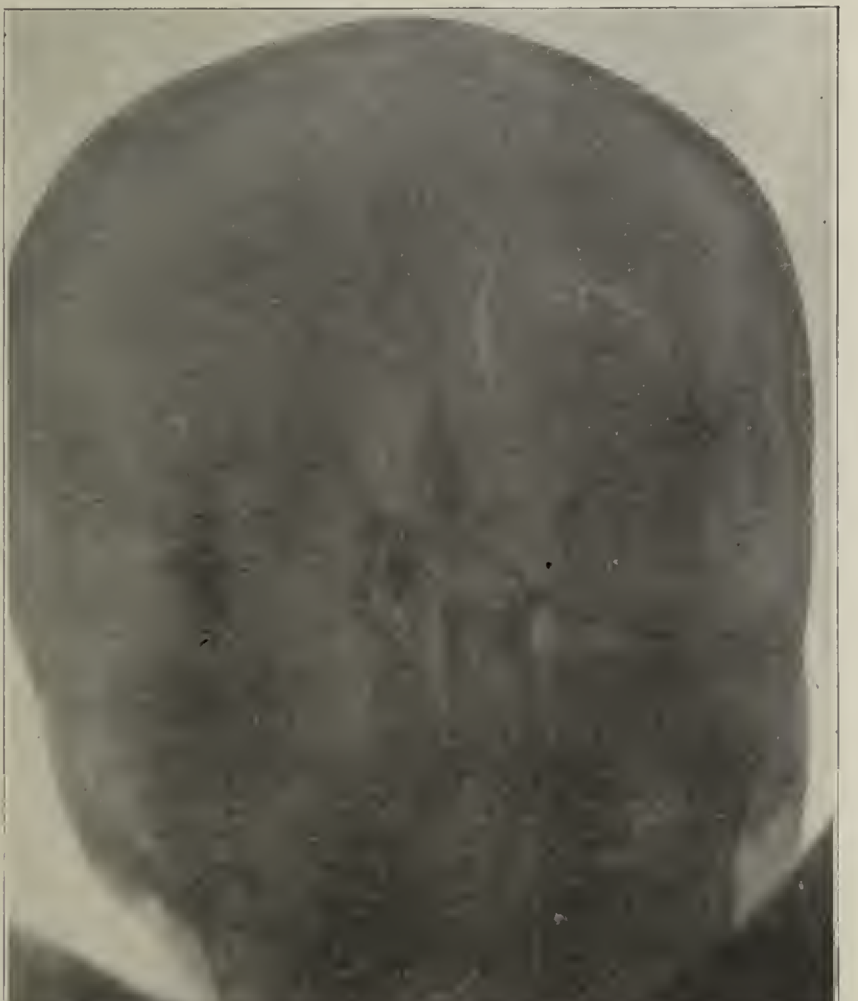

Fig. 6.—Frontal fragment replaced after operation; from a radiogram, slightly retouched to emphasize the shadow.

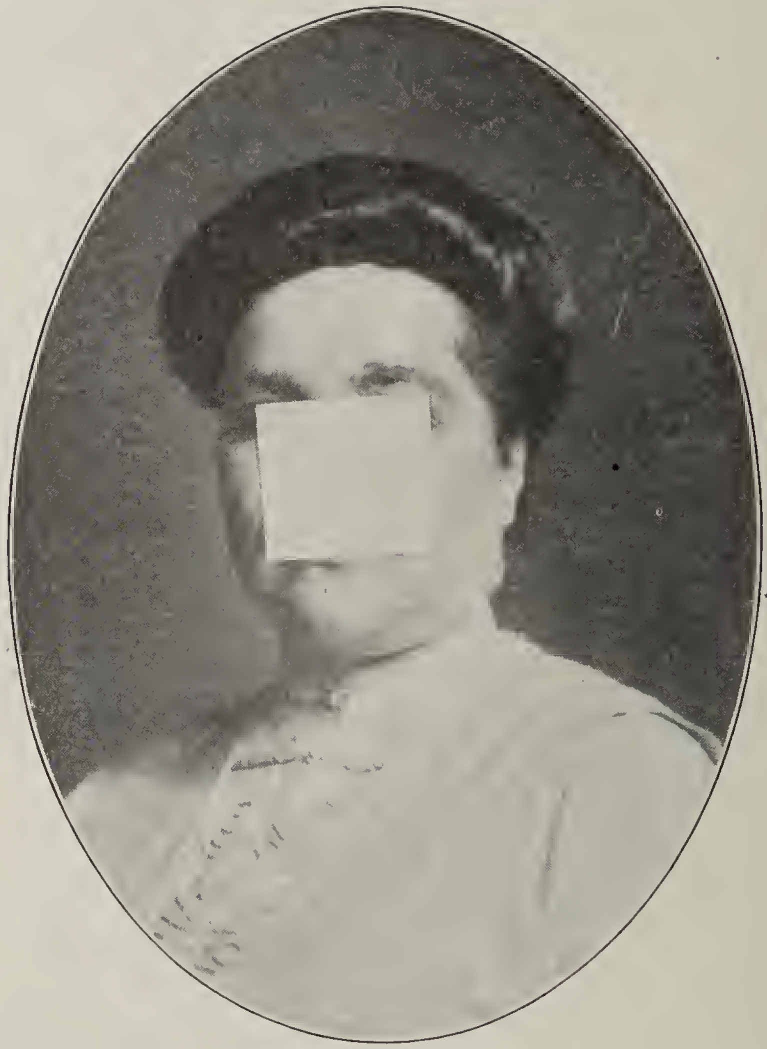

Fig. 7.—Patient after operation, showing line of incision scarcely visible.

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# AN ASEPTIC SURGICAL ACCESS TO THE PITUITARY BODY AND ITS NEIGHBORHOOD *

L. L. McARTHUR, M.D.
CHICAGO

I desire to ask your indulgence for departing from the more customary annual review of current surgical progress and to invite your attention to a subject of so narrow a scope as the caption of this paper sets forth.

Long considered safe from invasion by the most daring surgeon, both because of its almost inaccessible position and because of its intimate relation to life, the question of its feasibility to surgical attack has been answered in the affirmative. The question has now changed to, "When, and how shall one operate?"

Embraced within the brief period of twenty years, beginning with Marie's demonstration of the definite relationship of pituitary disease to acromegaly (1889) and ending with the memorable paper of Harvey Cushing read before this Section three years ago, all the knowledge of this subject has been accumulated. Were new arguments in proof of the value of scientific animal experimental research needed, the flood of light shed on this dark subject alone by the illuminating work of Shäffer, Crowe, Cushing, Kanavel and others should alone silence captious criticism. It is when the general surgeon comes to apply the fund of knowledge thus supplied that he sees, or thinks he sees, some modification of technic which may lessen the dangers, obviate some of the difficulties, or render less disfiguring or maiming the results of the earlier methods of attack. Hence the change from the lateral line of attack proposed by Carton and Paul and utilized by Horsley to the intranasal route proposed by Koenig and utilized by Schloffer, by which the majority of operations up to the present have been made. Let it not then be considered an insult to the intelligence of this audience if I briefly epitomize the operative procedures thus far in vogue and their evolution before proceeding to the recommendation which personal experience has convinced me to be a step in advance. The scope of the paper, then, is wholly confined to operative technic, all reports of cases, personal experiences, etc., being reserved for a conjoint report with the neurologists, Dr. Archibald Church and Dr. Sidney Kuh, through whose courtesy I have been enabled to apply practically the results of experimental work done in the laboratory. All three cases presented optic pressure symptoms. In all, the hypophysis was reached; in two of them, hypopituitarism was evident.

Carton and Paul evolved a procedure for the removal of diseased conditions of the pituitary, by the route usually employed in reaching the gasserian ganglion through the middle fossa. This was first utilized by Horsley. By this route he reached a cyst of the hypophysis, which, rupturing during its attempted removal, necessitated temporary drainage. In his operation, Horsley opened at once the dura, lifted the temperosphenoidal lobe, and later recommended the desirability of such an early incision of the dura. His patient was benefited. Halstead quotes Dahlgren as having also successfully utilized the subtemporal route.

It is probable that laboratory technic in the study of the physiology of this ductless gland exerted a powerful influence in the evolution of the operative attack on it in the human being; for a route had early been demonstrated in the lower animals which passed through the body of the sphenoid. This brings one directly to the floor of the sella turcica, on which the hypophysis rests. Shäffer successfully studied this organ in the dog, by a transphenoidal route beginning in the roof of the mouth, and Cushing, who had made numerous exposures of the hypophysis by the subtemporal route in the dog, found that the route through the roof of the mouth in the dog made facile the access to the body of the sphenoid, through the sinuses of which it was an easy matter to expose the inferior anterior surface of the pituitary gland.

Schloffer, in 1907, successfully applied the same method of attack to the human being, using the nasal route as offering the best access to the body of the sphenoid, on the roof of whose sinuses the hypophysis rests. He was soon followed by von Eiselsberg, who utilized the same procedure.

I will not delay longer with the description of a technic so well known, further than to recall that it involved the temporary resection of the external nose with the permanent destruction of almost all the contents of the nasal cavities.

That this was not wholly a satisfactory procedure is evidenced by the changes which are taking place in the methods of gaining access to the sphenoidal cells. Halstead now subdivides the routes into the superior and inferior nasal; Giordano, first to recommend the former, contemplated the removal of the septum, vomer, superior turbinates and ethmoidal cells and frontal sinus; while by the inferior nasal route of Kanavel, the major portion of these structures can be preserved. By the latter route, too, the incision, being within the mouth, leaves very little disfigurement. Finally, Cushing, who has had a greater experience with this route than anyone, has refined the operation to such an extent that after making a transverse intrabuccal incision at the point recommended by Kanavel, he makes a submucous

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* The Oration on Surgery, read in the Section on Surgery of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

extirpation of the septum and, with the nasal mucosa left intact, flattens out the turbinates by introducing a divulsor between the blades of two long slender retractors. In a personal communication from him I learn that he has frequently been able by this method to reach the sphenoidal sinuses without having torn through the nasal mucosa. He believes in this wise to have almost eliminated the ever-present dangers of septic meningitis which attend the direct transnasal route with its mutilations of turbinates, ethmoidal cells, etc.

Krause, as a result of experimental work on the cadaver, applying the principle of the Hartley-Krause skin periosteum bone-flap, turned down a very large horse-shoe of the frontal prominence on the selected side; then without opening the dura he proceeded slowly to elevate dura and frontal lobe together. On reaching the free edge of the sphenoid wing and the anterior clinoid process, he made a transverse incision in the dura between the optic nerve sheaths 0.5 cm. above the level of the bony floor. This brings the optic chiasm into view with the pituitary body immediately beneath it. He particularly specifies the desirability of a very fine hook-shaped knife for the purpose of incising the dura, in order not to injure any of the blood-vessels beneath it. He emphasizes the fact that the hypophysis, contrary to the prevailing opinion, can be exposed by this procedure. Up to the time of the publication of the last edition of his work he had not done the operation on the living. Bogojawlensky, in February of this year, successfully removed a tumor of the hypophysis by following the above technic, adding to it his suggestion of raising the operating-table to an angle of 30°, with the occiput hanging down over its elevated edge. The tumor was distinctly visible in front of the optic commissure. The recovery was without incident.

In the past, inspection and study by the pathologist or the anatomist of the relationship of the hypophysis to the rest of the nervous system have so universally been made after the removal of the brain with its adnexa, by inverting them, that only the very recent works depart from the old illustrations which depicted the hypophysis as hanging by its pedicle posterior to the optic chiasm. Since the study of the relationships of these structures by the frozen section method has come into vogue, we now know that this older impression is a false one and that the hypophysis is beneath the chiasm.

Kiliani illustrates with excellent drawings a proposal of his, which amounts to an enormous enlargement of the Krause method. In this an almost complete frontal bone reflexion is contemplated, with division of the longitudinal sinus between ligatures, transverse section of the dura and an elevation of both anterior lobes, exactly as is done in the post-mortem room when these lobes are elevated so that the hypophysis may be removed. Up to that time (1904) he had not utilized the method on the living.

In March, 1908, prior to the illuminating contributions of Cushing, Shäffer and others on the functional importance of this ductless gland, I performed my first operation for the relief of pressure on the optic nerves, a progressive bilateral hemianopsia threatening the patient with blindness. The experience gained from this and the two succeeding operations resulted in the adoption of the following technic:

## TECHNIC

The usual preparation of the patient for operation is observed: the preliminary prophylactic use of hexamethylenamin after Crowe's recommendation; the eyebrows shaved, and the operative field iodinized. The head is placed over the end of the table and the table elevated to 30°. The incision is made preferably over the right side unless some special indication for the left side exists. Beginning at the inner end of the eyebrow the incision is carried through the eyebrow to the external aspect of the external angular process, cutting through all the tissues to the bone. The supra-orbital arteries are ligated without including the nerve. Following the normal furrow a perpendicular incision at the mid-nasal end prolongs the horizontal one upward 3 to 4 cm. All the tissues of the flap, including the periosteum, are then loosened from the bone and reflected upward. In a similar manner the periosteum of the orbital roof is loosened and the orbital contents displaced downward, an ordinary teaspoon serving the purpose well. The orbital tissues are not seen or opened.

With a ¼-inch trephine a small opening is made in the frontal prominence, 4 cm. above the middle of the supra-orbital arch, and the button preserved in blood-warm, normal salt solution. The DeVilbiss cutting forceps then makes a curvilinear cut through the bone, concavity downward, the inner end terminating at the frontal sinus, the outer end at the outer aspect of the external angular process, from which the periosteum has been likewise retracted downward, thus invading somewhat the temporal fossa. A sharp osteotome with its ½-inch edge directed upward and inward is then driven through the outer wall of the frontal sinus. The external angular process is likewise severed; the cutting edge of the osteotome is held horizontally. Using two or three bone elevators the loosened frontal fragment is carefull detached and with it comes about one-half the orbital roof. This is immediately placed in normal salt solution and kept at blood-heat until the close of operation.

The remaining portion of the orbital roof, back clos to the optic foramen, is then quickly bitten away wit appropriate rongeurs, extreme care being taken not t injure the dura at any stage of the bone removal. Wit this completed one can slowly and carefully detach fro the bone the dura covering the inferior surface of th frontal lobe, at the same time having the latter raised b a long thin angular retractor in the hand of a skille assistant, in whose other hand a spoon retractor displace the orbital contents downward.

When one has reached the anterior clinoid process an the free edge of the wing of the sphenoid, which can b recognized with probe, blunt hook or finger, orientatio becomes easy. The shelving off of the floor into th sella can then be determined and the point in the dur between the clinoid processes selected, through whic the 2 to 3 cm. incision should be made, using the hook like knife of Krause. This should be about 0.5 c above the level of the anterior fossa floor to avoid th small, transverse, venous sinus that occupies the groov between the optic foramina. (This groove, it was lon taught, harbored the optic chiasm.) With the transvers incision in the dura made, the optic nerve, chiasm an in the abnormal state, the pituitary body come into vie In the normal state the special dural covering of t pituitary body may require tearing with the hooked kni before it rises into view.

Until the incision is made in the dura, not a sing important intracranial structure or vessel has bee exposed or injured. With care in opening the latte the pituitary field and its neighborhood come into vie Having met the indications, the frontal lobe can dropped, the frontal fragment reposed, a fine gutt percha cigarette drain inserted to the dural opening, and the external periosteum stitched anteriorly, thus again enclosing the bone in its normal coverings. Its peculiar shape makes it fit snugly where placed. The soft tissues are then sutured carefully in place. Being in the hair line of eyebrow and the normal frontal furrow the scar is almost inobservable. Chiari has recently recommended an orbital approach to the pituitary by a removal of the internal orbital wall, thus gaining entrance to the posterior nares without disturbing the bony tissues anteriorly and completing the operation after the intranasal technic; he has reported two cases so operated. He plans his primary incision as I did, in the shaved eyebrow. This demonstrates how easily the one route can be converted into the other when necessary, confirms my claim to the shortness and feasibility of the proposal here presented, but defeats one of the objects sought, that of an aseptic field.

No desire simply to present a new route to the pituitary neighborhood would excuse the presentation of this communication. Of far more concern is it to emphasize what Cushing has already incorporated in his treatise on this subject, that no one route is applicable to all cases. This is the natural development of the progress made in the pathology of this gland. The increased or diminished functional activity of the anterior lobe, producing widely differing constitutional conditions, requires different therapeutic handling. Again, the diminished activities of the anterior lobe may be purely incident to the mechanical inhibition caused by an intrapituitary neoplasm (cystic or solid) flattening the former against the sellar floor. To attack this through the sphenoid would involve still further destruction of the very portion of the gland the operator is aiming to relieve and preserve. On the other hand, an increased activity of the anterior pituitary lobe without a corresponding increase in the volume would be far more appropriately treated by a partial removal through the nasal route than by the subtemporal or frontal paths. Moreover, there occur tumors in the immediate neighborhood that by their presence and pressure excite all those symptoms usually ascribed to pituitary disease, when in fact independent of that organ. Under these circumstances, some one of the intracranial routes would be essential to their proper approach.

A second and vital factor which determined my search for a method of approach was the 33 per cent. of infections reported by von Eiselsberg. Among the earlier cases this naturally was of great frequency, due to the enormous difficulty of securing asepsis in the upper respiratory tract, and although the submucous route after removal of the septum has in Cushing's hands almost eliminated this danger, it still exceeds that to be awaited in a properly carried-out intracranial operation.

In conclusion, I desire to express frankly my conviction that whatever the route chosen for approach to the pituitary, both the difficulties and the dangers attendant thereon are so great and so grave that, whenever possible, the work should be referred to those devoting their efforts essentially to cranial surgery. Among these I do not profess to number myself. When, however, the general surgeon does find it necessary in an appropriately selected case to approach the pituitary by a cranial route, the one here proposed offers greater facilities of access with less trauma to vital structures, less dangers of sepsis than those in the past employed.

122 South Michigan Avenue.

# SYMPTOMS OF COLONIC INTOXICATION *

J. F. BINNIE, M.D.
KANSAS CITY, MO.

It is exceedingly common for men of sedentary habits to use the week-end as a time in which to make up arrears of healthy, open-air exercise. Golf, tennis, boating, riding, etc., are indulged in vigorously. Such men are often surprised on their return to sedentary occupations, because, instead of feeling all keyed up for mental work, they find themselves dull, slow, logy and they may even suffer from headache. If, instead of returning to their usual habits, they keep up the active exercise, no such symptoms arise. A day of loafing as a break in a strenuous fishing or hunting trip is often a day of drowsiness, headache and bad temper. These results of the sudden cessation of active exercise are practically the same as the symptoms of a mild colonic intoxication though brought about in a different way, and one finds that they can be entirely avoided by the use of a brisk cathartic at the end of the period of muscular activity.

Practically it may be said that the liquids of the contents of the intestinal canal are absorbed in the large intestine. If the feces stay too long in the colon or, if from disease, etc., the mucosa of that intestine is too permeable, then an excess of the fluids is absorbed and more toxins gain access to the circulation than can be properly and promptly attended to by the purifying organs of the body (liver, etc.). The want of balance between absorption and purification or elimination leaves in the circulation materials noxious to the economy and a condition of intoxication results. One must remember also that when the feces are delayed in their passage through the intestine fermentative changes become more pronounced.

## I. GENERAL SYMPTOMS OF COLONIC INTOXICATION

A. There is general abdominal uneasiness; more or less distention is present with so-called gas pains and rumbling noises; nausea is common; constipation is the rule but periods of constipation are often broken by attacks of diarrhea. There may be daily evacuations of the rectum, but the colon remains loaded all the time. The stools frequently contain mucus; blood in the stools is not uncommon; the feces are often lumpy, hard and in masses, more or less like sheep droppings. The tongue is always furred. The patient admits having a bad taste in his mouth and the truth of that admission is evidenced by the unpleasant odor of his breath.

The appetite is commonly poor and capricious, though some patients have a frequent craving for food; breakfast is generally loathed. There is a general longing for sour things.

B. Headaches are very common. Dizziness is occasionally noticed, especially if the patient raises his head suddenly. *Muscæ volitantes* frequently annoy; also evanescent scotoma, etc.; in fact, migraine is evident. The "blues" are prominent; the temper is bad and the patient is exceedingly sorry for himself. Any trifle upsets the mental equilibrium and nervousness is great. That rather indefinite collection of symptoms which has been dubbed neurasthenia forms a marked feature of the intoxication. There is loss of weight in advanced cases. Fever is usually notable by its absence. The skin is dirty, even yellowish, but not jaundiced; this is specially marked under the eyes and about the body folds.

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* Read in the Section on Surgery of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

The hands and feet are chilly, and sour sweats are common, though sometimes the skin is dry and harsh. Usually the skin feels greasy. The nails are ill grown, irregular, brittle, flecked and ridged.

My colleague, Dr. George H. Hoxie, has studied the blood for me in a number of cases with the following result:

The characteristic feature of the blood-picture of colonic auto-intoxication lies in the staining reactions of the white cells. The hemoglobin, total red count and total white count are within normal limits and thereby differentiate the condition from inflammations of the acute type. But the relative numbers of the various cell types differ from both the normal and the condition found in inflammations in that the total polymorphonuclear percentage is decreased and the large lymphocyte percentage increased. The typical deeply staining small lymphocytes are also decreased.

The cell that may be called characteristic of the blood-picture is the polymorphonuclear that takes both the red and the blue stains in its protoplasm—the so-called ambophilic cell. The nucleus of this cell may be lilac or deep blue, but the protoplasm is made up uniformly of large heavily stained purple granules lying in a mauve cytoplasm. The cell is therefore prominent in the field because it seems darker to the eye than the other polymorphonuclears.

Such cells may be occasionally found in other conditions but only in relatively small numbers. Therefore, when one finds these cells exceeding the total number of polymorphonuclears by 20 per cent., one should look for the other signs and symptoms of colonic auto-intoxication.

An average picture would be: Hemoglobin, 90 to 100; red blood-cells, 5,000,000; white blood-cells, 9,000.

Differential count: Polymorphonuclears, 60 per cent.; mononuclears, 35 per cent.; mast cells, 0.5 per cent.; and eosinophils, 1 per cent. Of the polymorphonuclears, 6 per cent., immature; 15 per cent., neutrophils; 60 per cent., ambophils; 10 per cent., basophils; and 5 per cent., oxyphils. Of the mononuclears, 80 per cent., large forms; 10 per cent. small forms; and 10 per cent. immature. The indican and phenolsulphates in the urine are increased in quantity.

### II. SYMPTOMS OF SOME OF THE CONDITIONS CAUSING THE INTOXICATION

A. *Cecum Mobile, Ptosis of the Cecum, Atony and Dilatation of the Cecum, Ileac Kinks and Pericolitis Dextra.*—These conditions may be considered together, as their symptoms are very similar and possibly, to a large extent, the various names given may refer to one and the same thing. Besides the general symptoms of intoxication, we find painful sensation in the lower abdomen, commonly on the right side, less commonly in the whole hypogastrium and occasionally diffuse (60 per cent. right side, 24 per cent. whole hypogastrium, 16 per cent. diffuse [Klose]). The symptoms are not constant. Early in the history of a case there are only indistinct pain, tenderness and a feeling of fulness; later these symptoms become more severe, take the form of crises which appear at decreasing intervals and with increasing severity.

Usually before an attack there is increase in the constipation, then intermittent colics appear without fever (if there is fever either diagnosis is wrong or secondary complications are present). On palpation, one finds an air-cushion-like fulness over the cecum which may extend down into the pelvis. If the cecum is heavily loaded with feces a palpable tumor may be felt instead of the cushion. Rectus rigidity is absent in spite of the presence of tenderness and often of superficial hyperesthesia. If rigidity is present then inflammatory complications must be assumed. Splashing noises and rumbling are often noted in the cecum. Vomiting is common. In cases in which an ileac kink is present the symptoms are sometimes severe, especially after a purgative has been taken; suddenly the patient feels something "give way," and soon the crisis passes.

Between the attacks the less distinct signs of constipation, splashing and moderate tenderness persist. *X*-ray examinations after the administration of bismuth give valuable information provided they are made and interpreted by a real expert. Unless this proviso is fulfilled *x*-rays constitute an expensive and troublesome road to error.

B. *Kinking or Stasis at Splenic Flexure.*—Damming back of intestinal contents owing to stasis at the splenic flexure can and does give rise to symptoms of cecum mobile but there is also local pain in the left flank. Reynier thinks that pain in the neighborhood of the seventh and eighth ribs, almost always described as a "stitch in the side" and taken to be intercostal neuralgia, is one sign of incomplete obstruction at the flexure. Payr distinguishes between chronic stenosis and sudden obstruction (*Occlusionskrisen*).

In the former, besides obstipation and general symptoms of intoxication there is severe pain near the umbilicus or at the left costal margin. If flatus passes freely the symptoms disappear or diminish for a time. Abdominal distention causes a feeling of anxiety and pressure in the head; there is general weakness. Blood and mucus may be in the stools. "The condition can drag along for weeks or months and constitutes a fight between nutrition and evacuation." "A few hours after meals, often during the night, severe colicky pains appear in the whole abdomen, and intestinal spasticity (*Darmsteifung*) can be observed in the right hypochondrium (Weiss). . . . The ileocecal and umbilical regions are specially tender."[1] The *x*-rays can give valuable information.

C. *Stasis at the Sigmoid.*—This presents symptoms very similar to those already described. Rectal examination can give valuable information. The *x*-rays show that the feces pass through the intestinal canal at their normal rate until they arrive at the lower colon, in which they stagnate.

The symptoms of intoxication due to colonic stasis vary much in different individuals, this variation being due to many causes.

1. Many people who have from childhood habitually neglected their intestinal functions may go along without an evacuation of the bowels for an inconceivable time and apparently without discomfort. I know of an otherwise healthy man who traveled from England to Mexico without a motion of the bowels. Such people have probably an acquired immunity to colonic intoxication.

2. The mucous membrane has a protective power against absorption, if the integrity of the mucosa is impaired by erosion or ulceration absorption of toxins may be facilitated. This impairment of the mucosa may be a late or an early phenomenon and is dependent on the presence of inflammatory changes which in turn may be due to mechanical causes (hardened feces, circulatory disturbances from altered positions of viscera, etc.).

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[1] Burckhardt: Ergebnisse der Chirurgie, iv, 382.

3. Variations in the protective potency of such organs as the liver, kidneys, etc., must cause proportionate variations in the symptoms.

4. The amount and character of the toxins present must vary according to the diet and to the amount and character of putrefactive changes taking place in the intestine.

The symptomatology of colonic intoxication may be greatly confused by the presence of other lesions which may be either the cause or sequel of the colonic trouble; such are appendicitis, gastric erosions or ulcers, cholecystitis, gall-stones, etc.

302 Argyle Building.

# DIFFUSE DILATATION OF THE ESOPHAGUS WITHOUT ANATOMIC STENOSIS (CARDIOSPASM)*

## A REPORT OF NINETY-ONE CASES

H. S. PLUMMER, M.D.
Attending Physician to St. Mary's Hospital
ROCHESTER, MINN.

In 1908[1] I reported forty cases of "cardiospasm." In this series, thirty-eight patients had diffuse dilatation of the esophagus. Since that time fifty-six cases of diffuse dilatation of the esophagus without anatomic stenosis have come under my observation. The purpose of this paper is to report the result of treating these cases by dilating the cardia with a hydrostatic dilator.

The following have been advanced as factors in the etiology: first, primary cardiospasm (Meltzer[2] and Mikulicz[3]); second, primary atony of the musculature of the esophagus (Rosenheim[4]); third, the simultaneous development of cardiospasm and paralysis of the circular musculature of the esophagus brought about by degenerative changes in the vagi (Krause[5]); fourth, congenital disposition (Fleiner,[6] Zenker[7] and Sievers[8]); fifth, primary esophagitis (Martin[9]); sixth, kinking at the hiatus esophagi; seventh, gross lesions of the esophagus or stomach, such as ulcer, carcinoma, etc.; eighth, congenital or acquired asthenia. That some disturbance of the nerve muscle mechanism of the esophagus and cardia is responsible for the diffuse dilatation of the esophagus without anatomic stenosis seems to be the consensus of opinion.

Most American authors, following Mikulicz, have reported these cases under the heading "cardiospasm." The adoption of this term is premature and confusing, as the part that cardiospasm plays in the production of diffuse dilatation is by no means established and there are many cases, probably not directly related, that have spasm at the cardiac orifice without dilatation of the esophagus.

It is beyond the scope of this paper to discuss in detail the theories regarding the etiology of diffuse dilatation of the esophagus without anatomic stenosis or the etiology of cardiospasm. I wish, however, to call attention to a few points that have proved of practical interest in classifying these cases.

One hundred and thirty cases that have come under my observation have been grouped as follows:

1. Diffuse dilatation of the esophagus without anatomic stenosis, ninety-one cases. No gross gastric lesions were found in this group and only five of the patients were of a neurotic type.

2. Severe cardiospasm without diffuse dilatation of the esophagus, two cases. Both patients had periodic attacks continuing from three to fourteen days, during which they were not able to swallow either liquid or solid food. I think that in these cases diffuse dilatation of the esophagus would have ultimately developed.

3. Cardiospasm without diffuse dilatation but with gross lesions in the stomach, twelve cases. Of these, two patients had ulcer, two syphilis, five carcinoma and three suspected, but not absolutely demonstrated, ulcer.

4. Mild cardiospasm without diffuse dilatation of the esophagus or gastric lesions, twenty-four cases. Almost without exception these patients were of a neurotic type and many were distinctly hysterical.

That relatively few individuals of a neurotic type and none with gross gastric lesions were noted in the group having diffuse dilatation of the esophagus, that diffuse dilatation had not followed the cardiospasm in any of the patients with gastric lesions, and that almost constant evidence of an acquired or congenital asthenia was present in the patients with mild spasm without dilatation or gastric lesions seem to indicate that these groups are of different origin and not very definitely related.

Ten cases which will be reported in another paper should be mentioned here. Five had some anatomic deformity at the cardia or hiatus esophagi, and five a condition that is perhaps analogous to that found in congenital pyloric stenosis.

The diagnosis of diffuse dilatation of the esophagus without anatomic stenosis should rest on the demonstration of the dilatation and the absolute elimination of organic strictures. I presented the general principles of the technical methods of diagnosis[10] before this Section in 1909.

Russel, in 1898,[11] was the first to report a sufficient series of cases to demonstrate the efficacy of dilating the cardia with a silk-covered rubber balloon. Russel's work did not attract attention until Sippy[12] in 1906 reported a series of cures attained by this method. The description of the instrument and the technic which I have used since 1906 may be found in The Journal.[1]

After eliminating the questionable cases previously referred to and the cases of cardiospasm without diffuse dilatation of the esophagus, there are ninety-one cases of diffuse dilatation of the esophagus without anatomic stenosis in my series. Of these, four patients have died, three cannot be traced, seventy-three have been completely relieved of the dysphagia, and eleven are not completely cured. Among the deaths are two from pneumonia, one from tuberculosis, one, cause of death unknown, and one (Case 62) from rupture of the esophagus. Of the patients who died from tuberculosis or pneumonia all had been free from dysphagia for a period of two or more years. The cured patients have been free from dysphagia as follows: three between six and seven years, twelve between five and six years, nine between four and five years, fourteen between three and four years, thirteen between two and three years, twelve for one year and ten for less than one year. Included among the cured patients are a few who at long intervals are conscious of the food passing the cardia.

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* Read in the Section on Surgery of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

[1] Plummer: The Journal A. M. A., Aug. 15, 1908, p. 549.

[2] Meltzer: Berl. klin. Wchnschr., 1888, No. 8.

[3] Mikulicz: Deutsch. med. Wchnschr., 1904, xxx, 17, 50.

[4] Rosenheim: Berl. klin. Wchnschr., 1902, No. 45.

[5] Lossen: Deutsch. med. Wchnschr., xxix, Berl. Beil., p. 94.

[6] Fleiner: München. med. Wchnschr., 1900, Nos. 16 and 17.

[7] Zenker and v. Ziemssen: Cyclopedia of the Practice of Medicine, 1878.

[8] Sievers: Hospitaltid., 1902, No. 39, Kjobenhavn.

[9] Martin: Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1901, viii.

[10] Plummer: The Journal A. M. A., Feb. 25, 1911, p. 560; also Tr. Sect. on Surg., A. M. A., 1910, p. 345.

[11] Russel: Brit. Med. Jour., June 4, 1898.

[12] Sippy: Paper read at the meeting of the American Medical Association in 1906. Not published.

Of the patients not completely cured two came under observation over four years ago, four over three years ago, one over two years ago, two over one year ago, and two within the last year. In five the treatment has not been sufficiently well followed up, two are of comparatively recent date and will require further treatment, three have had recurrences of dysphagia and regurgitation of food from the esophagus. They go, however, from periods of two to ten months without serious trouble. Two patients who were badly emaciated and regurgitated the greater part of their food still occasionally regurgitate and require water to wash down the food.

In my earlier work I determined the degree of pressure largely by the tolerance of the patient as indicated by the evidence of pain at the moment of greatest distention. The pressure was gradually raised at successive treatments until satisfactory results were obtained. In the majority of the first thirty cases the esophagus was dilated with a pressure of 500-575 mm. of mercury; in the next thirty-one, with a pressure of 675 mm. of mercury. In Case 62 the esophagus ruptured and the patient died of general peritonitis. The manometer indicated a pressure of 720 mm. at the time the rupture occurred. In the succeeding forty-five cases the esophagus was dilated with a pressure of 575-600 mm. The number of cases in which dilatation was obtained with a pressure of 575 mm. is sufficiently large to demonstrate the relative safety of using this degree of force. While I have always stopped the first treatment on the appearance of marked suffering and felt my way at succeeding treatments, I do not believe that the pain is a reliable index for judging the pressure to be used. The patient whose esophagus I ruptured did not complain of pain until the dilator was withdrawn.

In five patients in whom a pressure of 575 mm. failed to relieve the dysphagia and in three in whom the pain prevented me from using this pressure, I resorted to dilators of gradually increasing size, sufficient pressure being used to insure each size being distended to its maximum diameter at the cardia. This method of forcible dilatation is based on the assumption that there is some latitude between the points at which relief and rupture of the esophagus will occur. This method is tedious as the silk bag must be strongly made and of uniform diameter throughout its length and sufficient time must elapse between treatments to allow results to be noted.

A pressure of 675 mm. of mercury has invariably given marked relief and in a majority of cases a complete cure. It has been the routine practice to give the patients two or three treatments and allow them to go home with instructions to return if there be any recurrence of dysphagia. In no case have I followed up the treatment at frequent intervals over a long period of time, though a number of patients have returned at intervals of two to twelve months. It is remarkable that most of the patients with extreme inanition have needed but one treatment to effect a complete cure. In three patients I have had opportunity to demonstrate that the dilated esophagus has returned to normal size.

## ABSTRACT OF DISCUSSION

Dr. Jesse Myer, St. Louis: I rather object to the name diffuse dilatation of the esophagus without anatomic stenosis. Without an autopsy it is not impossible always to demonstrate that there is not an anatomic stenosis. With the aid of the esophagoscope and the Roentgen ray we can say definitely that there is a dilatation of the esophagus, but not that there is an anatomic stenosis. A case of mine of which I shall speak directly proves that point rather conclusively.

I believe that cardiospasm in most cases is a primary disturbance, and that the dilatation of the esophagus is a secondary condition, and the fact that these patients are relieved through the complete relief of the spasm seems to me to speak for the truth of this theory. The symptoms of dilatation manifested by the patient are the last and not the first to occur. The first symptoms are those of obstruction.

What constitutes a cure? It is possible in most cases, as Dr. Plummer has told us, to bring about a symptomatic cure, but I question very much if in these marked cases, cardiospasm with marked sacculation of the esophagus is ever completely cured from an anatomic standpoint.

I have had only fourteen such cases; I considered that a rather large series until I heard of Dr. Plummer's work. I have had eight patients under more or less constant observation for periods ranging from one to four years; three I have had under continuous observation for four years. In all the cases the sacculation remained practically of the same size after the patients had been completely relieved of their obstructive symptoms four years later. This I demonstrated by the Roentgen ray and an intragastric thin rubber bag attached to a stomach-tube which was introduced into the esophagus and filled under pressure with a suspension of bismuth in sour milk. I was able to introduce into the bag from 300 to 400 c.c. of the bismuth suspension, which was practically the same amount which I was able to introduce prior to the commencement of the treatment. The same thing was revealed in all the other cases (five) which I had under observation.

These sacculations persist, and give evidence of their existence throughout. The patients are greatly relieved and are apt to say that they are cured. If questioned closely, however, they will say that they are most comfortable when they eat slowly and chew their food thoroughly. Several patients have told me that cold drink or food causes more or less disturbance.

The method I have used of stretching or paralyzing the cardia is practically the same as that used by Dr. Plummer. I use, however, a dilator of the size of the cardia, and take the feelings and sensations of the patient as a guide in the treatment.

Dr. Max Einhorn, New York: One of my first cases of dilatation of the esophagus without obstruction I reported in 1888, and that was the second or third case that had been observed clinically up to that time. I believe that Meltzer was the first to describe this condition. Since 1888 I have seen each year a greater number of these cases. The condition is really rare, but anyone who has to deal with these troubles will see quite a number of cases and will have no trouble in recognizing them. I judge that I have seen over one hundred cases of diffuse dilatation of the esophagus.

Years ago I came to the conclusion that we could manage to keep our patients in a comfortable condition by arranging their diet and teaching them how to handle their food. Still there was never a cure established.

I was one of those who tried to stretch the cardia many years before Plummer did it, but I used bougies (54 French the largest) because I found that we could easily push them through the cardia. This upset the theory in my mind that we had to do always with cardiospasm, and I also saw that we did not bring on any change and so I gave it up. Later, when Plummer and others reported their very excellent results, I again started to dilate the cardia, using larger instruments, and I even attempted to construct a steel instrument, which could be unfolded when in the cardia or near it. About eight or nine years ago I found that the instrument was too stiff to be handled easily, and so I discarded it again. Five or six years ago I devised another instrument, which could be introduced and opened up easily. I gauge the treatment by the way the patient feels, but I always try not to stretch too much at one time. I stretch it about twice a week, continuing the treatment until the patient is relieved of his symptoms.

I have treated about twelve patients in this way and the results are so striking that there is hardly any condition in which we can secure a greater improvement than I have obtained in these cases. After the stretching they eat just as well as anybody.

I have found that the esophagus does change in size, but this is really a matter of little consequence. What difference does it make if the esophagus does not change in size, provided the patient can eat well, and enjoy eating? There is, however, a change in the configuration of the esophagus. A skiagram made of such an esophagus a year after treatment showed that it was almost half again as large as before treatment. In another case there was no residue in the esophagus at all.

**Dr. Anthony Bassler**, New York: I wish to emphasize the point in Dr. Plummer's paper with reference to the 5 per cent. of cases that had disease at the lower end of the gullet. We all know that a large proportion of these patients are neurotic; that their trouble is of nervous origin, and of course they are immensely relieved by dilatation. Some patients can after dilatation eat anything and enjoy their meals for several weeks. Then they come back for another course of dilatation, have another period of relief and another dose of treatment; and so on. Finally, after a few months, one realizes the futility of the treatment, and sometimes we learn, much to our surprise and chagrin, that we are dealing with a case of malignant disease of the cardia. The cardiospasm which was temporarily relieved may have been an expression of organic disease of the esophagus or of the stomach, just as pylorospasm may be the expression of gall-stone disease or appendicitis. One should be sure that there is no local disease present. The esophagoscope is essential in diagnosis, but the *x*-ray helps very little until a marked stenosis exists, which is late in the disease or when malignant disease is present.

After very general use of the various instruments employed in the treatment of this condition, the dilatation of the cardia, I regard Dr. Plummer's method as being the best. I believe in complete dilatation of the cardia. It is paralyzed in suitable cases. When a person has not eaten any solid food for several months and has had several attempts at dilatation made, which have been only moderate, and then has dilatation by Dr. Plummer's instrument he gets complete relief and takes his first large meal, which is a satisfaction to him as well as to the doctor.

**Dr. H. S. Plummer**, Rochester, Minn.: I believe that the majority of cases of diffuse dilatation of the esophagus are due to a spasm of the cardia. The truth of that statement, however, has not been demonstrated, and there is much evidence to refute it. I eliminated all cases that I considered questionable, and did not include them in the list of cases reported. I mentioned only ten cases. I tried to make the point that absolute demonstration of the absence of mechanical ileus of the cardia is essential.

With regard to the methods of dilating, I think we must rely either on the pressure used or on the size of the dilator. We tried to use different sizes of dilators and take the pain expression as a guide.

After Dr. Bassler's remark about dilating a malignant stricture, I doubt if that is a safe procedure for anyone to carry out except a very skilled esophageal worker. I would not make a diagnosis of diffuse dilatation of the esophagus with cardiospasm in any patient over 35 years of age unless the history showed that the trouble was of at least two years' duration. That is a very important point to bear in mind, because then you will avoid dilating a malignant stricture, to which Dr. Bassler referred.

# NERVOUS SYMPTOMS FOLLOWING SUNSTROKE

T. H. WEISENBURG, M.D.
Professor of Clinical Neurology and of Neuropathology in the Medico-Chirurgical College; Neurologist to the Philadelphia General Hospital
PHILADELPHIA

During the summer of 1911, because of the excessive heat there were more than the usual number of cases of heat exhaustion. It seemed to me, therefore, that a discussion of some of the resulting nervous symptoms would not be inappropriate. Of the number of cases seen in the course of years two are here reported because of their unusual character. The first was that of a patient in whom a severe sunstroke was followed by multiple nervous lesions producing acute cerebellar ataxia, loss of speech and spastic symptoms, an unusual combination. The second was that of a cook in whom because of overheating there occurred muscular spasms. The interesting feature was that he had an old poliomyelitis of one leg. In spite of this the muscular spasms were just as marked in the palsied limb as elsewhere, this being an interesting contribution to the theory that the spasms are produced by a degenerative process in the muscles and not by a lesion of the nervous system.

Although the literature of nervous symptoms following heat intoxication or exhaustion is not very large, yet a great variety of symptoms have been described. Besides the usual rise of temperature, headache and sometimes coma, there have been quite a number of cases of motor lesions which have been either hemiplegic or paraplegic and rarely acute ataxia and disturbance of speech. Curiously enough I have not found a single instance of such lesions producing sensory disturbances, although there is no reason why this should not occur.

Not much is known of the pathology chiefly because of the rarity of necropsy studies. As Oppenheim[1] states, it has been thought that there occurs cerebral hyperemia; by others thrombosis and multiple capillary hemorrhages in the medulla, anemia of the brain, edema of the pia, meningitis, cell-changes, dehydration of the tissues, auto-intoxication, etc. Considering the fact that the symptoms come on suddenly after a rise of temperature, it is not improbable that there is produced an auto-intoxication which in some cases causes multiple hemorrhages. Most of the reported findings tend to support this view and it is the explanation which I have given in the first case here reported.

It is evident that there must be something in the physical condition of an individual which renders him liable to succumb to excessive temperature. This needs no argument. I served for several years as a surgeon in the United States Army, being on duty in the Philippine Islands, and had an excellent opportunity to study the influence of temperature on newly arrived soldiers, and yet in spite of the excessive tropical heat there were very few cases of sunstroke. Among the natives this hardly ever occurred, whereas among the soldiers it happened in those who either foolishly exposed themselves or who drank. The memory of one case is distinct. It was that of a soldier who had been drinking quite severely the native drink, *bino,* distilled from some of the native plants. As was customary at that time, drill was held early in the morning, that is, about 7 o'clock, and this man went through an hour's work without difficulty. He ate very little breakfast and later on again drank, and while walking in the street in the full exposure of the sun suddenly fell down unconscious and remained so for some hours. He then woke up in an acute maniacal condition, ran to the barracks, seized his gun and before he was caught ran to one of the shacks and attempted to kill a native.

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[1] Text-Book of Nervous Diseases, ii, 790.

These sudden attacks were not at all unusual, but in my experience no matter how much liquor a man drank it was not until he was exposed to the heat that he would be at all affected and then very suddenly.

So it is in this climate. Of course in the elderly persons or those who are weak and sick there is every reason why the heat should affect them, but in the young adult it hardly ever occurs excepting in those who have been drinking.

### NERVOUS SYMPTOMS

Case 1.—July 4, 1911, one of the hottest days of the summer, the patient was brought to the Garettson Hospital in an unconscious condition. He had a temperature of 107. After an ice-bath the temperature dropped to 103, but it was not until July 26, twenty-two days afterward, that it came down to and remained normal. For the week following his admission he was unconscious. For the remainder of his stay in this hospital, that is, three weeks, he seemed to be stuporous, did not seem to understand anything and was considered out of his mind by the attending physicians. He had to be strapped in bed most of the time. This was largely due to the fact that any movement on his part was so ataxic that he had a tendency to fall out of bed. Besides, when he did get out of bed the only way he could walk would be on his hands and knees, and according to the resident physician, "he would go across the floor on his nose and knees."

About a month after his attack he was admitted to the nervous wards of the Philadelphia Hospital on my service. The reason given for this removal from the Garettson Hospital was that he had developed a peculiar mania which rendered his remaining in that hospital impossible. He remained in the Philadelphia Hospital for about two months. Unfortunately for us, since he was a foreigner and had been in this country only a short time, it was necessary to transport him to Europe. During his residence, however, he had occasional attacks of temper which were almost maniacal in character and it was often necessary to strap him. At other times he was quiet and never uttered a sound or volunteered anything.

Through an interpreter at different examinations made by others and myself he answered rationally and his mentality seemed to be perfectly normal. The patient denied having headache, nausea, vomiting or noises in his ear. His sight was good and he never saw double. There never had been difficulty in eating or swallowing. So far as speech was concerned he said he could not talk, although he knew what he wanted to say. He seemed to have understood the interpreter perfectly. The patient did not complain of pain or numbness anywhere. Ophthalmologic examination as well as a nose and throat examination was negative.

Examination on admission and subsequently showed the pupils to be normal, equal in size, with reactions to light and movement as they should be. There was no nystagmus at any time and no history or presence of ocular palsies. The cranial nerves were normal.

Power in the limbs was diminished as shown by the grip and resistance at the elbows and knees. The tendon-reflexes were much increased and there was present an ankle-clonus of considerable degree on both sides and the Babinski phenomenon. There was no disturbance of sensation anywhere. At first the patient could not control his bowels; later this power returned.

The most striking condition about the patient, however, was his extreme ataxia. He would lie perfectly still but on attempting a sitting posture his head and shoulders would show the most exquisite ataxia. In fact even when lying in bed and protruding his tongue the movement was ataxic. Any movement of the arms and legs would bring about an extreme incoordination which was not influenced by closing the eyes. The patient could smile and was not at all emotional. His condition when he was removed from the hospital was only slightly improved from that when he was brought in but his ataxia remained the same.

### DIAGNOSIS

The symptoms were indicative of a lesion in the cerebellum and in the motor columns on both sides. It is apparent that the motor columns were probably involved in the medulla because there was implication of the upper and lower limbs and not of the face.

As far as the other symptoms are concerned it is possible to explain all of them by a cerebellar lesion. First of all, the so-called maniacal outbreaks were not so much maniacal as they were the result of temper. The man was a Pole and could not make himself understood and it was only when he was exceedingly annoyed that this would occur.

His speech was not at all aphasic. Examination of the pharynx and larynx did not show any palsies and it is apparent that his inability to talk and articulate was the result of his cerebellar incoordination. It is interesting to consider that in this patient, while the whole body was ataxic as was also the tongue, yet there was no ataxia whatsoever of the eyeballs, neither was there difficulty in eating and swallowing. This would argue for a separate cerebellar center for coordination of the eyeballs which is in accordance with the view set forth by Victor Horsley,[2] who advanced the opinion that in the intrinsic nuclei of the cerebellum the movements of the eyes and head are represented, while in the so-called paracerebellar nuclei in which are included Deiter's nucleus, the vestibular nucleus and the nucleus magnocellularis substantiæ reticularis, are represented the movements of the trunk and limbs specially.

Accepting Horsley's view, it is probable, then, that the lesion in the case under discussion was principally in the so-called paracerebellar nuclei which are mainly located in the medulla. This would at once make the question pertinent as to whether an additional lesion in the nuclei of the ninth, tenth and twelfth nerves or their intramedullary fibers had not produced the difficulty in talking. Were this the case there would necessarily have been found some palsies in their distribution, that is, in the pharynx and larynx and besides would have produced some difficulty in eating and swallowing, none of which were present. While difficulty in speech resulting from cerebellar lesions has been noted, it is by no means common, yet it is especially apt to be present in sudden lesions or hemorrhage within the nuclei of the cerebellum. Nearly always the speech is described as ataxic or sometimes as explosive and yet if there be such a thing as a coordinating center for speech, would it not be possible for the incoordination to be so marked as to make i impossible for speech to be produced at all? I hav never seen such exquisite ataxia in any cerebellar lesion in my experience and this fact makes the assumption o a cerebellar anarthria possible.

A number of cases have been reported in the literatur which resemble very much this particular case. Nonne reported a case of acute ataxia after overheating. Th patient was unconscious for about twenty-four hours had convulsions and after awaking from the coma ha right hemiparesis with aphasia, these symptoms disappearing in the course of a week. This was followe by severe incoordination of the body, face, eyes, trun and extremities of an exquisite cerebellar character. Particularly remarkable were the articulatory difficulties as the result of the disturbance of coordination of the phonic, laryngeal and tongue muscles. There was also some disturbance of intelligence. Sensation, reflexes, sphincters, pupils and other functions were uninvolved. Nonne published a similar case one and one-half years previous to the one described above. In both these reports the author discusses the rarity of cerebellar lesions following heat exhaustion, and makes the interesting statement that in contradistinction to acute ataxia produced by infectious diseases and other forms of intoxication the prognosis is grave.

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[2] Brain, 1906, xxi, No. 116.

[3] Nonne: Deutsch. med. Wchnschr., 1907, i, 868.

Other authors mention the different lesions to be found following heat attacks. Goebel[4] mentions tremor, different forms of psychoses, paralysis of limbs, hemiplegia, disturbance of speech, facial palsy, neuroses and hysteria.

Revenstorf[5] reports a case of a man who had very severe multiple lesions due to a heat-stroke, which remained permanent. He quotes Hiller, who, in 435 cases, observed paralysis in seven. In three there was difficulty in moving the tongue and in one speech was difficult. He also states that in experimental animals the paralysis remained about two and one-half months. Senftleben[6] reports a case of a soldier who died on the march and at post-mortem the cerebral veins were very much dilated and full of blood and there were besides dural and pial hemorrhages and the basal vessels were empty. The lateral ventricles were full of blood as were also the vessels of the chorioid plexus.

### MUSCULAR SPASMS

The commonest manifestation of heat intoxication is the occurrence of muscular spasms. Edsall[7] recently called attention to this and reported four cases. In one there occurred tonic spasms of the forearms, legs and abdomen which were exceedingly painful, lasting from one-half minute to a minute and were brought about either by direct stimulus of the muscle, by movement whether voluntary or involuntary, or by electrical stimulation. These spasms were over in about twenty-four hours and nothing remained excepting a slight exhaustion and muscular soreness, although fibrillary twitchings were seen in the muscles for a number of days following and these were present also between the spasms. The reflexes and sensation were normal and there were no other symptoms present. Edsall, as a result of his metabolic studies, believed that the spasms were the result of an acute degenerative process in the muscles. He stated that these spasms were in direct relation to the severity of the exposure and the degree of musculature. Sometimes they are so severe as to cause death. They may occur from ordinary exposure to high atmospheric temperature in the summer and are quite common among stokers in the navy.

CASE 2.—In my own case, the patient, 41 years of age, was a cook. He had a history of alcoholism, although for two years before observation he had been drinking very little. The first manifestations were jerkings and contractions of the muscles in various parts of the body, then suddenly the muscles would contract, forming large hard knots over his stomach, upper and lower limbs, face and neck. They were so painful that the patient would curl up and during them could not walk or straighten out his limbs. By different forms of manipulation he would be able to relax the muscles but the spasms would come on again. At times because of the muscular contraction of the abdominal muscles he could not retain anything on his stomach and would constantly vomit. Again he could not talk or eat anything because he could not open his mouth wide because of the contraction of the muscles of the face and neck. His right shoulder-joint was dislocated a number of times by the force of the muscular contraction. An attack would last from three to four days. They were not always, however, of the severity described above and occasionally he had only a muscular contraction in different parts of the body and some tremors. As in the other cases, following the extreme muscular spasm he would have fibrillary twitchings in the muscles.

The interesting part about his history is that these attacks always came on while he was working in a kitchen and was overheated and would never appear any other time. Physical examination was entirely negative.

The most interesting feature about this case was that the patient had an old anterior poliomyelitis which came on when he was a child, involving the left leg. This limb presented the usual symptoms of atrophy and loss of reflexes and power. In spite of this the spasms were just as marked in this limb as elsewhere. This would argue that the cause was in the muscles and not in the central nervous system, for if the latter it would have been impossible to produce the contraction in the muscles.

2030 Chestnut Street.

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# INTESTINAL IMPLANTATION OF THE BACILLUS LACTIS BULGARICUS IN CERTAIN INTESTINAL CONDITIONS OF INFANTS, WITH REPORT OF CASES *

RALPH OAKLEY CLOCK, M.D.
Assistant Physician to the Out-Patient Department of the Babies' Hospital of the City of New York and St. Mary's Free Hospital for Children, New York City; Clinical Assistant Obstetrician to the New York Post-Graduate Medical School and Hospital
NEW YORK

Buttermilk has been widely used in infant-feeding because its chemical composition was supposed to be adapted to certain abnormalities of digestion and metabolism; but the results obtained from its use have been variable, since buttermilk is not always adapted to the caloric needs of the infant.

A few years ago, I reported[1] a series of cases in which buttermilk was used as a dietetic treatment for malnutrition, enteritis, enterocolitis, etc., and many similar cases have been reported by various writers from time to time. While the prostration and toxic symptoms were usually lessened under this regimen, some infants fared badly on the diet, so that the dietetic treatment was usually supplemented by medicinal methods; hence, any improvement in the condition could not be attributed solely to the presence of lactic acid bacilli in the milk. Moreover, the buttermilk was sometimes boiled in the process of making the feeding mixtures, so that the lactic acid bacilli were destroyed.

Buttermilk is not effective in the treatment of intestinal conditions, because it does not contain a bacillus that will survive ingestion, multiply in the intestine, and there produce sufficient nascent lactic acid so that the bacilli of putrefaction cannot exist. Any beneficial effects that have been derived from buttermilk feeding may be ascribed chiefly to the large amount of soluble protein furnished in finely subdivided form which admits of easy digestion. But even when the buttermilk has been pasteurized and then inoculated[2] with a pure culture of lactic acid bacilli, the results have not been entirely successful. Dunn[3] obtained favorable results with this method in twenty-three out of thirty-five cases.

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[4] Goebel: Ueber die Nachkrankheiten der Hitzschlags. Inaug. Diss. Berl., 1905.

[5] Revenstorf: Deutsch. med. Wchnschr., 1907, p. 868.

[6] Senftleben: Berl. klin. Wchnschr., 1907, p. 775.

[7] Edsall: THE JOURNAL A. M. A., Dec. 5, 1908, p. 1969.

* Read before the Section on Pediatrics of the New York Academy of Medicine, March 14, 1912.

[1] Clock, R. O.: Modified Buttermilk in Infant-Feeding, New York Med. Jour., April 20, 1907.

The observations of Metchnikoff and other bacteriologists on the antagonism of lactic acid bacilli to putrefactive organisms in the intestine have opened up a new method of treatment which is constantly gaining in popularity.

The fact that intestinal toxemia is considered so potent a factor in the causation of many diseases has encouraged the belief that by introducing cultures of lactic acid bacilli into the intestine it would be possible to arrest the growth of putrefactive and other pathogenic bacteria.

Among the various lactic acid-producing bacteria, it was found by Metchnikoff that the *Bacillus lactis bulgaricus,* isolated and first described by Grigoroff,[4] exerts the most pronounced effect in inhibiting the growth of putrefactive bacteria, this bacillus producing more than 3 per cent. of lactic acid. Metchnikoff discovered that the pathogenic bacteria which create putrefaction will not live in the presence of the *B. lactis bulgaricus,* which, he found, is the only lactic acid bacillus known that will survive ingestion, reach the large intestine, and continue to live there, creating nascent lactic acid and thereby displacing the pathogenic bacteria. He also found that, when the *B. lactis bulgaricus* is taken into the organism in the form of a culture, either in dry tablets or in milk, this bacillus multiplies in the intestine and creates nascent lactic acid as long as it is present.

Belonowsky[5] has shown that the lessened virulence of the intestinal flora, which occurs when the *B. lactis bulgaricus* is introduced into the intestine, is due in part to lactic acid and partly to the inhibitory products formed by the *B. lactis bulgaricus.*

Cohendy[6] and Herter found the *B. lactis bulgaricus* in the excreta of a patient from four to six days after its first ingestion, and six weeks to two months after the last administration.

It has long been known that the growth of one organism will inhibit the growth of another, but this knowledge has seldom been applied in practice. I have experimented with various preparations, supposed to contain the *B. lactis bulgaricus,* but without any definite result. It has been difficult to obtain a pure culture of this bacillus, most of the preparations now on the market consisting chiefly of paralactic bacilli.[7]

Through the Johns Hopkins Hospital, however, there has been imported from the Pasteur Institute a pure culture of the true *B. lactis bulgaricus;* this has been developed into an all-rod culture, showing only viable organisms. The culture is dried and mixed with milk-sugar, in which the bacilli will remain active a long time, and compounded into a tablet. The literature contains no reports of this particular bacillus having been introduced into the system through the medium of milk-sugar for the purpose of combating intestinal putrefactive conditions.

The cases which I desire to report show the results obtained by me in bottle-fed babies with this new method of treatment, in such conditions as gastro-enteritis (mild, severe and toxic forms) and enterocolitis. Some of these cases were of the most severe type of gastro-intestinal disturbance, but in every case a decidedly effective and happy result followed. The gastric symptoms quickly disappeared; the toxemia subsided; mucus and blood disappeared from the stools, which soon lost their foul odor; the indigestion cleared up, and the stools became well formed and normal in color usually on the third or fourth day; and there was never any return of the intestinal disturbance in any case. The intelligent care given to these infants in their homes, where the best of hygienic conditions prevailed, probably aided in bringing about these rapid and favorable results.

As these cases were all seen in private practice, there was no opportunity for studying the bacteriologic effect on the intestinal flora; but the remarkably decisive clinical results, just mentioned, prove conclusively that the putrefactive and other pathogenic bacteria of the intestine were displaced by the action of *B. lactis bulgaricus.*

In each of the following cases, the treatment consisted solely of the administration of tablets containing a pure culture of the *B. lactis bulgaricus.* One tablet, dissolved in a teaspoonful of water, was given after every bottle feeding; and in some cases the tablets were given before as well as after the feedings.

The excellent results obtained from this method of treatment in the first three cases persuaded me to continue the treatment without change of diet, and thus test the reliability of the bacilli as a means of combating the putrefactive process in the intestine; hence, no change was made in the feeding mixture of any of the patients. A starvation diet, accompanied by purgation, colonic irrigation and the administration of bismuth, is productive of loss of weight and strength, and serves to prolong the course of the disease.

The gain in weight which followed in every case under the implantation method of treatment was probably due to the fact that, after the putrefactive process had been arrested by the action of the *B. lactis bulgaricus,* the digestive tract was able to take care of the food which previously had caused indigestion; hence, the food began to satisfy the caloric needs of the infant and nutrition thus suffered no loss.

### CASE HISTORIES

CASE 1.—R. K., aged 8 months. Gastro-enteritis (mild form) June 14, 1911: Diet consisted of a top milk mixture; there had been pronounced diarrhea for five days; the stool were green, watery and offensive; they contained many curd and much mucus and were seven or eight daily in number The buttocks were excoriated. Weight, 15 pounds, 2 ounces

June 16: The stools were greenish-yellow, soft in consistency, less offensive, contained fewer curds and only very littl mucus and numbered only four daily.

June 19: The buttocks had entirely healed. The stool were light yellow, well formed and smooth; they were odo less and contained neither curds nor mucus, and were thre in number. Weight, 15 pounds, 8 ounces.

Cases 5, 6, 8 and 9 were of the mild form of gastro-enteriti similar to the above. The condition had lasted from one da to seven days. Fever had not been noted in any of the patients. All of them increased in weight, the average gain being 4 ounces during the first week.

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[2] Dunn: The Use of Living Lactic Acid Bacilli to Combat Intestinal Fermentation in Infancy, Arch. Pediat., April, 1907.

[3] Dunn: The Treatment of Infantile Diarrheas Due to Intestinal Fermentation with Lactic Acid Bacilli, THE JOURNAL A. M. A., Aug. 21, 1909, p. 599.

[4] Grigoroff: Etude sur un lait fermente comestible; le kissclo mleko de Bulgarie, Revue méd. de la Suisse romande, 1905, xxv.

[5] Belonowsky: Influence du ferment lactique sur la flore des excréments des souris, Ann. de l'Inst. Pasteur, 1907, xxi.

[6] Cohendy: Description d'un ferment lactique puissant capable de s'acclimater dans l'intestin de l'homme, Comp. rend. Soc. de biol., 1906, l.

[7] White and Avery: Observations on Certain Lactic Acid Bacteria of the So-Called Bulgaricus Type, Centralbl. f. Bakteriol., 1909, xxv, Part 2.

Case 3.—J. B., aged 4 months. Gastro-enteritis (severe type).

July 2, 1911: Diet consisted of a modified milk mixture. The onset was sudden, with persistent vomiting and the passage of six to eight loose, green stools, which contained many large yellow curds and considerable mucus. All stools were very offensive. Weight, 11 pounds, 9 ounces.

July 3: Nearly all the food was retained. During the twenty-four hours there were four stools. These were greenish-yellow with fewer curds and practically no mucus; the odor was less foul.

July 4: There were no gastric symptoms. There were three yellow, formed stools, containing a few curds, but neither blood nor mucus, and the offensive odor had entirely disappeared.

July 6: The stools were light yellow, of good consistency and numbered two or three daily. Weight, 11 pounds, 13 ounces.

Case 10.—G. T., aged 5 weeks. Gastro-enteritis (severe type).

Aug. 16, 1911: Fed on a milk formula containing a large quantity of maltose. Had been vomiting all food persistently for two weeks: the bowels were moving ten or twelve times daily; the stools were watery, dark green, with many curds and much mucus, besides having an offensive odor. The weight was 8 pounds, 11 ounces. In the treatment of this case, one tablet was given before and after each feeding.

August 17: There was much less vomiting; the stools were light green and of better consistency and did not exceed nine during the twenty-four hours. There was much less mucus in the stools and the curds were smaller and fewer, and there was less odor.

August 19: Vomiting had ceased; mucus had disappeared from the stools, which were now greenish-yellow and free from offensive odor, and contained curds only occasionally. The bowel movements were six in number.

August 21: Stools were soft yellow, without any curds, and averaged three daily. There was no evidence of either gastric or intestinal indigestion. The weight had increased to 9 pounds.

Case 13.—J. N., aged 8 weeks. Gastro-enteritis (severe type).

Sept. 3, 1911: For eight days there had been persistent vomiting of all food, a modified milk formula constituting the diet: and the stools, which numbered eight or ten daily, were liquid green, containing a few yellow curds and a great deal of mucus; all the stools were very offensive. The weight was 9 pounds, 8 ounces.

September 4: Vomiting was less severe but still persisted. The stools numbered six, but contained less mucus; the odor was still foul.

September 5: All the feedings were retained; vomiting had stopped entirely. The stools were four in number and greenish-yellow in color; of better consistency and free from mucus and curds. The odor of the stools was sour but not foul.

September 7: Gastric symptoms had not returned. There were three well formed yellow stools, without any foul odor, and there was an absence of both mucus and curds.

September 10: The bowels were moving two or three times daily; the stools were light yellow, perfectly formed and smooth. The weight had increased to 9 pounds, 14 ounces.

Cases 2, 4, 11, 12, 20 and 21 were of the severe type of gastro-enteritis, similar to Cases 3, 10 and 13.

The condition had lasted from three to eight days. The diets consisted of condensed milk, top milk formulas and modified milk formulas.

Vomiting had been present in all of these cases, but ceased within forty-eight hours. The stools, which were loose, green, with curds and having a foul odor, became normal on the fourth day. Fever was absent in every case. There was an average gain in weight of 3½ ounces in a week.

Case 15.—D. C., aged 6 weeks. Toxic gastro-enteritis.

Sept. 10, 1911: This baby had been fed on a condensed milk formula. The bowels had been loose for two weeks, and during the past five days there had been ten daily stools, watery and dark green, having a very foul odor and containing large quantities of bloody mucus. The baby was weak and much emaciated. Temperature was 104 F. The weight, which had been steadily decreasing, was 5 pounds, 5 ounces. In treating this infant, the tablets were given before as well as after each feeding.

September 11: Temperature was 102.6 F. There were eight stools, still very offensive, which were grass-green in color, containing blood-streaked mucus.

September 12: Temperature was 101.8 F. The stools, six in number, were less offensive; they were greenish-yellow and not watery.

September 14: Temperature was 99.2 F. There were four stools, free from any foul odor; they were well formed, yellow, and contained no blood or mucus.

September 17: There were three daily stools, light yellow, smooth, and showing no evidence of any intestinal disturbance. The weight was 5 pounds, 7 ounces.

September 20: The baby was brighter and stronger and had perfect digestion. The weight was now 5 pounds, 9 ounces.

Case 16.—F. F., aged 6 months. Toxic gastro-enteritis.

Sept. 15, 1911: For one week there had been persistent vomiting of all food, which consisted of peptogenic milk. The bowels had been moving ten to eleven times daily; the stools were thin and consisted of foul-smelling greenish mucus mixed with blood. The temperature was 102.8 F. and the weight was 13 pounds, 2 ounces.

September 16: Less vomiting occurred. There were eight bowel movements; the stools were loose, light green, contained considerable blood-streaked mucus, but the odor was less offensive. The temperature was 101.2 F.

September 17: Vomiting had ceased. The bowels moved five times in twenty-four hours; the stools were greenish-yellow, quite well formed, and contained a few yellow curds but no mucus or blood, and there was no longer any offensive odor. Temperature was 99 F.

September 19: There were no gastric symptoms. The stools, three in number, were soft, yellow, without any suggestion of foul odor and contained no mucus or blood. The temperature was normal.

September 22: The stools were perfectly normal; three in number and of light yellow color and firm consistency. The weight had increased to 13 pounds, 7 ounces.

Case 18.—W. W., aged 9 months. Toxic gastro-enteritis.

Oct. 5, 1911: Diet consisted of a modified milk formula. Five days previously after having been loose and green for a week, the stools suddenly became small, watery and frequent, greenish-black in color, with a great deal of bloody mucus; they averaged ten or twelve daily. The temperature was 102 F. and the weight 14 pounds, 1 ounce. The baby was drowsy and disinclined to take food.

October 6: Temperature was 101.2 F. There were eight bowel movements in the twenty-four hours; the stools had a better consistency but otherwise there was no change.

October 7: Temperature was 99.8 F. The bowels moved five times; the stools were loose, greenish-yellow, free from mucus and blood. The baby was much brighter.

October 9: There were three yellow stools, well formed, without any blood or mucus. Temperature was 99 F.

October 12: The baby was bright and took its food well. There were three perfectly formed, light yellow stools. The baby had gained 5 ounces in weight.

Cases 7, 14 and 17 were the toxic form of gastro-enteritis, similar to the foregoing. The duration of the condition had been from one to two weeks. Fever was present in all of these cases, the temperature ranging from 101 to 104 F. The diets consisted of top-milk formulas. The stools all contained bloody mucus which disappeared on the second or third day. All of these patients gained in weight, the average gain being 4½ ounces in the first week of treatment.

Case 19.—H. L., aged 4 months. Enterocolitis.

Sept. 27, 1911: This baby had been fed on a mixture of whey and dextrinized barley gruel. Two weeks previously all food began to be vomited and, in spite of medicinal treatment, the gastric symptoms had not abated. The stools were liquid green, eight or ten in number and contained large amounts of blood and mucus. There was marked tenesmus and prolapse of the rectum occurred with each bowel movement. The temperature was 101.4 F. and the weight was 9 pounds, 9 ounces.

September 29: The temperature was 99.6 F. Vomiting had ceased. There were six formed stools, greenish-yellow in color; they contained no mucus or blood. Tenesmus was less marked and prolapse occurred only occasionally.

October 1: There were four stools in the twenty-four hours; they were light yellow, perfectly formed and free from blood and mucus. Tenesmus was absent and prolapse occurred only once.

October 3: The bowels moved three times daily; stools were soft yellow. There was no tenesmus and prolapse did not occur. The weight was now 9 pounds, 13 ounces.

Case 22.—J. H., aged 10 months. Enterocolitis.

Nov. 2, 1911: This baby had been fed on a mixture of milk, barley water and milk-sugar. Four weeks ago, while *en route* to Cuba, the baby began to vomit its food; at the same time the stools became loose, green, with large amounts of mucus, and were very offensive. The condition became aggravated while in Cuba; the stools became very frequent, twelve to fourteen daily; they were small, watery, and consisted of blood-streaked mucus. The baby was brought back to this country four days prior to examination, but the condition of the stools had not changed; they were small and watery, and consisted chiefly of blood-streaked mucus with very little fecal matter. The baby was very weak, emaciated and apathetic. The temperature was 102.6 F. and the weight 13 pounds, 8 ounces. In the treatment of this case, the tablets were given both before and after each feeding.

November 3: There were ten bowel movements; the stools were greenish-black and liquid. Vomiting was less severe. The temperature was 101.6 F. and the baby was very restless.

November 4: The temperature was 100.4 F. There was much less vomiting. The bowels moved eight times; the stools were light green, quite well formed and contained only a little blood-streaked mucus. There was a loss in weight of 3 ounces.

November 6: Temperature was 99.8 F. There was no vomiting. The bowel movements were five in number; the stools were greenish-yellow and, for the first time in over three weeks, were free from blood; some of the stools contained small quantities of yellow mucus.

November 8: Temperature was 99 F. There was no further vomiting. The baby seemed to relish its food and was much brighter. There were three bowel movements during the day; the stools were well formed, yellow and contained no blood or mucus.

November 11: There were three soft yellow stools, free from blood and mucus; the stools were smooth and perfectly formed and showed no trace of intestinal disturbance. The baby was brighter and stronger; both gastric and intestinal digestion were normal. The weight was 13 pounds, 13 ounces, showing a gain of 5 ounces in spite of the initial loss.

## SUMMARY AND CONCLUSIONS

1. The infants varied in age from five weeks to ten months; there was one 5 weeks old; one 6 weeks old; one 8 weeks old; one 2 months of age; four were 3 months old; three were 4 months old; two were 5 months old; three were 6 months old; two were 7 months old; two were 8 months old; and there was one 9 months old, and one infant 10 months old.

2. There were two cases of enterocolitis (Cases 19 and 22) and twenty cases of gastro-enteritis; of the latter, five were of the mild form (Cases 1, 5, 6, 8 and 9); nine were of the severe type (Cases 2, 3, 4, 10, 11, 12, 13, 20 and 21), and six were toxic (Cases 7, 14, 15, 16, 17 and 18).

3. The duration of the gastro-enteritis, prior to the institution of the implantation method of treatment, was from one day to five days in the mild forms; from one day to two weeks in the severe types; and from one week to two weeks in the toxic forms. The intestinal condition had persisted in the two cases of enterocolitis from two to four weeks.

4. The two cases of enterocolitis had resisted other methods of treatment, but quickly responded to the implantation method.

5. Decided improvement followed in every case within twenty-four hours after beginning treatment.

6. The putrefactive process entirely disappeared, and the stools became normal in consistency and color on the fourth day, as a rule; and, by the end of a week, in spite of previous loss, the weight had increased, on an average, 4½ ounces.

7. The results were complete and permanent in every case; there was not a single failure or relapse.

8. Since the culture was mixed with milk-sugar, the tablet quickly dissolved in water and was readily taken by the babies.

9. One of the great advantages of this method of treatment is that it is unattended with any untoward effect, 20 tablets having been given in the twenty-four hours to infants of 5 and 6 weeks of age (Cases 10 and 15).

10. Another advantage is that the treatment does not conflict or interfere in any way with the diet of the baby.

11. The diets consisted of condensed milk, top-milk formulas, milk modified with proprietary foods, whole milk and barley water, peptogenic milk, whey and dextrinized barley gruel and modified milk with milk-sugar.

12. The favorable results that followed in Cases 2, 5, 15 and 21, which were on a diet of condensed milk, were due to the fact that the *B. lactis bulgaricus* flourishes best in a rich carbohydrate medium, whether this be lactose, maltose, saccharose or glucose.

13. Vomiting invariably ceased on the second day. This is to be explained by the fact that, after the putrefactive process in the intestine had been controlled, the reflex condition in the stomach quickly subsided.

14. Fever was absent in the mild and severe gastro-enteritis cases.

15. The temperature which had been present in all of the cases of toxic gastro-enteritis and in the enterocolitis cases quickly dropped to normal under the implantation treatment.

16. With one exception (Case 22), there was steady gain in weight on this method of treatment.

17. Patient 22 had been rapidly losing weight up t the time of beginning the implantation treatment; and while there was a temporary loss during the first thre days, the weight after this time steadily increased an showed a gain of 5 ounces at the end of the firs week.

18. The average gain in weight during the first wee was 4½ ounces.

19. After the stools became normal, the dried cultur was administered three times daily for a period of on to two weeks.

20. The negative results previously obtained with th various other dried cultures were unquestionably due t the small numbers of the true *B. lactis bulgaricus* prese in the tablets, which contained chiefly the paralact bacilli.

21. The results in the cases reported were due solely to the action of the *B. lactis bulgaricus,* since no other therapeutic measures were employed, nor was the diet altered in any case.[8]

64 East Fifty-Eighth Street.

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# THE PROCREATIVE REGULATION OF DEFECTIVES AND DELINQUENTS

G. L. ORTON, M.D.
Physician, New Jersey Reformatory
RAHWAY, N. J.

Dr. Frank Moore, superintendent of the New Jersey Reformatory, when assuming his present duties about three years ago, believed the probability that many of the inmates committed to the institution were mentally defective; not of such low grade as those confined in the New Jersey Training School for Feeble-Minded at Vineland, N. J., but of a higher grade or the so-called moron type. This particular class of defectives, when they become delinquent and come before the courts, are not recognized as such, but are classed as ignorant. Therefore, at the suggestion of Dr. Moore, I started a systematic investigation of the mental status of the inmates, basing this investigation on the system devised by the late Dr. Alfred Binet, the noted French psychologist, which it might be well to explain briefly. Binet examined a large number of school children who could do good work in school and were considered normal by their teachers. He found that children of a certain age could answer certain questions and execute definite tests of intelligence. From this series of examinations he was able to deduct a classification that can be used as a standard. For example, a normal child 9 years of age can name the days of the week, tell the date and make change. The normal child at 10 can name the months of the year, give simple sentences using a given word, and thus through the different classifications. During the past two years we have been able to examine carefully 600 inmates committed to the New Jersey Reformatory and find that 48 per cent. are of the moron type of mental defectives, ranging in mentality from three to eight years below the average normal adult.

While the Binet tests are most valuable, yet there must be some method devised for testing in the criminal that indescribable something, that, for the lack of a better term, I shall call emotional periods, or attacks of mental epilepsy — not the epilepsy with all the classical symptoms of falling to the ground, frothing at the mouth and afterward drowsiness. I shall not call it "brain-storm," but it might be styled "cerebral tempest." Even the guards at the reformatory crudely understand the attacks and call the condition "moony," for they believe that the attacks occur with the changes of the moon. For instance, inmates whose conduct is exemplary ordinarily are subject to periodic attacks with no definite interval between.

One instance then comes to my mind — the case of a boy who had been detained in the institution nearly five years because of breaches of discipline at these periods. With no external cause, while this boy was working in the paint-shop, he suddenly completely painted another boy's face and even before he was disciplined for the act wondered why he did it. Other boys, while working in the tailor-shop, suddenly cut and destroy garments. Still other boys lose their temper and commit assaults on their fellows and wonder why they do it. I feel confident that when the heredity of such boys is carefully studied there will be a history of insanity, epilepsy, feeble-mindedness or alcoholism. Thus this lack of inhibition is passed along from generation to generation resulting in the class of criminals who commit crime in one of these emotional periods and even before appearing in court try to figure out in their own minds what led them to commit the act.

All men in penal work are well aware of the fact that the average criminal who is incarcerated to-day is not of the vicious, desperate type as was at one time supposed, but rather the weakling, whose powers of inhibition and will-power have either been lacking or squandered by his ancestors.

For some years Dr. H. H. Goddard, of the Training School for Feeble-Minded at Vineland, N. J., has been trying to determine to just what extent heredity enters into the question of feeble-mindedness and the results he has obtained are astounding, and of the hundreds of cases that he has investigated of the families of children in the Vineland institution, almost without exception a history of feeble-mindedness has been traced for several generations. The consequences are that adults with the mentality of children are kept in the institution who are fully capable of maintaining themselves, but as soon as released they at once begin to procreate either legitimately or illegitimately, and, as history repeats itself in a few years, there would be more feeble-minded and criminal to become state charges. Dr. Goddard, through his field workers, has traced scores of remarkable cases, of which one is extremely suggestive. He traced the ancestry of a 22-year old girl in his institution through about 1,100 individuals as far as the Revolutionary War. A young man of good family inlisted in the Continental Army and mated with a feeble-minded girl. This connection resulted in the birth of a feeble-minded child of which the patient at Vineland is a direct descendant. This young man after the war married a woman of normal mind and thus founded a family which has since become distinguished by producing many who have figured prominently in the trades and professions. From the child of the feeble-minded girl there were 480 descendants, only forty-six being normal. From the eight children from the normal woman of his lawful marriage there were but 400 descendants, and not a degenerate or feeble-minded among them.

A similar work is being carried on by the field workers at the state village for epileptics, Skillman, N. J., under the direction of Dr. David F. Weeks, the superintendent, in regard to epilepsy. Dr. Weeks is fully prepared to say, in view of recent investigations, that epilepsy is hereditary. About two years ago at the New Jersey Reformatory there was considerable anxiety to know to what extent heredity entered into the question of crime, so hand in hand with the investigation of the mentality of the inmates, Mr. B. H. Crosby, who is especially adapted for the work, was appointed as a special field parole officer to look up the heredity of inmates confined in the institution. The work has many difficulties, for the parents and friends are often incensed at the courts because a child has been incarcerated; but by tactful work Mr. Crosby was able to obtain about 300 fairly complete histories. He was able to find several things; first, that the families of the inmates who prove to be mentally defective, according to the tests in the institution, show an invariable history of feeble-mindedness or degeneracy; second, many families show extreme poverty because of a lack of ability to compete in the battle of life; third, a history of tuberculosis, syphilis, epilepsy, alcoholism and drug addiction was very common; and fourth, on the parents' own acknowledgment, and generally people do not follow the teaching that "an open confession is good for the soul," a history of crime in over 30 per cent. of all cases. With the motto *Mens sana in corpore sano* in mind, I was anxious to know to what extent physical defects entered into the cases of the 48 per cent. that I found to be mentally defective, with the following results: Forty per cent. suffered from defective eye sight, a large number of whom were unable to do any close work without discomfort; 35 per cent. had flat feet; 32 per cent. had extremely bad teeth; 17 per cent. had throat difficulties, and 47 per cent. some form of nasal obstruction. Many had all defects named. Efforts are now being made to correct these difficulties. The question that naturally arises is, what can be done to prevent the rapid increase of the conditions above mentioned, and acknowledgment has to be made that no definite measure will completely remedy matters. But with the appalling facts of how crime, epilepsy and feeble-mindedness are transmitted from generation to generation, those most closely identified with the work united to devise and support a measure in the state legislature that in their minds would be the most successful solution of the problem. Therefore Assembly Bill 362 was passed at the session of 1910-11 of the New Jersey legislature, and signed by the governor, empowering the latter to appoint a commission whose duty it should be to sit and act on all cases recommended by the heads of the various institutions, the persons having the right of appeal to the court to show why the operation should not be performed. The law permits and in fact specifies the operation to be performed, namely orchectomy in cases of rapists, and vasectomy in case of all other defectives. The operation of vasectomy is a very valuable one in these cases and is performed by simply ligating the vas deferens and incising the same. It can be done under local or general anesthesia. It has been performed on several hundred cases in the Indiana State Reformatory with avowed success, and while it absolutely prevents procreation it does not destroy sexual desire or ability for coition.

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[8] The following additional references to the literature are of interest in this connection:

Baldwin: Observations on the Influence of Lactic-Acid Ferments on Intestinal Putrefaction, Jour. Biol. Chem., 1909, ii.
Bertrand and Weisweiler: Action du ferment bulgare sur le lait, Ann. de l'Inst. Pasteur, 1906, xx.
Brudzinsky: Ueber das Auftreten von Proteus vulgaris in Saüglings Stuhlen nebst einem Versucht der Therapia mittelst Darreichung von Bacterienculturen, Jahrb. f. Kinderh., 1900, Part 52.
Combe: L'auto-intoxication intestinale, 1906.
Heinemann: Lactic Acid as an Agent to Reduce Intestinal Putrefaction, THE JOURNAL A. M. A., Jan. 30, 1909, p. 372.
Heinemann and Heffernan: A Study of Bacillus Bulgaricus, Jour. Infect. Dis., 1909, vi.
Herter and Kendall: The Fate of Bacillus Bulgaricus in the Digestive Tract of the Monkey, Jour. Biol. Chem., 1908, v.
Kendall, Lactic Acid Bacteria: What They Are and What They Are Supposed to Do, Boston Med. and Surg. Jour., Aug. 25, 1910.
Luerssen and Kuhn: Yoghurt, die bulgarische Sauermilch, Centralbl. f. Bakteriol., 1907, xx, Part 2.
Mero: Naturliche Darm-Disinfektion, München. med. Wchnschr., 1906, xli, Part 53.
Rist and Khoury: Etudes sur un lait fermente comestible: le leben d'Egypte, Ann. de l'inst. Pasteur, 1902, xvi.
Tissier: Traitement des infections intestinales par la méthode de transformation de la flore bactérienne de l'intestine, Compt. rend. Soc. de biol., 1906, lx.

Since the passage of the New Jersey law there have been various objections raised on the part of the misinformed, and those whose sentiment enters into the matter. The objections offered have been varied. Some claim that the law is unconstitutional, and that phase of it is in the hands of the supreme court for decision at the present time.

Others assert that segregation is the better method of preventing procreation, but should we attempt to segregate and keep under supervision the mental defectives and habitual criminals that are, and should be, committed to our state institutions, the problem of caring for so many would be a tremendous one. Another argument that has been advanced is that should the individuals be so operated on, understanding the results, namely, that there would be no offspring to remind them of promiscuous relations, the result would be moral debauchery and the dissemination of venereal disease. But the particular class to which the law applies has no moral sense or obligation whatsoever, even though hundreds of their kind are placed on the list of vital statistics each year only to be cared for by the orphan asylums and later by state institutions. Illegitimacy does not shame them or prevent them from promiscuous and illicit intercourse; and the marriage ceremony is simply a form in order to escape the police.

There are other objectors who sincerely believe that what God has established should not be disturbed; but the Good Book says "if thine eye offend thee pluck it out." Even those who believe that the operation would be a good thing say "operate in a few cases and watch results." The physiologic results could be watched by following this method as has already been done with satisfaction, but it would take a generation to learn the results.

Persons of one particular class to which the law is applicable do not have the mentality to grieve over the fact that they cannot procreate; those of the other class, namely, the habitually criminal class, should not have a choice in the matter, for the public must be safeguarded. Those most closely identified with the work of dealing with defectives and delinquents, however, realize that progress must be made with great caution for two reasons: first, because the operation should not be performed on that class of criminals who are of normal mind and bid fair to be reformed and become law-abiding citizens, unless there is a bad history of crime in the family, or on that class of mental defectives who are low grade simply because of lack of education; second, because there should not be wholesale sterilization on even the worst class of degenerates until the good public, who are honest and sincere in their convictions, are educated to the appalling need for some strenuous action.

The public and our national government are slow to get at the real problems that face us. The federal department spends much time and money in plant pathology, cultivation of the soil, and health of farm animals, yet hesitates when it comes to establishing a national health bureau to safeguard the health and welfare of the very individuals who are benefited by the products of the soil and farm.

The most ignorant farmer knows enough to breed from the best cows in his herd or raise chickens from thoroughbred hens. The dog fancier understands that it would be the height of folly to breed puppies from some diseased mongrel, and yet the good public sits patiently and allows degenerates, defectives and deliberate criminals to propagate their kind *ad infinitum* with the knowledge that individuals of that particular class multiply from two to five times as rapidly as the normal, and that a large percentage will become charges of the state or city institutions and at public expense Then after all the money is expended to feed, cloth and educate them, they will be no good to themselves or those with whom they come in contact, and many of them wil curse the day they were born.

There is much progress being made in advanced medical research and the question of sterilization of defectives and delinquents is one of the most recent, and deserves the careful study and consideration of every medical man.

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## SOME HEALTH PROBLEMS OF CHANGING CHINA

W. W. PETER, M.D.
SHANGHAI, CHINA

Two thousand miles, twenty million people, two hundred cities — and not one sewer! This, in brief, is the summary of a trip into the interior of China.

One of the most fertile and most densely populated areas in the world is this Yangtse River Valley. There are numberless cities scattered between Shanghai on the coast and the mountains to the far west. While they vary a great deal in many ways, in the new order of things these cities will have to face certain problems of public health which are common to them all.

Congestion is one of these problems. Passing through the cities of the Yangtse Valley, one is constantly impressed with the fact that every available inch of ground has been utilized for building purposes. Compared with the large population within, the area occupied by these cities seems far too small.

Viewed from the top of a wall, such as surrounds many of the larger cities, little more is to be seen than an expanse of house-tops extending from wall to wall. There are no large open spaces for playgrounds or parks, or even wide streets. And trees are the exception.

In the city, the streets present much the same appearance. They are very narrow. Five feet is an ample alley; 10 feet makes quite a main street; and a 15-feet wide thoroughfare is so unusual as to be classed the boulevard of the city.

There are no yards, either front or back. The houses abut directly on the street. And often, in the business districts, the streets are made more narrow by the shops and stands which project out from the houses, in the back of which the people live. These houses, if of one story, are usually windowless. The doors open on to the street. Paving, when present, is so crude as to make cleanliness almost impossible, even if the people were so inclined. Cooking is done in the open, usually next to the street and its dust. Inquiry shows that ten people often occupy quarters large enough for only two.

Through these narrow streets flows such a current of life as one never sees even in the most unhealthful slums of America. Riders on horses and donkeys, herds of sheep, goats and cows, coolies carrying all sorts of foods and merchandise suspended from bamboo poles, ricksha men and pedestrians make up a throng which slowly passes by. Pigs, dogs and other dirty scavengers nose about as they rub their way through the crowd from one place to another. A more favorable breeding-place for disease than the insanitary congestion of these cities would be hard to find.

Another aspect of the problem of public health which the new China will have to face is that of medical legislation.

During its rule of three hundred years, the Manchu government failed to make laws safeguarding the public health. In consequence China was exposed to many dangers from without and from within, against which other nations attempted to protect themselves. There were no quarantine laws, no isolation hospitals, no efficient methods of combating cholera and plague. For this reason China was more or less a menace to the health of the rest of the world. She had no health officers, for there were no health departments, and no health regulations to enforce.

The history of civilization will present this strange anomaly: At the beginning of the twentieth century, when medical science and legislation had been so wonderfully developed in some parts of the world, the statute books of China, representing one-fourth of the human race, failed to provide for one single benefit urged by modern science. Where was the medical profession of China all these years? It was away in the background of the social order.

A third problem affecting the public health of China, is the condition of the medical profession. This profession is a very old one in China, its history extending back many centuries. To become a member was largely an hereditary affair. Young men, also, served as apprentices. And what secrets an old practitioner had, he usually handed down to his son or apprentice. But any man had the right to become a physician. The people thought so little of their physicians that no one cared. A man might go to bed a cobbler, and wake up a doctor, his mind having been made up during the night. All that it was necessary for him to do was to secure a sign which declared that he was a doctor. No one ever thought it worth while to urge medical education. And there were no legal requirements to meet.

If the physicians of China ever realized their inefficiency in comparison with those of other lands, no one knows. There is no record that they ever got together on anything. Clans, guilds and secret societies were formed from time to time to foster nearly every other industry and profession, but the doctors were all too busy making a living to waste time cooperating with their competitors who did not know anything anyway. There are no medical societies in China. If never before, then certainly in this revolution has the medical profession of China proved itself to be thoroughly unorganized, unprogressive and unfit.

But China is changing. It will be a long time, undoubtedly, before the congestion of the cities will receive adequate attention. But once the time does come, the cities of the Yangtse Valley will have at least one example to study. Burned during the long battle between the imperialists and revolutionists, the native city of Hankow is to be rebuilt along more modern lines. A foreign engineer has been called in to give advice in the making of plans. And once the people acquire clearer conceptions of the requirements for health, their housing conditions will improve, and tuberculosis and other diseases now ravaging the cities will be more easily controlled.

As to medical legislation, something has already been done. The new government has just completed the organization of a national department of health. Dr. Lin Boon Keng, of Shanghai, has been called to its head. Trained in foreign lands, with considerable experience in tropical diseases, Dr. Lin has a clear field before him. A bulletin of fifteen practical suggestions covering some of the most urgent needs is in process of preparation. Foreign doctors will be invited to cooperate in every way possible. Until the conditions in the country become more settled, not much more can be done by this department than the laying of plans for the future.

The medical profession will undoubtedly undergo changes with the rest of the country. One of the results of the revolution already manifesting itself is a complete change of attitude among the leaders of the people in the army and elsewhere, regarding the value of western medicine. The previous indifference has given way to a most unexpected interest. A Shanghai gentleman of considerable influence in the revolution exclaimed to me: "What would this war be without you foreign doctors?"

The hopeless inefficiency of their own old-school physicians, compared with the efficiency of the foreign and foreign-trained Chinese, in caring for the wounded in battle, presented such a striking contrast as cannot be forgotten or ignored. The old standards will more and more be swept aside and be supplanted by those which obtain among the first rate powers. Nationally, China is on the eve of a transformation such as Japan passed through some years ago, when she took so eagerly to western science.

For years medical missionaries have been training Chinese helpers in their hospitals, but the pressure of work made it impossible for them to do thorough medical educational work. Later several religious organizations at work among the Chinese combined in the establishment of union medical schools. American universities interested themselves in the problem of medical education, also.

To-day there are eight large union medical schools in various stages of development. In Shanghai there is one well established and another just being opened. One has been in operation at Soochow. At Nankin extensive plans are on foot for a medical department in connection with Nankin University. Hankow and Wuchang have one school. The Yale University men at Changsha will be ready to open their doors as soon as quiet is restored in the country. These five schools are all in the great Yangtse Valley.

In the south, at Canton, the University of Pennsylvania has a school which graduated its first class in 1910. In the north there are two schools, one at Pekin, which also graduated its first class in 1910, and the second at Tsinan (Shangtung province).

There is no school for western China, but one is contemplated at Chengtu, the capital of Szechuan.

The present war, of course, broke up the work of these various medical schools, the students enlisting either as soldiers or as members of the Red Cross organizations, but with the cessation of hostilities, it is expected that the work will be resumed with renewed interest.

Because of their name and affiliations, the schools concerning which the greatest hope is expressed are those which represent American universities. Harvard, in addition to Yale and Pennsylvania, is establishing a school in China. The choice of Shanghai as the location for the school is an excellent one. Chinese students were admitted in March of this year. There is to be a close connection between this school and St. John's University of Shanghai, whose junior and senior medical students have been sent over to the Harvard school. The school is located in the heart of the city, in close proximity to the large St. Luke's Hospital.

Work in three departments is to be undertaken — training, such as is offered in American universities, research, particularly in diseases affecting China, and public health.

Because public health and hygiene have received so little attention in China, it is planned to make this department of the largest possible service. Chinese students with sufficient previous training will here be given a special course fitting them for work as public health officers. All instruction in the school will be carried on in English. Later this department will seek to cooperate with government officials in planning for the establishment of provincial and municipal health departments throughout China, and of quarantine stations in the port cities.

Once the Chinese mind acquires a full understanding of modern science, particularly medicine, the benefits will affect not only China, but the rest of the world also, for of necessity, in the coming order of things, her wall of exclusion will crumble. Then her health problems will increasingly become world problems. Her ships, manned by her crews, will carry her products to the doors of all nations. Will they also carry her diseases?

Care Methodist Publishing House.

# SOME UNCOMMON AND OFTEN UNRECOGNIZED FORMS OF TOXIC DERMATITIS *

JOSEPH ZEISLER, M.D.
Professor of Dermatology, Northwestern University
CHICAGO

In the following I propose to call the attention, not so much of the expert dermatologist as of the general practitioner, to a group of morphologically similar, yet etiologically different, forms of toxic dermatitis which, though not of ordinary occurrence, are encountered sufficiently often to deserve notice. The joint presentation of these three forms may appear justified on the ground that in every instance a recognition of the true cause, which often escapes the attending physician and even at times the specialist, is absolutely essential for the relief of severe suffering which ceases soon after the removal of the cause. It may well be urged thst this applies to a great number of forms of medicinal dermatitis or drug eruptions, to all kinds of dermatitis venenata, as well as to those due to certain trades or occupations. My selection is prompted by the somewhat uncommon etiology as well as by the chance of their more frequent occurrence in my own recent practice.

## I. A RARE FORM OF VERONAL DERMATITIS

It is less than ten years since veronal was introduced by Fischer and von Mehring. To-day it is probably the most favored of all hypnotics. Attention was recently called to some of its dangers,[1] but no mention is made of its well-known occasional irritating effect on the skin as exemplified by quite a number of observations in recent literature. The following report relates to a rather unique cutaneous reaction due to that drug.

The subject is a man of about 50 who had, in the past, shown pronounced susceptibilities to a number of drugs. Thus, many years ago, the use of antipyrin was regularly followed by a localized urticarial eruption, until it was definitely abandoned. Later on, aspirin, whose employment was indicated by repeated attacks of lumbago and other rheumatic affections, was well tolerated at first, but gradually became the source of severe stomach disturbances, causing vomiting from twelve to twenty-four hours after its use, which would persist for twenty-four to thirty-six hours. Veronal also was well borne at first and

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* Read in the Section on Dermatology of the American Medica Association, at the Sixty-Third Annual Session, held at Atlanti City, June, 1912.

[1] Veronal Poisoning, The Journal A. M. A., Jan. 20, 1912 p. 196.

therefore its relation to the subsequent dermatitis was not suspected until after the third attack of the kind. These would occur with almost mathematical regularity in the following manner. Twelve to eighteen hours after taking 5 to 8 grains of veronal there would be noticed a marked itching on the glans and prepuce. On local inspection a number of round reddish patches would be observed which in the course of a day or two would become bright red, tense, somewhat swollen and gradually show even a serous exudation. This highly inflammatory state, accompanied by almost unbearable itching, would persist for a number of days before superficial crusting and final desquamation would terminate the process, about eight or ten days after its onset. Having traced the relationship of this peculiar local dermatitis to the use of veronal, the patient desisted from its use for a long period, but finally, after an interval of about eighteen months, he yielded to temptation during a restless night and promptly suffered for his indiscretion by a repetition of his previous experience. To a certain extent we may look on the untoward effects of the drug in this case, which came on after a previous tolerance, in the sense of an anaphylaxis, or to put it as we would have done five years ago, of an acquired idiosyncrasy.

Quite recently I had in my practice an almost identical case in a man of middle age, a pronounced neurotic, who for years has indulged in the use of various hypnotics and who lately has taken veronal by preference. He consulted me for a persistent eczematoid condition of the glans which I was able, on the ground of my previous observation, to attribute to the true cause. Avoidance of the drug and mild local remedies quickly brought about relief.

A similar observation in a different localization was reported by Woolley,[2] who reports, based on experience in his own person, the eruption of a circumscribed patch of dermatitis in the same place, namely, the first metacarpophalangeal joint of the left hand, whenever he used veronal internally.

## II. PRIMROSE DERMATITIS

During the past two years a number of cases of this affection, probably not less than twenty-five, have occurred in my practice. In all, the history of severe itching and a localized dermatitis, affecting mainly the hands and the face, formed the striking feature. With few exceptions all were women belonging to the better class. A few were engaged in floral establishments. The local features consisted in the well-known phenomena of ordinary dermatitis, ranging from mild erythema and occasional vesiculation to crusting, fissuring and swelling, associated with itching and burning. One need not be endowed with the powers of a Sherlock Holmes to be able, after a few such observations, to establish quickly a correct diagnosis in these cases. A few questions will usually elicit the suspected cause of the dermatitis, much to the surprise and keen interest of the patient. Recognizing the fact that other plants frequently cause inflammatory reaction of the skin in susceptible persons, I usually advise the elimination of all kinds of plants from the dwelling of the sufferer. Within a week or two these patients will usually report, either by telephone or in person, their entire freedom from trouble brought about by simple antiphlogistic local treatment and the removal of the primrose and other plants from their proximity.

In spite of a very respectable literature covering this subject the fact remains that many patients with this affection are erroneously treated by their family physicians, and even by specialists, for a supposed eczema, and at times for recurring attacks of mild erysipelas. J. C. White was the first to record the poisonous quality of certain kinds of primroses in 1888, a few years after the importation of the plant from China. The most important scientific study of the subject was made by Nestler in 1900, who demonstrated the cause of the toxic effect of the *Primula obconica* and *Primula sinensis* to be a peculiar oil secreted by the glandular hair which covers all parts of the plant above the ground. This poison remains active even after the plant is dried. That some people are immune to it there is no doubt. Others acquire gradually a specific idiosyncrasy against it; again an analogy to anaphylaxis. Nestler also proved the causal relationship of dermatitis to primroses by actual experiment. Excellent clinical reports on this subject have been made by Heuss, Wechselmann, Gassmann, Riehl, E. Hoffmann, and more recently by Foerster,[3] who contributed an exhaustive essay two years ago. W. H. Brown reported in the *Lancet* of 1906 a fatal case of blood-poisoning following a wound made by contact with a *Primula obconica*. After smelling the plant a lesion developed on the nose, associated with swelling and a carbuncle-like formation. Edema of the eyes, face and head followed and within a few days death occurred, owing to pneumonia.

If we consider the fact that many of these patients suffer severely for weeks and months and have recurrences of their trouble whenever, probably at Easter time, a fresh supply of primroses gladdens their hearts; if we furthermore recognize the facility of a cure consisting best in the employment of 96 per cent. alcohol, which dissolves the poisonous oil, followed by soothing local treatment and the permanent elimination of the poisonous plant, we shall easily see the practical importance of this matter. I should have gone more fully into this subject, but, when finding that the literature contains already so many identical observations, I felt that a brief reiteration of the salient points would be sufficient in this connection.

## III. HAIR-DYE DERMATITIS

In the last few years quite a number of observations of persistent dermatitis have come to my notice which I could easily trace to their peculiar causation.[4] Most of the sufferers were women above middle age. One only was a man of about 60. These people complained of considerable itching and burning of the face, which showed more or less sharply circumscribed redness, with superficial crusting, often involving the ears, but marginated against the hair line and only occasionally involving the hands in the form of a few patches. The eyelids suffer particularly, are usually swollen somewhat and show superficial transversal rhagades. The patients are otherwise in perfect health and know of their own knowledge no cause for their disfiguring dermatosis. These cases have usually been treated for long periods as chronic eczemas. A close observer will quickly notice the unnatural dead color of the hair, which contrasts markedly with the grayness of the hair close to the skull.

These patients do not deny the use of hair-dyes, of which there are so many different kinds on the market.

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[2] Woolley, P. G.: Veronal Dermatitis, The Journal A. M. A., Dec. 28, 1907, p. 2153.

[3] Foerster, O. H.: Primula Dermatitis, The Journal A. M. A., Aug. 20, 1910, p. 642.

[4] A number of instances of such dermatitis have been described in The Journal within a few years:
The Composition of Hair-Dyes and the Effects of Their Use, Aug. 26, 1911, p. 757.
"Eau Sublime" and "Mrs. Potter's Walnut Tint Hair-Stain," Nov. 5, 1910, p. 1662.
Burke, J. G.: Dermatitis from Hair-Dye, Aug. 14, 1909, p. 528.
Poisoning from Mrs. Potter's Walnut Tint Hair-Stain, Sept. 14, 1909, p. 809.
Schalek, A.: Dermatitis Venenata Due to a Proprietary Hair-Dye, Feb. 13, 1909, p. 557.
A Toxic Hair-Dye and Its Analysis, April 3, 1909, p. 1121.

In my opinion it does not matter which special brand has been used. The relationship of the dermatitis to some irritating chemical contained in the hair-dye is easily apparent, and the patient who learns of the true cause of her trouble will usually be willing to abandon her nefarious practice.

Again, what is necessary for relief is simple local treatment and avoidance of the cause. This subject has received considerable notice at the hands of dermatologists in recent years, among whom may be mentioned Fournier, Cathelineau, Emery and Mewborn, but I am forced to the conclusion from my own experience that it is not so fully appreciated in its bearing as it deserves.

32 North State Street.

## ABSTRACT OF DISCUSSION

**Dr. J. B. Kessler**, Iowa City: I was recently called to see an infant with an eruption that started on the right vulva, gradually extended down the thighs half way to the knees and involved both legs. There was considerable infiltration, as much as one finds at times in urticaria gigans. The attending physician had pronounced the eruption an erythema, and while I thought it urticaria gigans, I did not dispute his diagnosis, as the line between these affections cannot always be sharply drawn. The eruption was a vivid red and was accompanied by a considerable elevation in temperature, ranging between 102 and 104 F. At times, the redness, infiltration and high temperature would disappear entirely; these remissions would last for several hours. A number of physicians were called in to see the patient. One physician attributed the eruption to a staphylococcus infection; another thought it was due to intestinal toxins, while the mother of the child was firmly convinced that it was the result of arsenic poisoning caused by chewing wall-paper. The infant had no gastro-intestinal symptoms whatever.

**Dr. M. L. Ravitch**, Louisville, Ky.: To my mind, the majority of cases of toxic dermatoses are due to anaphylactic reactions. Eruptions due to the ingestion of certain drugs, such as veronal, and those due to contact with certain plants and weeds, and even attacks of rose and hay fever, are manifestations of anaphylactic reactions. I recall a case of veronal eruption, similar to that described by Dr. Zeisler, in a pregnant woman. After the drug was discontinued, the eruption disappeared, only to reappear, two months later, when the patient again began to take veronal.

**Dr. W. B. Trimble**, New York: Dr. Zeisler mentioned an instance of recurrent attacks of certain drug eruptions in the same location in which the lesion was confined to one finger. The same phenomenon has been noted in antipyrin eruptions, and I recall one case of my own in a man who was sensitive to quinin. He showed bullæ about the size of a thumb-nail on one side of the chest and in the right inguinal region, with smaller lesions on the glans penis. He had two recurrences while under my observation, and each time the lesions appeared in the same locations. This patient was shown at a meeting of the New York Dermatological Society, and several of the speakers who took part in the discussion referred to similar effects from antipyrin.

**Dr. Ludwig Weiss**, New York: Cases of the class described by Dr. Zeisler are often treated for eczema and allied diseases, and some of them are very severe. There are doubtless many types of scarlatiniform eruption which we thus far are unable to classify, but which will eventually reduce themselves to some form of toxic dermatitis, when we have learned the etiologic factor. Artificial dermatitis may be produced by the application of the high-frequency current. Last year, I saw a middle-aged woman who was treated by her physician for sciatica with the high-frequency current, the applications being made with the flat electrode. When I saw her, she had a dermatitis which, until I learned that the treatment was confined to the high-frequency current, I was inclined to attribute to the ingestion of some drug. The dermatitis subsided without any treatment; the patient returned to her physician and the electrical treatment was again followed by a dermatitis.

**Dr. J. H. Carman**, Plainfield, N. J.: I have had several cases of toxic dermatitis due to the *Primula obconica*—one of them only a few weeks ago—in which the eruption started on the face and hands, being most pronounced about the eyes and nose, owing to the fact that the patient, who is blind, in smelling and feeling of the plant, came in actual contact therewith. It has been my experience that in primula poisoning the eruption is less virulent than in poisoning due to the *Rhus toxicodendron*

**Dr. J. T. Farrell**, Providence, R. I.: Within the past few weeks I have seen two cases of supposed scarlet fever at the City Hospital. The skin eruption was typical of scarlatina and there was slight elevation of temperature, but no throat symptoms. On investigation, I found that the patients had been eating strawberries, and under soothing applications and a dose of Epsom salts the eruption cleared up within forty-eight hours.

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# RECONSTRUCTION OF THE BILE-DUCTS *

ARTHUR G. SULLIVAN, M.D.
MADISON, WIS.

In spite of the fact that for many years the diseases which the biliary tract is heir to have been successfully attacked and conquered, the surgical world is still woefully handicapped by the need of a simple, safe method of transmitting bile from the liver to the duodenum in the absence of the gall-bladder and common duct. The high mortality attending cases in which the common duct has been partially or totally destroyed is a sad commentary on our helplessness, which is due largely to the lack of an efficient means of dealing with the situation. A casual review of the cases reported in the current literature of the last year impresses one forcibly with the seriousness of any pathologic process which destroys the common duct.

The purpose of this paper is to present again a method for the construction of an intra-abdominal sinus for biliary drainage, in the hope that for the next year, the case reports may give somewhat better results. I have no quarrel with the method of anastomosing the stump of the hepatic duct with the duodenum, but it is generally conceded that in cases requiring this work, the latter operation is not easy of accomplishment or safe, as it would seem theoretically. The mortalit attending this method, in even skilled hands, add emphasis to this statement. I have not the presumption to weary you with technical details, yet the following brief description of the technic employed in thi work must be given, which, if followed, even in averag hands, will be much less difficult than hepatioduodenostomy, and from the standpoint of danger of biliar leakage, will be much surer.

Into the stump of the hepatic duct an elastic rubbe tube is inserted for about half an inch and securel sutured to it with several unabsorbable sutures. Th other end of the tube is pushed down into the duodenu through the stump of the common duct if possible, o if this is not possible, the tube should project throug a small incision in the anterior wall of the duodenu about one-half inch into its lumen.

The opening in the duodenum should be sufficient repaired so that the cut edges snugly encircle the tub At the point where the tube penetrates the intestin wall the tube should be firmly anchored to the duodenu with unabsorbable sutures. The duodenal walls are then sutured over it, so that for a distance of about 2 cm. before the tube penetrates into the intestine, it runs in a canal composed of overlapped duodenum. The tube is then anchored with unabsorbable sutures in several places to the duodenum and the gastrohepatic omentum. In short, the tube is to be put in with the idea of keeping it *in situ* as long as possible. The great omentum is then drawn up and a suitable area is selected with which to cover the exposed surface of the tube. This area is traumatized by drawing a dry sponge over it lightly a few times; similar friction is applied to the duodenum and the gastrohepatic omentum on either side of the tube. The omentum is then placed so as to cover the tube and extend beyond it a centimeter or two in all directions and is carefully anchored in position by several catgut sutures.

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* Read in the Section on Surgery of the American Medic Association, at the Sixty-Third Annual Session, held at Atlan City, June, 1912.

The rubber tube should have a lumen of not less than a quarter of an inch and should be soft pure rubber, yet resilient enough to retain its shape. Should the structures into which the tube must be passed not admit one of this caliber, stretching it along a stiff sound or a long-shanked forceps, thus decreasing its diameter, will make it possible to insert it easily.

To show the ease with which the tube passes down into the intestine shortly after operation, I give the following summary of the experimental work previously reported:

> The first dog operated on after this method, much to the surprise of my associates in the Surgical Research Laboratory of Columbia University, prospered, and as the days passed with no signs of peritonitis or acholia, and with absolutely no leakage of bile, interest grew in the procedure. A couple of weeks after the first operation, the dog's abdomen was again opened, and the end of the tube grasped through a small incision in the duodenum. The ease with which the tube slipped out suggested that the peristaltic action of the intestine could well supplant the second operative procedure. Consequently, the second dog operated on had a tube with a rubber sponge-tipped end inserted. Very fine plain catgut was used throughout, with the result that the tube and sponge were passed sixty hours later. In animals subsequently operated on, a small gauze sponge was substituted for the rubber sponge previously used, and it was found to work entirely satisfactorily.
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> In some of the dogs, the sponge which was inserted was compressed as much as possible by taking several turns of No. 3 plain catgut around it. My experience has been that catgut in the lumen of the dog's duodenum is disintegrated about three times as rapidly as that placed in the body tissues. So, by using the heavier gut to compress the sponge, one very greatly diminishes the peristaltic tug on the tube for a few days after the operation, until finally the sponge breaks its bonds, expands, and is then ready to do active work at approximately the same time that the catgut holding the tube in the duct, is absorbed. The adv tage of having the tube undisturbed the first few days is obvious.

Until a short time ago, I was quite proud of one animal which is still in splendid health, and on which this operation was done. Three years ago, I removed the entire common duct of this animal after doing a cholecystectomy, and inserted into the hepaticus a tube without a sponge-tipped end, with the idea of keeping the tube there permanently. The tube was securely sutured to the surrounding tissues with unabsorbable material, and was allowed to project into the duodenum for about 2 inches. The dog's convalescence was short and uneventful, as it was in all the others, and as the months passed by, I was greatly pleased in the belief that the tube would remain *in situ* until disintegrated. When forced to operate on this animal last year, for a strangulated umbilical hernia, my surprise can well be imagined when I found that the tube had been passed, and that an entire absence of adhesions, save those artificially produced, permitted the new-formed bile-passage to be easily seen and demonstrated. This proves conclusively that it is by no means necessary to attach a bulbous object to the end of the tube in order to have the peristaltic action of the bowel remove the tube.

I have given a summary of the use of the sponge-tipped tube in the early work for two reasons: one is to illustrate an idea which may be utilized, that is, the surgical use of the peristaltic action of the bowel, and the other is to emphasize the fact that the elaboration of technic to have the tube withdrawn was entirely unnecessary, for, contrary to all theories and expectations, it is difficult to anchor the tube so that it will be retained permanently. If it is retained but a few months, until all inflammatory reaction has subsided, the sinus will have become such a definite formed structure that the tube will be no longer essential to its patency. When the method is used on dogs and in normal tissues, if the tube remains *in situ* but a short time, a persistent sinus is formed which does not continue to contract as might be supposed. Microscopic sections show that the mucosa of the duodenum grows upward and the mucosa from the duct downward into the new-formed tube, and, furthermore, that the tissues composing the walls of the artificial canal are formed peritoneal structures and not inflammatory deposits.

It undoubtedly is true, however, that when this method is used in operations on the human being and in tissues involved by recent and severe inflammatory changes, the sinus might contract more than otherwise, owing to the incited round-cell infiltration. If a tube of larger caliber is used in such instances, the contraction which follows will not be great enough to impede the biliary discharge, and this difficulty may be obviated.

At this point a technical suggestion may be made which I trust will be of some value. In these cases in which there has been great destruction and adhesion of tissues, much difficulty has been encountered in locating the distal end of the duct. Time and energy can be saved by passing a small catheter or a duct sound upward from the duodenum through the ampulla of Vater and on up the common duct. This will establish the landmarks and, in the search for the duct, will minimize hazard to the two more important structures in the gastrohepatic omentum. By doing this, it will be found that, in a greater number of cases, a larger portion of the common duct can be more readily discovered and saved, and the hiatus between the divided ends of the biliary tract will be smaller. A deficiency in the common duct in which a portion of its anterior wall is missing, or even in which a short section has been removed, may be readily bridged by passing a catheter down into the duodenum through the common duct, and then uniting the hepatic duct and catheter in the method already described. By gentle dilatation of the ampulla and lower common duct with suitable instrumentation, a fairly good-sized catheter may be readily introduced. In these cases, it must be remembered that the tube should be properly fenestrated at a point just before it passes into the duodenum, so that the flow of pancreatic secretion will not be obstructed.

Furthermore, it must again be emphasized that the tube must be carefully and securely anchored. Do not put it in with the idea of getting it out! Put it in with the idea of keeping it there!

The thought must occur to some: Is this operation a technical dream, or even a surgical nightmare? Looked at from a surgical point, it appears to be a dangerous proposition, but on analyzing the constituent steps in this work, as I have pointed out in a previous communication, it is at once apparent that the operation is merely a combination of more or less accepted technical details.

The drainage of the hepatic duct by a rubber tube, as set forth by Abbe, is recognized. Witzel's method of gastrostomy is roughly similar to my method of implanting the tube in the duodenum. Kehr has successfully used portions of the gastric wall to bridge over a deficiency in the wall of the common duct; and the use of omental grafts to cover such apertures is a fairly common procedure.

Beside the principles on which these procedures hinge, the ease and permanency with which a persistent biliary fistula may be caused needs only to be contemplated to add conviction that this same fistula may be as easily and permanently drained into the intestine, in which it will be of physiologic value, as to the skin, where it is a menace and an end.

Furthermore, there is no leakage of bile through the walls of even the temporary sinus which exists after the removal of the drainage tube in biliary surgery. Some objection has been raised as to the direct communication of duodenum and biliary passage without a normal protecting valve intervening, such as afforded the common duct by the papilla of Vater. This valve, however, has been frequently slit in order to remove ball-valve stone, and the slit been left unrepaired without harm to the patient. The same is true of the ureteral valve, and in animals, at least, the slitting of these valves seems to produce no interference or change in the kidneys or in the animal's health, and by analogy, the same principle obtains as regards the biliary system.

In the dog, whose duodenum is always parallel to the ground, unlike the human being, regurgitation of duodenal content into the tube and, particularly, the access of intestinal worms to the liver may be blocked by cementing a short ferrule of dentist's rubber to the duodenal end of the tube, the wet surface of which, by adhering, will act as a valve. In the human being, because of posture alone, siphonage must play some part in biliary drainage.

Several men of world-wide repute believe that this method of bile-duct reconstruction is the means of cure in many so-called permanent biliary fistulas. Whether permanent tubage be necessary or not is still a matter of conflicting opinion among the masters of biliary surgery. It is agreed, however, that whether or not it be required is of little consequence.

In the use of this technic, I should like to emphasize certain necessary steps. 1. It is essential that the tube be placed within the duct, and not in the reverse order. 2. The duodenal wall must be folded over the tube for a distance of 2 cm. before it plunges into the lumen of the intestine. 3. The restraining stitch which temporarily prevents traction on the upper portion of the tube should be put in. 4. The tissues forming the walls of the tube must be lightly traumatized. 5. Silk or linen sutures should be used to hold the tube in place. 6. No sponge or other bulbous object should be attached to the tube. 7. The tube should not project into the duodenum more than one inch. 8. If the distal end of the common duct is not to be utilized as part of the canal, and if it is open and accessible, it should be ligated.

In passing, it may be of sufficient interest to note that in dogs, if one sections the common duct and does not ligate either end, after a little biliary leakage, the duct will reunite without suture, and will do so invariably. This is probably due to the firm and constant support given it by the gastrohepatic omentum.

Although for some time past, a number of American surgeons have expressed their faith in the practical application of this work, and have signified their intention of making use of it in permanent biliary fistula, but one case has been reported thus far;[1] several successful cases, however, are on record in which limited deficiencies in the common duct have been bridged.

Dr. Brewer's patient was originally operated on for acute gangrenous cholecystitis. Extensive sloughing of tissues had occurred, destroying the entire common duct and resulting in a permanent biliary fistula. Seventy-five days after the primary operation a small rubber tube was inserted into the hepatic duct and secured by a purse-string of chromic gut. The other extremity was passed into the duodenum through a stab wound, and held there by a purse-string suture. Omentum was wrapped about the tube and sutured so as to extend beyond its exposed surface in all directions. A cigarette drain was inserted down to the omental graft and the wound was closed. The following is taken verbatim from Dr. Brewer's report:

> A moderate reaction only followed the operation; the patient suffered little discomfort, the temperature and pulse reaching the normal on the fifth day. On the third day the bowels moved freely as the result of the enema, the stool being brown in color and containing well-marked traces of bile. At no time was there any leakage of bile from the abdominal wound. The drain was removed about the eighth day, and all stitches on the thirteenth day. The patient gained rapidly in weight, had a ravenous appetite and sat up on the fourteenth day. He had a slight rise in temperature after sitting up for a few hours. This was repeated on the seventeenth and thirty-first days after operation. On the thirty-sixth day there was a chill, high temperature and slight jaundice. These symptoms subsided on the following day, and he was discharged from the hospital on the fortieth day after the second operation, or one hundred and fifteen days after the cholecystectomy. At the time of his discharge, he expressed himself as feeling as well as ever in his life. The temperature and pulse were normal, the abdominal wall solidly healed, and he had daily movements containing an abundance of bile.

A few weeks later, after a few intermittent attacks of jaundice, this patient had apparent biliary obstruction, and Dr. Brewer wrote that he would operate on him again to correct the difficulty. I at once wrote Dr. Brewer and suggested that the results might have been better had he made a duodenal gutter for the tube to lie in, just before it entered the intestinal lumen. It will be recalled that he simply punctured the duodenum, passed the end of the tube inside the intestine, and held it there with a purse-string suture. His reply was as follows:

> You will be interested to know that I operated on my patient again last week. I am sorry I did not receive you letter before, although I do not imagine I could have don any differently. My intention was to do exactly as you sug gest, i. e., make a gutter in the wall of the duodenum, bu the adhesions were so dense, and, when the duodenum wa exposed, so little peritoneum was left on it, that I though i wiser practically to repeat my former operation, using larger rubber tube. As the patient was deeply jaundiced at th time, we have had considerable trouble with capillary oozin both from the bowel and stomach and from the wound. A

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[1] Brewer, George E.: Ann. Surg., June, 1910.

> present, he seems to be doing well, and there has been practically no leakage of bile; his stomach is irritable, and he has difficulty in retaining food. As it is now seven days since, and he has no sign of peritonitis, I think he will pull through.

I would like to call attention to the fact that the adhesions found at the time of the second operation prevented Dr. Brewer from using the technic already described, and I feel that failure to make the duodenal gutter greatly handicaps the success of the work. Further than this, the first tube inserted was never found by *x*-ray, nor in the stools, and so the length of time the tube was *in situ* can hardly be guessed. A few days later Dr. Brewer wrote me as follows:

> I am sorry to be obliged to tell you that my patient died as the result of his second operation. His condition was pretty bad at the time from cholemia, and the wound oozed for about ten days, which greatly weakened him. At the end of this time, the hemorrhage ceased and he began to take nourishment, but the bile never flowed freely into the intestine. Why I cannot imagine, because the duct was coupled up to the duodenum by a large tube through which the bile flowed during the operation. The temperature kept almost to the normal, and there was no peritonitis. No autopsy was permitted.

The most striking thing to me, in the convalescence after this work experimentally, and as borne out by Professor Brewer's experience in both operations, is that there is no biliary leakage and no peritonitis. One would suppose that there would be leakage at the point at which the tube enters the duodenum, at which place there must be some peristaltic back pressure. Such is not the case, however.

It is also curious that it is difficult to keep the tube *in situ* for any length of time without considerable care in anchoring it firmly with unabsorbable sutures.

The one point in this work about which there is some skepticism is whether or not the fistula will eventually close. If it is ultimately proved that in the human being a biliary sinus will not remain patent, a tube with flanges may be inserted, and thus held *in situ* permanently.

I have endeavored to present all angles of this work, so that it may be analyzed. It must stand or fall on its merits. I would esteem it a favor, if the men who have had cases of the nature this method is intended for will criticize its shortcomings.

28 West Mifflin Street.

# BERIBERI CAUSED BY FINE WHITE FLOUR

JOHN M. LITTLE, M.D.
ST. ANTHONY, NEWFOUNDLAND

The etiology of beriberi in rice-eating countries has had a great deal of light thrown on it recently. One frequently sees reports in the medical and lay press of cases arising on shipboard or in different parts of the world where the eating of polished rice cannot be the cause; reports from medical men proving that rice has nothing to do with it; reports of measures being taken by health officers on the assumption that it is an infectious disease. In spite of the knowledge gained, the disease seems not to be generally understood in such a way that rational measures are instituted when it appears, or that preventive measures are adopted where it is likely to occur. There is no doubt about the cause in the minds of the men who are working in the rice-eating communities, but they do not see the cases arising from other diets (perhaps the same cause). While the work of these men is very definite and their results splendid, they have not been rightly interpreted by men who see beriberi arising from other diets. The reason of this is that the connection between cause and effect is not so plain. Contributing causes and intermittent conditions cloud the picture. It is in the hope that this difficulty may be removed and that better prophylaxis and treatment may be instituted, even where beriberi is not so prevalent or severe as in eastern lands, that I am writing some observations made clinically during five years in a wheat-eating country where beriberi is fairly common, that is, Newfoundland and Labrador.

There are people in this country who, especially at certain times of the year — mid-winter and spring, and in summer on their fishing vessels — come down to a diet of bread and tea. In other words, substitute wheat for rice, and we have the exact conditions which are seen in the east. The conditions are complicated by vicious physical states, arising from other causes, such as actual starvation, exposure, hardship, unhygienic conditions (this last to be insisted on and emphasized without going into details), so that malnutrition, physical exhaustion, scurvy and various minor and major pathologic metabolic processes are to be considered. Yet these can all be thrown out, and case after case demonstrated in which there is affection of the nerves, and almost invariably it is found that such patients have been or are, to all intents and purposes, on a diet of overmilled wheat, by which I mean ordinary fine white flour.

A great many people here live from hand to mouth, being always on the verge of poverty. There are many who are well satisfied if they have enough flour, tea and molasses to see them through the winter. Agriculture is so discouraging that many never have a vegetable. Game, deer, birds, rabbits, seals are scarce and getting scarcer. Berries, though abundant in the fall, are hard to gather. Fish is worth more to sell than to eat for with it flour, which is the cheapest food, is bought. Although there are times of the year when such people get all of these, there are times when they get none of them and those are the times when the physician begins to hear various complaints. These complaints are in many cases vague, in some definite. Such for instance are night-blindness, retention of urine, numbness or cold feelings, tingling in the legs or arms, or across the abdomen or mouth, feelings of water running up and down under the skin, etc. These are the paresthesias, the functional nervous troubles which are the prodromal stage of beriberi. They are very common. Let the vessel get home or the spring come, the ice break up, navigation open and a more varied diet be taken, and they disappear. But let an added burden be thrown on the economy, whether it be pregnancy, a wetting and chill or a cold; add the squalor and discomfort, dirt and bad air of one of the air-tight overheated cottages the natives live in, increased by the neglect caused by their own undermined health, then you will see the condition advancing sometimes very rapidly to the later stages of sensory and motor paralysis, with affection of the peripheral or special nerves, involvement of the heart, or any other organ, edema, etc., and sometimes death.

I have seen the advance into complete helplessness of a patient who complained only of night-blindness with paresthesias, anesthesias and paralysis. I have seen the same patient, put on a diet of whole-wheat flour, beans and peas, get perfectly well in two months. I have taken into hospital patient after patient advancing from the functional stage of symptoms into the paralyzed, and, by giving a full diet with whole-wheat bread, beans, potatoes, macaroni and fresh meat, had them well in two weeks. I see two to three cases a day now, and during the last two months have taken in the worst ones and cured the patients in two weeks. On one part of our coast where beriberi has been most common, in the fall of 1910 a large vessel went ashore from which whole-wheat flour was unloaded to lighten her. The natives got the flour and there has not been a case there since, nor any of the functional symptoms. The "old stagers" of this country who remember the days when "brown flour" was the diet, say that this trouble was unknown among them. I could multiply clinical and empirical arguments endlessly, but what is the use?

Before the works of Eijkman, Frazer and Stanton, Chamberlain and Vedder and others came out, and their significance as applied to conditions here was understood, I found this problem the hardest to solve. Since the light thrown on this disease has been applied here, everything has been simplified. As I said in the first place, the contributing factors and the intercurrent and analogous conditions must be recognized and allowed for, but after this the bold fact stands out that the beriberi so prevalent here is caused by the same thing here as in Asia, the use of the overmilled grain (wheat, not rice) and the exclusion of other foods.

This must not blind us to the possibilities of other causes. The fact that peripheral neuritis is caused by alcohol does not prove that it is not caused by arsenic or diphtheria or other agents. The fact that one particular form of peripheral neuritis, which is called beriberi, is caused by eating to the exclusion of other foods, grain, whether rice or wheat, which has had its outer coat removed by polishing or milling, does not prove that peripheral neuritis is not caused in other ways, any more than the fact that beriberi was caused by eating polished rice proved that it might not be caused by eating overmilled wheat. Here in my experience is the proof that it is, and yet the fundamental cause is no doubt the same.

It is no part of my purpose to follow this argument up and to advance hypotheses to explain the other causes of the disease, as, for instance, the fact that unmilled grain may have the neuritis-preventing elements in its peripheral layers removed, changed or dissolved out by dampness, or decomposed and removed by heat, or that in certain states the body may not cause the decomposition of the proteins of other diets in the way necessary to produce the particular substance necessary to the normal preservation of nervous tissue. What I mainly want to do is to lead men to accept, at its worth, the work of the scientific investigators of this problem, to apply the findings to the amelioration of whatever conditions are the cause of the disease wherever they find it, and to produce a fuller understanding and recognition of the disease as a clinical entity outside of rice-eating communities.

It looks as though the time were not far distant when the wanting ingredient of the diet would be isolated and possibly put on the market in easily handled forms, which would vastly simplify our work in the prevention and treatment of this disease.

Meanwhile, a dissemination of the knowledge of its symptoms, cause, prevention and cure should be taking place. There are many isolated communities in which the diet is restricted and in which tuberculosis is rife, to which education for the prevention of tuberculosis is being brought, and many of these communities are under more or less government control. It should be easy in such to include in the instructions on foods a knowledge of the value of whole-wheat flour, from the standpoint of preventing many of the prodromal, as well as severe, ills of beriberi, as well as from that of its general nutritional advantages. Where government control is possible, as in institutions, government relief work, etc., whole-wheat flour should be insisted on, as has been done in the Philippine Islands.

I have found the same prejudice against whole-wheat flour here as has been found against the unpolished rice there, but it has broken down before its proved value, and, at present, I am unable to supply the demand for it locally. The old regulations devised for preventing disease on vessels should be revised to meet this new knowledge. Sailors should be made to understand the significance of some of these symptoms, and ship-owners should understand the possibilities and means for their prevention. It should be taught that the more the diet is to be restricted to flour, the more is it necessary to have whole-wheat flour. The worse the hygienic conditions and the greater the hardships, even the more is it necessary. Or to put it in another way, whole-wheat flour is better than fine white flour for many reasons. The more one depends on it for the diet, the stronger become the reasons. When the staple article of diet is flour, the reasons are paramount; whole-wheat flour must be used to prevent nerve-poisoning.

St. Anthony Hospital.

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# THERAPEUTIC LITERATURE *

## EVERETT J. BROWN, M.D.

DECATUR, ILL.

By "therapeutic literature" I mean literature in the form of books, monographs, magazine articles, journals or tracts of optimistic and self-helpful character which are written in language and meaning acceptable to the laity, and which can be safely placed in the hands of certain patients to help them cure their diseases or remove their symptoms.

I know that many physicians are already in the habit of suggesting the reading of certain books to their patients as an aid to cure, but as yet I have not been able to find where any one has systematically collated this form of literature for use in a therapeutic way. It is not my purpose by any means to attempt to name all the books which are used, or might be used, but I have selected only those with which I have become acquainted and which have proved of value to me in my professiona work. These books I regard as a part of my therapeuti armamentarium.

Although it is still a mooted question whether patient should be instructed in medical matters, and I strongl object to ever placing an ordinary medical text-book i their hands, yet in all these books which I have selecte there is nothing to suggest self-medication or to encour age introspection, and no dismal prognoses are given but all are encouraging and self-educative, and assist i a logical way in producing that attitude of mind whic has given the various "cults" what success they have ha to-day. These books teach patients to form the habit o dismissing the disagreeable, to be less self-contemplati and to look outside of themselves for life and happines

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* Read before the Morgan County Medical Library Associatio Jacksonville, Ill., Feb. 18, 1912.

and to frequently vary the activities of their different groups of nerve-cells; they encourage outdoor life, the cultivation of fads, and temperance in all things. They are especially applicable to that large group of patients — the psychoneurotics — who form at least 40 per cent. of the general practitioner's clientele—whose symptoms are out of proportion to their physical bases, and who need help in teaching them to build up a resistance to fatigue, to gain self-control and to overcome their phobias. There is no class of patients that get as little satisfaction from the general practitioner as these nervous derelicts; if the physician has the proper "hypnotic" influence, he may treat them for years, ringing the changes on bromids and valerian, or electricity and rest-cures, and although they are great "dividend-payers" to the unscrupulous physician, yet he never gives them their "money's worth," and sooner or later the quacks or the cults get them.

Not every physician is a psychologist, nor is every physician a psychotherapeutist, and even if he were, he has not the time to give to every neurotic patient the many minutes or even hours of advice and reeducation necessary to help him overcome his fears, his follies and his obsessions; often, too, the printed page has more influence than the spoken words of the physician.

Dr. S. Weir Mitchell, in his introduction to that splendid little book, "Doctor and Patient,"[1] says: "Many times I have been asked if there were no books that helpfully dealt with some of the questions which a weak and nervous woman, or a woman who has been these, would wish to have answered." He has done this well in his discussion of pain and its consequences, convalescence, nervousness and its influence on character, the moral management of sick or invalid children and outdoor and camp life for women.

In "Why Worry?"[2] Walton describes the worrier at home and on his travels, the doubting folly, worry and obsession, hypochondria and neurasthenia, sleeplessness and the fear of becoming insane; also the cultivation of a fad in the treatment of the psychoneuroses.

In "Self-Help for Nervous Women,"[3] Dr. John K. Mitchell suggests that, after one thorough reading of the book, one chapter be read every day, for the lessons inculcated are much enhanced by frequent repetition. This is the plan of cult followers who read their "bible" daily. He discusses the exaggerated emotional expression, the use and abuse of sympathy, how to form good physical and mental habits, control of nervousness, economy of nervous energy, value of system and routine, errors and fancies about special diets, religion and nervousness, dangers of hypnotism, failure of the Emanuel movement, etc.

In "The Way With the Nerves,"[4] Collins gives in a most interesting manner the "letters to a neurologist on various modern nervous ailments, real and fancied, with replies thereto, telling of their nature and treatment." Other books along the same line are "The Conquest of Nerves,"[5] by Courtney.; "The Physiology of Faith and Fear,"[6] by Sadler; "Power Through Repose,"[7] by Annie Payson Call. Every nervous mother, especially if she has a nervous child, should read "How Not to be Nervous,"[8] by Patrick. In carefully selected cases we might recommend a more technical work, "The Psychic Treatment of Nervous Disorders,"[9] by Dubois.

The individual who believes that his only hope is in a "cult" should read something which shows him that psychotherapy need not be converted into a religion or into an ethical cult to help him in preventing and removing his symptoms. Cutten, in the preface to his book, "Three Thousand Years of Mental Healing,"[10] says: "Many people nowadays are misled into believing that recent healing movements are new in origin and in principle, simply and solely because they are ignorant of similar movements in the past. On the contrary such movements as those known as Mormonism, Dowieism and Eddyism — mental healing combined with religious vagaries — are merely repetitions of similar movements in by-gone ages, and such individuals as the Modern Evangelist, George O. Barnes, Father Mathew and Francis Schlatter present characteristics which are to all intents and purposes the same as those of healers and leaders of cults hundreds and thousands of years ago." The booklet, "Eddyism,"[11] by Charles Edward Locke, if handed to the patient with "cult" tendencies, will do more than hours of argument in properly orienting him. Admitting with Osler that "these new systems have no doubt done the profession much good in awakening an interest in a too much neglected section of regular therapeutics, yet the tragic side of the story lies in the valuable lives sacrificed to the fanatical ignorance of so-called healers. The miracles of Christian Science or of faith cures, which we know so well, are exclusively in the realm of functional disorders." No case of organic disease was ever permanently cured.

Although written half a century ago, Emerson's essay, "Homeopathy and Its Kindred Delusions,"[12] is still interesting to the student of mental healing.

There is no class of patients which can derive more benefit from the reading of well-chosen literature than the consumptive. Of equal importance to the education of the patient is the education of the family on "how to prevent the disease, how to live with the disease and how to cure the disease." Such literature must be hopeful and at the same time absolutely truthful, for to keep a tuberculous patient ignorant of his disease is a crime, both to himself and to the community in which he lives. Will M. Ross has written "My Personal Experience With Tuberculosis."[13] Flick,[14] Woods Hutchinson[15] and Knopf[16] have each written short popular works, easily understood by the laity. The *Journal of the Outdoor Life*[17] I recommend to each of my consumptives. Many excellent articles on tuberculosis appear from time to time in the different monthly magazines. The various national, state and municipal associations for the prevention, study and cure of tuberculosis, as well as some of the state boards of health, print most valuable little tracts of effective educative character which may be easily obtained.

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[1] Mitchell, S. Weir: Doctor and Patient, J. B. Lippincott Company, Philadelphia.

[2] Walton, George L.: Why Worry? J. B. Lippincott Company, Philadelphia.

[3] Mitchell, John K.: Self-Help for Nervous Women, J. B. Lippincott Company, Philadelphia.

[4] Collins, Joseph: The Way with the Nerves, G. P. Putnam Sons, New York.

[5] Courtney, J. W.: The Conquest of Nerves, The Macmillan Co., New York, 1911.

[6] Sadler, William S.: The Physiology of Faith and Fear, A. C. McClurg Co., Chicago, 1912.

[7] Call, Annie Payson: Power Through Repose, Little, Brown and Company, Boston.

[8] Patrick, Hugh T.: How Not to Be Nervous, THE JOURNAL A. M. A., Feb. 7, 1903, p. 347.

[9] Dubois, Paul: The Psychic Treatment of Nervous Disorders, Funk and Wagnalls Company, New York, 1907.

[10] Cutten, George Barton: Three Thousand Years of Mental Healing, Charles Scribner's Sons, 1911.

[11] Locke, Charles E.: Eddyism—How Long Will It Last? Grafton Publishing Company, Los Angeles.

[12] Emerson, Ralph Waldo: Medical Essays, Houghton, Mifflin Company, Boston, 1889.

[13] Ross, Will M.: My Personal Experience with Tuberculosis, Writers Press, Milwaukee, Wis.

[14] Flick, Lawrence F.: Consumption—A Curable and Preventable Disease, David McKay, Philadelphia.

[15] Hutchinson, Woods: Conquest of Consumption, Houghton, Mifflin Company, New York, 1910.

[16] Knopf, Adolphus: Tuberculosis as a Disease of the Masses and How to Combat It, The Survey, 105 E. Twenty-Second Street, New York, 1911.

[17] Jour. Outdoor Life, New York.

To the overworked business or professional man who finds, often too late, that health outweighs all other blessings, I am in the habit of recommending one of the following books: "Making Life Worth While,"[18] "Efficient Life,"[19] "Mind and Work"[20] or "Instinct and Health."[21] The two books "How to Live on Twenty-Four Hours a Day"[22] and "Mental Efficiency,"[23] by Arnold Bennett, who is a novelist and not a physician, contain much good advice.

The many editions of Sir Henry Thompson's book on "Diet in Relation to Age and Activity,"[24] show the interests of many people in such subjects. He gives hints concerning habits conducive to longevity, discusses alcohol and the evils of improper feeding, overfeeding in middle life, value of a light diet for brain workers, simplicity in diet, prevention of corpulence, etc.

There are many books which can be safely recommended to the mother or nurse to guide and instruct her in the management of infants or children; I mention only two: "The Care and Feeding of Children," by L. Emmett Holt, is an excellent manual arranged in the form of a catechism and should be prescribed for every new mother; "The Care of the Baby,"[26] by J. P. Crozer Griffith is also recommended.

Let the self-medicating patient or the victim of quacks, mental healers, clairvoyants, etc., read from "The Great American Fraud,"[27] by Samuel Hopkins Adams, or from "Nostrums and Quackery,"[28] two books which should be on the waiting-room table in every physician's office; the former appeared first as a series of articles in *Collier's Weekly*.

In selected cases, to patients with syphilis or gonorrhea, especially to those contemplating marriage, we may recommend such books as "Social Diseases and Marriage,"[29] by Prince A. Morrow, and "Health and Disease in Relation to Marriage,"[30] by Senator and Kaminer. As the personal propagandism of the physician is to-day the most effective agency of society in the prevention of venereal disease, such books in the hands of intelligent patients can do much good.

For "shut-in" patients or hopeless cases with incurable diseases, there is much literature of an optimistic character which may prove of great therapeutic value. It is a well-known fact that patients with incurable diseases usually have engrafted on their organic symptoms a multitude of psychic symptoms which are often relieved by suggestion; the removal of these secondary symptoms explain the temporary results often obtained by the cults and healers. Osler mentions a case in which a patient with far advanced cancer of the stomach improved greatly and gained 10 pounds in weight after the visit of a consultant who promised a cure. For these hopeless cases much mental comfort may be obtained by reading one or more of the above-mentioned books.

Many of the books mentioned in this paper take up a variety of subjects such as diet and diet delusions, exercise, clothing, baths, tobacco, alcohol, habits of work and play, mental hygiene, fads, etc., and even physicians would derive much information from reading them. I do not attempt to enumerate the many popular books on diet, sex hygiene, sex education, etc., but have confined myself to the more practical and more urgent needs of the every-day patient.

I could report the histories of a considerable number of patients who had been the "rounds," and had "suffered much of many physicians," to whom I have recommended some good book from this "five-foot shelf" of therapeutic literature, and which was the means of their awakening — making them laugh at themselves, and at their fears and follies and stopping their demands for a medicine for every symptom.

In conclusion I wish to say that the medical profession is largely responsible for the wide-spread prevalence of cults and bizarre methods of healing; physicians have been prevented by a false sense of the dignity and mystery of medicine from doing their share in educating the public and the individual patient to distinguish sham and pretense from truth and science, and the American Medical Association, through its Committee on Propaganda for Reform can do no better work than to collate for the benefit of both the public and the medical profession such literature as I have attempted in a general way to outline.

134 West Prairie Avenue.

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18. Fisher, H. W.: Making Life Worth While, Doubleday, Page and Company, New York.
19. Gulick, Luther: Efficient Life, Doubleday, Page and Company, New York.
20. Gulick, Luther: Mind and Work, Doubleday, Page and Company, New York.
21. Hutchinson, Woods: Instinct and Health, Dodd, Mead and Company, New York.
22. Bennett, Arnold: How to Live on Twenty-Four Hours a Day, George H. Doran Company, New York.
23. Bennett, Arnold: Mental Efficiency, George H. Doran Company, New York.
24. Thompson, Henry: Diet in Relation to Age and Activity, Frederick Warne and Company, London.
26. Griffith, J. P. Crozer: The Care of the Baby, W. B. Saunders, Philadelphia.
27. Adams, Samuel Hopkins: The Great American Fraud, A. M. A. Press, Chicago.
28. Nostrums and Quackery, A. M. A. Press, Chicago.
29. Morrow, Prince A.: Social Diseases and Marriage, Lea Brothers and Company, New York.
30. Senator and Kaminer: Health and Disease in Relation to Marriage, The Rebman Company, New York.

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# THE USE OF HEXAMETHYLENAMIN IN THE AFFECTIONS OF THE UPPER RESPIRATORY TRACT

ARTHUR A. EISENBERG, A.B., M.D.
Physician, U. S. Indian Service
LOWER BRULE, S. DAK.

At the time I read Dr. Barton's article on "The Elimination of Hexamethylenamin by the Mucous Membrane of the Middle Ear,"[1] together with report of a case of suppurative otitis media, I thought of the desirability of testing the effects of the drug in other conditions characterized by presence of a discharge; but at that time I was a student in a medical school and, lacking both the time and clinical opportunity to do so, soon forgot it.

On reading Dr. Vanderhoof's article,[2] however, my interest in the subject was revived, and having this time both the time and the opportunity, I decided to test the efficiency of the drug, generally following Dr. Vanderhoof's suggestions as to the dosage and frequency of administration. I also decided to extend the scope of Dr. Vanderhoof's observations, including cases other than bronchitis. My clinical opportunity was very good, most of my cases being school children and employees in the Lower Brule Indian School, thus making it possible for me to be sure at all times that the drug was administered as prescribed, as well as enabling me to see the patients at the earliest moment possible and to observe them as frequently as I desired.

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[1] Barton, W. M.: The Journal A. M. A., March 12, 1910, p. 871.

[2] Vanderhoof, Douglas: The Journal A. M. A., Feb. 3, 1912, p. 331.

I have used hexamethylenamin in forty-three cases, of which twenty-two were cases of acute bronchitis, twelve of acute rhinitis, eight of influenza and one of chronic frontal sinusitis. While I am fully aware of the fact that an observation of so limited a number of cases as the one here offered is not convincing, I nevertheless hope that as a corroboration of Dr. Vanderhoof's statements, and as a supplement to the cases reported by him and Drs. Miller[3] and Hexmuller,[4] this article may be of some interest.

### I. HEXAMETHYLENAMIN IN ACUTE RHINITIS

Daily routine inspection of the school children is responsible for the fact that practically every case of rhinitis reported here was put under treatment within less than twenty-four hours after the onset, i. e., before a free secretion had been established. At that time the only complaints were slight headache and "stuffiness" in the nose; every patient observed was kept indoors for a day or two, was given 1 grain calomel and soda (in 1/4-grain doses, every fifteen minutes), and six hours later was given two teaspoonfuls of magnesium sulphate. Hexamethylenamin was administered as follows: Children 10 years old received 0.3 gm. (4 grains) dissolved in half a glass of water, three times a day during the first day, and twice a day during the following day or two. Two boys of 15 and over received 0.4 gm. (6 grains) dissolved in a full glass of water, while two adults were given 0.7 gm. (10 grains) in the same way. Only two patients required further administration of hexamethylenamin, which was given in half of the original dose, twice a day for two more days. No other treatment of any kind was given, nor was the diet restricted in any way, except that milk was withdrawn during the day on which calomel was given. The results were as follows: Of the eight cases which were seen before the secretion had been established, six developed a scanty discharge on the following day, which disappeared completely on the third day; of the other four cases (which were first seen after the secretion had just been established) two cases developed a moderately free and two a profuse discharge on the following day, which disappeared on the fourth day; in almost all cases the sensation of "stuffiness" and headache were relieved on the day following the initial administration of hexamethylenamin, and none of the patients developed any complications, such as sinusitis, laryngitis or — by far the commonest — bronchitis.

### II. HEXAMETHYLENAMIN IN ACUTE BRONCHITIS

In the twenty-two cases of acute bronchitis, seventeen patients, when first seen, complained of a slight but irritating cough which caused a "raw" feeling under the sternum, some malaise and other general symptoms of the disease; the other five patients were first seen when the cough was somewhat "loose," the expectoration being serous or seromucous, but not purulent. In fourteen cases there were heard on auscultation shifting sibilant and sonorous râles, while in the other eight both the sibilant and crepitant and subcrepitant râles were present; in six cases rhonchal fremitus was present on palpation; temperature ranged between 99.5 and 102 F. In four cases acute laryngitis was present at the time of the first visit. The treatment consisted of keeping the patients in bed as long as temperature stayed above the normal, excluding meats and pastry from the diet, securing as perfect a ventilation as possible, giving calomel and soda, and magnesium sulphate, as described above, and administering hexamethylenamin as follows: Full doses, 0.7 gm. (10 grains) for the adults and corresponding doses for children, were given three times a day for three days, twice a day until the cough subsided, then half doses twice a day for three more days. No other treatment was given except in those cases in which acute laryngitis was present; here inhalations of medicated steam were given every four hours (a teaspoonful of compound tincture of benzoin to a pint of water). The results were very good indeed; every patient was well within from four to five days; free secretion was promptly established with great relief to cough, temperature became normal on the second or third day, and all other coexistent symptoms subsided within three days. The only difference in the effect of hexamethylenamin given in acute bronchitis and given in acute rhinitis was that the bronchial secretion was much more abundant in the former than the nasal in the latter; why this should be so, or whether this was purely incidental, I cannot say.

### III. HEXAMETHYLENAMIN IN INFLUENZA

All of the eight cases of influenza were of the respiratory type, and were characterized by great prostration. Temperature ranged from 100.7 to 105.2 F. at the time of the first visit. The routine hygienic and dietetic treatment was instituted, while the medicinal treatment consisted of a mild purge, moderate doses of acetphenetidin for pain, and hexamethylenamin administered in full doses three times a day until temperature stayed below 100 F. and general symptoms were much improved; then half doses three times a day until temperature became and stayed normal, and then one-third of the original dose was given three times a day for a week. All patients were well within from five to seven days, with no complications following; the symptoms referable to the respiratory system were manifestly improved within from three to four days. No untoward symptoms which might be ascribed to the use of hexamethylenamin were observed.

### IV. HEXAMETHYLENAMIN IN CHRONIC FRONTAL SINUSITIS

This was a very interesting case. An adult Indian came to me for the first time on Feb. 9, 1912, complaining of a "catarrh in the head and nose"; he said that ordinarily he was not suffering much, but every time he had an attack of acute rhinitis he would have a very severe pain at the root of the nose and around the right eye — an obvious exacerbation of the chronic frontal sinusitis. I prescribed for him hexamethylenamin, 0.3 gm. three times a day, and told him to take it for a month. He came back to my office, six weeks later, and though he did not feel any better, he was delighted with the fact that while a week ago he had suffered from an attack of acute rhinitis, he was for the first time in the last six years absolutely free of any pain or any other symptom referable to the presence of sinusitis.

### CONCLUSIONS

1. Hexamethylenamin is a valuable remedy in the treatment of the inflammatory conditions of the upper respiratory tract.

2. It must be given in doses large enough to secure its full physiologic effects.

3. No untoward symptoms were observed while given in fairly large doses (up to 30 grains daily).

4. It seems to prevent possible complications of acute rhinitis, such as bronchitis and sinusitis.

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[3] The Journal A. M. A., April 9, 1910, p. 1222.

[4] The Journal A. M. A., June 10, 1911, p. 718.

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[*For other information see second page following reading matter*]

SATURDAY, JUNE 29, 1912

## THE INDEX

This issue of The Journal contains the Index to the current, or fifty-eighth volume of The Journal, including the current medical literature which has been listed from week to week. The Index contains references to original articles in about 225 of the leading medical journals of the world, including those of the principal foreign countries. The Index makes this material available to the searcher and the scope of the field covered makes it a true index medicus—not, indeed, an exhaustive one, but what is perhaps even more useful to the physician, a selected and practical one.

The form of the Index has been somewhat changed. Instead of two subject indexes, each duplicating the other in part, there is now only one subject index, which represents all that the former two indexes contained. All references to the reading-matter in The Journal are now distinguished by the use of black-face type; the light-face type refers to original articles in other journals which have been listed in the Current Medical Literature Department, but not summarized in The Journal. These changes, we hope, will be a help to the reader. The aim has been to simplify the Index. Suggestions from readers for its further improvement will be welcome.

The "Guide to Current Medical Literature," under which title the Index appears as a separate volume, contains, in addition to the Index proper, the titles of the articles arranged chronologically and by journals, as in the Current Medical Literature Department. The use of the "Guide" renders it unnecessary to handle the bound volume of The Journal in looking up a subject. It is to be regretted that more readers do not have this "Guide,"[1] and know it thoroughly, for we feel that it fills a very definite want on the part of those who have occasion to look up a subject in medical literature.

## COLD STORAGE AND HEALTH

The growing tendency to restrict the use of chemical preservatives in the food industries has served to direct attention more forcibly to the application of cold storage. This method of preservation has made possible the transportation of perishable products from the place of production to the point of distribution without harmful exposure from heat and with slight if any deterioration in quality, irrespective of distance. Thus the delivery of goods in a condition suitable for consumption can be adjusted to meet current demands. Again, the employment of cold storage has served to lengthen the period of consumption, thus greatly increasing production. In many classes of products the ordinary season of use was formerly limited to the immediate period of production or briefly beyond; now nearly all fruits and dairy-products can be purchased at any season of the year in good condition and at reasonable prices. It need scarcely be added that this has greatly extended the period of profitable trading in such products as fresh meats, poultry, fish, fruit, eggs, butter and cheese.

As a natural consequence the development of refrigeration practice, which has become practically indispensable to the general well-being, has been very extensive. The number of public cold-storage warehouses in 1911 is given as 860 with a storage space of 170,000,000 cubic feet. The capital invested represents $75,000,000, and estimates of the value of goods stored in all these public refrigeration plants during one year range from $500,000,000 to $700,000,000. The United States probably leads the world in respect to the magnitude of the cold-storage business now expanding with great rapidity in all parts of the country.

The cold-storage industry, as might be anticipated, has not escaped criticism. In some quarters it has been regarded as a menace to public health on the ground that refrigeration enables dealers to hold food-products for so long a time that they become unfit for consumption. Goods preserved by cold storage have been declared to be inferior to fresh food in quality, wholesomeness and palatability and to produce various disorders. Furthermore, it has been contended that cold storage enables speculators to withdraw food-products from the market and to force up prices to an artificial level, to the great injury of the consumer, thus becoming an instrument of monopoly.

In its relation to the health of the people and less directly in its effects on the cost of living, the cold-storage problem is of immediate interest to the medical man. At the outset it must be admitted that no serious complaints can be brought against the cold-storage warehousemen in general on the ground of unsanitary or unscientific methods of conducting their establishments. Any abuses in this respect are exceptional; and the satisfactory condition of the plants is attested by the results of governmental inspection.[1] The other questions raised have very recently been made the subject of an inquiry by a commission appointed for this purpose by the

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[1] See advertising page 2.

[1] Report of Committee and Hearings Before U. S. Senate Committee on Manufactures, Relative to Foods Held in Cold Storage, 1910, p. 172.

Governor of Massachusetts. The report[2] of its five members commands notice as the latest pronouncement on this debated topic. The commission recognizes that cold storage has become a fundamental necessity in the distribution of the food-supply of the nation, and sees its principal economic function in the fact that it enables the surplus of certain products in the season of natural plenty to be carried over to meet the demand in the season of natural scarcity. The charge that cold storage in general is detrimental to public health is refuted by an impartial examination of this subject in its hygienic aspects.

In the words of the report: "While abuses have arisen, through the holding of food-products in cold storage for unduly long periods and through the handling of foods by improper methods before and after as well as during refrigeration, the benefits that have come from the salvage of food through cold storage far outweigh any evils that have developed in this field. Cold storage has brought about an expansion and diversification of the food-supply of the population, making certain kinds of food more abundant and more accessible. It thus makes for the conservation of the vital resources of the people. The gain from this source is universal and permanent; the injuries are occasional and temporary, and can be eliminated by proper regulation."

There are numerous data now available regarding the changes which certain food-products, especially meats, poultry and eggs, undergo during cold storage. These have in the main been gathered by the United States Department of Agriculture and there has been a notable improvement in the commercial handling of poultry during recent years as the result of Dr. Pennington's investigations. Cases of ptomain poisoning alleged to have resulted from the consumption of cold-storage foods are often mentioned in newspapers; but manifestly such testimony is of dubious value. It is evident that the condition of goods when they come out of storage depends very largely on their condition when they go in. The greatest care is needed in the selection and preparation of food-products for preservation; and failures in this direction should not be charged to refrigeration.

The progressive changes taking place in perishable food-products are not absolutely suspended by refrigeration. Therefore a food-product that has been held in cold storage is never just as good as the perfectly fresh article, other conditions being equal. The deterioration first appears in a change in flavor, which may affect the palatability of the food, but does not necessarily impair its wholesomeness or nutritive value. Scientific investigation in this field has not yet furnished sufficient evidence to enable one to fix the time limits of cold storage for different commodities; for the proper period depends largely on the methods of previous handling and preparation.

The Massachusetts commission reports that "on the whole, prolongation of cold storage beyond one year, even under correct conditions, appears to be undesirable and prejudicial to the public health." It believes that there is need of legislation for the regulation of the business and proposes that extensive powers be delegated to the State Board of Health for this purpose. The main objects are to prevent improper handling of foods, undue prolongation of the storage period and deception of purchasers through the sale of cold-storage articles as fresh goods. Finally the commission believes that the influence of cold storage is to make prices lower and steadier, thus disposing of the bugaboo of speculative manipulation.

## THE VACCINE THERAPY OF TYPHOID

Repeated reports of the satisfactory employment of vaccine treatment of typhoid and allied enteric diseases occur in recent literature. In 1907, Chantemesse[1] reported his method of vaccine treatment employed in Paris hospitals, by which the average case mortality of typhoid was reduced from 17 per cent., under regular treatment, to 4 per cent. under vaccine therapy. On a return for a brief time to the regular treatment the mortality immediately rose to the former percentage. Watters and Eaton[2] published a similar account with case-reports and temperature charts. They stated that 75 per cent. of all their cases were influenced favorably; the temperature was lowered immediately on beginning the vaccine treatment, and the other physical manifestations of the disease were decidedly improved. The case mortality in their report was reduced from 11.1 per cent. to 3.2 per cent. by the application of the vaccine treatment. The cases were not selected, but were treated as they came in general hospital service. Sadler[3] recently published case-records of over fifty cases treated by vaccine therapy, together with individual temperature charts of cases with and without vaccine treatment. His experience is that this treatment shortens the course and modifies the severity of the disease; that it makes mild cases of average ones and modifies severe cases into average severity. The reports above cited agree that only the very severe cases fail to show improvement under this treatment.

Different workers have used widely different methods of applying the treatment. Thus Sadler found most beneficial an initial dose of one to two million killed bacilli injected subcutaneously, followed by a smallar dose every four or five days. On the other hand Watters and Eaton used doses of 100 to 500 million bacilli. Others have used still different methods of dosage, and it is to be hoped that careful observation may establish the relative merits of the methods which appear to have given favorable results. Those who have used the vaccine treatment to any extent practically agree that it is a method of great promise; many state, in the light of results already obtained, that they do not feel justified in withholding the treatment from any typhoid patient. The fact that good results have not followed the treatment in very severe cases coincides with the consensus of opinion regarding vaccine therapy in general: that good judgment and discrimination are required in the selection of suitable cases, and that cases in which a temporary increase in the severity of the disease might do permanent injury should be avoided.

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[2] Report of the Commission to Investigate the Subject of the Cold Storage of Food and of Food-Products Kept in Cold Storage, Mass. House Document No. 1733, January, 1912, 308 pp.

[1] Chantemesse: Internat. Cong. of Hyg. and Demogr., 1907, i, 204.

[2] Watters and Eaton: Bost. Med. and Surg. Jour., 1909, clx, 508; Med. Rec., 1909, lxxv, 93.

[3] Sadler: Quart. Jour. of Med., 1912, v, 193.

All reports are to the effect that better results are obtained the earlier the treatment is applied in the course of the disease, which emphasizes the importance of early diagnosis. Thus far the ophthalmic reaction gives promise of being the earliest available diagnostic reaction in typhoid. Blood cultures yield growth of typhoid bacilli in a very large percentage of the cases examined early, and give the additional advantage of supplying a strain of bacteria from which an autogenous vaccine may be made. It would seem that early diagnosis followed by vaccine treatment may prove a distinct advance in the management of typhoid fever. The evidence thus far presented, however, is not conclusive.

## Current Comment

### THE HOUSE-FLY AND THE B. B.

One of the characteristics of the present-day campaign for the prevention of disease is the homely, practical way in which facts are being placed before the public. Many of our state boards—through bulletins—are doing excellent work in this direction. As a result, some popular ideas are being sadly shaken. The little house-fly, for instance, has been for years the subject of household poetry, and has been referred to as the harmless and innocent companion of man. The bedbug, on the contrary, has been looked on with speechless aversion. He has no social standing. Even the mention of his name has not been considered good form in our best circles, while the least suspicion of a speaking acquaintance with him has been regarded with horror. In the May number of the *Bulletin of the North Carolina State Board of Health*, Dr. Cyrus Thompson, in an article on "Flies and Filth," says: "Now as a matter of unprejudiced fact, barring the sting of the bite and the odor of the encounter, the bedbug is a much more eligible companion than the house-fly, whether of bed or of board. But if bedbugs, comparatively cleanly of habit, crawled all over our plates, table and food just as the house-flies crawl, fresh from the foulest filth of every pestilential kind, who could eat or even sit at the table for a moment? I am not making a plea for the elevation of the social status of my nocturnal friend, who loves darkness rather than light; but I am declaring that his deeds are not nearly so evil and destructive as those of the house-fly." Put this statement before every American housekeeper, and the doom of the typhoid fly is sealed. The bedbug has been, for generations, the abomination of the housewife, and the object of her unrelenting warfare. Once convince American women that the fly is more loathsome and dangerous than the bedbug, and the ravages of this typhoid-breeder and filth-distributor will be over.

### THE EFFECT OF ANTIVIVISECTION AGITATION ON CHARACTER

In the fight for untrammeled and unhampered scientific experimentation, there has been no more effective soldier than Dr. W. W. Keen of Philadelphia. For years he has fought the efforts of the ignorant and the deluded to put chains on scientific investigation under the plea of humanitarianism. His previous articles which have appeared in The Journal, as well as his more popular articles for the public, are familiar to all those who have participated in or followed the course of this struggle. In a discussion with Dr. Keen two years ago, in the *Ladies' Home Journal*, the Rev Dr. Floyd W. Tomkins, president of the American Antivivisection Society, took the position that "vivisection tends to weaken character and that nothing which hurts character can be right." Dr. Keen accepts this as a test and in the *Boston Medical and Surgical Journal*[1] he discusses the influence of antivivisection on character, showing the extremes to which the advocates of restrictive legislation have gone in their efforts to make out a case. As the only ground on which any reasonable attack on animal experimentation can be made is its ethical side, Dr. Keen's presentation of the influence of antivivisection enthusiasm on moral character is a valuable contribution to the literature of the question.

### THE NERVES IN TEETH

The compact nature of the dentin and enamel of the teeth has made it difficult, if not technically impossible, to carry out any adequate examination of a possible innervation of these tooth structures. Many have regarded it as highly probable that there is a nerve-supply to the dentin of the human teeth by which very acute sensation is transmitted from the periphery of this tissue as in other parts of the body. Mummery[2] has apparently been successful in tracing the nervous structures by means of the more modern methods of histologic study. He regards it as fully evident that the dentin is richly supplied with nerves from the pulp, which do not terminate, as has been hitherto generally supposed, at the inner margin of the dentin, but enter the tubules of that tissue and traverse them to their peripheral terminations at the enamel and cementum margins. There is some consolation, therefore, in the thought that our teeth are no longer to be deprived of the privilege of a suitable path for the transmission of those unique sensations which we are reminded at times to refer to these highly important organs.

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[1] Keen, W. W.: Influence of Antivivisection on Character, Boston Med. and Surg. Jour., May 2, 1912, p. 651, and May 9, 1912.

[2] Mummery, J. H.: The Distribution of the Nerves of the Dental Pulp, Proc. Roy. Soc., London, B., lxxxv, 79.

## FOLLOWING THE LINE OF LEAST RESISTANCE

The Kentucky State Board of Health has most happily designated the State Bureau of Vital Statistics as "Kentucky's Big Family Bible." The Virginia Health Department, which is inaugurating the enforcement of a new law for the registration of births and deaths, has appealed to the public in a different but probably equally effective manner. A poster recently printed by the state health department and distributed to every city, asks in large type, "If you owned a thorough-bred, you would want to preserve his pedigree. Would you not like to preserve your own? Would you not be glad to know that the birth and death of your father, yourself and your children would be recorded where you know it would be kept forever? You can have a record of births and deaths in Virginia if you will assist in the enforcement of the law." Such an appeal to the public shows a growing understanding of popular psychology on the part of health officials. Compulsion, in the form of fines or imprisonment, may be necessary, in extreme cases, to enforce any law. But how much better to follow the path of least resistance and to secure the willing cooperation of the people by showing them that health laws and regulations are not arbitrary rules, but are for their own protection and benefit! The American people will report births and deaths, if they are convinced of the necessity for such a measure and understand why it is expected of them.

## PROPHYLAXIS OF FOURTH-OF-JULY TETANUS

It is important to sound a note of warning each year just before the annual celebration of Independence Day, calling attention to the possibilities of further reducing the morbidity and mortality of tetanus. Consultation of the annual compilations made by The Journal of the tetanus cases occurring as the result of Fourth-of-July celebrations since 1903 will show that there has been a gradual reduction in number. In 1903 there were 415 cases of tetanus in the United States as the result of Fourth-of-July injuries; in 1911 there were only eighteen. Of the eighteen cases of tetanus occurring in 1911, ten, or 55 per cent., terminated fatally, as compared with 93 per cent. in 1910, 84 per cent. in 1909 and 72 per cent. in 1908. While these figures are very gratifying, we are still of the opinion that cases of tetanus, and particularly deaths as results of tetanus, are almost entirely avoidable. Not only the layman, but also the physician, should be impressed with the fact that a death from tetanus should practically never occur. The loss of life from this cause must be ascribed, we believe, entirely to the neglect of the patient or his parents to seek medical advice early enough after the injury. The experience of years proves conclusively that tetanus antitoxin is one of the most valuable of the serums used as prophylactic agents, but it must be emphasized that entire dependence should not be placed on it to the neglect of other treatment. Antitoxin is not a substitute for surgical care and treatment; it is an aid or accessory thereto. Fatal results may occur because antitoxin is injected too late or in insufficient quantities, or because the local infection is not given the necessary attention. The antitoxin should be used at the earliest possible opportunity, in adequate immunizing doses. The injections may be repeated often and the dosage increased without doing harm to the patient, since tetanus antitoxin possesses great efficiency as a preventive, and even as a curative agent is not entirely without value. The most essential curative measure is the proper hygienic treatment of the wound. The tetanus bacillus is an anaerobic organism and it is most important that every part of the wound be exposed freely to the air. The presence of even an infinitesimal quantity of oxygen inhibits its activities; therefore, a sufficient supply of oxygen will prevent its propagation and the production of its poisons. Free incision under general or local anesthesia exposes the wound sufficiently to the air. Thorough removal of every particle of foreign material from the wound and the application of a light dressing to prevent infection by pyogenic organisms, with the other measures suggested, are sufficient in the treatment.

# *Medical News*

### ALABAMA

**Personal.**—Dr. J. C. O'Gwynn, Mobile, sailed for Europe, June 14.——Dr. Alfred Edward Thayer, formerly professor of pathology in the University of Texas, has been appointed to a similar chair in the University of Alabama, Mobile, and will take charge of the department July 1.——Dr. Stuart Welch has been assigned as assistant health officer of Birmingham.——Dr. W. S. Britt, Eufaula, while going on a hand car to Georgetown, Ga., on an emergency call, was struck by the lever of the car, fracturing a rib.——Dr. J. Ernest Walker, New Market, was struck in the face by a baseball June 3, and may lose the sight of his eye.——Dr. T. E. Dryer has been appointed city physician of Huntsville.——Dr. W. W. McGehee has been appointed assistant health officer of Montgomery.

### ILLINOIS

**Personal.**—Dr. T. F. Birmingham, city physician of Galesburg, has been elected county physician of Knox County.——Dr. E. B. Godfrey has been elected city physician of Springfield and Dr. Homer Wilcockson, Illiopolis, county physician of Sangamon County.

### Chicago

**Makes Appropriation for Emergency Hospital.**—The Health Committee of the Common Council has recommended an appropriation of $25,000 to establish and maintain temporary hospitals for contagious diseases.

**Lincoln Park Sanitarium Opened.**—The Lincoln Park Sanitarium for Sick Babies at the foot of Fullerton Avenue, which is supported by the Fresh Air Fund, opened for the season June 24. During the last season the sanitarium cared for 5,332 sick babies and 5,561 children, and the nurses visited 228 homes.

### INDIANA

**Hospital Notes.**—Elkhart has raised $40,000 for a Municipal Hospital.——Job Freeman has donated a hospital to Linton which will be known as the Freeman City Hospital.

**The Fight Against Tuberculosis.**—Twenty-three acres of land for an open-air camp for tuberculosis have been given to the Vigo County Association for the Study and Prevention of Tuberculosis, by David Watson. The camp, which is to be known as "Twin Hills," is on the interurban line between Terre Haute and Brazil.——A Bartholomew County branch of the Indianapolis Association for the study and Prevention of Tuberculosis was organized at Columbus, May 29.

### IOWA

**New Officers.**—Jones County Medical Society at Anamosa: president, Dr. A. G. Hejinian, Anamosa; secretary-treasurer, Dr. T. M. Redmond, Monticello.

**Personal.**—The medical profession of Dubuque gave a farewell dinner, June 10, to Dr. J. W. Heustis, who is about to move to Washington, D. C.——Dr. D. W. Stumbaugh, Lacona, was stabbed and robbed near Oakley, while making a professional call, June 3.——Dr. H. M. Francisco, pathologist at the Mount Pleasant City Hospital, has resigned to accept a similar position in one of the state hospitals of New Jersey.——Dr. E. E. Heaton and wife, Centerville, have started for Europe. ——Dr. V. V. Norton, of the Iowa State Tuberculosis Sanatorium, Oakdale, has resigned to accept the superintendency of the Minnesota State Sanatorium, Walker.——Dr. Mark F. Boyd, Iowa City, has been elected health officer of Oskaloosa. ——Dr. A. O. Pitcher, Mount Pleasant, is reported to be seriously ill.——Dr. G. Hardy, Waterloo, has returned from abroad.——Dr. Esther Ann Ryerson, a member of the staff of the Mount Pleasant State Hospital, has resigned.——Dr. C. A. Waterbury, Waterloo, coroner of Blackhawk County, injured his arm while cranking his automobile, June 19.

## KANSAS

**New Officers.**—Osage County Medical Society: president, Dr. Smith, Lyndon; secretary-treasurer, Dr. W. V. Stephenson, Osage City.

**Personal.**—Dr. L. S. S. Ott, Topeka, has started for South America.——Dr. Fred A. Forney has succeeded Dr. G. R. Gage, resigned, as chairman of the Hutchinson Board of Health.

**Eclectics Endorse Owen Bill.**—At the forty-second annual session of the Kansas State Eclectic Medical Society, resolutions were adopted endorsing the Owen bill now before congress.

**Bi-County Association.**—Sumner County Medical Association held a meeting at Argonia, June 4, for the purpose of effecting an organization to include the physicians of Sumner and Harper counties.

**State Board Notes.**—At the annual meeting of the State Board of Health, Dr. H. L. Aldrich, Caney, was elected president; Dr. V. C. Eddy, Colby, vice-president, and Dr. S. J. Crumbine, Topeka, secretary (reelected for the eighth consecutive term).——Dr. W. D. Hunt, Emporia, has been appointed a member of the State Board of Health.——Dr C. J. Simmons, Lawrence, has been reappointed a member of the State Board of Medical Examination and Registration.——Dr. Henry A. Dykes, Lebanon, has been reappointed secretary of the State Board of Medical Examination and Registration.

**Summer School for Health Officers.**—The second annual school for health officers and physicians of Kansas was opened at the State University, Lawrence, June 10 to 15. In addition to lectures and demonstrations made by members of the faculty, Dr. J Allen McLaughlin, U. S. P. H. & M.-H. Service, delivered a series of lectures on "Water-Borne Diseases." Dr. W. H. Frost, U. S. P. H. & M.-H. Service, lectured on "Epidemic Cerebrospinal Meningitis and Acute Poliomyelitis," and Dr. Thomas R. Crowder, Chicago, discussed the "Principles of Ventilation and Public Sanitation."——The State Association of Health Officers at its meeting, June 11, elected Dr. C. S. Kenny, Norton, president; Dr. W. W. Nye, Hiawatha, vice-president; Dr. J. J. Sippy, Belle Plaine, secretary, and Dr. F. A. Kelley, Winfield, treasurer.

## KENTUCKY

**Society Endorses Owen Bill.**—At the May meeting of the Jefferson County Medical Society, a resolution was unanimously adopted endorsing the Owen bill now pending in congress.

**Dime-Day in Louisville.**—"Dime-Day" collections in Louisville for the benefit of the Louisville Anti-Tuberculosis Association, June 10, amounted to a little more than $1,700, or approximately $1,000 less than the amount collected for a similar purpose last year.

**New Officers.**—The Kentucky State Association of Railway Surgeons, Louisville, May 16-17; president, Dr. D. Yandell Roberts, Louisville; secretary, Dr. J. B. Kinnaird, Lancaster; treasurer and editor of the journal, Dr. C. H. Vaught, Richmond.——Southwestern Kentucky Medical Association, Paducah, May 21-22; president, Dr. C. E Purcell, Paducah; secretary, Dr. C. P. Burnett, Paducah.

**Hospital News.**—Estimates have been asked for by the architects having in charge plans of St. Elizabeth's Hospital, Covington, which is to cost $750,000.——Physicians of Hopkinsville have rented a two-story brick residence which is to be remodeled and equipped as a city hospital.——The Emergency Hospital, Louisville, opened several months ago to accommodate patients suffering with cerebrospinal meningitis, has been closed.

**Personal.**—Dr. H. S. Keller, Frankfort, resigned as a member of the State Board of Health, June 11, to accept a commission as a member of the Kentucky Tuberculosis Board.——Dr. W. S. Blakeman, Glasgow Junction, is reported to be critically ill.——Dr. Chester A. Mayer, Louisville, has been bequeathed $3,000 by the will of the late Mrs. Henrietta Brown.——Dr. H. Horace Grant, Louisville, while returning from Atlantic City was obliged to stop in Philadelphia for treatment of ptomain poisoning.——Dr. O. S. Kash, Carlisle, has been appointed health officer of Nicholas County, vice Dr. John M. Wells, resigned.——Dr. A. P. Taylor, Lexington, was painfully injured when his automobile overturned near Lexington.——Dr. H. H. Buntin, Carlisle, has been elected a member of the Nicholas County Board of Health.

## MARYLAND

### Baltimore

**Personal.**—Dr. C. H. Jones sailed for Europe, June 20.——Dr. Randolph Winslow and daughter will start for the Isthmus of Panama, July 13.——Dr. George B. Reynolds, who was assaulted and robbed, May 18, has recovered and resumed practice.

**Must Give Entire Time to Work.**—The chair of anatomy of the University of Maryland will henceforth be held by an incumbent who will be required to devote his entire time to his duties and will not be allowed to practice. He will receive an annual salary of $3,000.

**To Investigate Unethical Procedures.**—The Honor Committee of the Baltimore City Medical Society made an important report on newspaper advertising by physicians at the last meeting of the society. The committee recommends a permanent honor committee which shall have power to investigate unethical procedures and whose duty it shall be to prefer charges before the board of censors against such offenders. The society adopted the recommendation and the following committee was appointed: Drs. Gordon Wilson, J. Whitridge Williams and Wilmer Brinton.

## NEW YORK

**Pine Camp Opened.**—The City Hospital, Binghamton, has opened Pine Camp two miles west of the city and on the northern bank of the Susquehanna, with accommodation for thirty patients of the institution.

**Personal.**—Dr. J. H. Pratt, Manchester, fractured his right arm while cranking his automobile, June 11.——Dr. C. H. Gallagher, Slaterville, and C. P. Biggs, Ithaca, have been appointed members of the Board of Managers of the Tompkins County Tuberculosis Hospital, which is being constructed at Taughannock.

**Field Day for Public Health Association.**—The Rochester Public Health Association has arranged to appeal to the public for funds, and it is proposed that this shall take the form of a field day to be held at the baseball park on August 10. An effort will be made to raise about $5,000 which is required to meet expenses.

**New Officers.**—Delaware County Medical Society at Delphi, June 11; president, Dr. C. R. Woods, Hamden; secretary-treasurer, Dr. W. R. Tymeson, Franklin.——Alumni Association of the Syracuse College of Medicine, June 10: president, Dr. E. C. Burdick, Montezuma; secretary, Dr. Charles Post, Syracuse.——Saratoga Springs Medical Society: president, Dr. A. Sherman Downs; secretary-treasurer, Dr. M. E. Vanaernem.

### New York City

**Tuberculosis Committee Gives Exhibitions.**—A moving picture show under the auspices of the Health Department and the Tuberculosis Prevention Committee was given for the first time in Mount Morris Park on June 21. Similar exhibits will be given from time to time in other city parks during the summer.

**Appointments at Rockefeller Institute.**—The board of scientific directors of the Rockefeller Institute for Medical Research announces that Dr. Alexis Carrel has been promoted to the rank of member of the institute. The following associates have been made associate members for three years: Dr. Peyton Rous, pathology and bacteriology; Dr. Donald Dexter Van Slyke, chemistry; Dr. Walter Abraham Jacobs, Chemistry, and Dr. Frederick Wolcott Bancroft, experimental biology. The following new appointments have been made: Dr. Harold Lindsay Amoss, Boston, assistant in pathology; Dr. Clarence J. West, assistant in chemistry; Dr. Wolfgang Ewald, fellow in experimental biology; Dr. Francis Richard Fraser, assistant resident physician and assistant in medicine; Dr. Frederick Moir Hanes, assistant resident physician and assistant in medicine. The following assistants have been made associates: Dr. Paul Franklin Clark, Dr. Richard Vanderhorts Lamar and Dr. Hardolph Wasteneys.

## OHIO

**To Take Charge of State Association Meeting.**—Drs. R. D. Gibson, W. H. Buechner, Silas Schiller, Sidney McCurdy and W. de Weese Coy, have been placed in charge of the arrangements for the meeting of the Ohio State Medical Association to be held in Youngstown in May, 1913.

**New Officers.**—Ohio State Medical Teachers' Association at Columbus: president, Dr. W. E. Mosely, Toledo; secretary, Dr. Roy G. Hoskins, Columbus (reelected).——Adams County Medical Society at West Union; president, Dr. R. W. E. Irwin, Manchester; secretary-treasurer, Dr. O. T. Sproull, West Union.

**Personal.**—Dr. T. H. Brannan, Canal Dover, is reported to be in a critical condition at the home of his daughter, in Cleveland.——Dr. Dale Wilson has been appointed local surgeon of the Cincinnati, Hamilton & Dayton Railway and Dr. August Schade assistant surgeon, at Toledo.——Dr. Theresa Chestora Snyder, Lancaster, has decided to enter the mission field and will go to West China in the fall.——Dr. Calvin McMillin, Cleveland, celebrated his ninetieth birthday anniversary, May 31.——Dr. W. R. Dabney, Marietta, is said to have been found insane and has been taken to a private sanatorium in Cincinnati.——Dr. A. B. Frame has resigned as local surgeon at Piqua for the Cincinnati, Hamilton & Dayton Railway.

### Cincinnati

**Clinic Week.**—The first annual clinic week of the Ohio-Miami Medical College Alumni Association was held, May 27-June 21. Clinics were held on each morning at the various hospitals of the city; in the afternoon college clinics were held, hospital buildings inspected and the medical alumni played a game of baseball with the academic alumni on Carson Field. The Academy of Medicine smoker was held on Monday evening; the Research Society held its meeting on Tuesday; the local chapter of the Alumni Association gave a moving-picture show demonstrating the medical scientific phenomena on Wednesday evening; the West End Medical and McDowell Medical societies held their outing on Thursday afternoon and evening, and on Friday evening the annual meeting and banquet of the Ohio-Miami Medical College Alumni Association of the University of Cincinnati was held at which the following officers were reelected: president, Dr. Walter R. Griess, Cincinnati; vice-presidents, Dr. Thomas A. Dickey, Middletown; A. J. Light, Cincinnati; Herschell Fisher, Lebanon and Alexander H. Beam, Hillsboro; secretary, Dr. H. M. Urner, Cincinnati, and treasurer, Dr. Arthur C. Bauer, Cincinnati.

## PENNSYLVANIA

**Personal.**—Dr. and Mrs. James R. Care, Norristown, sailed for Europe, June 6.——Dr. W. L. Herbert, York, was seriously injured while jumping from his carriage, June 9, and is under treatment in the York Hospital.

**Tag Day Successful.**—Tag Day for the West Side Hospital, Scranton, June 15, resulted in an addition of $2,452.50 to the funds of the hospital.

**Society Rents Building.**—The Berks County Medical Society has rented a building on Walnut Street, Reading, for three years. The society will occupy a portion of the building and will rent the remainder.

**Maternity Dispensary.**—The Pittsburgh Maternity Dispensary has been established. The staff consists of fifteen doctors and nurses who live in the dispensary and devote their entire time to caring for confinement cases in the homes of patients. The dispensary is open for registration on Monday, Wednesday and Friday from 2 to 3 p. m.

### Philadelphia

**Baby Saving Show Wanted by Other Cities.**—The baby saving show, which closed its three day exhibition at the Germantown Y. M. C. A. building with a total attendance of 6,000 visits, brings the whole attendance up to 122,000 persons. The show opened on June 20 at a large hall in Manyunk and Pittsburgh, Camden and a number of other cities have requested that exhibits be transferred to their localities, besides Frankford and West Philadelphia who have also asked for an exhibition.

**Personal.**—Dr. Howard S. Anders has resigned as assistant professor of physical diagnosis in the Medico-Chirurgical College.——Dr. Ward Brinton has been appointed to fill a vacancy on the Board of Prison Inspectors.——Drs. Roland G. Curtin and B. Franklin Stahl have been reelected directors of the General Alumni Society of the University of Pennsylvania.——Drs. Judson Daland, Charles P. Green, Francis E. O'Brien, S. Lewis Ziegler and S. E. Bateman have sailed for Europe.

**University Confers Degrees.**—At the one hundred and thirty-sixth annual commencement of the University of Pennsylvania, held in the Metropolitan Opera House, June 19, the honorary degree of doctor of laws was conferred on Dr. Louis A. Duhring, professor emeritus of dermatology and honorary curator of the Dermatological Collections of the University of Pennsylvania, and on Dr. James Tyson, emeritus professor of medicine at the university.

**Sane Programs for Fourth.**—Independence Day will be celebrated with exercises conducted under eighteen separate organizations, cooperating with the Reconstructed Fourth of July Association, which is supported by city appropriation and private subscriptions. The feature of the programs is the elimination entirely of the use of fireworks or the placing of such displays in the hands of experts so as to insure the least danger of serious accidents.

**New Jefferson Professor.**—On June 18, the Board of Trustees of Jefferson Medical College, elected to the chair of chemistry made vacant by the resignation of Dr. James W. Holland, Prof. Philip B. Hawk, of the University of Illinois.

## GENERAL

**Personal.**—The honorary degree of master of arts has been conferred by Harvard University on Surgeon-General Charles Francis Stokes, U. S. Navy, and that of doctor of science on Drs. Frederick Forchheimer, Cincinnati, and Frederic Cheever Shattuck, Boston.——Dr. Charles A. Powers, Denver, has been elected president of the American Surgical Association.——Dr. Louis J. Hirschmann, Detroit, has been elected president of the American Proctologic Association.——Dr. Antonio G. Sison, Manila, has been made chief of staff of the Philippine General Hospital.

**Climatologists Elect Officers.**—At the annual meeting of the American Climatological Association held in Hartford, Conn., June 11-12, the following officers were elected: president, Dr. Charles L. Minor, Asheville, N. C.; vice-presidents, Drs. J. M. Anders, Philadelphia, and C. D. Alton, Hartford, Conn; secretary-treasurer, Dr. Guy Hinsdale, Hot Springs, Va., and councilor, Dr. Judson Daland, Philadelphia.

**Plague in Porto Rico.**—Bubonic plague is said to have broken out in Porto Rico. Up to June 23, nineteen cases had been reported with seven deaths. All sanitary precautions are being taken, jail prisoners have been pressed into service for the removal of debris, one hundred additional police have been detailed to carry out a thorough campaign of sanitation and all houses in the infected areas will be fumigated or destroyed. At Puerta de Tierra, adjacent to San Juan, where the plague was first discovered, thousands of rats have been killed and the district has been wired to prevent the escape of rats to other suburbs.

**Plan for Federal Health Department.**—At a joint conference held in Pittsburgh, June 18, between a committee representing the American Medical Association and a committee from the American Institute of Homeopathy, holding its sixty-eighth annual convention in that city, it was virtually agreed that both would favor a national department of health. The Association was represented by Dr. W. C. Woodward, of Washington, D. C., and Dr. Samuel G. Dixon, of the Pennsylvania Department of Health. The institute committee was composed of Drs. George Royal, Des Moines, Ia.; J. H. McClelland, Pittsburgh; J. P. Sutherland, Boston; R. S. Copeland, New York, and J. B. Gregg Custis, Washington, D. C.

## LONDON LETTER

*(From Our Regular Correspondent)*

London, June 8, 1912.

### The Diminution in Infant Mortality

Speaking at a meeting held in London for the purpose of forming a national association of the various agencies at present concerned in the prevention of infant mortality, Mr. John Burns, president of the local government board, made the following remarkable pronouncement: "I say, without hesitation, that in no country in the world has greater progress been made in the combating of infant mortality than has been made in the last four years in Great Britain and Ireland." As previous letters to The Journal show, a very active campaign for the prevention of infant mortality has been carried on in recent years in this country. The principal method is the instruction of mothers by means of female "health visitors," paid and voluntary. This is the third conference on infant mortality over which Mr. Burns has presided in the past six years. He was able to announce that when the first conference was held infant mortality was at the high figure of 145 deaths under the age of 1 year per thousand births, whereas in 1910 the rate was only 106, or a decrease of 30 per cent. In the previous sixty-six years the diminution was only 32.5 per cent., including the six just mentioned. Thus thirty of the total diminution took place in the last six years and only 2.5 in the previous sixty. The lower rate represents a saving of from 40,000 to 50,000 babies a year in the United Kingdom. Another feature in the improvement is that certain of the high peaks of exceptional mortality in populous districts are being wiped off. The rates of 250, 300 and 400 of twenty years ago are no longer seen, so that the difference between the highest and the lowest rates is not so great. Concluding, Mr. Burns said that the time had arrived when less should be spent on special schools, municipal motor cars (to take crippled children to school) and many other things of a palliative character for those suffering from some physical defect owing to lack of proper attention during the first years of life, and effort should be concentrated on the mother and child, during the most susceptible period of the latter's life, namely, the first seven years.

### Action for the Loss of a Blind Eye

A case has been tried before the Court of Appeal in which a workman who had lost the sight of one eye from an accident was subsequently able to obtain work because the defect in his sight had not been observed. As the result, however, of a second accident the blind eye had to be removed and he was thus prevented by the obviousness of the defect from obtaining work. By a majority of two to one the Court held that the words "incapacity for work" in the Workmen's Compensation Act must be interpreted strictly, and that the man was not entitled to compensation from his employer for the second accident, because his incapacity for *performing* work was the same after it as before, incapacity for *obtaining* work only being the result of the second accident. The case has now come before the highest court in the country, the House of Lords. Here the judgment of the Court of Appeals has been reversed. In giving judgment the Lord Chancellor said that in his opinion, in the ordinary and popular meaning of the words, there was incapacity for work when a man had a defect which rendered his work unsalable in any market reasonably accessible to him, and that in like manner there was partial incapacity when his work was rendered less salable. The opposite view would leave a workman uncompensated for what might be a real and direct consequence of an injury. The case was accordingly remitted to the arbitrator for the assessment of compensation.

## PARIS LETTER

*(From Our Regular Correspondent)*

Paris, June 7, 1912.

### Professional Secrecy and Public Charitable Institutions

An incident relative to the professional secret among hospital directors has caused a conflict between the Public Charities (*Assistance Publique*) and the prefecture of police. A child was found at the door of a house situated in the proximity of the Tarnier, Maternité and Baudelocque clinics; it was about 10 days old and had a layette recognized as that of the Public Charities. The location, the age of the infant (women are dismissed from the hospitals nine days after their accouchement) and the layette led to the conclusion that the infant had been abandoned by a woman dismissed that very day or the evening before from a lying-in hospital. The police, therefore, immediately sent an inspector to obtain from the three institutions lists of the women who had just been dismissed. The directors refused, pleading professional secrecy. The prefecture of police protests against this interpretation of professional secrecy; he thinks that secrecy should not be invoked here since it concerns an offense committed outside of the hospital and since the information does not concern the illness of the woman. Notwithstanding, the directors of the Public Charities zealously defended the professional secret. Their tradition is to refuse absolutely any information concerning patients in their institutions. They consider, moreover, that in the affair in question the claim of the police was especially unreasonable; they did not ask merely for a certain person, but wished to have a list, more than that, three lists of the women dismissed from the three hospitals. The Public Charities, in acting as it does, conforms to the jurisprudence of the court of appeal, which approved the refusal of a director of the Maternité de Bordeaux to show his book of registration, "secrecy on which pregnant women rely, important in regard to the public morals as well as to the honor of the families." A few years ago, at the time of the Ferrer disturbance at Paris, a number of the wounded went to the Beaujon hospital. The attorney general demanded of the hospital director a list of these people. He was refused and had to submit to this refusal.

### Syndromes of Severe Acidosis Without Diabetes

Drs. Marcel Labbé and H. Bith have recently reported the cases of two women who, although not diabetic, had the most pronounced symptoms of acidosis, accompanied by mental disturbance (in one case confusion and mental weakness, in the other delirium and refusal to eat). The first patient died in coma; the second was cured very rapidly. Both of these patients had an affection of the liver which in the first was disclosed at the autopsy (fatty degeneration) and was manifest in the other by transient disturbances of the sugar metabolism, by urobilinuria and by amino-acid in the urine.

Consequently, Labbé and Bith think that, besides simple acetonuria, a common symptom in the course of infection and intoxication, acetone bodies in the urine can be observed, resulting from an injury to the liver, even though there may be no diabetes.

In the discussion, Netter, *agrégé* professor at the Faculté de Médecine de Paris, emphasized the important part played by acidosis in the uncontrollable vomiting of children; this vomiting is connected with an excess of the acetone bodies, but it has not been determined precisely to which one of these products the essential pathogenic rôle belongs. In some cases, this vomiting may be accompanied by nervous symptoms similar to those of cerebrospinal meningitis. This was the case with a young woman, aged 23, who, apparently in good health, developed comatose symptoms, with rigidity of the limbs. The acetone odor on the breath of the patient, however, led to the supposition that it was rather a case of acidosis. Examination of the cerebrospinal fluid showed, moreover, absence of meningococci. Large doses of sodium bicarbonate were given to the patient simultaneously with numerous injections of strongly alkalinized water. Under the influence of this treatment, the cure was rapid. In other cases, Netter has observed similar symptoms and he considers it profitable to investigate the acetone bodies in the cases of vomiting accompanying a nervous condition, since, by appropriate treatment, it is often possible to avert fatal complications.

## BERLIN LETTER

*(From Our Regular Correspondent)*

Berlin, June 7, 1912.

### German Association for School Hygiene

At this year's meeting of the German association for school hygiene, May 28, Ministerialdirektor Professor Kirchner delivered a remarkable address on "Tuberculosis and the School." He said that although the tuberculosis mortality has fallen since the year 1894 from 32 to 15 per 10,000, still 60,000 persons die annually from tuberculosis in Germany. The reduction of the mortality among men is more marked than among women and children. While among the latter the absolute mortality has decreased, the relative mortality is growing. In children of school age the tuberculosis mortality is as a whole small but with the newer methods of diagnosis, especially Pirquet's test, the prevalence of tuberculosis among school children has been discovered to be considerably greater than was formerly assumed. At Mannheim it was found that of 90 boys of school age, 47 per cent., and of 89 girls, 61 per cent. gave a positive reaction. Professor Jacob in a rural district in Hannover found that among 1,927 school children examined, 43 per cent. gave a positive reaction while among 843 not yet of school age, only 9.2 per cent. reacted positively, that is, were infected with tuberculosis. The positive reactions were in school children from tuberculous families. Tuberculosis is not a school disease, but originates in the home of the parents. It is necessary, therefore, if we wish to prevent tuberculosis among children to protect them from association with people who have open tuberculosis. This, however, would necessitate the notification of all patients with tuberculosis, which unfortunately is not the law in Germany. On the other hand, a ministerial order has now been promulgated, on the basis of the ministerial law against communicable disease, that teachers and pupils with open tuberculosis must not attend the schools. To mitigate the Draconic character of this rule, measures must be taken to detect the tuberculosis before it becomes open. This can best be accomplished by supervision on the part of the school medical inspector in cooperation with the teachers. Particularly all children entering school must be examined, as in Berlin, and the examination of all school children must be repeated from time to time, particularly those who are suspected of tuberculosis, the examination being best performed with Pirquet's test, the latter only with the consent of the parents. If the diagnosis is established, but there is not yet open tuberculosis, the attempt must be made to cure the disease by the establishment of out-door schools for the affected children just as subsidiary schools are provided for defective children. If the tuberculosis has become open, the teachers or pupils must be excluded from the school until the disease is cured. But the task of the school in the fight against tuberculosis is not completed by these measures. In addition there must be a thorough daily cleansing of the school room, and no family must be allowed to live in the school building. School baths, school lunches, care of the teeth, vacation colonies, seaside resorts and forest convalescent stations should also be provided. All these measures deserve support since they increase the vital energy of the young. With these measures must be associated instruction of the children in regard to the avoidance of communicable diseases.

### CARE OF THE EYES IN SCHOOL CHILDREN

Among the other addresses that of the Berlin privatdocent for ophthalmology, Dr. Krusius, was worthy of notice. He reported comparative investigations on the eyes of the children of the upper graded schools in the province of Brandenburg. He showed that most of the children with defects of the eyes have them already established when they enter school, but that adequate attention is not given to them until they reach higher grades, instead of protecting their eyes with suitable glasses from the beginning. He also investigated the cause of the deterioration of vision occurring during school age. He insisted that the work in the school, and even the school work at home, have less to do with this deterioration of vision than private reading, which in many cases ought to be restricted in favor of exercise of the eyes in the open air.

## VIENNA LETTER

*(From Our Regular Correspondent)*

VIENNA, June 8, 1912.

### A Remarkable Case of Poisoning by Barium Carbonate

A most unusual case of poisoning occurred recently in Prague, and the incidents are so remarkable that the attention of the profession should be drawn to the accident. A woman suffering from vague symptoms of stomach disease for a long time consented, on the advice of her physician, to have her bowels examined by *x*-rays. Therefore she swallowed, in the presence of the physicians, a few hours before the examination should take place, about 50 gm. of a suspension of what was thought to be barium sulphate, procured, after the prescription of the physician, from a well-known apothecary shop.

Another young woman who accompanied the patient, also wanted to have her stomach and bowels examined by *x*-rays, merely "for the sake of fun," as she said, to encourage her friend. She, too, swallowed an equal amount of the suspension. In a few minutes the first patient collapsed, under severe symptoms of acute poisoning; violent cramps, then loss of consciousness, paralysis of the respiratory muscles, and she died in the office. The other patient suffered a little less and could be brought to a hospital still living. The investigation was of a most searching kind, and it was found that the unlucky patients had been given barium carbonate, instead of sulphate.

While the latter substance is insoluble in the organism, the carbonate is a deadly poison which is easily dissolved in the stomach and has a rapid fatal action even in small doses. Up to the day of writing it could not be ascertained whether the mistake was made in the dispensary, or whether the dispensary had obtained the poison from the druggist's firm in a mislabeled package. At all events, the occurrence calls for the attention of physicians, for in hospitals and in private *x*-ray offices thousands of persons receive daily barium suspensions previous to examination. A misadventure was reported once by an attendant who used to hand to the physician the bismuth carbonate for such purposes, giving what he believed to be a harmless carbonate, that of barium, when the barium salt was recommended instead of the bismuth. In that instance the mistake was found out too late, but the patient recovered.

### A Proposed Restriction of the Number of Students of Anatomy

Owing to the lack of space in the anatomic institute of Vienna, which has been complained of several times by all concerned, the teaching staff of the medical faculty of Vienna has taken a drastic step in order to call the attention of the government to this state of affairs. It has recommended the adoption of a "numerus clausus" for the admission of students to the study of anatomy, and has suggested that the matriculation of foreign students should be postponed until all inland students were accommodated in the institute. This proposal will no doubt not be accepted by the government, for not only is the measure of fixing a certain number as regards students a most unpopular one in this country which boasts of the *Lernfreiheit* (liberty to learn as much and where a student wishes to), but the importance and reputation of the Vienna Medical School and University would be at stake by the restriction of the admission of foreign students. Also political reasons will be paramount in preventing any such procedure. But the impossibility of continuing in the same manner is brought well to the knowledge of the persons responsible for the present unsatisfactory conditions in some of our medical institutions.

## *Marriages*

ELTON GARDNER LITTELL, M.D., Yonkers, N. Y., to Miss Annie G. Westcott of Hartford, Conn., at Dedham, Mass., June 11.

HOUGHTON CURRIER SMITH, M.D., to Miss Ethel M. Corzer, both of Trenton, N. J., at Ellicott City, Md., May 22.

GLENN E. WRIGHT, M.D., Chicago, to Miss Anna Kelly of Flushing, L. I., N. Y., at Far Rockaway, L. I., June 8.

EDWARD ALBERT FLEMMING, M.D., Richmond Hill, L. I., N. Y., to Miss May Tynan of New York City, June 5.

JOHN ALLEN TOLBART, M.D., Washington, D. C., to Miss Roberta Willis Lackland, at Washington, June 5.

JOHN MARSHALL WENGER, Terre Hill, Pa., to Miss Edna Hurst of Talurga, Pa., at Lebanon, Pa., June 14.

WILLIAM BAILEY MURPHY, M.D., Snow Hill, N. C., to Miss Mary Moore Colvin of Atkinson, N. C., June 12.

HOWARD MERCHANT FRANCISCO, M.D., to Mrs. Frances E. Smith, both of Mount Pleasant, Ia., June 12.

ROBERT HUGHES HEMDON, M.D., Covington, Ky., to Miss Mary Gilman Howell, at Covington, June 12.

HENRY CHURCH PILLSBURY, M. C., U. S. Army, to Miss Janet Woods, at Jefferson Barracks, Mo., June 5.

DENNIS FRANCIS O'CONNOR, M.D., Worcester, Mass., to Miss Loretta M. Radel of Newark, N. J., June 5.

SAMUEL W. DUNLAVY, M.D., to Mrs. Flossie Lippy, both of Cherryvale, Kan., at Joplin, Mo., May 26.

HUGH W. MCCAIN, M.D., High Point, N. C., to Miss Alma Cunningham of Waxham, N. C., May 23.

WILLIAM GAITHER BANDY, M.D., to Miss Myrtle Leota Daniel, both of Pratt City, Ala., June 19.

ALBERT T. LUNDGREN, M.D., to Miss Beda M. Munson, both of Chicago, at Madison, Wis., March 30.

JOHN WILLIAM HOLMES, M.D., Philadelphia, to Miss Alice Patchin Ake of Camden, N. J., June 12.

EUGENE M. FISHER, M.D., Roswell, N. Mex., to Miss Cora Lee Johnson of Snyder, Tex., May 22.

HENRY M. MOORE, M.D., St. Louis, to Miss Jamie H. Jones of Rockport, Ind., at St. Louis, June 8.

FLETCHER OLIN MACFARLAND, M.D., Minneapolis, to Miss Mirian Rabb of Chicago, June 19.

EDWARD ADAMS SOMMER, M.D., Conway, Ia., to Miss Mabel Cooper, at Creston, Ia., June 6.

PHILIP J. SPAEDER, M.D., York, Pa., to Miss Marie L. Schoonover of Philadelphia, recently.

JOHN SHAW GIBSON, M.D., Gibson, N. C., to Miss Edna Iona Ebert, at Baltimore, June 11.

SAMUEL MILBANK, M.D., to Miss May A. Weatherbee, both of New York City, June 15.

SYDNEY R. LASSELL, M.D., Hainan, China, to Miss Ruth Lyen of Redlands, Cal., June 5.

GEORGE W. BARNETT, M.D., to Miss Anna Strauss, both of Johnstown, Pa., June 12.

A. VAN SMELKER, M.D., to Miss Wrotnowski, both of Nogales, Ariz., recently.

EDWARD GARRAGHAN, M.D., to Miss Grace Reddy, both of Chicago, May 31.

# Deaths

**Henry C. Duvall, M.D.** University of Louisville (Ky.) 1875; a member of the Kentucky State Medical Association and president of the Grayson County Medical Society; for several years surgeon for the Illinois Central Railroad at Big Clifty and Millwood; health officer of Millwood and a member of the Board of Health of Grayson County; died at his home, April 17, from organic heart disease, aged 68. The Grayson County Medical Society adopted resolutions deploring the loss the society sustained by the death of Dr. Duvall and extending its sympathy to his family.

**Fyfield Holt Longley, M.D.** Eclectic Medical Institute, Cincinnati, 1867; College of Physicians and Surgeons, Keokuk, Ia., 1876; a member of the Nebraska State Medical Association and president of the Lincoln County Medical Society; chairman of the commissioners of insanity and coroner of Lincoln County; died recently at his home in North Platte, from nephritis, aged 79.

**John Wesley Mathews, M.D.** American Medical College, Eclectic, St. Louis, 1875; for more than sixty years a local preacher and missionary of the Methodist Episcopal Church, South; surgeon in the Confederate service during the Civil War; died at the home of his son, in Liberty, Mo., May 5, from senile debility, aged 87.

**John W. Field, M.D.** University of Maryland, Baltimore, 1860; for many years postmaster of Chincoteague Island, Va.; a member of the Virginia legislature from 1865 to 1867 and at one time a member of the Maryland and Virginia Boundary Commission; died at his home on Chincoteague Island, May 4, aged 75.

**Benjamin F. Butcher, M.D.** Pennsylvania Medical College, Gettysburg, 1861; surgeon of the Ninety-Ninth Pennsylvania Volunteer Infantry throughout the Civil War; for forty-five years physician to the Moyamensing Prison, Philadelphia; died at his home in that city, May 31, from cerebral hemorrhage, aged 72.

**Jerome Hilton Waterman, M.D.** Harvard Medical School, 1893; a member of the Medical Society of the State of New York; president of the Harvard Medical Society, New York City; attending surgeon to the Hospital for the Ruptured and Crippled, New York City; died at his home, June 9, aged 51.

**John Ely Bready, M.D.** Jefferson Medical College, 1878; acting assistant surgeon U. S. P. H. & M.-H. Service since 1880; a veteran of the Civil War; for many years a member, secretary and president of the Dubuque County (Ia.) Medical Society; died at his home in Dubuque, June 5, aged 72.

**John Washington Smith, M.D.** University of Toronto (Ont.) and Trinity Medical College, Toronto, 1876; formerly of Sheffield, Ont.; a member of the city council of Dundas, and medical health officer of Beverly Township for several years; died at his home in Toronto, May 2, aged 67.

**Fred Leslie Woodburn, M.D.** Keokuk Medical College, College of Physicians and Surgeons, Keokuk, Ia., 1906; formerly of Ainsworth, Ia.; a member of the American Medical Association; died at the home of his parents in Washington, Ia., June 4, from tuberculosis, aged 29.

**Harriett C. Hinds, M.D.** Eclectic Medical College of the City of New York, 1877; for 25 years demonstrator of anatomy in her alma mater; and for forty-two years a resident of the Oranges, N. J.; died at her home in East Orange, June 5, from cerebral hemorrhage.

**James McFarland Evans, M.D.** Cleveland University of Medicine and Surgery, 1868; a veteran of the Civil War; a member and once president of the Henry County (Ia.) Medical Society; died at his home in Salem, June 6, from the effects of a fall, aged 70.

**Lucy A. Gaynor, M.D.** Northwestern University Women's Medical School, Chicago, 1891; a medical missionary of the Friends Mission Board, at Nanking, China; died at her station in that city, recently, from typhoid fever, aged 50.

**James McChesney, M.D.** Castleton (Vt.) Medical College, 1849; the oldest member of the Rensselaer County (N. Y.) Medical Society; died at his home in Troy, June 4, aged 88.

**Lewis C. B. Yergey, M.D.** University of Pennsylvania, Philadelphia, 1873; of Pottstown, Pa.; died in the Pottstown Hospital, May 21, from cerebral hemorrhage, aged 62.

**John B. Winrow, M.D.** Meharry Medical College, Nashville (Tenn.) 1910; died at his home in Ripley, Tenn., May 19, aged 41.

**Frederick W. Seifert, M.D.** McGill University, Montreal, 1905; formerly of High River, Alberta, but more recently a medical officer on steamers plying between England and the Gold Coast; died at Forcados, West Africa, April 24.

**J. J. Jepson, M.D.** University of Tennessee, Nashville, 1860; for more than fifty years a practitioner of Barren County, Ky.; a Confederate veteran of the Civil War; died at his home in Glasgow, June 6, from angina pectoris, aged 79.

**Franklin Eugene Cook, M.D.** Hospital College of Medicine, Louisville, Ky., 1887; of Oxford Junction, Ia.; who was operated on recently for stone in the bladder, in Dubuque; died at his home, June 7, from septicemia, aged 60.

**William Herbert Doolittle, M.D.** Rush Medical College, 1876; a member of the American Medical Association and Fox River Valley Medical Society; died at his home in Woodstock, Ill., June 10, from cerebral hemorrhage, aged 61.

**Horatio Sprague Kelley, Jr., M.D.** New York University, New York City, 1884; a member of the Massachusetts Medical Society and an officer of the U. S. P. H. & M.-H. Service; died at his home in West Dennis, April 16, aged 57.

**Boyle Kerr, M.D.** Jefferson Medical College, 1854; said to have been the oldest alumnus of the Western University of Pennsylvania, Pittsburgh; died at his home in that city, June 5, from senile debility, aged 81.

**James F. Rascoe, M.D.** University of Nashville (Tenn.) 1868; for nearly half a century a practitioner of Christian County, Ky.; died at his home in Hopkinsville, April 17, from heart disease; aged 69.

**John Nicoll, M.D.** Yale University, New Haven, 1854; formerly a member of the Connecticut Medical Society; died at his home in Elizabeth, N. J., May 22, aged 81, from senile debility.

**Fred W. Wright, M.D.** Detroit (Mich.) Medical College, 1884; city physician of Grand Rapids, Mich., from 1889 to 1891; died at his home, June 7, from the effects of influenza, aged 53.

**Frederick Hale Coffeen, M.D.** College of Physicians and Surgeons, Keokuk, Ia., 1882; a member of the American Medical Association; died at his home in Yamhill, Ore., June 2.

**W. A. R. Tenney, M.D.** Pulte Medical College, Cincinnati, 1882; health officer of Cincinnati in 1898; died at his home in that city, May 12, from cerebral hemorrhage, aged 61.

**Harry Green Hill, M.D.** Willamette University, Salem, Ore., 1889, and a practitioner of Elma, Wash., since that time; died at his home, April 9, from senile debility, aged 72.

**David Humphrey McFarland, M.D.** Rush Medical College, 1870; for fifty-four years a practitioner of medicine; died at his home in Heyworth, Ill., May 6, aged 80.

**Francis T. Gilmore, M.D.** Hospital College of Medicine, Louisville, 1878; formerly of Tuscumbia, Ala.; died in the State Hospital, Tuscaloosa, May 3, aged 60.

**Purnell W. Andrews, M.D.** Homeopathic Medical College of Pennsylvania, Philadelphia, 1867; died at his home in Camden, June 4, from heart disease, aged 65.

**B. W. Robinson** (license, Tex. Judicial District Board, 1877); for forty years a practitioner of Bedias; died at his home, May 10, from pellagra, aged 73.

**Thomas B. Rider, M.D.** Atlanta (Ga.) Medical College, 1887; formerly of Hot Springs, Ark.; died in Rye Patch, Nev., May 19, from heart disease, aged 52.

**Edward Diedrich, M.D.** University of Nebraska, Lincoln, 1882; died at his home in Portland, Ore., June 2, from cerebral hemorrhage, aged 63.

**Frederick B. Hand, M.D.** Kentucky School of Medicine Louisville, 1898; died suddenly at his home in Lake City, Fla. May 26, aged 38.

**James M. Clemens, M.D.** University of Louisville (Ky.) 1860; formerly of Paducah; died at his home in Carrsville Ky., recently.

**William Michael Ferrell, M.D.** Bennett Medical College, Chicago, 1910; of Pittsburgh; died in a hospital in that city, May 8, aged 25.

**William Thaddeus Dickert, M.D.** Chattanooga (Tenn.) Medical College, 1905; died at his home in Newberry, S. C., May 2 aged 42.

**Charles B. Prouty, M.D.** National Medical University, Chicago, 1896; died at his home in Chicago, June 8, aged 67.

**Alfred F. Marshall** (license, Ind., 1898); died at his home i Jasonville, April 22, from pneumonia, aged 56.

**David Jones M.D.** (license, Ia. years of practice, 1886) died at his home in Richland, April 3, aged 82.

# The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

## TRENCH'S REMEDY

### A Dangerous and Fraudulent Cure for Fits

Those who have followed the trend of events in the "patent medicine" world have noticed that since the passage of the Food and Drugs Act there has been a great increase in the number of remedies sold as cures for epilepsy. Possibly it would be more correct to say that there has been a great increase in the advertising appropriations made for this class of nostrums. The reason is not far to seek. The bromids are powerful drugs and produce well-marked physiologic effects. Given in quantities that no physician who respected his patient's welfare—or his own reputation—would dare to prescribe, they produce effects that impress the layman with their potency. The purchaser mistakes a temporary suppression of the attacks of epilepsy, produced by large quantities of bromids, for a cure. The presence of this powerful drug does not have to be declared on the label, which doubtless accounts for its wide-spread use under the present law.

"Trench's Remedy for Epilepsy and Fits" is made by Trench's Remedies, Ltd., Dublin, Ireland. It is advertised by the methods usual to such concerns—newspaper advertisements and booklets containing testimonials. A fake analytical report from the "analyist," Granville H. Sharpe of London, who makes a business of furnishing "certificates" for pay, is also used as an advertising asset. The nostrum comes in two forms—liquid and powder. It is sold in the liquid form in Great Britain and in the powdered form elsewhere. Both preparations have been analyzed by the chemists of the British Medical Association. The formula reported for the liquid form was:

TRENCH'S
REMEDIES
LIMITED
TELEGRAMS
TRENCH.
ST JAMES CHAMBERS.
TORONTO

Photographic reproduction of a portion of the letterhead used by Trench's Remedies, Ltd.

| | |
|---|---|
| Potassium bromid | 70 grains. |
| Ammonium bromid | 10 grains. |
| Sugar | 72 grains. |
| Fuchsin q. s. to color. | |
| Water to make | 1 fl. oz. |

The powdered form, which is sold in the United States and also in Canada and the other British colonies comes in quarter-, half- and full packages. The quarter-package contains 11¼ ounces of a dark brown, coarsely granular powder which is to be dissolved in one pint of warm water. The formula of the powder was reported to be:

| | |
|---|---|
| Potassium bromid | 61 parts. |
| Moist brown sugar | 39 parts. |

When this was dissolved in water, according to directions, the finished mixture was calculated to contain:

| | |
|---|---|
| Potassium bromid | 120 grains. |
| Moist brown sugar | 77 grains. |
| Water to make | 1 fl. oz |

It will be seen that there is a noticeable difference between the preparation sold for home consumption and that sold for use in the United States and in the British colonies. The powdered form contains no ammonium bromid but the amount of potassium bromid in it is greater than the combined ammonium and potassium bromids in the liquid form.

The dose recommended for both of these preparations containing such powerful drugs is: "*The patient should take enough to arrest the attacks completely,* [italics in the original] but not enough to cause drowsiness or giddiness."

The enormous harm that may be done by such indiscriminate use of bromids can best be described by quoting Dr. W. T. Spratling in his testimony before a United States court. Dr. Spratling is an authority on epilepsy and was for many years Superintendent of the Craig Colony for Epileptics at Sonyea, N. Y.:

> "The colony has ascertained through the analysis of nearly thirty of the more widely advertised patent nostrums for the 'sure cure' of epilepsy that the bromid is the base of them all.
>
> "Many of these quack remedies so glowingly set forth in the public prints, possess the power of suppressing the attack for a time, but it is suppression only, not cure, and the patients are always worse afterward.
>
> "If pushed too far, death may intervene from acute bromid poisoning. This happened in the case of a boy of 12 years, whom I knew, whose parents gave him too frequent doses of a patent nostrum, the essential ingredient of which, as with the bulk of patent epileptic cures, was bromid of potassium.
>
> "It is a frequent experience to see patients brutalized by bromid, go months without fits, but with a loss of mental and physical activity."

It is evident that the number of drugs in "patent medicines" whose presence should be declared on the label should be increased. At present there are but thirteen drugs and their derivatives whose presence the public has any means of knowing! Such powerful poisons as arsenic, strychnin, prussic acid, phenol (carbolic acid) and ergot may be used in "patent medicines" in any quantity that the manufacturer sees fit and the public is entirely in the dark regarding their presence. The same is true of the depressing bromids. It is high time that the list of "declared" drugs be extended. When this is done, the number of epilepsy "cures" will be decreased and the safety of the public increased.

## TAKING THE MEASURE

### Showing that a Pharmaceutical House Can Be Classified by Its Standards

In days gone by, when the physician's information as to the reliability of medicines was obtained almost exclusively from those who made them, the Tilden Company, New Lebanon, N. Y., stood rather well with the profession, and its fluidextracts and some of its proprietaries enjoyed a somewhat extensive use. To some it was a surprise, therefore, that when the Council on Pharmacy and Chemistry was organized and began its work, none of the Tilden Company's preparations was admitted to New and Nonofficial Remedies. The reason was brought out later by a report of the American Medical Association Chemical Laboratory on Hydrocyanate of Iron—Tilden (The Journal, June 19, 1909). The report showed that the preparation consisted of Prussian blue and talc in about equal amounts and that the firm, in response to an inquiry from a physician, had announced that it proposed to hold the composition of its remedy a "trade-secret." The report also showed, as might have been expected, that the statements made by the firm regarding this proprietary, if not absolutely false, were at least distinctly misleading.

Recently we published a notice of judgment (No. 780) giving the result of the prosecution of the Tilden Company under the Food and Drugs Act. It showed that Mr. S. J. Tilden, president of the firm, pleaded guilty to the charge that the firm's acetanilid-phenacetin mixture, called Febrisol, was misbranded. It is an acknowledgment that the firm's policies have included deception.

# Correspondence

## Pressure in Treatment of Hyperthyroidism

*To the Editor:*—I hasten to suggest the advisability of trying continuous pressure in case of hyperthyroidism. This plan has commended itself to me after a futile trial with other remedies in three cases of well-marked enlargement of the thyroid.

The first case occurred in a woman of 45 who had always enjoyed good health. The tachycardia was present some time before any enlargement of the gland was noticeable and at no time was exophthalmos distinguishable. Nervous symptoms, palpitation and air hunger grew more frequent and pronounced until the patient's life was made quite miserable; every medicinal remedy that had been suggested was tried without any benefit. Operation was advised but the patient did not take kindly to the measure. She was then told to use salt-bags over her neck while in the recumbent position. In two weeks the gland was so reduced in size that it was hardly perceptible; the heart quieted down and the nervous symptoms disappeared.

The second case was in a woman aged 38 who had always had good health. When first seen the patient had appreciable enlargement of the thyroid, marked palpitation, slight protrusion of the eyeballs, restlessness, nervousness, broken sleep, constipation and poor appetite. She was given eight or ten remedies in order of their rank but no benefit followed. Continuous pressure was tried and relief was obtained in a few days and the symptoms finally disappeared; the patient has been free from any trouble for two years.

The last case was that of a woman 36 years old. When I was first called to see the patient, she was pregnant three months, had had incessant vomiting for five days, rapid respiration, moderate tachycardia and considerable enlargement of the thyroid; she had become very weak from the prolonged vomiting. No remedies were given internally. A 2-pound salt-bag was placed over the thyroid gland and in six hours the vomiting had stopped; the respiration returned to normal and by the end of the second day the gland had been reduced one-half and the patient felt comfortable. The salt-bags were used on account of being readily obtained at the grocery store; shot or sand-bags would be just as desirable and probably more convenient of application.

My limited experience with this remedy does not justify any definite conclusion but I desire to report these results that others may try the treatment to determine the extent of its usefulness. The symptoms of hyperthyroidism are so distressing that any measure which offers relief is many times welcome.

The effect of the compression is reduction of the blood-supply to the gland and in this respect acts the same as ligation of the blood-vessels. Cold compresses and elastic constriction of the neck have been mentioned as useful measures to be tried in this affection, but neither of them is very practical. Compresses of cold are not judiciously carried out over any length of time and constriction is uncomfortable and makes uniform pressure around the entire neck.

Everett Mingus, M.D., Marshfield, Ore.

## The Most American City

*To the Editor:*—The President's address, given by Dr. Abraham Jacobi, at the recent meeting of the American Medical Association, is a remarkably strong argument as to the means of combating infant mortality, covering as it does all the phases of prevention of this needless waste of life.

Among the interesting facts brought out are the statistics quoted as to the number of labors attended by midwives in the various cities, Chicago, 86; St. Louis, 75, and New York, 42 per cent.; in these instances, a survival of old-world customs among our foreign-born people. A marked contrast to Dr. Jacobi's statistics as to the practice of midwives elsewhere is the discovery of the Committee on Regulation of Midwifery Practice of the Obstetric Section of the Jackson County (Mo.) Medical Society, with reference to Kansas City. This committee, consisting of Drs. H. O. Leonard, H. L. Hess and H. B. Coleman, after a most careful investigation and with the aid of the City Board of Health reports, which have been compiled by Dr. Hasbrouck DeLatamer of the department, found that there are in Kansas City only eight midwives who practice and that the number of births reported by them is less than 1 per cent. of the total birth-rate of the city. As the population of the city is about 250,000 and there are over 1,000 physicians registered, the contrast can be very readily appreciated.

These figures coincide with the records of the city school board, which show that we have the largest percentage of native-born school children and the children of native-born citizens of any school district in America, there being according to the statistics of Mr. Hale H. Cook, a member of the school board, less than 4 per cent. of foreign-born children in the ward schools and less than 1 per cent. in the high schools. Los Angeles, it is said, comes next to Kansas City in this regard in its school report. It is doubted if any large city is a close second as to the number of midwives in practice within its boundary.

It must be conceded, these figures being accepted as correct, that Kansas City is the most intensely American metropolis.

George Clark Mosher, M.D., Kansas City, Mo.

## The Guaiac-Turpentine Test for Occult Blood in the Feces

*To the Editor:*—In the article (The Journal, Nov. 4, 1911, p. 1532) entitled "A Source of Error in the Test for Occult Blood in the Feces," by Dr. William A. Newbold, it is stated that watermelon pulp and juice will give a blue color with the guaiac-turpentine blood-test.

It is true that the old Van Deen test, which consisted in mixing the tincture of guaiac with the oil of turpentine or peroxid and adding the urine, feces or stomach contents, will give a blue color reaction with watermelon pulp, or juice, which is identical with the blood reaction. As Weber pointed out in 1893, however, many other substances will give the same reaction, e. g., many vegetables, milk, bile, saliva and pus, as well as several medicines. He, therefore, modified the test by making an ether-acetic acid extract of the feces, to which was added the turpentine and guaiacum. Weber's modification has proved to be absolutely reliable when correctly performed and a blue or violet color reaction indicates blood and nothing else. The test is so well established now that when the guaiac-turpentine test for blood is mentioned Weber's modification is understood, instead of the unreliable Van Deen test.

It was only recently that I was able to procure a specimen of watermelon pulp and prove that it would *not* give a blue color reaction to the ether-acetic acid extract.

H. W. Soper, St. Louis.

## The Committee on National Public Health Legislation

*To the Editor:*—In the report of the transactions of the House of Delegates at Atlantic City (The Journal, June 15, p. 1904), appears the report submitted by the Committee on National Public Health Legislation. The report is signed by various members of the committee, but my signature does not appear.

The explanation of this is that I was not consulted in regard to the contents of the report, was not permitted to see it before it was transmitted, and consequently had no opportunity so sign it.

Of course, this is more a matter of importance from the standpoint of good manners, both official and personal, than it is of ethics, and therefore hardly worth while being concerned about, but inasmuch as the House of Delegates conferred on me the honor of designating me as a member of the nationa committee, I deem it proper to explain to the members of the House that the failure of my name to appear in connection with the report was not due to any lack of interest on my part in the subject-matter, to failure to participate in th deliberations of the committee, or to any lack of appreciatio of the honor of being selected by the House for service o the committee.

G. B. Young, Chicago.

# Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

## APPROACHING INTERNATIONAL OTOLOGIC CONGRESS

*To the Editor:*—What is the exact date of the approaching International Otologic Congress to be held at Boston this summer?

C. Y., Chicago.

ANSWER.—The date of the Ninth International Otologic Congress is announced as August 12-17. The details in regard to the prizes offered to be awarded at the meeting were given in THE JOURNAL, Feb. 10, 1912, page 421. Further particulars may be obtained from the secretary and treasurer, Dr. Henry O. Reik, 506 Cathedral Street, Baltimore. Dr. Clarence J. Blake, 226 Marlboro Street, Boston, will preside.

## TREATMENT OF INCONTINENCE OF URINE IN WOMEN

*To the Editor:*—Please inform me where I can find articles on the surgical and paraffin-injection treatment for incontinence of urine in the female.

GEORGE A. TRIPP, M.D.,
South Bend, Wash.

ANSWER.—The following articles may be referred to:

Ball, C. A.: Incontinence of Urine and Its Treatment, *Med. Press and Circular,* Dec. 9, 1909.

Miller, G. B.: Incontinence of Urine Following Labor, *Surg., Gynec. and Obst.,* January, 1910; abstr. in THE JOURNAL, Feb. 26, 1910, p. 740.

Alexander, W.: The Problems Presented by Extreme Cases of Incontinence of Urine and Some Solutions of Them, *Med. Press and Circular,* June 8, 1910.

Squier, J. B.: Postoperative Urinary Incontinence, *Med. Rec.,* New York, May 13, 1911.

Taylor, H. C.: Incontinence of Urine in Women, *Med. Rec.,* New York, June 17, 1911.

Semb, O.: Injection of Paraffin for Incontinence of Urine, *Norsk. Mag. f. Laegevidensk,* November, 1911; abstracted in THE JOURNAL, Dec. 9, 1911, p. 1956.

## LIQUOR FORMALDEHYDI

*To the Editor:*—In "An Antiseptic Thermometer Case" (THE JOURNAL, June 8, p. 1756), the first sentence reads: "After having studied the question systematically, Beasley in a recent article suggests, as the most practical disinfectant for thermometers, the Pharmacopeial formaldehyd solution (liquor formaldehydi), which, as is well known, is a 40 per cent. solution of formaldehyd in alcohol." Permit me in this connection to give the U. S. P. definition of liquor formaldehydi: "An aqueous solution, containing not less than 37 per cent. by weight of absolute formaldehyd, an oxidation product of methyl alcohol." It is therefore an aqueous and not an alcoholic solution.

H. G. HENRIKSEN, New Market, Minn.

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**Health is Wealth.**—Without it, sickness brings poverty; poverty crime, and crime fills our institutions, which in turn depletes the treasury, increases taxation, which again suggests poverty.—Burkholder in *Virginia Med. Semi-Month.*

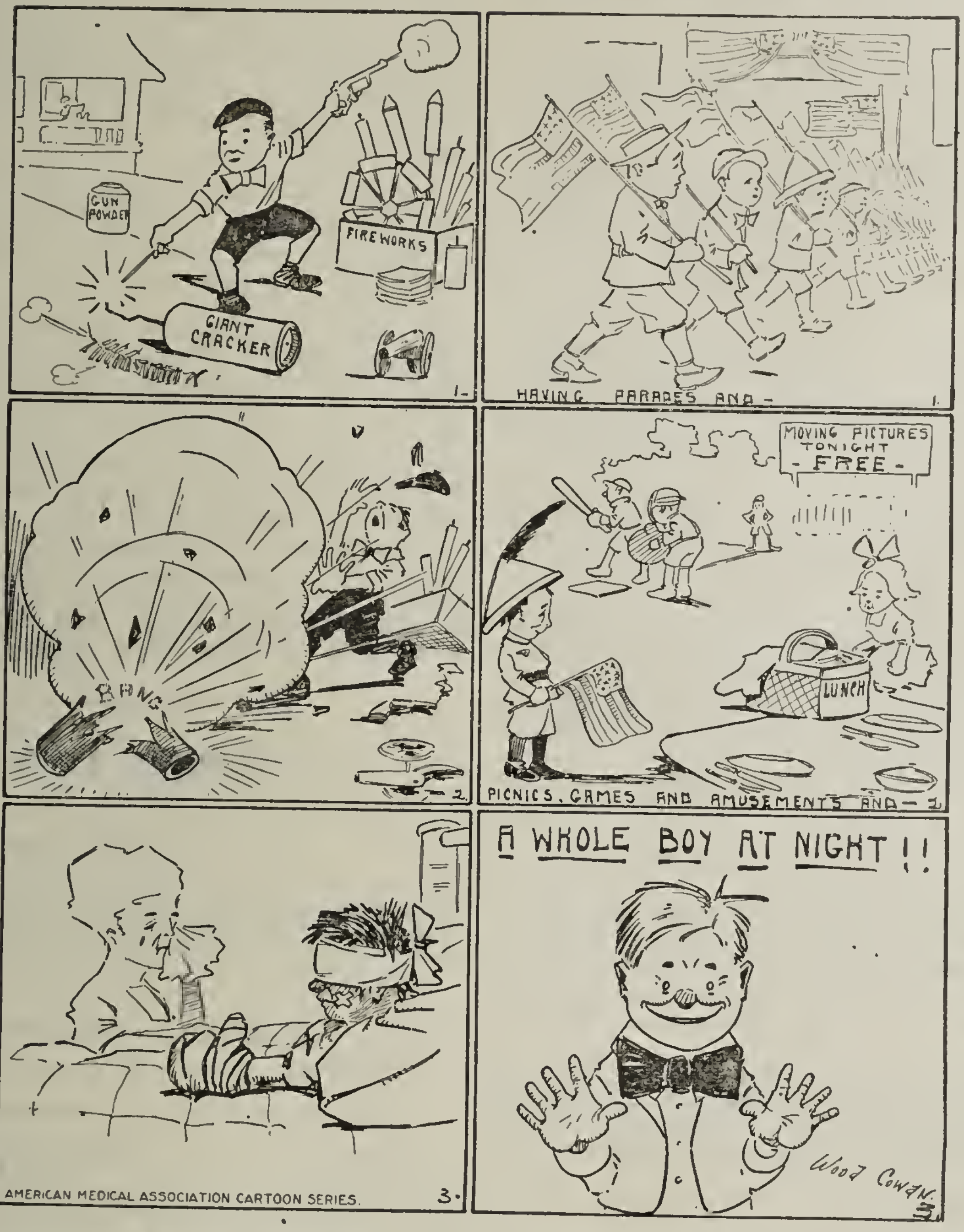
# Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POSTGRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

## CURRENT NEWSPAPER COMMENTS ON PUBLIC HEALTH TOPICS

Many interesting editorials have appeared in the daily newspapers of late on public health questions. If space permitted it would be worth while to reproduce all of the editorials, as an evidence of the increasing public interest in health matters. Only a few quotations are possible, however.

THE INSANE WAY AND— THE SANE WAY



AMERICAN MEDICAL ASSOCIATION CARTOON SERIES.

The Greenville (Ohio) *Democrat* has this to say under the head of "Medical Organizations":

"As scientific improvement was made in surgery and the use of medicine little nuclei of doctors of the craft began to form in communities until a general need for medical associations become manifest in counties, states, and nations.

"This progress of unification of ideas is not only for the uplift of the profession but for the amelioration of mankind. .

"In this commercial age of unrest we fail to appreciate the work of these great men to prolong life and add to the comfort of mankind. The profession snatches from the jaws of death many a victim . . . The loathsome diseases . . . that have blighted so many lives, are yielding to the treatment of the profession, and in the place of melancholy, the star of hope lights the way to healthfulness and a better way of living.

"The profession, however, is not free from annoyances. . . . Quackery will stick its long snout of officiousness into the rationale of medical science, securing here and there a willing dupe to be fleeced, but the medical fraternity moves on, steadily advancing until it has become an indispensable part of the world of science. Health boards are created by its influence, and men are made to live purer and nobler lives.

"The medical profession silently works, night and day, applying the remedies, watching results, making a new diagnosis, discovering some new disease, and then a new method to regulate and control it, delving into the numerous ramifications of life, and its mysteries, and in holding up to Nature the mirror of science, it reflects the unselfishness and constant devotion of millions of faithful servants to humanity."

The Fresno *Republican* discusses vaccination at length, winding up its editorial thus:

"Of course all this argument is based on the assumption that we are living in a real world, in which disease, and the prevention and cure of disease are facts, in regard to which there exists real knowledge. We are painfully conscious that there are persons who deny all these propositions. And we have often expressed the conclusion that the proper place for these persons to make that denial is the court where the microbe presides, and that the amount of liberty of conscience on these subjects that can be granted is the amount the microbe can be induced to yield. If the microbe is deaf, blind, mindless and ruthless, then, on these questions we are under a deaf, blind, mindless and ruthless rule, from which no mere process of argument can release us. In matters of disease, the microbe exercises legislative, executive and judicial powers. And he is no respecter of persons or conscience. We are not saying this is right. We are merely saying that those who think it is wrong must make their argument in the microbe's court, and get such hearing as the microbe will grant. For the microbe has—and exercises—the power of life and death. That may be wrong, too. But tell it to the microbe."

School inspection is just now a vital issue in Grand Rapids. The *News* replies to a query by the local League for Medical Freedom which asks:

"'How far are school authorities justified in assuming responsibility for the health and physical conditions of pupils?'"

"In reply, the *News* says:

"Just so far as may be necessary to protect the normal child now in the public schools and menaced by the presence of other children who have not been so fortunately dowered and reared.

"Just so far as will guarantee to children, not robust, the means whereby they may be assisted in securing a sound mind in a sound body.

"Just so far as shall make it possible for children whose parents, through ignorance or neglect, have not corrected deformities which are easily correctible, to receive advice as to their physical condition, and assistance in remedying that condition before it is too late.

"Just so far as may be necessary in order to insure to the rising generation the best possible training, physical, mental and moral, to the end that they may be well fitted to cope with the battle of life into which they will eventually be driven.

"Just so far as the best thought of the day dictates shall be the equipment, bodily and mentally, of conquerors in life's race, instead of mere cumberers of the ground.

"Just so far that no child in the public schools may be deprived of his education by means of physical deformities which interfere with his mental growth.

"Just so far that every child shall be protected against unnecessary exposure to contagious diseases, the result of inability to diagnose symptoms in time.

"Just so far that every child be guaranteed the inalienable rights of life, liberty and happiness. . . .

"No sound argument can be brought against medical inspection in the public schools. The idea is in line with all that is being done toward lifting humanity to a higher level. Sanitation, inspection, are bulwarks against disease, and they are vitally necessary where large bodies of people are congregated. . . .

"Give every child the right to grow up strong and healthy. Before you punish him for being a delinquent, correct the cause of the defective condition which resulted in delinquency. Better still, prevent delinquency by curing defectiveness."

The New York *Sun*, commenting on "The Passing of the Family Physician" says:

"The family doctor, who in childhood was dreaded because of his nauseous drugs, but was loved more deeply as the years passed during which he was the first to greet one in this world and the last on whom the darkening vision of loved ones rested—this sympathetic counsellor in sorrow is still firmly intrenched in trusting hearts. In large urban centers, however, the family doctor is rapidly passing into a distributor of cases to the specialist."

After discussing the cause for this condition the *Sun* quotes Dr. Jacobi's prophecy that the next twenty-five years will see the family physician restored to his place of usefulness and honor, and adds, "A consummation devoutly to be wished."

The New Orleans *Democrat*, under the title "An End to Mosquitoes" shows how thoroughly the teachings of modern sanitary science have been impressed on the southern public. Drawing a lesson from Panama, the *Democrat* asks why mosquitoes cannot be exterminated in New Orleans and at once answers its own question by saying that they can if the people of New Orleans go about it aright. When the reader recalls the attitude of the New Orleans public to the first proposal to screen cisterns and living-rooms and to drain pools of water, the change in public sentiment is apparent.

The Columbus (Ohio) *Dispatch* discusses the Owen bill and its opposition and adds:

"There is the usual twaddle about the doctors' trust and the senseless fear that one school of medicine is going to get the advantage of the others. But against that the bill amply provides in requiring that 'the health service shall have no power to regulate the practice of medicine or the practice of healing, or interfere with the right of a citizen to employ the practitioner of his choice, and all appointments within the health service shall be made without discrimination in favor of or against any school of medicine or healing.'

"That leaves absolutely nothing for the opponents of the measure to stand on except a desire not to promote the public health and so take away some of the opportunities of gain which have been so zealously improved in the past by persons who had nothing but empty promises to offer. That the Owen bill would do much to promote the growth of preventive medicine is apparent to anybody who has observed the triumphs of American medical science in the pest-ridden sections of Cuba and Panama."

The St. Louis *Star*, with practical common sense, applies the test of results, and under the title "Reducing the Death-Rate" compares the present mortality in St. Louis with that of ten years ago. The *Star* says:

"There is little comfort to those who oppose health regulations and fight what they are pleased to call the 'doctor's trust' in the statistics showing the reduction of deaths in St. Louis from communicable diseases during the past eleven years. . . . Of the reduction of 20 per cent. the largest single factor is that of tuberculosis. While better water and more knowledge of the means of communication of diseases on the part of the people generally are largely responsible for this, the knowledge resulting from the campaign of education carried on through the press by associations and the Board of Health, the fact remains that the medical regulations for handling infectious diseases and for their prevention, as well as enforced sanitation, have had much to do with it."

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# Society Proceedings

## COMING MEETINGS

Michigan State Medical Society, Muskegon, July 10-11.
Minnesota State Medical Association, Duluth, Aug. 14-15.
Washington, Idaho and Oregon associations, Portland, July 5-8.
West Virginia State Medical Association, Webster Springs, July 10-12.

## AMERICAN PEDIATRIC SOCIETY

*Annual Meeting, held at Hot Springs, Va., May 29-31, 1912*

Dr. Augustus Caille, New York City, in the Chair

The list of new officers was published June 8, p. 1766.

### The Relation of the American Pediatric Society to the Movements for the Reduction of Mortality in Infancy and Childhood

Dr. Walter Lester Carr, New York: The word "conservation" may have been overused, but it nevertheless brings to our minds the improved conditions that prevail in an awakened public sentiment regarding natural resources, and especially an appreciation of the value of health and life. These influences have reacted on this and similar organizations and have changed their attitude toward disease. The topics discussed now concern nutrition and the problems of metabolism, while formerly the subjects were more often of clinical and pathologic interest. A study of the comparative statistics of infant mortality during the past fifteen years shows a remarkable decrease in deaths from all causes except syphilis. We should add to our study of diseases observed in infancy and childhood from the standpoint of their pathologic and clinical histories, comparative and tabulated records, and methods of precision, so that we can judge more accurately of the semeiology of disease. We should have a program relating to metabolic processes, more especially to those of infancy and childhood, arranged so that investigators will present to this society for discussion the results of laboratory investigation that bear on our clinical studies. We should endorse movements having to do with physiologic and economic problems relating to infancy and childhood, particularly those of mortality and disease. Congenital diseases should be brought under this class. We should give hearty aid and approval to societies that approach pediatrics from standpoints other than medical.

### The Coagulation of Blood in Infants and Children

Dr. Howard C. Carpenter and Dr. J. Clayton Gittings, Philadelphia: We have made 192 examinations in 176 patients. Of these, eighteen examinations of sixteen patients had an undetermined coagulation time. Of 160 persons whose blood gave a positive coagulation time, thirty-five were healthy, except for such afflictions as ringworm and scabies; 125 suffered from a variety of disease. The average time of coagulation for the healthy children for thirty-nine examinations was 9.4 minutes; in those not healthy, the average coagulation time in 135 examinations was 9.7 minutes. This showed an unimportant difference between the well and the sick. Other observers have found that the coagulation time in children as compared with adults shows practically no difference, except during the first few days of life, when a delay is observed, and our results have shown no material difference from the accepted result; although our average for childhood was higher than the average for adults tested by the Biffi method. The results of various observers show rather more than the usual disagreement and our work has shown that this is equally true in the case of the child. Future efforts should be directed toward solving the problem of blood coagulation *per se,* or to a study of coagulability, according to the more advanced standards, e. g., the determination of the presence or absence, increase or diminution, in one or more of the various elements concerned in the formation of thrombin and in the latter's action on fibrinogen.

#### DISCUSSION

Dr. Alfred Hand, Philadelphia: I would like to ask if such studies have been made in typhoid and pneumonia. There is considerable fibrin formation in both these diseases which causes a more or less plastic state of the blood which may be explained by the beneficial effect of the drugs used in lessening this plastic state of the blood.

Dr. Howard C. Carpenter, Philadelphia: In bronchopneumonia the coagulability of the blood is practically normal, but it would be a mistake to draw definite conclusions from a report on such a limited number of cases. I do not think that an examination by clinical methods means much, except in the grossest way.

### Epidemic of Sore Throat, with Involvement of the Cervical Lymph-Nodes

Dr. John Ruhräh, Baltimore: Fully 50 per cent. of the cases occurred in children. The organism found was a diplococcus with a distinct capsule and was Gram-positive. Its thermal death-point in milk was 54 C. at an exposure of twenty minutes. The disease varied from a very mild type to one of intense severity and was accompanied with complications and numerous fatalities. The most common complication was inflammation of the middle ear, which occurred in 30 to 40 per cent. of the cases. Another complication was irregular swellings which rarely suppurated. The lesson learned from the epidemic is that streptococcus infection may be occasioned by infected milk even in cold weather and that no matter how carefully milk is handled it may, at times, be a source of danger and that in consequence the milk-supply of cities should be pasteurized.

#### DISCUSSION

Dr. Charles G. Kerley, New York: A case similar to the ones reported came under my observation a short time ago. The child first had redness of the throat and swelling of the glands. This was then followed, in succession, by a mild pneumonia, a severe peritonitis, an acute nephritis with urinary suppression lasting twenty-four hours, and a return of the peritonitis, the child finally dying after an illness of about four weeks.

Dr. Samuel McC. Hamill, Philadelphia: It seems that the final subsidence of the epidemic was due to repasteurization of the milk-supply. I would like to know to what the preliminary fall was due. I would also like to ask whether the milk was collected from a large number of farms and if any disease was manifested among the cattle.

Dr. J. H. Mason Knox, Jr., Baltimore: I had two cases of this disease complicated with erysipelas which proved fatal. In both there was a little reddening of the throat but no bubos. In two other cases, one with very marked throat symptoms and one with marked bubos and an otitis media and high temperature, the children made a good recovery. The one child, after being apparently well, developed scarlet fever which lasted but a few days.

Dr. Fritz B. Talbot, Boston: A case of this disease came under my observation which was diagnosed as a diplococcus infection. It is a curious coincidence that during the two previous summers there occurred the same form of bacillary dysentery, but that during the past summer streptococcus infection of the gastro-intestinal tract was prevalent. A large number of babies developed pyelitis and in the majority of these the pure culture of the streptococcus was isolated from the urine.

Dr. Frank S. Churchill, Chicago: We are having an epidemic in Chicago similar to the one just described by Dr. Ruhräh which is being carefully studied. I cannot say how far the study has progressed but the epidemic cannot be attributed entirely to one dairy. The infection has attacked many doctors and in all cases the streptococci have been found.

Dr. John L. Morse, Boston: We have had two epidemics similar to those described, one in the spring of 1911 which was very severe, and one during the past winter. The striking feature of the Boston epidemic was not the severity of the original infection, but that of the complications, such as endocarditis and general peritonitis. While suppuration of the glands occurred in only a small proportion of the cases, it was deep when it did occur and attacked one gland after another.

Dr. John Ruhräh, Baltimore: I cannot say how the infection got into the milk. The fall in the number of cases I believe was apparent rather than real. I have seen children with a rash strongly suggestive, but not typical, of scarlet fever. The rash fades away quicker than in scarlet fever. I do not know whether the organism was a diplococcus or a streptococcus. Dr. McCleary believes that the organism is a pneumococcus. In nearly all the cases there was a combination of the streptococcus and the pneumococcus. All the therapeutic measures employed were very unsatisfactory. No vaccines were used so far as I know.

*(To be continued)*

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## ARKANSAS MEDICAL SOCIETY

*Thirty-Sixth Annual Meeting, held at Hot Springs, May 13-16, 1912*

The President, Dr. Morgan Smith, Little Rock, in the Chair

### Officers Elected

The names of the newly elected officers were published in The Journal, June 8, p. 1762.

### The Diagnostic Value of Salvarsan

Dr. Abner H. Cook, Hot Springs: I believe the reaction to be unreliable and of little value, often rendered nugatory by accidental impurities in the distilled water. Its therapeutic value in relieving symptoms is ideal, and it is of great aid in preventing secondaries and a most valuable aid in conjunction with mercury. Its future utility is problematical. Its status must be established in clinics.

### Thoracic Aneurysm With Report of Two Cases

Dr. James H. Chesnutt, Hot Springs: My first case was that of a negro woman, aged 38; family history negative; personal history showed usual diseases of childhood, numerous attacks of malaria and severe attack of lues; symptoms included pains underneath sternum, brazen cough, expectoration thick, glairy mucus, often streaked with blood, normal movements of the muscles of the eyes, pupils equal and reacting to light and accommodation. On the body and upper and lower limbs were numerous pitted scars; abdomen was rather full and tympanitic. Radial, brachial and temporal arteries showed marked arteriosclerosis; blood-pressure was rather high; breathing shallow and rapid; a small tumor mass the size of hen's egg was found in second right interspace, distinctly pulsating. There was marked diastolic murmur at base of heart, with suggestion of tracheal tug. Large doses of potassium iodid and moderate doses of biniodid of mercury were given. There was an immediate response to treatment. Cough and dyspnea disappeared; appetite returned. Patient insisted on returning to work. Some three months after, while working, she had sudden pain in right chest, weakness, faintness, pallor, and expired in twenty minutes. Autopsy was not obtainable; but death was believed to be due to rupture of aneurysm or aortic insufficiency.

The second case was that of a white man, aged 60; symptoms were pain, dizzy spells, flashes of light. One day, after bathing in water of moderate temperature, had a sudden sharp pain in the left upper back, very severe; extremities grew cold; pulse was rapid, thready and weak. Patient expired in fifteen minutes. Necropsy showed left pleural cavity completely filled with blood; pericardium normal in appearance; left lung pushed up high in the apex of thoracic vault; remainder of pleural cavity filled with huge mass firmly adherent to the pleura behind. The heart was a typical cor bovinum of enormous size; aortic valves insufficient. The mass when removed proved to be an enormous aneurysm of the arch of the aorta, weight 10 or 12 pounds; when filled with blood it must have been 6 or 10 times size of normal heart. There was a rupture in posterior surface of sac at the junction of the descending and transverse portion of aorta. At point of rupture, the membrane was as thin as a newspaper. The aneurysm itself involved nearly all of the arch of the aorta; as the aorta left the heart it dilated gradually down to the origin of the right innominate artery, which was slightly enlarged. From this point the true sac began while the left common carotid and left subclavian arteries came off from the sac. There were no signs of enlargement. The greatest enlargement of the sac was in the transverse and descending portion of the aorta. Dilatation of the aorta ceased about one inch from the diaphragm.

### Vascular Surgery

Dr. Carroll W. Allen, New Orleans: The problem of occlusion of large arteries with removable metallic bands was worked out in 168 experiments on dogs in the laboratory of operative surgery, Tulane University, using principally the common carotid. The vessel was occluded at intervals varying from twelve hours to 144 hours. Vessels may be compressed to the point of obliterating the pulse for three to four days before obliterative endarteritis occurs. All vessels stood compression seventy-two hours without recognizable gross visible changes; some showed decided changes after ninety-six hours. Sheet aluminum bands are preferred. Ligatures should be condemned.

### Tumors of the Urinary Bladder

Dr. E. S. Judd, Rochester, Minn.: The condition is most frequent between 40 and 70; rarely occurs in childhood. About half of the 114 cases reported (eighty-four males, thirty females) presented one large tumor and numerous small ones, usually found near the ureters or urethra, rarely in dome or lateral walls. Flattened epitheliomas occurred in seventeen of the cases; two fibromyomas. Bloody urine is a characteristic symptom. Continuous hemorrhage means malignancy. The prostate was enlarged in forty-two cases. Metastatic foci were seldom seen. Recurrences are common. Excision through suprapubic incision is recommended. Knitze high-frequency current is exceptionally valuable for recurrences. Poor result is usually due to duration of infection and extensiveness of involvement. There are few absolute cures; some patients are made comfortable and their lives prolonged. Seventeen were treated by fulguration, including eleven with recurrences. Five of these examined one year later were found to be well.

### Sarcoma of Nasopharynx

Dr. R. C. Dorr, Batesville: I removed a tumor an inch and a half in diameter from a girl, aged 12, and subsequently at intervals of six months, removed similar growths. Patient was under treatment about eighteen months; general health was apparently not impaired.

### Open Treatment of Fractures of Long Bones

Dr. M. G. Thompson, Hot Springs: I would strongly recommend this procedure, using ten-day catgut for fixation. I had one very favorable result in the case of a boy with compound fracture of the olecranon, and another in a powerful young man with compound fracture of tibia and fracture of fibula, protruding into a dirty shoe.

### Obscure Catarrhal Throat Troubles

Dr. W. R. Breathwit, Pine Bluff: I would warn against superficial examination in pediatric practice. Many tonsillitis patients have tuberculosis or rheumatic sequelæ, adenoids may be succeeded by mastoiditis, deafness and other serious complications of later life.

### The Surgical Side of Pediatrics

Dr. E. E. Barlow, Dermott: Of importance are: Examination and diagnosis, and gaining the confidence of the child; laboratory findings; asepsis and antisepsis; safeguarding against exposure to cold and traumatism; abundance of fresh air and sunlight; strict watchfulness and observation of symptoms.

### Pellagra

Dr. C. J. March, Fordyce: I wish to report one case, that of a woman, aged 45, with some nausea; constipation; severe headache; formication; burning sensation and spasmodic action of feet and legs; insomnia; patella tendon-reflex unequal, more pronounced on left side than on right. Babinski absent. After six months' treatment, the knee reflex was more nearly normal but still more marked on left side; the Babinski was absent on left; very slight on right; appetite and digestion were good; neuritis in feet and legs much improved. Treatment, liquor potassii arsenitis and tincture ferri chloridi; later sodium cacodylate, hypodermatically. Eruption almost disappeared; prognosis hopeful; no toxic effects noted from large doses of arsenic.

### Uterine Hemorrhage

Dr. W. R. Brooksher, Fort Smith: Value of painstaking diagnosis must be emphasized; medication is usually fruitless. Prompt curettage should be used where indicated tuberculin should be employed for tuberculous cases, in conjunction with fresh air, sunshine, exercise, hygiene.

### Involution of the Uterus

Dr. E. N. Davis, Little Rock: I wish to condemn hasty termination of puerperium; urge immediate repair of lacerations, except when contra-indicated by exhaustion due t hemorrhage. I prefer silkworm-gut for sutures; loose stitche for best results; favor "shaving" and external sterilize dressing. Douches during first ten days of normal puerperium should be condemned. Laxatives should be given to preven constipation, when indicated; pulse and temperature shoul be carefully observed. Good nursing, fresh air, nourishin food are essentials.

### Cesarean Section and Porro Cesarean Section

Dr. William V. Laws, Hot Springs: I wish to report tw cases. 1. Patient, midget, aged 30; height 32 inches; weigh 36 pounds; pelvis, interspinous 16.5 cm.; intercristal 20.5 cm bitrochlear 25 cm.; diagonal conjugate 7 cm. Normal pregnancy; ether anesthesia; very little hemorrhage; ideal contraction of uterus; sutured in three planes with 30-day catgut. Child weighed six pounds and was placed in incubator; now living. Delivery at 9 a. m., accomplished in thirty minutes; patient apparently progressing excellently up to 2 p. m. No ether nausea; sudden dyspnea; pupils dilated. Death in ten minutes, probably due to pulmonary embolism. 2. Patient, a primipara, aged 40; pregnancy complicated with fibroid; shoulder presentation; Porro Cesarean section chosen. Child, female, fully developed; weighed eight pounds. Supravaginal hysterectomy; silk ligatures; stump closed with two layers of catgut; rubber tube drain. Abdominal wound closed with layer sutures; smooth convalescence; mother and child in excellent health to-day.

### Auto-Intoxication

DR. H. P. COLLINGS, Hot Springs: I believe that auto-intoxication is a produce of faulty metabolism, and related to blood-pressure and temporary albuminuria. Beer and alcohol and excess of proteids are contributing causes. I tabulated 327 cases with over 800 blood-tests; 170 male, 157 female, and supported my conclusions. Meat diet with sweetmeats, lack of exercise, insufficient drinking of water and constipation are prominent predisposing causes. High blood-pressure due to auto-intoxication is amenable to treatment.

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# Current Medical Literature

## AMERICAN

Titles marked with an asterisk (*) are abstracted below.

### Cleveland Medical Journal

*May, XI, No. 5, pp. 317-400*

1 Vascular Suture and Some Considerations Regarding Its Successful Execution and Application. C. C. Guthrie, Pittsburgh.
2 *Diagnosis and Treatment of Eclampsia. A. J. Skeel, Cleveland.
3 *One Hundred Cases of General Paralysis of Insane, with Serologic and Cytologic Findings. K. S. West and H. B. Corlett, Cleveland.

2. **Eclampsia.**—Albuminuria is regarded by Skeel as being the most uniformly present symptom of pre-eclamptic toxemia. Its persistence, in spite of treatment, is more significant than its quantity. Albuminuria, rise in blood-pressure, and edema are unfortunately "grouped" in their severity. The child's interest in induced labor is identical with the mother's. Eliminate vigorously before starting labor. Whenever under reasonably vigorous treatment the patient does not improve, induce labor. In the presence of actual convulsions: (a) If the cervix is open apply forceps or do version; (b) if the cervix is closed do vaginal or abdominal Cesarean section; (c) avoid the strain of labor. Gas is the anesthetic of choice for operative procedure; next ether; never chloroform. Avoid undue forcing of hot packs for fear of heat stroke. Secure time for production of elimination by controlling convulsions with morphin. Ordinarily the high blood-pressure needs no specific attention. The successful treatment of eclampsia requires much personal attention by the physician.

3. **Paralysis of Insane.**—The cases considered in the report made by West and Corlett include those present in the Cleveland State Hospital in August, 1910, and those admitted since that date, and the series is therefore considered representative of the disease in its most frequent forms and at the same time exhibits many of the numerous and diversified conditions encountered in this malady. Men only have been considered; but during this same period of observation there were present and received nine women, showing the ratio of one to eleven, which is about the rate usually found. Their ages range from 19 to 65 with an average of 42¾ years. The youngest case was of juvenile type, and the only one so considered. The number of occupations represented by these 100 men is forty-five, thus showing a large diversity in the social scale. Thirty-five gave a history of more or less prolonged and excessive alcoholism, while sixty-five were temperate in the sense usually applied.

A history of insanity in the family was found in only 19 per cent. of the cases, which is lower than is frequently given, as high as 30 per cent. being reported. Traumatism, i. e., head injury, was found in six cases, all of which were of more or less severity; but in only one did the conditions indicate decompression or any other operative measures. A history of syphilis was positively established in fifty-six cases; it was questionable in twenty-two, and no history was obtainable in twenty-two; lues was excluded in none. In thirty-six cases, a definite time of infection was established, which varied from five to twenty-six years prior to the onset of paresis, making an average of sixteen years. Forty-one of the patients are now dead; of these, thirty-one had convulsions sometime during their course, and twenty-six of the thirty-one died in status or exhaustion following seizures of some of the above mentioned types. Of the fifty-nine still living, twenty-six have already had convulsions.

About 25 per cent. of the patients had remissions in which the improvement was pronounced, and several more to a limited extent; but the majority of patients have gradually deteriorated, going on to complete dementia. In 60 per cent. of the cases the pupils were of the Argyll-Robertson type, 37 per cent. reacted feebly, and in 4 per cent. they reacted normally. In 25 per cent. there was a noticeable irregularity and an equal number showed inequality of the pupils. The authors found a speech defect in varying degrees in 90 per cent. of the cases on admission, and noted an altered facial expression and tremor of the facial muscles present in such cases. The patellar reflex was found exaggerated in 65 per cent., normal and slightly reduced in 15 per cent., and absent in 20 per cent.

On admission to the hospital, 59 per cent. were exalted, in 31 per cent. there was a simple dementia, and 10 per cent. were depressed; these conditions continued more or less characteristic throughout their course. The spinal fluid in this series of cases was clear in every instance, and in only two cases did it contain the fibrin flocculi observed occasionally with little or no pathologic significance. A lymphocytosis existed in every case. As for the Wassermann test, the results parallel the findings of other observers. It was positive in the serum in 92 per cent. of the cases, while 94 per cent. showed fixation of complement when the test was applied to the spinal fluid. The negative findings parallel each other in five cases.

### New Mexico Medical Journal, Las Cruces

*May, VIII, No. 2, pp. 239-270*

4 Altitude and Blood-Pressure, Especially in Pulmonary Tuberculosis. J. L. Pomeroy, Monrovia, Cal.
5 Trachoma. F. E. Tull, Albuquerque, N. Mex.
6 Comparison of Wassermann and Noguchi Reactions and Effect of Treatment on These Reactions; Report of Cases. S. Simon, Denver.
7 Salvarsan and Wassermann Reaction. H. A. Ingalls, Roswell, N. Mex.

### Kentucky Medical Journal, Bowling Green

*May 15, X, No. 10, pp. 425-457*

8 Tonsillitis. C. L. Nichols, Louisville.
9 *Multiple Rupture of Small Intestine. A. L. Parsons, Louisville.
10 Vertigo. A. O. Pfingst, Louisville.

9. **Multiple Rupture of Small Intestine.**—As the result of a fall of about forty feet from a scaffold Parsons' patient sustained a small scalp wound over the sagittal suture, 1 inch long, but no fracture. The left eye was contused. The floor of the left axilla was torn open from the anterior to the posterior folds, the muscles being uninvolved. It appeared as if he had grabbed some support while falling, and the weight of his body had been almost sufficient to tear the arm loose. The left shoulder was dislocated, the humeral head resting under the middle of the clavicle. Chest normal. The abdomen was flat and slightly tender, but at no particular point; there was no abdominal pain. The recti were all but relaxed. A small umbilical hernia of long standing was noted with the sac empty. Urine bloodless. The patient complained bitterly of his shoulder. Under the application of heat, etc., he rallied prompty from the shock, and was then anesthetized. The shoulder was reduced, the axilla packed, and the patient returned to bed in good shape.

On the next day Parsons noticed, for the first time, the absence of peristalsis, and felt that he was dealing with an adynamic ileus following shock. As soon as possible the abdomen was opened in the mid-line. The cavity contained a little foul-smelling, pea-soup-like fluid; no free gas or feces was detected. All the peritoneal surfaces below the transverse mesocolon were inflamed and coated with pale butter-like lymph, which in places reached a remarkable thickness. This also filled the little hernial sac. At about the junction of the ileum and the jejunum a rupture was found. It was opposite the mesentery, and large enough to admit the finger-tip. The everted mucous membrane so effectually plugged it that little or no gas had escaped from the enormously distended coils in the vicinity. Closed by Lembert suture. Leading downward about 4 feet above the ileocecal valve, a rent 1 inch long was disclosed. The edges were ragged and the wound gaped open. The gut in the neighborhood was collapsed. Rupture closed. Leading upward from the first tear, and about 4 feet therefrom was a third rupture, a duplicate of the first. No blood was found in the cavity. Died on thirty-eighth day.

### Journal of South Carolina Medical Association, Seneca

*May, VIII, No. 5, pp. 123-147*

11 Headache. J. O. Sanders, Anderson.
12 Anoci-Association, New Principle in Operative Surgery. G. W. Crile, Cleveland.

### Virginia Medical Semi-Monthly, Richmond

*May 24, XVII, No. 4, pp. 81-104*

13 Algae. M. G. Perrow, Lynchburg.
14 *Burn Involving Over One-Third of Entire Body; Recovery and Cause. E. W. Reisinger, Washington, D. C.
15 Myiasis Linearis. L. Lofton, Emporia.
16 Clinical Significance of Tachycardia. A. G. Brown, Richmond.
17 Sanitation in Navy. L. Gwathmey, Norfolk.
18 Influenza and Its Vagaries, Set Forth in Special Cases. H. C. Beckett, Scottsburg.

14. **Burn Involving Over One-Third of Entire Body.**—Reisinger withheld opium in his case believing that it diminishes urinary elimination and therefore would interfere with the progress of his patient. In fact he attributes the recovery of the patient to this. Outside of withholding opium, the patient went the usual course and recovered in the usual time, without skin-grafting.

### Archives of Pediatrics, New York

*May, XXIX, No. 5, pp. 321-400*

19 *Nutrition and Digestion of Infants. M. Ladd, Boston.
20 Inclusion Bodies in Blood of Scarlet Fever as Means of Differentiation Diagnosis. M. Nicoll, Jr., and A. W. Williams, New York.
21 Surgery of Rachitis. H. L. Taylor, New York.
22 Some Newer Aspects of Problem of Infant Hygiene. A. McAllister, Camden, N. J.
23 Appendicitis in Childhood. E. Marvel, Atlantic City, N. J.
24 Cool Bed for Infants. A. F. Hess, New York.
25 Epidemic of Throat Infection with Glandular Enlargement. F. Van Der Bogert, Schenectady, N. Y.

19. **Nutrition and Digestion of Infants.**—As a result of the study of eighty-two infants with varying grades of indigestion and malnutrition, Ladd concludes that many atrophic infants can be educated to take higher percentages of fat than are ordinarily given, with satisfactory results in weight development. The average rate of gain in atrophic and undeveloped infants who are fed on whey mixtures with lactose for prolonged periods was 18 ounces per month. When malt-sugar is substituted in these mixtures for milk-sugar, the rate of gain is increased to 22⅔ ounces per month, or an increase of 26 per cent. Two series of infants were fed on plain cream mixtures with barley starch and the excess of sugar was supplied in the form of maltose (maltose and dextrimaltose). In one group the mixtures were not pasteurized; in the other group the food was superheated to a temperature of 212 F. for twenty minutes. The rate of gain in each group was the same; that is, 21¼ ounces per month. Boiling the milk did not in any way lessen its nutritive qualities. The possibility of scorbutus was guarded against after several weeks of feeding by small daily doses of orange juice. Individual cases often did better on the superheated than on the raw milk. With an occasional exception the infants did not make satisfactory gains in weight until the energy quotient was raised to 140 to 160 and sometimes to 175 to 190. Generally speaking, the energy quotient is greatest when the weight development is farthest from that of the average normal infant, as determined by the weight chart. The quantity of food to be given an atrophic infant is only a little less than that which the normal infant of the same age receives, and is often from 1½ to 2 ounces more than would be given to the normal infant of the same weight. The detailed study of the weight and feeding charts in a large series of cases shows great variation in the individual requirements and the impracticability of applying general rules of feeding to the atypical and difficult cases.

### Annals of Otology, Rhinology and Laryngology, St. Louis

*March, XXI, No. 1, pp. 1-276*

26 Cubical Capacity and Superficial Area of Sphenoid Sinus. H. W. Loeb, St. Louis.
27 Functional Testing of Vestibular Apparatus. R. Bárány, Vienna.
28 Relief of Pain in Advanced Tuberculosis of Larynx by Means of Injections of Alcohol Into Internal Laryngeal Nerve. G. Fetterole, Philadelphia.
29 Superior Maxilla; Its Proper Development. E. G. Seibert, Washington.
30 Vacuum Nasal Headache with Ocular Symptoms Only. G. Sluder, St. Louis.
31 Deep Temporal Abscess. A. Braun, New York.
32 Streptococcus Infection and Immunity. L. W. Strong, New York.
33 Experiments with Autolytic Solutions in Treatment of Inoperable Cancer of Throat, Neck and Face. J. C. Beck, Chicago.
34 Contribution to Pathology and Treatment of Otosclerosis. J. C. Beck, Chicago.
35 Contribution to Etiology, Pathology and Treatment of Atrophic Rhinitis. J. C. Beck, Chicago.
36 Virulent and Rapid Infection of Middle Ear and Mastoid Followed by Evanescent Cellulitis of Neck and Streptococcemia. J. R. Page, New York.

## FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### British Medical Journal, London

*May 25, I, No. 2682, pp. 1165-1224*

1 Fertilization in Relation to Pathology. J. Bland-Sutton.
2 *Influence of Age and Type of Patient on Course and Treatment of Appendicitis. W. Billington.
3 *Operation for Acute Appendicitis: Primary Closure of Abdominal Wound. J. G. Andrew.
4 Early Diagnosis and Operation in Appendicitis. J. H. Dauber.
5 Four Cases of Perforations of Stomach and Duodenum. R. L. Spittel.
6 Rupture of Abdominal Wall, Postoperative and Spontaneous. A. G. Stewart.
7 Strangulated Omental Hernia with Few Symptoms. R. Parker.

2. **Course and Treatment of Appendicitis.**—There are few cases of acute appendicitis in which in Billington's opinion the decision will be against operation: therefore if decided on, the earlier it is carried out the better. It seems logical to Billington that to operate as soon as a definite diagnosis of acute appendicitis is made is the only safe course. Only when operation, on account of the patient's general condition, would be attended by very grave risk, should the rule be departed from, and then the decision against operation should be final. In elderly people acute appendicitis manifests peculiarities which may lead to error. Billington's experience is that the course of the disease is very insidious. The symptoms and objective evidence furnish no certain guide to what is going on inside. The temperature, pulse and general condition often induce a false sense of security, which is rudely disturbed too late. It is not unusual to see a man lying comfortably in bed with a comparatively slow pulse, an almost normal temperature, and who expresses himself as not feeling ill, and who yet has a gangrenous appendix and a rapidly-spreading peritonitis.

In the elderly, as in children, the pathologic condition is more often such that spontaneous recovery is impossible. It is common, even at an early stage, to find the appendix gangrenous in almost all its length and with little or no evidence of an attempt to localize infection. This probably accounts for the fact that the early reflex symptoms are so little marked. These precede gangrene and disappear when it occurs. In these cases Billington has almost invariably found the local condition worse than was expected, and has never had cause to regret early operation. For the reasons that in elderly people it is more difficult to estimate the gravity of the disease by the clinical phenomena, that resolution is less likely to occur, and that if serious complications do develop they cannot be successfully combated, Billington is of opinion that it is imperative to operate as early as possible.

3. **Operation for Acute Appendicitis.**—In every case of primary appendicitis, Andrew says the damaged appendix is attacked, infected, from within its own lumen. The ever-present *Bacillus coli* finds in the devitalized organ a suitable nidus for its increased activity, and in the great majority of cases it is the predominating pus-producing organism present. For these reasons Andrew has been giving, either immediately before or immediately after the operation, 50 to 100 millions of a stock *Bacillus coli* vaccine, followed in ten days by a second dose, if necessary. This is given without testing the opsonic index. Another departure from the usual procedures is the following. Having to rely on disinfection as a means of securing primary union of the wound, Andrew found, after experimenting with various antiseptics, that iodoform was best suited for this purpose, and was best in the form of an emulsion. Before opening the peritoneum the emulsion is poured into the wound. This fulfils a double purpose: it brings an antiseptic into intimate contact with the freshly wounded surface, an antiseptic, iodoform, which has a particularly inhibitive effect on *Bacillus coli* growth. The peritoneum is now opened. Andrew advocates the abolition of the drainage tube as a routine method of procedure in all cases of operation in acute appendicitis, but advises not to adopt any hard and fast line of treatment, but treat each case on its own merits.

### Lancet, London

*May 25, L, No. 4630, pp. 1388-1450*

8 *Fertilization in Relation to Pathology. J. Bland-Sutton.
9 *Clinical Diagnosis of Malignant Disease of Body of Uterus. T. W. Eden.
10 *Surgical Treatment of Aneurysm. H. G. Barling.
11 Early Diagnosis and Treatment of Epilepsy. E. F. Buzzard.
12 Lineae Atrophicae, Achloriduria and Typhoid. J. C. F. D. Vaughan.
13 Probable Effect of Control of Milk-Supply on Infantile Mortality from Tuberculosis. S. Delépine.

8. Also published in *British Medical Journal*.

9. **Malignant Disease of Body of Uterus.**—It is emphasized by Eden that the prognosis as regards recurrence after radical operation for malignant disease of the uterine body is much more favorable than in cancer of the cervix. One of his patients in whom the disease was found to have extended to the fallopian tube and broad ligament is alive and well ten years after the operation; another in whom the disease was almost equally extensive at the time of the operation, was free from recurrence after seven years. Glandular enlargements are said not to contraindicate a radical operation, even when the affected glands cannot be extirpated. In a considerable proportion of cases the enlarged glands are found to be nonmalignant, the increase in size being due to inflammatory infection from the ulcerating growth. It is, of course, desirable, he says, that enlarged glands should, if possible, be removed, as the question of malignancy can only be settled by microscopic examination. It may therefore be said that even if diagnosis is difficult, and cases are seldom seen in the early stages, for the reasons already set forth, the disease remains operable for a relatively long time and surgical intervention may be undertaken with good hope of success, even when the history is prolonged and the disease of wide extent.

10. **Surgical Treatment of Aneurysm.**—The figures which Barling brings forward regarding endoaneurysmorrhaphy in the British Isles are very meager, though he has made careful search and inquiry. The total number of cases is sixteen, nine collected from current literature and seven yet unpublished. Of these sixteen aneurysms, one was of the external iliac, one femoral, eleven popliteal, two subclavian and one brachial. Fourteen were operated on by the obliterative method; of these, one patient with external iliac aneurysm died from sepsis. Gangrene of the leg supervened in this case and in one with popliteal aneurysm. The two remaining operations were reconstructive in patients with popliteal aneurysm; in both the sac had already ruptured and both operations were followed by gangrene. Secondary hemorrhage or failure to cure is not referred to in any of the cases. There is, therefore, one death only, and apart from this case gangrene following operation in three other patients, all of whom recovered after amputation.

Barling does not express any dogmatic opinion on the value of the new treatment as compared with the older methods. He says that probably that surgeon will obtain the greatest success who restricts himself to no single line of treatment, but selects that most appropriate in the case immediately before him. He is very favorably impressed by the advantages of endoaneurysmorrhaphy and will adopt it under suitable conditions. Obliteration is likely to hold the field for the majority of cases; it may be fairly said to have proved its claims. In carefully selected cases restoration of the artery promises brilliant results and should certainly be adopted where possible. Reconstruction has not so clearly established its claims and should be used but rarely and when the conditions for reconstruction are unusually favorable.

### Annales de Médecine et Chirurgie Infantiles, Paris

*May 15, XVI, No. 10, pp. 289-320*

14 The Boy Scouts. (Eclaireurs ou "Boy-scouts.") F. de Courmelles.
15 Excellent Ultimate Results from Subcutaneous Tenotomy for Congenital Torticollis. A. Jalaguier and L. Lamy.
16 *Sunlight Treatment of Surgical Tuberculosis. P. F. Armand-Delille.
17 *Shield for Throat Examinations. J. Renault.

16 and 17. Abstracted in THE JOURNAL, May 25, p. 1646.

### Presse Médicale, Paris

*May 18, XX, No. 41, pp. 433-444*

18 The Hormones. L. Hallion.
19 Lymphoid and Myeloid Transformation of Organs in Trypanosomiasis. A. Pettit.

*May 22, No. 42, pp. 445-452*

20 Gangrenous Phlegmon of the Palate. (3 observations d'angine de Ludwig.) P. Reclus.

*May 25, No. 43, pp. 453-464*

21 *Total Resection of Superficial Varices. (Résultats immédiats et éloignés de la résection totale des varices essentielles superficielles des membres inférieurs.) P. Alglave.

21. **Total Resection of Varicose Veins.**—Alglave gives illustrations of several patients to show the great benefits obtainable by total resection of the superficial veins in case of chronic varices. He regards the operation in its immediate and remote results as one of the most satisfactory in modern surgery. The entire trunk of the diseased vein must be resected, with its varicose branches.

### Semaine Médicale, Paris

*May 29, XXXII, No. 22, pp. 241-252*

22 The Jugular Venous Pulse and Pulsation in the Esophagus with Disease of the Left Heart. (Des modifications du pouls veineux jugulaire et du pouls oesophagien dans les lésions du cœur gauche.) L. Bard.

### Berliner klinische Wochenschrift

*May 20, XLIX, No. 21, pp. 973-1020*

23 *Diagnostic Puncture of the Cortex. (Die histologische Untersuchung der Hirnrinde intra vitam durch Hirnpunktion bei diffusen Erkrankungen des Centralnervensystems.) O. Foerster.
24 *Vaccine Therapy of Gonorrhea in Women. (Ueber die spezifische Behandlung der weiblichen Gonorrhöe.) F. Fromme.
25 Experiences with 100 Operations to Correct Cleft Palate: Uranoplasty. (Erfahrungen bei 100 Gaumenspaltoperationen mit technischen Mitteilungen.) C. Helbing.
26 Conditions Permitting Retrograde Blood-Current. (Ist eine experimentelle Umkehr des Blutströms möglich?) M. Rothmann.
27 *Blunders in Diagnosing "Inoperable Cancer." (Drei interessante Fehldiagnosen auf malignen Tumoren.) R. Fabian.
28 Relief of Severe Persisting Symptoms from Artificial Menopause by Transplantation of Ovary. (Kann die Ovarientransplantation als erfolgreiche Behandlung der Ausfallserscheinungen kastrierter Frauen angesehen werden?) E. Engel.
29 Hygiene of Youth on Leaving School. (Zur Hygiene der schulentlassenen Jugend.) A. Lewandowski.

23. **Puncture of the Cortex for Diagnosis of Diffuse Disease of the Central Nervous System.**—Foerster reports further experiences with puncture of the brain according to Neisser's technic. He has now applied the measure in sixteen cases, always on the right frontal lobe. He comments on the remark-

ably slight disturbance from the measure, the puncture being done under ethyl-chlorid spray. The dura is pierced and a scrap aspirated from the cortex through the puncture needle. The most instructive findings were those differentiating true paralysis from pseudoparalysis. This differentiation is extremely important, as with true progressive paralysis specific treatment does no good and generally does harm, while pseudoparalysis may be materially improved by vigorous specific treatment, or entirely cured. He illustrates the findings in some of the cases. In five, multiple sclerosis was involved; it is characterized by a special finding of glia cells along the vessels.

24. **Vaccine Therapy of Gonorrhea in Women.**—Fromme remarks that conservative measures are often useful, but seldom can be relied on for a permanent cure alone. Much better results may be attained, he says, by supplementing them with vaccine therapy. This combination gave the best results in cases of old pyosalpinx. On reexamination a year later he found 31.7 per cent. cured to date of eighty-six patients in this class. The vaccine therapy does not seem to protect against reinfection.

27. **Blunders in Diagnosing "Inoperable Cancer."**—Fabian reports a case in which laparotomy showed a large knobby tumor involving loops of intestine and the right kidney in the solid mass, with nodules in the liver diagnosed as metastases of the supposed inoperable carcinomatous tumor. Five years later the patient, a man of 49, returned on account of an abscess in the neck, and the tumor in the upper abdomen was found apparently in the same condition as five years before; it must have been some syphilitic or tuberculous inflammatory process. Under potassium iodid it grew smaller and the patient is still free from disturbances with unimpaired earning capacity. The second patient was a woman of 47 and the large "inoperable cancer" in the gall-bladder disclosed by the laparotomy disappeared entirely in the course of the next few years, not a trace being found of it over six years later. Whatever the cause of the tumor, it certainly was not cancer, as the patient has been in good health since. A sarcoma in the ovary of a woman of 25 was removed in 1906. A year later a supposed recurrence developed in the upper abdomen, but subsided entirely under atoxyl and Roentgen-ray exposures. There has been no trace of recurrence during the three years since. It is a question whether the second process was a return of the sarcoma or a syphilitic process, as both are known to be influenced by atoxyl. Fabian emphasizes that the Wassermann test should always be applied before accepting the cancerous nature of large tumors in the abdomen.

### Correspondenz-Blatt für Schweizer Aerzte, Basel

*May 10, XLII, No. 14, pp. 521-552*

30 *Palliative Treatment of Choked Disk. (Ueber Stauungspapille und deren Palliativbehandlung.) A. Siegrist. Concluded in No. 15.
31 Spontaneous Infection in Obstetrics. (Spontaninfektion in der Geburtshilfe.) P. Hüssy.

*May 20, No. 15, pp. 553-584*

32 Section of Posterior Roots of Spinal Nerves in Case of Multiple Sclerosis; Partial Benefit. (Fall von Durchschneidung der sensiblen Rückenmarkswurzeln nach Förster bei multipler Sklerose.) E. Tschudi.

30. **Choked Disk and General Practitioners.**—Siegrist is an ophthalmologist, and he deplores the fact that eye specialists seldom see a case of choked disk until irreparable damage has been wrought. The general practitioner seldom realizes the importance of early signs of trouble of the kind and the necessity for immediate relief. This is the more deplorable as it is within his power by a mere harmless lumbar puncture to relieve the pressure causing the damage. Siegrist discusses the history of choked disk, commenting on the experimental and clinical findings which have demonstrated that its cause is increased intracranial pressure with an increased secretion of cerebrospinal fluid; inflammation is a secondary process. The essential factor in all cases and often the sole factor of choked disk is the stagnation of lymph in the space between the sheaths of the optic nerve. The pressure causing the stasis may be arrested by decompressive trephining or lumbar puncture, and he reports three instructive cases in which the latter alone not only cured the choked disk, but seemed to have had a curative action on the mysterious affection causing the intracranial pressure, as there has been no recurrence of trouble since. One patient was a lawyer of 39 with extreme photophobia and much impairment of vision and speech; the temperature was slightly increased, but the pulse was only 58 or 62. The papilla was found extremely congested and the presumptive diagnosis was meningitis, possibly traceable to an old pachymeningitis due to infection from the intestines. Under five lumbar punctures between July 21 and October 6, all symptoms retrogressed, vision became entirely normal by November and the patient has been in continuous good health since. At the first puncture the cerebrospinal fluid was under a pressure of 280 mm. water, turbid, with numerous leukocytes and bacilli resembling the colon bacillus. The Wassermann test was constantly negative. In the second case, a youth of 16, complaining for four months of lassitude, gastric pains and violent headache, began gradually to lose his sight and memory. The papilla was found extremely congested and swollen and vision was reduced to 0.2 and 0.08, when lumbar puncture induced a remarkable turn for the better, the brain symptoms subsiding and the choked disk retrogressing, but the disturbances had been so severe and long-standing that vision is still defective, the patient being able to count fingers only at 1 meter with the left eye and three with the right. Siegrist regrets that no comprehensive work has yet been published on the effect of lumbar puncture on choked disk and on vision. As long as vision is not impaired he does not think choked disk needs any special treatment; but at the slightest impairment of vision the intracranial pressure must be reduced. The safest and simplest means to do this is by lumbar puncture, repeated at need unless a brain tumor or abscess is positively diagnosed. Even in cases of cerebral syphilis or gumma in the brain he advocates lumbar puncture along with the specific general treatment, keeping close oversight of the choked disk and status of vision. In this way it may be possible to ward off injury of the optic nerve until the underlying process is entirely cured, permitting the optic nerve to recuperate entirely. If there is a reasonable certainty, however, of an abscess or tumor in the brain, he advises not to waste any time on lumbar puncture but to proceed at once to decompressive trephining, which should also be done in case the lumbar puncture fails to arrest the visual disturbances.

### Deutsche medizinische Wochenschrift, Berlin

*May 23, XXXVIII, No. 21, pp. 977-1024 and Supplement*

33 *Treatment of Cancer. (Zur Karzinombehandlung.) W. A. Freund.
34 Technic and Interpretation of the Electroardiogram. (Ueber die Klinik des Elektrokardiograms.) A. Strubell.
35 The Viscosity of the Blood Not Modified by Iodin. (Beeinflusst Jodeinverleibung die Viskosität des Blutes?) H. Determann and H. Bröking.
36 Successful Radical Operation for Pulsion Diverticulum in the Esophagus. (Ein Pulsionsdivertikel der Speiseröhre.) C. Jacobs.
37 *Transient Reduction of Resisting Power of Red Corpuscles Under Alcohol. (Weitere Mittellungen über Resistenzverminderung der Erythrozyten nach Alkoholgenuss.) F. v. Fillinger.
38 *Importance of Anesthesia—Absence of Reflex Action—in Treatment of Inflammation. (Bedeutung der Anaesthesie—Areflexie—in der Entzündungstherapie.) G. Spiess and A. Feldt.

33. **Treatment of Cancer.**—Freund reports experimental and one clinical experience which demonstrate that it is entirely feasible to exclude temporarily from the general circulation an organ or a limb and flush its vessels with a medicinal fluid without interfering with other organs or jeopardizing life. In the one clinical case—advanced cancer of the cervix—the cancerous tissue sloughed off afterward and a line of demarcation became evident, while the bladder, rectum and vagina did not seem to have been affected by the procedure. He does not think the method promises to be practically efficient but possibly some modification of it and combination with other methods, possibly Sticker's, Podwyssotzki's, Bier's or Wassermann's, or all combined, might have a future.

37. **Reduction by Alcohol of Resisting Powers of Red Corpuscles.**—Fillinger examined the blood of two healthy young men before and after drinking champagne and found the resisting power of the reds in one case much reduced thereafter for a time; the resistance quotient (Liebermann) dropped from 88

to 43 in an hour. He found the same phenomenon in some rabbits and a dog.

38. **Importance of Anesthesia in Treatment of Inflammation.**—Spiess and Feldt have been conducting researches to confirm still further Spiess' assumption that the main factor in inflammation is the work of the sensory nerves, and that consequently means to exclude the action of the sensory nerves is the logical first step in treatment. This can be done by anesthetizing them or by making it impossible for them to exert any reflex action. Inflammation, they affirm, is a reaction on the part of the vessels—a reflex process. Spiess has published a number of works on the subject, especially on application of the principle to treatment of whooping-cough (1901), coryza, etc. The redness, heat, swelling and pain of an inflammatory process are all the work of the sensory nerves, and are thus of secondary reflex nature, the vasodilatation and changes in the vessel walls being the result of the primary irritation of the afferent nerve terminals. When these nerve terminals are rendered insensible to the primary irritation, no reflex action follows and thus there is no inflammation. The inflammation once installed, the sensory nerves keep it up by a kind of vicious circle. If the afferent sensory nerves at any time are anesthetized the vicious circle is broken up and the inflammation heals. The nerves need to be deadened only just enough to arrest the reflex action, and the anesthesia should affect only the sensory nerves. Animal experimentation reported by Bruce last year has confirmed Spiess' theory, as he found it impossible to induce inflammation in an anesthetized area even with agents which under other conditions induce a lively inflammation. Even mustard oil did not induce inflammation in rabbits' eyes as long as the innervation was under the influence of an anesthetic or the sensory terminals were excluded from the ganglion by the nerve being severed and a stretch degenerated, thus restricting the reflex arc to the periphery. The importance of anesthetics for combating inflammation is scarcely realized, as yet, Spiess and Feldt declare, and new horizons are opening for treatment. Haug has been applying the principle in treatment of middle-ear disease since 1906 and Levinstein in the throat since 1910.

### Medizinische Klinik, Berlin

*May 26, VIII, No. 21, pp. 853-892 and Supplement*

39 Expectant Management of Pelvic Presentation. (Die Abwartung der Geburt in Beckenendlage.) W. Hannes.
40 Differentiation of Cardiac Neuroses and Arteriosclerosis. (Zwischen Herzneurose und Arteriosklerose.) M. Herz.
41 Action of Baths on the Heart. (Ueber den Einfluss verschiedener Bäder auf das Herz.) G. F. Nicolai.
42 Operative Treatment of Exophthalmic Goiter. (Ueber die Leistungen der chirurgischen Behandlung bei der Basedowschen Krankheit.) A. W. Meyer.
43 Sputum Filtrate in Treatment of Pulmonary Tuberculosis. (Ueber die Herstellung eines Sputum-Kochsalzlösung-Filtrats zur Behandlung der Lungentuberkulose.) Hoffmann and C. Martin.
44 Action of g-Strophanthin on Circulation in the Coronaries. (Hat g-Strophantin eine Einwirkung auf den Coronarkreislauf?) F. Meyer.
45 Curable Cases of Pulmonary Tuberculosis and Sanatorium Treatment. (Die Auswahl für die Volksheilstätten.) H. Grau.

### Münchener medizinische Wochenschrift

*May 21, LIX, No. 21, pp. 1137-1200*

46 Clinical Importance of Hypersusceptibility to Protein. (Die klinische Bedeutung der Lehre von der Protein Ueberempfindlichkeit.) E. v. Behring. (Die Auslösung von Ueberempfindlichkeitserscheinungen durch körpereigene Eiweisssubstanz und ihre klinische Bedeutung.) A. Wolff-Eisner and D. Vertes.
47 *Treatment of Rachitis with Pituitary Extract and Explanation of Its Etiology from Effect Observed. (Zur Aetiologie der Rachitis auf Grund ihrer therapeutischen Beeinflussung durch Hypophysenmedikation.) R. Klotz.
48 Calcium Salts in Treatment of Asthma and Hay Fever. (Kalziumsalze bei Bronchialasthma und Heufieber.) R. Hoffmann.
49 Injury from Nail Extension for Fracture. (2 Fälle von schwerer Knochenschädigung bei Anwendung der Nagelextension nach Steinmann.) P. Michaelis.
50 Perforation of Rectum During Rectoscopy. (Perforation des Mastdarmes bei der Rektoskopie.) A. Schmitt.
51 Transient Collapse After Intramuscular Injection of Hormonal. (Ein weiterer Beitrag zur Kenntnis der Hormonalwirkung.) H. Birrenbach.
52 Salvarsan and the Nervous System. Spiethoff. Commenced in No. 20.
53 *"Artificial Ear Drum." (Ueber ein neuartiges künstliches Trommelfell.) F. v. Menz.
54 *Proposed Reform in Trade-Mark Protection of Proprietary Medicinal Articles. (Der Warenzeichenschutz der Arzneimittel.) W. Heubner.

47. **Pituitary Extract in Rachitis.**—Klotz writes from the gynecologic clinic at Tübingen, of which Sellheim is director, to call attention to his success in the treatment of rachitis with pituitary extract. The coloring matter of the hypophysis is particularly rich in phosphorus and hence theoretically seems indicated in rachitis. He supplemented it with calcium carbonate to supply material for bone growth, and states that within five or six weeks the five children became transformed. The effects observed in these cases and in osteomalacia suggest, he declares, that the true cause of both this and rachitis is some disturbance in the phosphorus rather than in the calcium metabolism. A number of clinical and experimental facts sustain this view.

53. **Rubber Sponge as Substitute for Tympanic Membrane.**—Menz has found very useful a plug for the ear cut from a very porous rubber sponge. This can be boiled as often as needed and thus kept sterile while it adapts itself to the shape of the auditory canal; the patient can introduce it himself without fear of injury and in case of any discharge the sponge soaks it up, thus draining it away, while the effect on the hearing is as satisfactory as with any prosthesis of the kind or "artificial ear drum."

54. **Protected Names for Proprietaries.**—Heubner gives arguments for modification of the laws in regard to the trade names of proprietary medicinal preparations, citing the stand taken by the Council on Pharmacy and Chemistry of the American Medical Association. His communication was presented to the recent Kongress für innere Medizin but no official action was taken on the subject. (See editorial in The Journal, June 15, p. 1860.)

### Wiener klinische Wochenschrift, Vienna

*May 23, XXV, No. 21, pp. 783-826*

55 *Local Cancer After Roentgen Burn of the Abdomen. (Fall von Röntgenkarzinom.) H. v. Haberer.
56 The Lipoids in the Serum in Syphilis. (Die Lipoide im Serum bei Lues.) E. Klausner.
57 Isolated Tuberculosis of the Appendix Vermiformis. (Isolierte Tuberkulose des Wurmfortsatzes.) E. Miloslavich.
58 *Charcoal in Treatment of Internal Diseases. (Behandlung innerer Krankheiten mit Tierkohle.) O. Adler.
59 Rhodan in Therapeutics. (Zur therapeutischen Verwendung der Rhodanverbindungen.) Z. v. Dalmady.
60 Historical Notes in Neuropathology. (Miszellen aus der Geschichte der deutschen Neuropathologie.) M. Neuburger.
61 Therapeutic Utilization of Sunlight in Austrian Mountains. (Die Höhensonne in unseren Ostalpen.) Klein.

55. **Roentgen-Burn Cancer.**—Haberer reports the case of a woman of 37 who had severe amenorrheic disturbances and anemia and was therefore given a course of roentgenotherapy, daily ten-minute exposures of the abdomen for three weeks. This was in 1901, and an $x$-ray burn developed and persisted for years, very painful and finally showing cancerous degeneration. Then the skin was excised over an oval area from the xiphoid process to the symphysis, and the patient is now clinically cured after eleven years of martyrdom.

58. **Charcoal in Treatment of Internal Disease.**—Adler refers among others to Wiechowski's experiments (1909) which showed that animals given otherwise fatal doses of poisons survived when they were treated with animal charcoal which seemed to absorb the poison and thus render it harmless. Adler has been applying the same measure systematically in various internal diseases and the favorable results justify, he declares, further work in this line. He advises having the charcoal in the proper doses constantly on hand so as to give it at once when need arises. In poisoning cases a suspension of the charcoal in water might be poured into the stomach and pumped out again at once as absorption occurs almost instantaneously. Then after rinsing out the stomach with water to which the ordinary antidote may be added, he advises giving a suspension of the charcoal in a solution of magnesium sulphate, if there is no contra-indication to a purge. This charcoal suspension can be given several times during the same day or kept up for several days. An enema of water in which charcoal is suspended will clear out the bowels below, so that the upper part will be more readily evacuated. He thinks there is every reason to believe that this simple and harmless method will materially reduce the mortality from poisonings. He has applied it in six cases with the best results; the poison

had been phosphorus, mercuric chlorid, Paris green, tincture of opium or phloroglucin, all taken with suicidal intent. Adler suggests that the charcoal might prove useful in cholera, for typhoid-bacilli carriers, in gastro-enteritis, typhoid fever, etc. In normal conditions the charcoal seems to be inert, that is, it does not tend to induce constipation nor act as a laxative, but when the gastro-intestinal tract is being irritated and responds with diarrhea, the charcoal, by absorbing the toxins and thus keeping them away from the tissues, puts an end to the irritation and the diarrhea is arrested. The charcoal may thus serve to differentiate the cases in which the trouble is in the contents of the bowels rather than in the walls or due to nervous influences.

### Zentralblatt für Chirurgie, Leipsic

*May 25, XXXIX, No. 21, pp. 705-736*

62 *Nerve Blocking at the Gasserian Ganglion. (Intrakraniale Leitungsanästhesie des Ganglion Gasseri.) F. Härtel.
63 *Prophylaxis of Ischemic Paralysis. (Zur Frage der Vermeidung der Lähmungen nach der Anwendung der Esmarch'schen Blutleere.) C. Lauenstein.

62. **Nerve Blocking at the Gasserian Ganglion.**—Härtel says that by blocking the nerve at the gasserian ganglion it is possible to anesthetize the entire side of the head innervated by the trigeminal nerve, instead of the single branches separately according to Braun and Offerhaus' technics. The dosage required is much less and the anesthesia is complete at once and permits operations on the base of the brain, hypophysis, etc., as well as gasserectomy. The ganglion is most safely reached through the foramen ovale, following the course of the trigeminal nerve, in the direction toward the trigeminal depression in the petrous portion of the temporal bone. A straight line from the foramen ovale to the trigeminal depression holding the gasserian ganglion crosses the skull at a point midway between the anterior margin of the ascending ramus of the lower jaw and the posterior margin of the maxillary tuberosity. In 90 per cent. of all the skulls Härtel examined, this imaginary "axis" crossed the upper margin of the alveolar process in the molar tooth region. The depth of the foramen ovale is about 5 or 6 cm. (extracranial) and at least 1.4, generally 1.9 cm. (intracranial) to the trigeminal depression. The only trouble is to get the right slant for the axis, but there is no difficulty about this. He uses a fine steel cannula 9 cm. long, and says that it cannot go astray and do harm by this route but reaches the ganglion directly without fail. In his six cases to date he injected from 0.005 to 0.015 c.c. of a 2 per cent. novocain-suprarenin solution. The anesthesia was immediate and complete throughout the entire trigeminus domain, even the corneal reflex being suspended. The measure was applied to cure neuralgia in two cases, in the others for operations on the orbit or antrum of Highmore or for pulling teeth in both jaws. No serious by-effects were observed. All the patients bore the procedure well; all were out-patients except one. The pulse was not modified in any instance, but one weakly and anemic woman had slight syncope and vomiting after injection of 0.005 c.c.

63. **Prophylaxis of Ischemic Paralysis.**—Lauenstein calls attention anew to the advantages of interposing a pad over the artery before applying the Esmarch bandage, and says that for the pad nothing answers the purpose so well as a rolled up elastic bandage placed lengthwise on the artery. This limits the constriction exclusively to the point where it is needed. He is convinced that injury from the ischemia occurs more often than is generally recognized, and insists that it can all be avoided by this simple measure.

### Zentralblatt für Gynäkologie, Leipsic

*May 25, XXXVI, No. 21, pp. 665-696*

64 Rupture of Rectovaginal Wall During Spontaneous Delivery. (Fall von Ruptura rectovaginalis bei spontaner Geburt.) C. Grabowiecki.
65 Self-Holding Automatic Gauze-Feeding Speculum for Tamponing the Uterus. (Zur Technik der Uterustamponade.) S. Boxer.

### Zentralblatt für innere Medizin, Leipsic

*May 25, XXXIII, No. 21, pp. 493-516*

66 Elimination of Colloid Nitrogen in the Urine in Diabetes. (Ueber die Kolloidausscheidung im Harn bei Diabetes mellitus.) H. Pribram and J. Löwy.

### Gazzetta degli Ospedali e delle Cliniche, Milan

*May 14, XXXIII, No. 58, pp. 609-616*

67 *Improved Technic for Iodin Sterilization of the Skin. (Il jodio come antisettico e l'iposolfito di sodio come antidoto al jodio.) L. Sabbatani.

*May 16, No. 59, pp. 617-624*

68* Copper Sulphate in Treatment of Osteoperiostitis. (Il solfato di rame nella cura delle osteoperiostiti purulente.) A. Campani.

67. **Improved Technic for Iodin Sterilization of the Skin.**—Sabbatani regards the superior advantages of tincture of iodin for sterilization of the skin as established now beyond question. Its one drawback is that sometimes there may be some irritation of the skin from its use, and he here announces that this can be effectually prevented by removing at once any excess of the iodin after it has accomplished its purpose. Sodium hyposulphite transforms the iodin into a harmless salt while the hyposulphite is entirely free from any irritating or toxic action. He uses it in a 5 per cent. tepid solution with which he swabs the skin five or ten minutes after it has been painted with the tincture of iodin and the latter has done all that is expected from it. After swabbing with the hyposulphite solution, he covers the field with a layer of cotton, lightly pressed down and removed in two minutes. The skin then is sterilized, all the iodin not needed has disappeared, and with it nearly all the discoloration from the iodin.

68. **Copper Sulphate in Osteoperiostitis.**—Campani reports twenty-nine cases of purulent osteoperiostitis in which he realized a complete cure by curetting and flushing out the cavity with a hot saturated solution of copper sulphate. This method has long been in vogue in veterinary practice; the fluid is injected from a fountain syringe into all the recesses of the cavity. In some of his cases the lesions were of long standing, with old fistulas, but they all healed under from twelve to forty-five of these daily applications.

### Hospitalstidende, Copenhagen

*May 1, LV, No. 18, pp. 493-528*

69 Comparative Importance of Modifications of Wassermann Test in Syphilis. (Om den kliniske Betydning af Hermann & Perutz' Syfilisreaktion, samenlignet med Wassermanns.) V. Jensen and J. Feilberg.
70 Influence of Proportionate Albumin Content on Absorption of Antiserums. (Aeggehvidekoncentrationens Indflydelse paa Resorptionshastigheden af Antistoffer ved subkutan og intramuskulær Injektion.) L. E. Walbum.

*May 8, No. 19, pp. 529-560*

71 *General Anesthesia with Ether by Intravenous Injection. (Om intravenös eternarkos.) O. Löfberg.

71. **General Ether Anesthesia by Intravenous Route.**—Löfberg expatiates on the advantages of administering the anesthetic by the intravenous route in operations on the face, neck, etc., although he does not quite agree with Burkhardt's opinion that this technic is the least harmful and most agreeable. The latter has used it in 250 cases without embolism or thrombosis, although he reports asphyxia from overdosage in three cases. Kümmel has had no embolus in 100 cases and no thrombosis in his last fifty cases. Löfberg reviews the other literature on the subject and describes the technic with an illustration of it as applied in practice. He then reports his own experience with it. The operations in his three cases were for ruptured tubal pregnancy in a woman of 26, resection of the pylorus in a man of 47, and amputation of the femur for diabetic gangrene in a woman of 66. The anesthesia was not quite perfect in the first two cases but the patients made a smooth recovery. The third patient went under in five minutes and the anesthesia was complete; 40 gm. ether were used, and she recovered from the operation but died nine days later from embolism. An embolus plugged the pulmonary artery and a thrombus was found in the basilical vein 4 cm. above the point of infusion and others farther up in the cephalic and subclavian veins, none anywhere else. A total of 498 cases of intravenous ether anesthesia are now on record, with two deaths, one of unknown cause and the other the case of embolism reported above, while Küttner has reported a case of clinically diagnosed embolus. Löfberg thinks there can be no doubt that the fatality in his case was the result of the infusion, but whether the ether was responsible for it or the salt solution vehicle is not absolutely certain. He infused 810 c.c. of physiologic salt solution, containing 5 per cent. of ether.

# Book Notices

DIGEST OF COMMENTS ON THE PHARMACOPEIA OF THE UNITED STATES OF AMERICA (EIGHTH DECENNIAL REVISION), AND ON THE NATIONAL FORMULARY (THIRD EDITION) FOR 1909. By Murray Galt Motter and Martin I. Wilbert. Paper. Public Health and Marine-Hospital Service of the United States, Hygienic Laboratory Bulletin No. 79. 1912.

The scope of the "Digest of Comments" has been indicated in THE JOURNAL in the reviews of previous volumes. As an illustration of the material of value to physicians which is contained in the Digest the following paragraphs of therapeutic interest have been selected:

An editorial (THE JOURNAL, Nov. 27, 1909, p. 1826) on worthless drugs, calls attention to the report of the Council on Pharmacy and Chemistry (ibid., p. 1836) on echinacea, a drug which is the chief constituent of a number of nostrums for which ridiculous claims are made, and the article shows, in a striking manner, on what feeble evidence the asserted virtues of the nostrums containing this drug are based.

A. Waldo Forbush asserts that *Echinacea angustifolia* is a rapid drug and is rapidly coming into prominence. He states that this drug actively opposes septic tendencies, blood deterioration, stimulates the glandular organs, and actively influences secretion and excretion (*Jour. Therap. and Diet.*, 1909-10, iv, 138).

John William Fyfe asserts that in echinacea we have a remedy of varied usefulness. It is especially useful in all conditions in which a tendency to sepsis is a prominent characteristic, regardless of the name or location of the disease (*Eclectic Rev.*, 1909, xii, 49).

D. H. Edwards thinks that there is no one drug in materia medica that deserves more praise as a life-saver and pain-reliever than does *Echinacea angustifolia* when administered either locally or internally in properly selected cases (*Eclectic Med. Jour.*, Cincinnati, 1909, lxix, 73-76).

G. Allison Hinton asserts that the treatment of syphilis with echinacea, phytolacca, iris and other vegetable alteratives gives negative results in 95 per cent. of the cases so treated (*Nat. Eclect. Med. Assn. Quart.*, 1909-10, i, 113).

C. L. Diehl reports that the committee on National Formulary has confirmed the statement as to the inactivity of elixir digestivum comp. N. F., made by the Council on Pharmacy and Chemistry of the American Medical Association, but that on account of the wide-spread use of this elixir it is thought desirable to retain it (*Proc. Am. Pharm. Assn.*, 1909, lvii, 1065).

W. A. Pearson reports experiments with elixir of lactated pepsin in several concentrations at different temperatures, and under various degree of acidity and alkalinity, without obtaining any more action than the corresponding blank experiment under the same conditions (*Am. Jour. Pharm.*, 1909, lxxxi, 440).

C. M. Kline points out that, from the price at which this preparation is offered by some makers, they apparently do not even attempt to add pepsin and pancreatin at all. Such a practice is certainly reprehensible, though, considered only from the standpoint of economy, why should the ingredients be added when one knows that they are to be at once destroyed (*Proc. North Western Druggists Ass'n.*, 1909, p. 123).

Otto E. Bruder points out that pepsin and pancreatin in compound digestive elixir, N. F., are therapeutically incompatible, and suggests that either the formula be discontinued or the pancreatin be left out (*Proc. Am. Pharm. Assn.*, 1909, lvii, 965; also *Bull. Am. Pharm. Assn.*, 1909, iv, 231).

Charles H. LaWall asserts that while compound digestive elixir has been characterized as a therapeutic monstrosity and a pharmaceutic crime, nevertheless, strong protests were made against dismissing it from the National Formulary (*Boston Med. and Surg. Jour.*, 1909, clx, 623).

John Hargreaves, in discussing the possible uses of "Elixir Pepsini Compositum, N. F.," points out that it has been thoroughly well established that mixtures of this kind tend to become more or less inert, and that the constituents cannot be expected to retain their normal activity for more than from three to six weeks (*Canad. Pharm. Jour.*, Toronto, 1909-10, xliii, 194).

Renick W. Dunlap reports two samples of elixir of lactated pepsin examined, not passed (*Rep. Ohio Dairy and Food Com.*, 1909, p. 60).

M. H. Fussell, in recommending the deletion of geranium from the Pharmacopeia, asserts that geranium is a beautiful flower, but as a medicine a nonentity (THE JOURNAL, Feb. 5, 1910, p. 433).

Capps, Pratt, McCrae and Halsey recommend the deletion of geranium and fluidextractum geranii from the U. S. Pharmacopeia (THE JOURNAL, 1909, liii, 792).

W. Leming asserts that *Geranium maculatum* is indicated in subacute and chronic catarrhal states, and mucus fluxes with great relaxation or tendency to ulceration (*Jour. Therap. and Diet.*, 1909-10, iv, 93).

Physicians who wish to keep informed concerning the status of drugs should have all volumes of the Digest for reference. Up to the limit of free distribution copies may be obtained by applying to the Surgeon-General of the Public Health and Marine-Hospital Service, Washington, D. C. They may also be obtained for a nominal sum from the Superintendent of Documents, Government Printing Office, Washington. D. C.

FILARIASIS AND ELEPHANTIASIS IN FIJI. Being a Report to the London School of Tropical Medicine. By P. H. Bahr, M.A., M.B., D.T.M. and H. Paper. Price, 6 shillings net. Pp. 192, with illustrations. London: Witherby & Co., 326 High Holborn W. C., 1912.

The investigations recorded in this monograph were the result of a grant given to the London School of Tropical Medicine by Lord Sheffield. The grant was for 500 pounds, which was supplemented by other funds, so as to make possible the large amount of work which the completion of the research entailed. The author gives a preliminary account of the Fiji Islands and the Fijians and explains his technic and gives his results in the form of twenty-seven conclusions, which he further elaborates in the succeeding parts of the book. The first and second of these conclusions are sufficiently startling: "1. A large proportion, 27.1 per cent., of the Fijians harbor microfilaria in their blood. 2. This figure does not represent the aggregate liability of the Fijian to filarial infection. There are reasons for believing that at one time or another, nearly every Fijian is the subject of filariasis."

The Fijian filariasis is not periodically nocturnal and its principal pathologic expression is elephantiasis. The frequent affection of the testes, epididymis, etc., he thinks, may contribute to the infecundity of the Fijian. Surgical and medical treatment of the disease is unsatisfactory and the remedy lies in prevention. Mosquito destruction carried out on the same lines as for malaria and yellow fever is the only means likely to prove of service in eradicating or seriously mitigating this important helminthiasis.

After a detailed discussion of the conclusions the less interesting but important statistical and technical details are summarized in a number of tables and appendixes. The text of the book is finely illustrated with drawings and colored plates showing anatomic and histologic features of the worms, the lesions they cause, and the insects which form the intermediary hosts, the chief of which is the common mosquito of the islands, *Stegomyia pseudoscutellaris*.

The author makes a number of suggestions for future work on this important subject, which may be fruitful in solving some of the important problems affecting the health of the oriental people. It is to be hoped that the work may be continued as effectively and profitably as it has been begun.

WHAT TO DO IN CASES OF POISONING. By William Murrell, M.D., F.R.C.P., Senior Physician to the Westminster Hospital. Eleventh Edition. Cloth. Price, $1 net. Pp. 283. New York: Paul B. Hoeber, 1912.

This is a handy little book, small enough to be carried in the pocket, and covers in a very practical way the general subject as defined in the title; in fact, it goes deeper than the title in that it considers the symptoms and difference of diagnosis of practically everything that may cause poisonous symptoms.

# Medicolegal

## Duty of Town to Care for Quarantined Family—Powers of Board of Health

*(Bellows vs. Board of Supervisors of Seneca County (N. Y.), 133 N. Y. S. 586)*

A special term of the Supreme Court of New York, Seneca County, holds that it was the duty of the town, and not of the county, to care for a family quarantined for small-pox, although a legal residence had not been acquired in the town. The court holds that, while the man taken with that disease was without means and dependent on his daily earnings for the support of himself and his family, and advised those who represented the public that he would be unable to care for his family during quarantine, he was not to be accounted a "poor person," within the meaning of that term as used in the law, never having applied, and not then applying, to the poor authorities for help.

It was the duty of the board of health of the town to guard against the introduction of contagious and infectious disease, to require the isolation of all persons infected with, or exposed to, such disease, and to provide suitable places for the treatment of sick persons who could not otherwise be provided for. All expenses incurred in the performance of that duty are a charge on its municipality, and shall be levied, collected and paid in the same manner as other charges against it.

Exhaustive powers are given to boards of public health because of the necessity which from time to time arises, requiring for the public good prompt and radical action. No question is made as to whether a person unfortunate enough to come within their jurisdiction is rich or poor, high or low; whether he is a town charge, a county charge or a state charge. The health law contemplates only that, when necessity arises, the power vested in boards of public health shall be promptly exercised for the public good.

The board of health of the town was authorized to do and to furnish everything which was done and provided for this man and his family, not because he was a poor person, but because he was suffering from a disease which might become communicated to others to the harm of the public; and no different treatment would have been accorded him had he resided in the town for ten years instead of a few months. The physician in charge was employed by the board of health, the nurse was employed under its authority, and the messenger who took care of the temporary wants of the family was employed by it, while every article of food, fuel, medicine and raiment furnished was on an order signed by the authorized messenger of the board of health, expressly stating that it was to be furnished on the credit of that board. This was properly so, for the entire expenses were those incurred by that health board, not for the support of this man, but for the protection of the public from infection from the dangerous disease with which he had become infected. They were incurred under the authority of the health law only, and were properly to be charged to and paid by the town.

## Medical and Non-Expert Opinions of Causes of Diseases

*(Central of Georgia Railway Co. vs. Clements (Ala.), 57 So. R. 52)*

The Appellate Court of Alabama says that the most difficult practical science of which it has knowledge is the science of medicine. It is a matter of common knowledge that the most eminent diagnosticians frequently disagree as to the true nature or actual cause of a disease. While for some of the simple and common ailments, such as colds, indigestion, headaches, etc., the ordinary man suffering therefrom may, in a rough, practical way, assign the cause; nevertheless, when the cause of a disease or of some material ailment of an important organ of the human body is the subject of inquiry, only the opinion of a diagnostician, of a man skilled in the mysteries of medicine, can ordinarily be resorted to. And when this is done the law knows that the opinion of an expert is not infallible, and such opinion, when rendered on a given state of facts, goes to the jury as evidence to be weighed by them, along with the other evidence, in passing on the question as to the true cause of the disease or ailment.

A witness who is not an expert may testify to facts, but, as a general rule, not to deductions or conclusions from facts. In case of an injury, he may state the facts, his symptoms, etc., but he cannot, as a rule, state that such injuries resulted in some particular disease to some organ not actually injured. In the present case, it was entirely permissible for the plaintiff (Clements) to state that the rib of an umbrella stuck into his chest, that his hands were bruised, his fingers and ribs broken, and his hips injured, and it was also permissible for him to say that after that time he had suffered from a cough and a sore throat; but the court thinks that only an expert could say that his lungs or speaking organs, neither of which organs was actually injured by his fall, had become involved by reason of injuries to the above other parts of his body. This deduction was one which only a medical expert could draw from the facts, or the jury in their exclusive province as triers of the facts. Suppose that a few weeks after the alleged injuries the plaintiff had been taken with a fever. Could he be permitted to say that, in his opinion, the injuries were the cause of his fever? Suppose that he had, shortly after the injuries, been attacked with pneumonia. Could he be permitted to say that such pneumonia was caused by his injuries? The questions, it seems to the court, formulate their own answer. Whether the alleged cough or throat trouble was due to tuberculosis, influenza, or to the injuries received by him was certainly not for the plaintiff, a non-expert, but, at best, for a medical expert or the jury, under all the facts, to say.

## What is "Being Necessarily and Continuously Confined Within the House?"

*(Ramsey vs. General Accident, Fire and Life Insurance Co. (Mo.), 142 S. W. R. 763)*

The Kansas City (Mo.) Court of Appeals holds that a provision in a policy of health insurance providing for indemnity for time the insured is "necessarily and continuously confined within the house, and therein regularly visited by a legally qualified physician by reason of illness," should have a reasonable construction, and does not mean that the insured must literally and actually be confined within the walls of a house all the time. One is within the protection of the policy who may be attacked with serious illness at his hotel away from home and is advised by a physician, who is called, that he should be taken home, and is transported in a Pullman car, where he may be accommodated with a bed, and who on arriving home finds that he will be compelled to undergo an operation by skilled surgeons in a near-by city, goes there, and is operated on and attended by them daily by being taken to them in a carriage from his hotel near by, and occasionally walking to them when able, being taken home, yet under the treatment of a physician, and confined within his house, except occasionally sitting on the porch and being once driven down to his place of business, and at another time to a physician's office, but with these exceptions, of short duration, being in the house and much of the time in bed.

## Qualified Use of Title of "Doctor" Permitted by Statute

*(Jones vs. People (Colo.), 120 Pac. R. 125)*

The Supreme Court of Colorado reverses a conviction of violating the medical practice act of that state by the use of the title "Doctor," or "Dr." It was stipulated in the case that the accused was a graduate of a recognized college of osteopathy, had received the degree of "Doctor of Osteopathy," held a certificate from the state osteopathic association, was engaged in the practice of osteopathy without prescribing medicine or administering drugs, and at no time attached the word "Doctor" or the abbreviation "Dr." to his name, except in connection with the words "Osteopath" or "Osteopathic Physician," while he had printed on his cards, letter heads, envelopes, and the door of his office the word "Doctor" before, and "Osteopathic Physician" after, his name. The court holds that the stipulation brought the accused clearly within the exception to the section of the statute defining the practice of medicine, which provides: "Nothing in this act shall be construed to prohibit . . . nor shall it apply to . . . the practice of osteopathy, when not prescribing medicine or administering drugs."

# EXPLANATION OF THE USE OF THE INDEX

This is an index not only to the reading matter in The Journal, but also to original articles in the principal medical periodicals of this and other countries. In previous volumes the subject index was divided into two parts: one covering Current Medical Literature—that is, titles of articles appearing in other journals, as well as in this journal—and the other, entitled "General Index," being a subject index of matter appearing only in The Journal.

In this volume, the two are combined into one General Subject Index. We believe that this will be found more satisfactory than under the old plan. The reading matter appearing in The Journal is distinguished by the use of **black-faced numerals**.

The letters used to explain in which department the matter indexed appears are as follows: "E," Editorial; "C," Correspondence; "T," Therapeutics; "Ml," Medicolegal; "P," Propaganda for Reform; "ME," Medical Economics; "ab," abstract; the star (*) indicates an "Original Article" in The Journal.

This is a subject index and one should, therefore, look for the chief word, with the following exceptions: "Deaths," "Book Notices," and "Society Proceedings" are indexed under these titles at the end of the letters "D," "B," "S." Matter pertaining to the Association is indexed under "American Medical Association."

All matter is indexed under the most important word of the heading used in The Journal, and also under the subject heading. For instance, abscess of the brain will be found under "abscess," as well as under "brain." Such titles as "ocular manifestations, etc." have been indexed under "Eye." Cross references have been liberally used. It is also well to remember that in looking up a certain subject related words should be consulted. For example, Chest, Thorax; Test, Reaction.

The figures in parentheses refer to the paragraph, the number following to the page in The Journal, for example:

Abscess, brain, superficial, sinus thrombosis, and acute mastoiditis, recovery, ***1004**
Acid, citric, in headache, **1221**
Acid, boric, poisoning, (14) **1153**—ab
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The first example is an original article in The Journal, as shown both by the star and by the black-faced numerals indicating the page.

The second, as indicated by the black-faced figures, is also in The Journal, and on turning to page 1221 we find an answer to a question in the Department of Queries and Minor Notes.

In the third, the page number being in black-faced type shows that the matter is discussed in The Journal, "ab" indicating that it is an abstract. Turning to page 1153, we find (14) refers to an article by J. H. Sanders in the *British Medical Journal* March 16.

The fact that in the fourth reference the page is given in ordinary type indicates that only a title of the article is given. Turning to page 743 we find the numeral (138) indicates that a paper on that subject by K. Petren appeared in *Virchows Archiv*, January.

In the Author Index are the names of the authors of articles which have appeared in The Journal of the American Medical Association and of articles that have been listed from week to week in the Department of Current Medical Literature as having appeared in other journals. The black-faced numerals indicate that the article is in The Journal. The star (*) preceding the page number, indicates an original article.

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## SOCIETIES

*Abbreviations:*
  *Acad.—Academy.*
  *Am.—American.*
  *A.—Association.*
  *Conf.—Conference.*
  *Cong.—Congress.*
  *Internat.—International.*
  *M.—Medical, Medicine.*
  *Pharm.—Pharmaceutical.*
  *S.—Society.*
  *Surg.—Surgical, Surgery, Surgeons.*

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Pease, M. C., (59) 438
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Peiser, H., (58) **522**
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Raulot-Lapointe, G. (78) 667
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Symptoms of Colonic Intoxication. J. F. Binnie, M.D., Kansas City, Mo.2011
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Diffuse Dilatation of the Esophagus without Anatomic Stenosis (Cardiospasm); A Report of Ninety-One Cases. H. S. Plummer, M.D., Rochester, Minn.....................2013
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Nervous Symptoms Following Sunstroke. T. H. Weisenburg, M.D., Philadelphia ..........................2015
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Intestinal Implantation of the Bacillus Lactis Bulgaricus in Certain Intestinal Conditions of Infants, With Report of Cases. Ralph Oakley Clock, M.D., New York................2017
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Dr. Guido Fischer, Director of the Royal Dental Institute of the University of Marburg. Translated from the Second German Edition by Richard H. Riethmüller, Ph.D. Cloth. Price, $4. Pp. 202, with 105 Illustrations. Philadelphia: Lea & Febiger, 1912.

INSTEAD OF "WILD OATS." A Little Book for the Youth of Eighteen and Over. By Winfield Scott Hall, Professor of Physiology, Northwestern University Medical School. With a Foreword by Edward Bok. The Edward Bok Books of Self-Knowledge for Young People and Parents, of Which This is Number Three. Cloth. Price, 25 cents net. Pp. 62. New York: Fleming H. Revell Company, 1912.

WHEN A BOY BECOMES A MAN. A Little Book for Boys. By H. Bissеker, M.A. Revised by the Council of the Medical Officers of Schools Association of London, England. With a Foreword by Edward Bok. The Edward Bok Books of Self-Knowledge for Young People and Parents, of Which This is Number Two. Cloth. Price, 25 cents net. Pp. 46. New York: Fleming H. Revell Company, 1912.

DIAGNOSE UND THERAPIE DER MAGEN- UND DARMKRANKHEITEN. Anhang: Die Chemische und Mikroskopische Untersuchung des Mageninhaltes und der Faeces. Von Priv.-Doz. Dr. Walter Zweig, Abteilungsvorstand am Kaiser-Franz-Josef-Ambulatorium in Wien. Second Edition. Paper. Price, 16 marks. Pp. 502. Berlin: Urban and Schwarzenberg, 1912.

SOME RECENTLY DISCOVERED LETTERS OF WILLIAM HARVEY, WITH OTHER MISCELLANEA. By S. Weir Mitchell, M.D., LL.D., F.R.S. With a Bibliography of Harvey's Works by Charles Perry Fisher, Librarian of the College. Transactions of the College of Physicians of Philadelphia. Paper. Pp. 59. 1912.

HOW SHALL I TELL MY CHILD? By Mrs. Woodallen Chapman. With a Foreword by Edward Bok. The Edward Bok Books of Self-Knowledge for Young People and Parents, of Which This is Number One. Cloth. Price, 25 cents net. Pp. 62. New York: Fleming H. Revell Company, 1912.

THEORIE UND PRAXIS DER INNEREN MEDIZIN. Von Dr. Erich Kindborg. Second Volume. Die Stoffwechselstörungen, Die Krankheiten des Bewegungsapparates und der Verdauungsorgane. Cloth. Price, 10 marks. Pp. 634, with 74 Illustrations. Berlin: S. Karger, 1912.

HOW THE "FOURTH" WAS CELEBRATED IN 1911. Facts Gathered from Special Reports and Prepared by Lee F. Hanmer. Paper. Price, 10 cents. Published by the Department of Child Hygiene of the Russell Sage Foundation, 400 Metropolitan Tower, New York City.

THE LIFE AND WORK OF WILLIAM PRYOR LETCHWORTH, STUDENT AND MINISTER TO PUBLIC BENEVOLENCE. By J. N. Larned. Cloth. Price, $2 net. Pp. 472, with Illustrations. Boston: Houghton Mifflin Company, 1912.

WEBSTER'S COLLEGIATE DICTIONARY. Leather. Price, $5. Pp. 1136, with over 1100 illustrations. Thin Paper Edition. Springfield, Mass.: G. & C. Merriam Company, 1912.

THE ANGLO-AMERICAN MEDICAL ASSOCIATION OF BERLIN, 1911-12. Club Rooms and Bureau of Information, Friedrich-Strausse No. 105, Hotel Atlas. Paper. Price, 5 cents.

SIXTH ANNUAL REPORT OF PRESIDENT AND TREASURER, CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING. Paper. New York: 576 Fifth Avenue, 1911.

REPORT OF THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION. Food Products and Drugs, 1911. Part Two of the Annual Report of 1911. Paper.

MILK MODIFICATION CARD. A Rapid Calculation Device. By J. H. Young, M.D. Price, $0.50. Boston: F. H. Thomas, 691 Boylston Street, 1912.

EXTRACT FROM THIRTY-SECOND ANNUAL REPORT, New York State Department of Health. Paper. 1911.

TWENTY-FIFTH ANNUAL REPORT, ST. LAWRENCE STATE HOSPITAL, OGDENSBURG, N. Y. Paper. 1911.

FORTY-FOURTH YEAR-BOOK, NEW YORK ORTHOPEDIC DISPENSARY AND HOSPITAL. Paper 1912.

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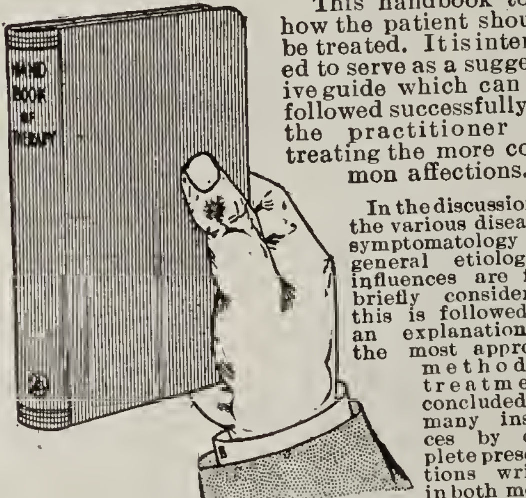

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(Continued from page 22)

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(Continued on next page)

(Continued from preceding page)

medical journals. They certainly need it, and I hope you keep after them. Have received sample copies of . . . and . . . You have stirred them up. Well, they need it.

Charles Haase, Elmira, N. Y.

## The Public Service

### Medical Corps, U. S. Army

Changes for the week ended April 20:

Banister, Wm. B., lieut.-col., April 12, on departure from Chicago of Col. Louis M. Maus, Medical Corps, will, in addition to his present duties, temporarily assume the duties of chief surgeon, central division.

Miller, Reuben B., major, and Coffin, Jacob M., captain, April 12, ordered to Memphis, Tenn., for duty pertaining to the flood sufferers.

Craig, Charles R., captain, April 13, ordered to proceed to meeting of Louisiana State Medical Society, New Orleans, April 23 to 26, 1912.

Phillips, H. A., captain, April 13, orders directing him to proceed to Ft. H. G. Wright, N. Y., for temporary duty, is revoked.

Rich, E. W., captain, April 15, granted three months' leave of absence.

Bartlett, C. J., major, April 13, relieved from duty at Ft. Andrews, Mass., and ordered to Ft. Werden, Wash., for duty.

Ballard, J. C., M.R.C., April 11, granted thirty days' leave of absence, permission to apply to the adjutant general of the army for thirty days' extension.

Truby, W. F., major, April 15, relieved from duty at Ft. Worden, Wash., and ordered to Ft. Winfield Scott, Cal., for duty.

Waring, J. B. H., lieut., April 15, relieved from treatment at Letterman General Hospital, San Francisco, and ordered to Ft. Leavenworth, Kan., for duty.

Holmes, R. W., lieut., April 15, orders relieving him from duty at Plattsburg Barracks, N. Y., and assigned to duty at Ft. Liscum, Alaska, is revoked.

Von Schrader, Alleyne, lieut., April 15, relieved from duty at Letterman General Hospital, San Francisco, and ordered to Ft. Liscum, Alaska, for duty.

McBrayer, C. E., lieut., April 15, relieved from duty at Ft. Howard, Md., and ordered to Ft. William H. Seward, Alaska.

Davis, W. B., colonel, April 16, ordered to his home to await retirement from active service.

Brown, I. C., M.R.C., April 17, orders directing him to proceed to Schofield Barracks, H. T., is revoked and instead assigned to duty on the transport *Burnside*, with station at Seattle, Wash

Bailey, Edward, M.R.C., April 17, relieved from duty on the transport *Burnside*, Seattle, Wash., and will proceed to Ft. Lawton, Wash., for temporary duty.

Dougherty, James C., M.R.C., April 17, relieved from duty at Ft. Bliss, Texas, and will proceed to Schofield Barraks, H. T., for duty.

Mudd, Leo C., lieut., April 17, relieved from duty at Washington Barracks, D. C., and ordered to Ft. Leavenworth, Kan., for duty.

Bailey, Edward, M.R.C., April 18, granted leave of absence for four months, about June 25, 1912.

Reno, W. W. Jamer, April 18, ordered to proceed to Ft. Leavenworth, Kan., to accompany the board of officers on the marches to be made to test the latest pattern of marching shoes.

### Medical Corps, U. S. Navy

Changes for the week ended April 13:

Norton, O. D., medical inspector, detached fleet surgeon, U. S. Pacific Fleet; home, wait orders.

Wilson, G. B., medical inspector, ordered to Receiving Ship, Navy Yard, Boston.

DeValin, C. M., surgeon, detached from Marine Recruiting Station, New York, to fleet surgeon, Pacific Fleet.

Riggs, C. E., surgeon, detached *Wabash*; to Receiving Ship, Navy Yard, New York.

Morris, Lewis, surgeon, detached *Hancock*, to Marine Recruiting Station, N. Y.

Angeny, G. L., surgeon, detached *Indiana*; to Receiving Ship, Navy Yard, Philadelphia.

Conner, W. H., asst.-surgeon, detached from *Princeton*; home, wait orders.

Parham, J. C., asst.-surgeon, detached Naval Medical School, Washington, D. C., to Naval Station, Tutuila, Samoa.

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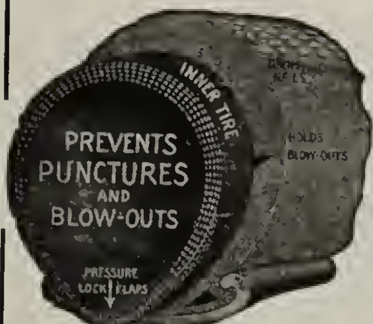

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WANTED—DURING JUNE, JULY AND August; position in tuberculosis sanatorium or locum tenens by physician experienced in hospital and sanatorium work; competent pathologist and bacteriologist; prefer California; licensed; reciprocity 27 states; state salary or conditions first letter; no triflers. Add. 2598 I, % AMA.

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(Continued on next page)

## THE PUBLIC SERVICE

*(Continued from preceding page)*

Changes for the week ended April 20:

French, G. R. W., asst.-surgeon, detached from the *Albatross* and ordered to the *Nero*, in connection with Alaskan Wireless Expedition.

Hull, H. F., P. A. surgeon, detached from the *Panther* and ordered to the *Ohio*.

Rennie, H. H., P. A. surgeon, detached from the *Ohio* and ordered to the *Panther*.

Turner, H. W. B., P. A. surgeon, commissioned P. A. surgeon from July 30, 1912.

## U. S. P. H. and M.-H. Service

Changes for fourteen days ended April 17:

Kerr, J. W., asst. surgeon-general, detailed to attend the annual meeting of the American Association of Pathologists and Bacteriologists at Philadelphia, April 4 to 6, 1912.

White, J. H., surgeon, detailed to attend the annual meeting of the State Medical Society at Wisconsin at Milwaukee, May 24, 1912.

Eager, J. M., surgeon, granted one month's additional leave of absence from April 23, 1912.

Lavinder, C. H., P. A. surgeon, detailed to attend the meeting of the State Medical Association of Alabama at Birmingham, April 16 to 19, 1912, and the meeting of the Georgia Medical Association at Augusta, April 17 to 19, 1912.

Grubbs, S. B., P. A. surgeon, directed to report to the commanding officer of the revenue cutter *Algonquin* for temporary duty during a cruise in the waters of Porto Rico.

von Ezdorf, R. H., P. A. surgeon, detailed to attend the meeting of the State Medical Association of Alabama to be held at Birmingham, Ala., April 16-19, 1912.

Lumsden, L. L., P. A. surgeon, directed to proceed to Selma, Ala., to make an investigation of the causes favoring the propagation and spread of typhoid.

Parker, Herman B., P. A. surgeon, granted 1 month's leave of absence on account of sickness, from March 1, 1912.

McLaughlin, A. J., P. A. surgeon, directed to proceed to Jefferson City, Mo., and other points on the Missouri River watershed, to examine into precautions taken to prevent the spread of typhoid and other waterborne infections diseases in interstate traffic.

Lloyd, B. J., P. A. surgeon, directed to proceed to Bremerton, Wash., when necessary, to fumigate certain vessels.

Collins, G. L., P. A. surgeon, directed to report to the medical officer in command of the Marine Hospital, Boston, for temporary duty.

Frost, W. H., P. A. surgeon, directed to proceed to Oskaloosa, Iowa, via Des Moines, to make an investigation of an epidemic of typhoid in that city.

Duffy, B. J., asst.-surgeon, relieved from duty at the Marine Hospital, Stapleton, N. Y., and directed to proceed to Seattle, Wash., and report to the commanding officer of the revenue cutter *Tahoma* for duty.

Watkins, J. A., asst.-surgeon, relieved from duty at the Marine Hospital, New Orleans, and directed to proceed to San Francisco and report to the commanding officer of the revenue cutter *Bear* for duty.

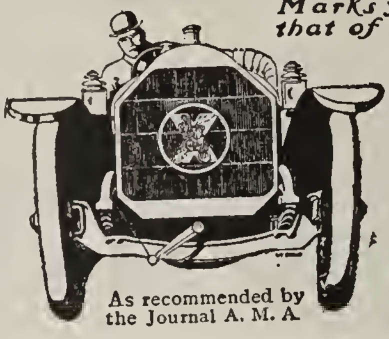
Brecht, N. D., asst.-surgeon, directed to proceed to Seattle, Wash., and report to the commanding officer of the revenue cutter *Manning* for duty.

Stiles, C. W., Professor of Zoology, directed to proceed to Wilmington, N. C., on special temporary duty.

Bailey, C. A., acting asst.-surgeon, directed to accompany the officers of the United States Immigration Service on or about April 22, 1912, from St. John, N. B., to Quebec, P. Q., for duty in the examination of alien immigrants.

Board of medical officers convened to meet at Port Townsend, Wash., as soon as practicable for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: P. A. Surgeon B. H. Earle, chairman; Acting Assistant Surgeon P. I. Carter, recorder.

Board of medical officers convened to meet at the Marine Hospital, Port Townsend, Wash., at 10 o'clock a. m., April 22, 1912, for the examination of an officer of the Revenue Cutter Service to determine his physical fitness for promotion. Detail for the board: P. A. Surgeon B. H. Earle, chairman; Acting Assistant Surgeon P. I. Carter, recorder.



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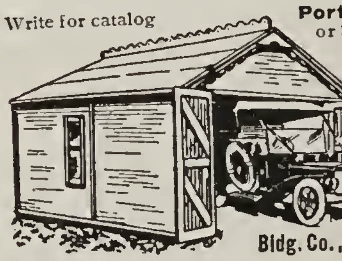

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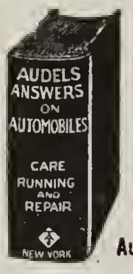

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FOR SALE — COLORADO — MY $8,000 cash general practice, 1,200 of which is high-class contract; all easily transferable, including hospital appointment; city of 15,000; am going to Europe, but will take ample time to transfer entire practice to purchaser; cash price, $4,000. Add. 2637 N, % AMA.

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FOR SALE — ILLINOIS — UNOPPOSED general practice; established 31 years; wish to retire permanently; prosperous Pennsylvania Germans; in heart of Illinois agricultural district; will give practice to purchaser of my office and equipment; option on residence; will thoroughly introduce successor; terms nominal; a snap. Add. 2699 N, % AMA.

FOR SALE—ILLINOIS—$2,500 PRACTICE—30 miles from Chicago, in good American community; good schools and churches; 75 per cent. gravel roads; suburban and interurban service; nearest competition 7 miles; collections 98 per cent.; good business from start; possession given any time before September 1. Add. 2700 N, % AMA.

FOR SALE — CENTRAL ILLINOIS — $3,300 practice, drugs and office outfit in town of 1,300; one competitor; rich country; money from the start; property optional; will introduce successor; price, $500. Add. 2720 N, % AMA.

FOR SALE — CENTRAL ILLINOIS — $300 buys $3,500 practice, office furniture and drugs; town of 1,500; two railroads; best of schools and churches; competition light; collections 98 per cent.; going into hospital work. Add. 2659 N, % AMA.

FOR SALE—CENTRAL ILLINOIS—$4,000 practice in town of 300; situated on railroad; no competition; collections 95 per cent; fine location; large territory in rich farming community to buyer of my residence, office and fixtures, drugs and *x*-ray machine; all for $2,200; one-half cash; reason for selling, going west. Add. 2712 N, % AMA.

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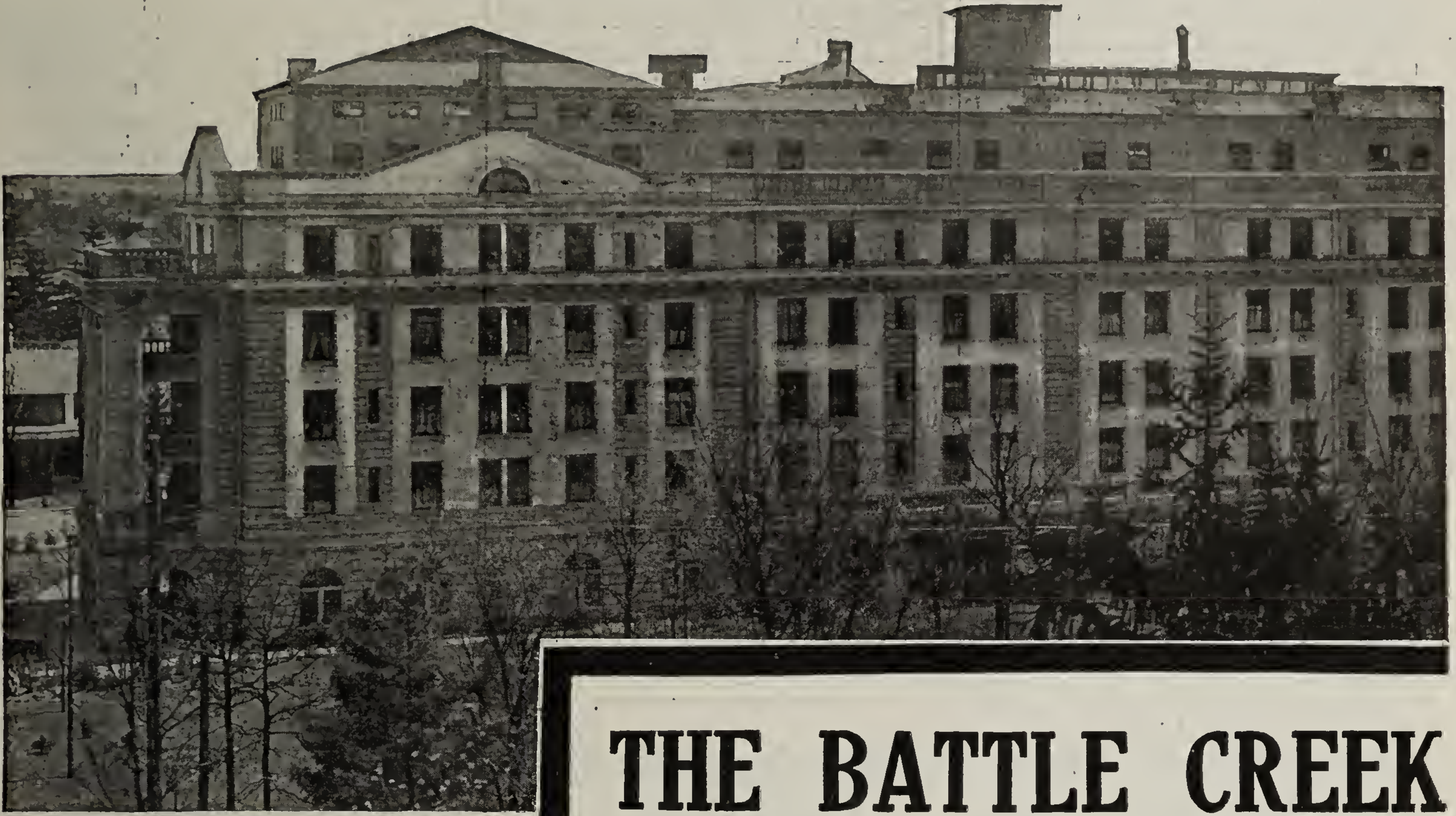

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## JOKES—NEW AND OLD

(Continued from page 22)

stripped and examined him, ejaculating finally:

"Old man, we cannot find a single blemish on your hide. Where were you shot during the war?"

The old man said, "Well, gentlemen, I was shot in the substitute"

# *The Public Service*

## Medical Department, U. S. Army

Changes during the week ended May 25:

Ingalls, R. E., dental surgeon, May 10, reported for duty at Vancouver Barracks, Wash.

By par. 1, S. O. 117, War Department, May 17, 1912, the following assignments of acting dental surgeons, U. S. A., recently appointed, are ordered to the stations opposite their names: Matthews, Arnett P., Schofield Barracks, H. T.; Squires, William A., Fort D. A. Russell, Wyo.; White, Albert R., Fort Des Moines, Iowa; Snapp, John H., Camp E. S. Otis, Canal Zone, Panama; Cady, Frank C., Fort Riley, Kan.; Knoderer, Arthur T., Fort Oglethorpe, Ga.; Scovel, John W., Lettermann General Hospital, presidio of San Francisco; Sanderson, Mortimer, Fort Monroe, Va.

Bevans, James L., captain, May 18, in addition to his other duties is designated as medical superintendent of transports at San Francisco, vice Captain Edwin W. Rich, Medical Corps, hereby relieved.

McKinney, Garfield L., captain, May 20, granted leave of absence for one month and fifteen days, effective about Aug. 17, 1912.

Church, James R., major, May 18, ordered to Concord, N. H., to confer with adjutant general of New Hampshire militia, June 8, 1912. Major Church will then proceed to camp of instruction at Weare Center, N. H., to make annual inspection of the sanitary troops, New Hampshire militia, June 10-15, 1912.

Dutcher, B. H., major; Hess, L. T., major; Phalen, James M., captain, and Davis, William R., captain, May 17, ordered to proceed to camp of instruction for medical officers, New York militia, Peekskill, N. Y., June 22 to 29, 1912, for duty as instructors.

Hess, J. H., dental surgeon, May 15, reported for duty at Fort Douglas, Utah.

Wertenbaker, C. I., M.R.C., May 13, ordered to duty with 16th Infantry from Alaska to United States. On completion of this duty to comply with War Department orders in his case.

Huntington, B. L., lieut., May 22, ordered to Fort Casey, Wash., for temporary duty.

Murray, Alexander, captain, May 22, relieved from duty at Fort Casey, Wash., and ordered to Fort McDowell, Cal., for duty.

King, Edgar, captain, May 22, relieved from duty, Fort McDowell, Cal., and ordered to army medical school, this city, for special course of instruction.

Smith, L. L., captain, May 22, relieved from duty at army medical school, this city, and ordered to Walter Reed General Hospital, Takoma Park, D. C., for duty.

Lloyd, Samuel, M.R.C., May 22, ordered to active duty, May 29 to June 2, 1912, and to repair to this city for the purpose of delivering address to the graduating class of the army medical school on May 31, 1912.

Hartnett, E. H., major, May 17, granted thirty days' leave of absence.

Wild, William F., M.R.C., May 23, relieved from duty at army medical school and proceed to his home, and arrival there stand relieved from active duty in the medical reserve corps.

Changes during the week ended June 1:

Cady, Frank C., acting dental surgeon, May 23, reports for duty at Fort Riley, Kan.

Wheate, J. Marchal, M.R.C., May 22, ordered to proceed from Boise Barracks, Idaho, to presidio of San Francisco for temporary duty pending arrival of the *Logan*, then assume the duties of surgeon of that transport during the absence of Lieut. M. C. Stayer, Medical Corps.

Halliday, C. H., M.R.C., May 22, reports for temporary duty at Fort Wayne, Mich.

Sanderson, Mortimer, acting dental surgeon, May 25, reported for duty at Fort Monroe, Va.

(Continued on next page)

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(Continued from page 22)

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WANTED — GOOD LOCATION TO DO surgery; would associate with busy general practitioner or buy interest in hospital; desire town of 5,000 or over; Illinois or reciprocating state; 36 years old; 7 years' surgical experience in employ of U. S. A.; can make cash investment; describe in detail your proposition; this adv. appears but once. Add. 2935 E, % AMA.

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WANTED — PHYSICIAN TO TAKE EYE, ear, nose and throat practice for about nine months; going to Vienna; a fair working knowledge of specialty required; can include general practice; one willing to form partnership preferred; give full particulars in first letter. Add. 2746 F, % AMA.

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WANTED—WITHIN CONVENIENT MOtoring distance of Boston, position with physician of good professional ideals and standing; want compensation enough to meet moderate expense account and opportunity to take certain postgraduate courses, beginning September; I am a practicing physician in Colorado and professionally well connected. Add. 2928 I, % AMA.

WANTED—NURSE, OBSTETRICAL, TWO and one-half years' hospital training, diploma of New York Nursery and Child's Hospital, wishes association with obstetrician, head nurse in maternity hospital ward or charge of small sanitarium; professional references given and required; Jersey, Pennsylvania preferred; would go west if good opening offered in thriving town. Add. 2919 I, % AMA.

WANTED — POSITION IN SANITARIUM as medical and executive assistant by a physician experienced in sanitarium work. Add. 2941 I, % AMA.

WANTED — MINNESOTA OR IOWA— Well-established paying practice; must bear strict investigation; no real estate at present; state full particulars at once. Add. 2937 I, % AMA.

WANTED—POSITION AS LOCUM TENens or assistant in private or institutional practice, by 1910 graduate of A1 college; have had one year's hospital service and one year's assistantship in mining practice; aged 28, single; will go anywhere, but prefer Iowa; reciprocity in 22 states. Add. 2898 I, % AMA.

WANTED — SITUATION — AS SPECIAL detailist of thoroughly ethical specialty or specialties; have personal acquaintance with all prominent physicians in southwest, particularly New Orleans, Mobile and Memphis; highest references as to ability and results obtained; graduate. Add. 2933 I, % AMA.

WANTED — YOUNG WOMAN, 21 YEARS of age, high-school graduate, completed junior term at the Chicago College of Pharmacy, registered as pharmacist in Indiana, desires position in hospital. Add. 2917 I, % AMA.

WANTED — SALARIED POSITION WITH busy physician or surgeon, or in hospital or contract work; graduate A1 school, '09; hospital training; single, temperate; license and reciprocity in 23 states. Add. 2824 I, % AMA.

(Continued on next page)

## THE PUBLIC SERVICE

*(Continued from preceding page)*

Huber, Edward G., captain, May 27, granted leave of absence for one month and fifteen days.

Stone, Frank P., dental surgeon, May 27, relieved from duty at Fort Barrancas, Fla., and ordered to Fort Ethan Allen, Vt., for duty at that post.

By paragraph 27, S. O. 126, War Department, May 28, 1912, the following six changes in the stations and duties of officers of the Medical Corps are ordered:

Dunbar, Leo R., lieut., relieved from duty at Fort Douglas, Utah, and from temporary duty at Fort Logan, Colo., and will proceed to the Letterman General Hospital, presidio of San Francisco, for duty, relieving Capt. Louis C. Duncan.

Duncan, Louis C., captain, on being thus relieved will proceed to Washington Barracks, D. C., for duty.

Geeuwkes, Henry, lieut., relieved from duty at Fort Jay, N. Y., and will proceed to presidio of San Francisco for duty with Ambulance Co. No. 2, relieving Lieut. Herbert H. Sharpe.

Sharpe, Herbert H., lieut., on being thus relieved is also relieved from duty with Field Hospital No. 2, and will proceed to Fort Winfield Scott, Cal., for duty.

Michie, Henry C., Jr., lieut., is relieved from duty at Fort Missoula, Mont., and will proceed to Fort Flagler, Wash., for duty, relieving Capt. William M. Smart.

Smart, William M., captain, on being thus relieved will proceed to Fort Monroe, Va., for duty.

Campbell, George F., M.R.C., resignation accepted, to take effect May 28, 1912.

Knoderer, Arthur T., acting dental surgeon, May 29, left Columbus, Ohio, en route to station at Fort Oglethorpe, Ga.

Snapp, John H., acting dental surgeon, May 29, left Columbus, Ohio, en route to station at Camp E. S. Otis, C. Z., Panama.

### Medical Corps, U. S. Navy

Changes for the week ended May 31:

Webb, U. R., surgeon, detached from naval hospital, Canacao, P. I., and ordered to naval hospital, Olongapo, P. I.

Turner, H. W. B., asst. surgeon, detached from naval hospital, Olongapo, P. I., and ordered home to await orders.

Omelvena, J. G., asst. surgeon, detached from the *Pompey* and ordered to the naval station, Cavite, P. I.

Stuart, Allen, surgeon, May 27, detached from the naval disciplinary barracks, Port Royal, S. C., and ordered to naval recruiting station, Atlanta, Ga.

Dunn, H. A., surgeon, detached from the *Utah* and ordered to the *Solace*.

Mann, W. L., P. A. surgeon, ordered to naval disciplinary barracks, Port Royal, S. C.

Steadman, W. G., P. A. surgeon, detached from *Kansas* and ordered to *Mississippi*.

Rhoades, G. C., P. A. surgeon, detached from *South Carolina* and ordered to *Ohio*.

Strite, C. E., P. A. surgeon, detached from *Vermont* and ordered to *New Jersey*.

Cohn, I. F., P. A. surgeon, detached from *Michigan* and ordered to *Washington*.

Gill, J. E., P. A. surgeon, detached from *North Dakota* and ordered to *Missouri*.

Jenness, B. F., P. A. surgeon, detached from navy recruiting station, Atlanta, Ga., and ordered to the *Utah*.

### U. S. P. H. and M.-H. Service

Changes for the seven days ended May 22:

Cofer, L. E., asst. surgeon-general; detailed to attend the thirty-seventh annual meeting of the American Academy of Medicine, at Atlantic City, May 31 and June 1, and to present a paper on "The Medical Examination of Arriving Aliens."

Gassaway, J. M., surgeon, granted one month's leave of absence, on account of sickness, from May 16, 1912.

Stimpson, W. G., surgeon, directed to proceed to Northfield, Vt., to advise precautionary and suppressive measures against smallpox in quarantine camp of Vermont militia.

Lumsden, L. L., P. A. surgeon, directed to deliver an address at a health conference and exhibit to be held in Chesterton, Md., on May 22, 1912.

Schereschewsky, J. W., P. A. surgeon, directed to attend the meeting of the Infant Hygiene Conference at Philadelphia, May 22, 1912, for the purpose of making an address

(Continued on next page)

## A STATE ORPHANS' SCHOOL FOR SALE

In June, 1912, the State of Pennsylvania will vacate the property they have used for many years as a Soldiers' orphan school at Chester Springs, Pa. This property is owned by the Farmers & Mechanics National Bank of Phoenixville, Pa., and consists of 40 acres in park and campus, boys' and girls' dormitories, school buildings, hospital, lighting and heating plant, administration building, sewerage disposal plant.

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WANTED—ASSISTANTSHIP IN INSANE hospital about August, by married man, aged 30 years, experienced; references. Add. 2839 I, % AMA.

WANTED—PHYSICIAN, 25 YEARS OLD, desires position as traveling salesman for drug concern or physicians' supply house; can give good reference. Box 184, Hendersonville, N. C. I

WANTED—A POSITION AS AN ASSISTANT to an eye, ear, nose and throat specialist, by thoroughly competent man; graduate class A school, temperate, of good address and married, or will pay small sum for good location or buy a practice if cheap, but prefers a position; references furnished. Add. 2921 I, % AMA.

WANTED—POSITION AS ASSISTANT TO surgeon, house physician or contract work by experienced man; capable internist and therapeutist; Protestant; Mason; member county and state societies; healthy, optimistic; moderate salary leading to advancement; New Mexico or Arizona preferred; must bear investigation; references. Add. 2857 I, % AMA.

WANTED—POSITION AS WOMAN PHYSICIAN in state hospital for insane; experienced; charge of acute service in large institution making all mental and physical examinations for women and managing hydrotherapeutic department; also tubercular, inebriate, epileptic and general sick wards; best references and reasons for desiring change. Add. 2854 I, % AMA.

WANTED — LADY PHYSICIAN, HAVING great desire to travel, would like position as companion to lady traveling; nursed my mother, who was an invalid, for years; have a special regard for elderly ladies and would give my best attention and am sure could give satisfaction; references exchanged. Add. 2904 I, % AMA.

WANTED — POSITION WITH EYE OR ear, nose and throat specialist; single, aged 26, good habits; state full particulars in first letter. Add. 2903 I, % AMA.

WANTED—POSITION AS ASSISTANT TO bacteriologist, state or municipal government, or to professor of bacteriology; aged 31; energetic and capable; B.S. and M.D. degrees from A1 university; have had no experience in bacteriology, but can furnish names for reference as to my ability to learn quickly and do accurate work; will consider any salaried position in a large city, with hours off to devote to study of bacteriology; salary and particulars first letter. Add. 2863 I, % AMA.

WANTED—TO ASSOCIATE WITH SURGEON or general practitioner having large practice and needs a capable helper; salary or percentage basis, with view to partnership; graduate Rush, ex-intern Cook County Hospital, Chicago; 2 years' private practice; skilled in laboratory work and new treatment methods; sober, ambitious, reliable; middle west preferred. Add. 2816 I, % AMA.

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(Continued on next page)

## THE PUBLIC SERVICE

*(Continued from preceding page)*

on the subject of the prevention of summer diarrheas in children.

Boggess, J. S., P. A. surgeon, directed to proceed to Kansas City, Mo., and other points along the Missouri River to assist in the collection and study of data to determine the relation of the pollution of water-supplies to the spread of typhoid in interstate traffic.

Ebert, H. G., P. A. surgeon, directed to report to commanding officer, Marine Hospital, San Francisco, for duty and assignment to quarters.

Ashford, F. A., P. A. surgeon, relieved from duty at Ellis Island, N. Y., and directed to proceed to Montreal, Canada, for duty in the office of the inspector of immigration, in the medical examination of arriving aliens.

Warner, H. J., asst. surgeon, directed to report to commanding officer of the revenue-cutter *Itasca* for duty during the practice cruise of the cadets of the revenue-cutter service.

Hunt, Reid, professor of pharmacology, detailed to attend the meeting of the American Medical Association to be held in Atlantic City, June 3-7, 1912, and to represent the service in the Section on Pharmacology and Therapeutics.

Board of medical officers convened to meet at the bureau, on the call of the chairman, for the purpose of grading the examination papers of Assistant Surgeons A. J. Lanza and Robert Olesen, to determine their fitness for promotion to the grade of passed assistant surgeon. Detail for the board: Assistant Surgeon-General W. J. Pettus, chairman; Assistant Surgeon-General L. E. Cofer, member; Passed Assistant Surgeon L. L. Lumsden, recorder.

## Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

INVESTIGATIONS INTO THE JAIL DIETARIES OF THE UNITED PROVINCES. With Some Observations on the Influence of Dietary on the Physical Development and Well-Being of the People of the United Provinces. By Major D. McCay, M.B., M.R.C.P., I.M.S., Professor of Physiology, Medical College, Calcutta. Scientific Memoirs by Officers of the Medical and Sanitary Department of the Government of India, No. 48, New Series. Boards. Price, 3 shillings. Pp. 200. Calcutta, 1911.

A DICTIONARY OF MEDICAL DIAGNOSIS. A Treatise on the Signs and Symptoms Observed in Diseased Conditions. For the Use of Medical Practitioners and Students. By Henry Lawrence McKisack, M.D., M.R.C.P., Lond., Physician to the Royal Victoria Hospital, Belfast. Second Edition. Cloth. Price, $4.25 net. Pp. 590, with Illustrations. New York: William Wood and Company, 1912.

THE THEORY OF SCHIZOPHRENIC NEGATIVISM. By Prof. Dr. E. Bleuler, Professor of Psychiatry, University of Zurich. Translated by William A. White, M.D. Nervous and Mental Monograph Series No. 11. Paper. Price, $0.60. Pp. 36. New York: Journal of Nervous and Mental Diseases, 64 W. Fifty-Sixth Street, 1912.

PATHOLOGIE DES HERZENS Von A. Vogt, ö. Professor der allgemeinen Pathologie an der kaiserlichen Universität Moskau. Autorisierte Übersetzung aus dem Russischen, von Dr. Julius Schutz. Paper. Price, 8 marks. Pp. 168, with 20 Illustrations. Berlin: Julius Springer, 1912.

LARGE SCALE EXPERIMENTS ON THE PROCESSING OF JAPANESE PERSIMMONS, with Notes on the Preparation of the Dried Persimmons. By H. C. Gore, Assistant Chemist Division of Foods, U. S. Department of Agriculture, Bureau of Chemistry, Bulletin No. 155. 1912.

TROPENKRANKHEITEN UND TROPENHYGIENE. Von Prof. Dr. Reinhold Ruge, Marine-Generalarzt in Kiel und Dr. Max zur Verth. Leitfäden der Praktischen Medizin. Paper. Price, 13 marks, Pp. 463, with 209 Illustrations. Leipzig: Werner Klinkhardt, 1912.

A STANDARD TUBERCULOSIS CLINIC. Issued by the Association of Tuberculosis Clinics of New York City, 105 E. Twenty-Second Street. Paper.

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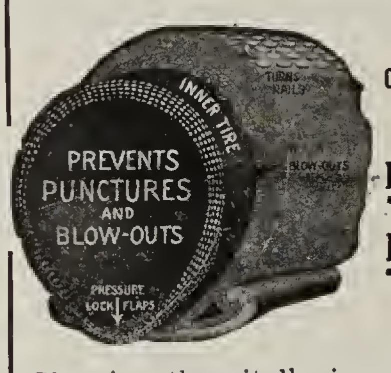

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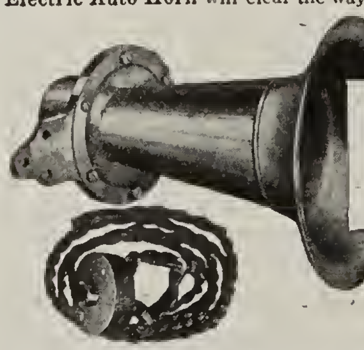

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*(Continued from preceding page)*

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FOR SALE — TERRE HAUTE INHALAtorium; cost $650; used only two months; good as new; price, $260, f.o.b. Denver; also, physician's American System Desk; cost $250; used but a short time; in fine condition; price, $110, f.o.b. Denver. Add. W. J. Burton, Administrator, 231 Sixteenth St., Denver, Colo. K

FOR SALE — A BARGAIN — COMPLETE set of surgical and other instruments, with electrical appliances, vibrator, battery, ready for use; office furniture, including $50 operating chair, manikin, etc.; some splendid medical books; drug stock, worth $200; death of doctor reason for selling; good location; one doctor. Box 275, Farnam, Neb. K

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## BOOKS WANTED AND FOR SALE

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FOR SALE — CALIFORNIA — TO PURchaser of my finely furnished 10-room house, in most beautiful city in southern California; growing rapidly; will give my $7,000 yearly cash practice; excellent reasons for selling; splendid opportunity for one wishing to specialize in nose, throat, etc., or tubercular conditions; $15,000 cash. Add. 2678 N, % AMA.

FOR SALE—CALIFORNIA — PRACTICE—Town 700; in rich farming section; just being subdivided; practice almost unopposed; collections $200 to $500 per month; am going to city; price, $750 (drugs and equipment). Add. 2833 N, % AMA.

FOR SALE—COLORADO — IN ONE OF the best growing railroad towns in state; 4,000 population; moderate competition; best location in town; several good appointments to transfer; practice mostly office work; practically no country driving; paid $3,200 cash last year; will do better this year; reason for selling, going to specialize; price, $750 for office fixtures and introduction. Add. 2872 N, % AMA.

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**Refined and Concentrated**

## THE NEW LEDERLE SYRINGE

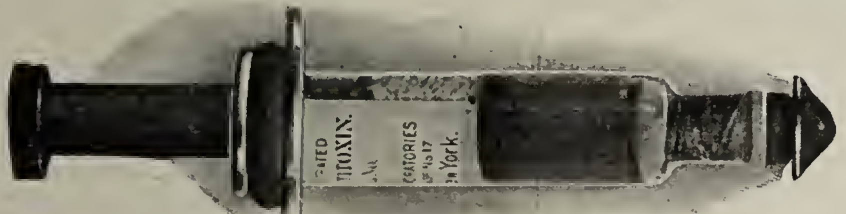

FIGURE 1 shows the syringe as the physician receives it

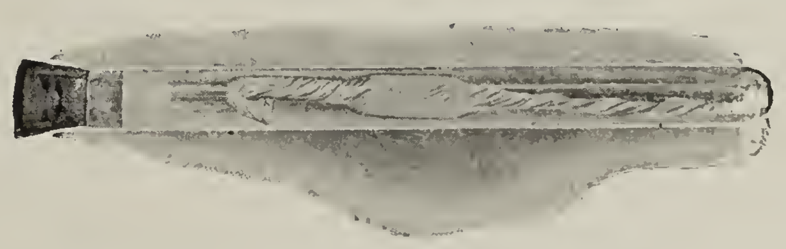

FIGURE 2 shows the needle wrapped and encased in a glass tube in which it has been sterilized

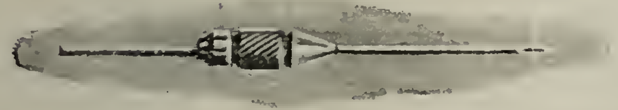

FIGURE 3 shows the needle with the paper wrapping removed

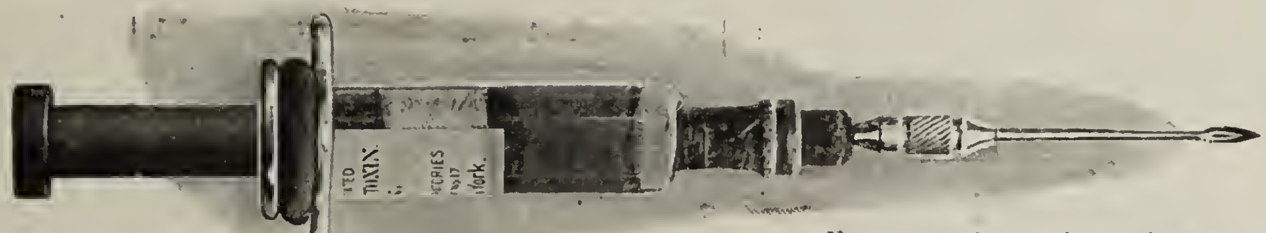

FIGURE 4 shows the syringe connected and ready for the operation

An accurately standardized product. Accurately measured into containers.

A product of the highest potency, supplied in the most convenient container, affording opportunity for absolute asepsis in the operation.

**Schieffelin & Co.,** **New York**

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## *Knocks and Boosts*

### WELL WORTH HAVING

While it is measurably true, perhaps, that the American people, as Barnum declared, like to be humbugged, it is not less true that the great majority of Americans, as of mankind generally, thoroughly enjoy the exposure of humbugs. For that reason "Nostrums and Quackery," an octavo of some 500 pages, should become a very pop-

*(Continued on next page)*

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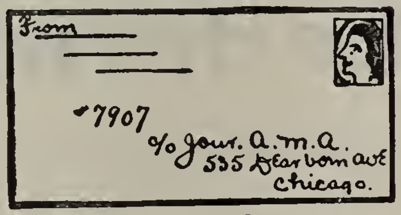

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For current issue, ad. must reach us by 4:30 p. m. Monday.

**Journal A.M.A., 535 Dearborn Ave., CHICAGO**

N. B.—We exclude from our columns all known questionable ads. and appreciate notification from our readers relative to any misrepresentation.

## APPARATUS WANTED

WANTED—SECOND-HAND X-RAY COIL. Lindstrom Smith Company, 218 S. Wabash Ave., Chicago. A

## ASSISTANTS WANTED

WANTED—A THOROUGHLY QUALIFIED woman physician to supply a vacancy on the medical staff of the Topeka (Kan.) State Hospital; apply directly to the superintendent; the position pays $900 per annum, with living in the hospital. B

WANTED — NURSE FOR SEVEN-BED hospital; some out-patient work; must have good personality, ability, character and training; willing to work; state age, weight, height, preliminary education, training and salary expected; send photo and references in first letter; monthly salary, $25 to $50, as per ability; board and room furnished. Add. Odebolt Hospital, Odebolt, Iowa. B

WANTED — A WELL-PAYING, HIGH-class tubercular sanatorium, situated in Colorado Springs and established for ten years, is desirous of obtaining the services of a physician who has had experience in tubercular work; straight salary or will sell an interest to the right party; will net about $10,000 a year. Add. 2900 B, % AMA.

*(Continued on next page)*

## KNOCKS AND BOOSTS

*(Continued from preceding page)*

ular volume. It contains a multiplicity of articles, reprinted from THE JOURNAL of the Association, and dealing with innumerable patent and proprietary medicines, cures and cure-alls, mail-order medical concerns, mechanical fakes, medical institutes—in a word, the whole round of nostrums and quack remedies by which unscrupulous humbugs exploit the gullibility of the American public. A single-volume encyclopedia of medical and medicinal frauds, it is well worth having within reach.—*The Ave Maria.*

—o—

### VALUABLE JOURNAL DOING GOOD

*To the Editor:*—Please accept my sincere thanks for your reply, through the columns of THE JOURNAL and by pamphlet, to my inquiry concerning Marjorie Hamilton's Obesity Cure. On reading the pamphlet my patient says, "These fake duffers will get no more money from me." Believe me, there is no part of your valuable journal that is doing more good than the department devoted to The Propaganda for Reform. Yours gratefully,

J. J. MUGAN, Langdon, N. D.

—o—

### COUNCIL WORK INESTIMABLE

*To the Editor:*—I wish to congratulate THE JOURNAL on its continued fight on wrong and its stand for right in all things medical. Especially do I wish to emphasize the work of the Council on Pharmacy and Chemistry for their work, which is simply inestimable. With best wishes and my unstinted praise of your good work, I am as ever, Yours for the profession,

C. F. WAHRER, Fort Madison, Iowa.

—o—

### PUT IT IN YOUR OFFICE

Send to the American Medical Association, 535 Dearborn Avenue, Chicago, and get a copy of "Nostrums and Quackery" and learn about guaranteed and infallible cures, hair dyes, eyes and other lies—well, just get the book and read it and then hang the thing up in your office so others can see and read it. —From a circular letter from its secretary to the members of the Titus County (Texas) Medical Society.

## *Jokes — New and Old*

### A FAMILY AFFAIR

When a Toronto man engaged a physician to attend his wife in her approaching confinement he was requested to send in for examination the usual sample of urine. A few evenings later he reappeared with a quart beer bottle full.

"I only wanted a small bottle, about two or three ounces," said the physician on beholding the large bottle.

"Well, I thought I would bring you enough. Can you examine it now?"

"Yes."

A little later: "Is it all right?"

"Yes."

"No Bright's disease?"

"No. It's all right."

"Can I use your telephone to phone my wife?"

"Yes."

"Hullo! Is that you, Rebecca?"

"———"

"You're all right."

"———"

"I'm all right, too. Ikey's all right. Jakey's all right. Rachel's all right."

The physician sighed as the mystery of the full bottle was laid bare.

—o—

### WORTH EVERY CENT OF IT

"Didn't that man complain when you charged him for a broken appointment?"

"No," replied the dentist; "he said breaking an appointment with me was worth every cent it cost."—*Washington Star.*

—o—

### HIS FEARS REALIZED

Calhoun Clay was a waiter at a seaside restaurant. The white glare of the sun-drenched beach injured his eyes and he had to consult an oculist. The oculist fitted him out with spectacles, and, as he left the shop

*(Continued on next page)*

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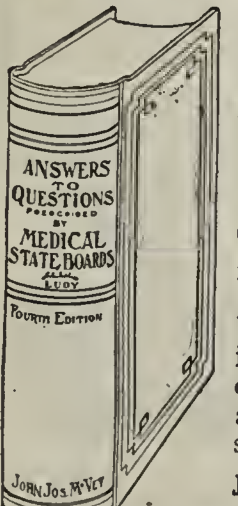
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*(Continued from preceding page)*

WANTED—THERE IS A POSITION AS assistant physician open in the tuberculosis department, Essex County Isolation Hospital, Belleville, N. J.; salary, $50 per month, with maintenance; agreeable surroundings; thirty-five minutes from New York; applicants must be non-tuberculous; interesting and instructive work for right man. Apply William J. Douglas, M.D., Superintendent. B

WANTED—IN CONNECTICUT—ASSISTANT for country practice; must be registered, sober and well recommended, understand horses and able to talk French; adv. will not appear again; full particulars first letter. Add. 2954 B, % AMA.

WANTED—ASSISTANT (WOMAN PREFERRED) in private laboratory of general practitioner, New York City; mostly serum work; some vaccine and blood; previous training necessary; must be efficient, reliable and permanent; give full particulars and salary. Add. 2950 B, % AMA.

### LOCATIONS WANTED

WANTED—LOCATION IN GOOD GROWING West Virginia town by married graduate of A1 college, with several years' experience in large general work; must bear close investigation and promise good returns. Add. 2962 E, % AMA.

WANTED — WELL-ESTABLISHED, PAYING practice in Pennsylvania; no real estate; must bear strict investigation; will go anywhere, but small town preferred; state full particulars in first letter; would like to close deal before July 1; have had five years' experience in general practice. Add. 2743 E, % AMA.

WANTED — LOCATION, PRACTICE OR partnership by eye, ear, nose and throat specialist; graduate of leading college, with 10 years' experience in special work, including year's internship as resident surgeon of large eastern eye hospital, and postgraduate courses in Harvard, London and Berlin; only first-class practice will be considered; give full particulars in first letter. Add. 2948 E, % AMA.

WANTED — TO BUY AN ESTABLISHED eye, ear, nose and throat practice in city of not less than 10,000, or will give $50 to any doctor, druggist or other person who will inform me of some such suitable location as soon as accepted. Add. 2855 E, % AMA.

WANTED — LOCATION IN WISCONSIN with or without real estate; must be a good location and bear close investigation; give full details in first letter; can come any time. Add. 2858 E, % AMA.

WANTED—SURGICAL, GYNECOLOGICAL or general practice offering good opportunity for surgery or paying sanitarium, hospital; opening must be first-class city; I am collecting $20,000 annually in a good little city, but feel that I could do much better in first-class field; will buy all or part. Add. 2890 E, % AMA.

### LOCUM TENENS WANTED

WANTED — A GOOD M.D. TO TAKE charge of my practice for eight months; will pay from $100 to $175, depending on personality of man; prefer homeopath; Kansas. Add. 2968 F, % AMA.

WANTED — PHYSICIAN TO TAKE EYE, ear, nose and throat practice for about nine months; going to Vienna; a fair working knowledge of specialty required; can include general practice; one willing to form partnership preferred; give full particulars in first letter. Add. 2746 F, % AMA.

### PARTNERS WANTED

WANTED—AN ENERGETIC YOUNG MAN who wishes to specialize, with some cash to buy an interest in $7,000 a year eye, ear, nose and throat practice; established 12 years; in south Georgia town of 5,000, with half dozen good towns near by; practice gets larger every year; I need a partner or assistant; good opportunity for right man; I prefer young man who has just graduated, wishing to specialize; best reference given and required. Add. 2923 G, % AMA.

*(Continued on next page)*

### JOKES—NEW AND OLD

*(Continued from preceding page)*

with the spectacles on his nose, he gave a great start and halted before a huge and extraordinary machine.

Calhoun stared in awe at this machine for some time. Then he said:

"What's dat, boss?"

"That," said the oculist solemnly, "is an ophthalmometer."

"Sho," muttered Calhoun, and he backed further away, his eyes still fixed on the formidable instrument. "Sho, dat's what Ah wuz afeared it wuz."—*Philadelphia Ledger.*

—o—

HER TWO COMPLAINTS

Edward, the colored butler of a lady in Washington, had recommended his mother for the position of cook, but when the applicant came the lady noticed that she was not very strong-looking.

"Do you suppose you will be able to do the work, Auntie? You don't look very healthy."

"Yes, ma'am, I is able; I ain't nuvver been no ways sickly in my life—ain't nuvver had nuthin' but smallpox an' Edward."—*Lippincott's.*

## *The Public Service*

### Medical Department, U. S. Army

Changes during the week ended June 8:

Scovel, John W., acting dental surgeon, May 28, reports for duty at Letterman General Hospital, San Francisco.

Feely, James F., acting dental surgeon, May 27, left from temporary duty at Fort Washington, Md., en route to Fort Totten, N. Y., for same duty.

Truby, Albert E., major, May 29, granted thirty days' leave of absence, about June 25.

Foster, George B., Jr., lieut., May 29, granted leave of absence for one month and fourteen days, about September 1.

Raymond, Henry I., lieut.-col., May 29, relieved from duty in the Philippines division, about September 15, and ordered to proceed to Schofield Barracks, H. T., for duty at that post.

Mitchell, Leopold, M.R.C., June 3, 1912, ordered to Washington Barracks, D. C., for temporary duty during the absence of Major Charles R. Reynolds, and on completion thereof to proceed to Fort Lawton, Wash., for duty.

By par. 22, Special Orders No. 130, War Department, June 3, 1912, each of the following named first lieutenants of the Medical Reserve Corps, having completed the course of instruction at the Army Medical School in this city, will proceed to the station specified after his name for duty: Harry H. Blodgett, Fort Meade, S. Dak.; Thomas W. Burnett, Fort Casey, Wash.; Morris H. Boerner, Fort Sam Houston, Tex.; Charles R. Castlen, Fort Worden, Wash.; Phillip B. Connolly, Fort McPherson, Ga.; Michael A. Dailey, Fort Sheridan, Ill.; Howard L. Hull, Fort Howard, Md.; Robert M. Hardaway, Fort Lawton, Wash.; Thomas E. Harwood, Jr., Fort Caswell, N. C.; William E. Hall, Fort Winfield Scott, Cal.; John G. Ingold, Fort Missoula, Mont.; Frederick C. A. Kellam, Jr., Fort Clark, Tex.; Harry R. McKellar, Vancouver Barracks, Wash.; Shelley U. Marietta, presidio of Monterey, Cal.; William B. Meister, Fort Benjamin Harrison, Ind.; Alvin C. Miller, Fort George Wright, Wash.; Guy L. Qualls, Fort Lincoln, N. Dak.; Thomas E. Scott, Fort Niagara, N. Y.; Robert Skelton, Fort Robinson, Neb.; Leeson O. Tarleton, Vancouver Barracks, Wash.; John H. Trinder, Fort Omaha, Neb.; Harry H. Van Kirk, Plattsburg Barracks, N. Y.; Charles M. Walson, Fort Douglas, Utah; Adna G. Wilde, Fort Flagler, Wash.; Neal N. Wood, presidio of San Francisco; James E. Baylis and John W. Sherwood, Fort D. A. Russell, for duty with ambulance Co. No. 1.; Kerwin W. Kinard and Alfred P. Upshur, Walter Reed General Hospital, D. C., for duty with Field Hospital No. 3; Douglas W. McEnery, Fort Logan, Colo., for temporary duty; Hew B. McMurdo, Fort McDowell, Cal., for temporary duty; John W. Meehan, Fort Slocum, N. Y., for temporary duty; Samuel J. Turnbul, Fort Leavenworth, Kan., for duty with Ambulance Co. No. 2; Johnson F. Hammond, presidio of San Francisco, for duty with Ambulance Co. No. 2.

Quade, Omar H., M.R.C., having completed the course of instruction at the army med-

*(Continued on next page)*

**Gifford School**

Mentally Undeveloped or Nervous Children specially trained by most approved methods. Year-round sunshine, fresh air and wholesome diet.

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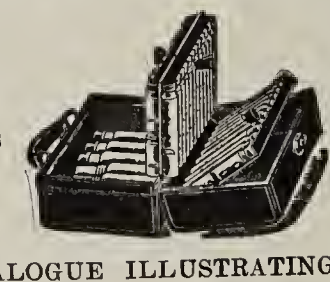

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MAKERS

**48 Wabash Ave. Chicago**

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using an interrupterless machine or heavy coil, we recommend

**TUNGSTEN TARGET TUBES**

with unburnable focus point. Shipments made immediately on receipt of order.

**JNO. V. DOEHREN CO.**

*The X-Ray House*

**117 N. Dearborn Street, Chicago, U.S.A.**

*(Continued from preceding page)*

### SITUATIONS WANTED

WANTED—SITUATION—AS SPECIAL detailist of thoroughly ethical specialty or specialties; have personal acquaintance with all prominent physicians in southwest, particularly New Orleans, Mobile and Memphis; highest references as to ability and results obtained; graduate. Add. 2933 I, % AMA.

WANTED—POSITION AS SUPERINTENDent of hospital, by a woman physician who is also a trained nurse; experienced, executive ability, capable of taking full charge and managing all departments; can furnish excellent testimonials. Add. 2913 I, % AMA.

WANTED—A POSITION AS AN ASSISTant to an eye, ear, nose and throat specialist, by thoroughly competent man; graduate class A school, temperate, of good address and married, or will pay small sum for good location or buy a practice if cheap, but prefers a position; references furnished. Add. 2921 I, % AMA.

WANTED—POSITION AS ASSISTANT TO surgeon, house physician or contract work by experienced man; capable internist and therapeutist; Protestant; Mason; member county and state societies; healthy, optimistic; moderate salary leading to advancement; New Mexico or Arizona preferred; must bear investigation; references. Add. 2857 I, % AMA.

WANTED—POSITION AS WOMAN PHYsician in state hospital for insane; experienced; charge of acute service in large institution making all mental and physical examinations for women and managing hydrotherapeutic department; also tubercular, inebriate, epileptic and general sick wards; best references and reasons for desiring change. Add. 2854 I, % AMA.

WANTED—WITHIN CONVENIENT MOtoring distance of Boston, position with physician of good professional ideals and standing; want compensation enough to meet moderate expense account and opportunity to take certain postgraduate courses, beginning September; I am a practicing physician in Colorado and professionally well connected. Add. 2928 I, % AMA.

WANTED—POSITION AS LOCUM TENens or assistant in private or institutional practice, by 1910 graduate of A1 college; have had one year's hospital service and one year's assistantship in mining practice; aged 28, single; will go anywhere, but prefer Iowa; reciprocity in 22 states. Add. 2898 I, % AMA.

WANTED — SITUATION AS LABORAtory or hospital assistant; recent graduate of an A1 school; one year hospital experience; three months' private practice; good laboratory training; single, excellent habits; best references; prefer middle west; give particulars in first letter. Add. 2964 I, % AMA.

WANTED—LADY PHYSICIAN, HAVING great desire to travel, would like position as companion to lady traveling; nursed my mother, who was an invalid, for years; have a special regard for elderly ladies and would give my best attention and am sure could give satisfaction; references exchanged. Add. 2904 I, % AMA.

WANTED—POSITION AS ASSISTANT TO bacteriologist, state or municipal government, or to professor of bacteriology; aged 31; energetic and capable; B.S. and M.D. degrees from A1 university; have had no experience in bacteriology, but can furnish names for reference as to my ability to learn quickly and do accurate work; will consider any salaried position in a large city, with hours off to devote to study of bacteriology; salary and particulars first letter. Add. 2863 I, % AMA.

WANTED — EXPERIENCED SURGEON, speaking both German and Spanish, desires position as surgeon for railroad or mining corporation; single, aged 33; graduate of Rush, 1903; now in government service; have executive ability; fully competent to take entire charge of both medical and surgical work and experienced in hospital management; highest references. Add. 2958 I, % AMA.

*(Continued on next page)*

## THE PUBLIC SERVICE

(Continued from preceding page)

ical school, will proceed on June 10, 1912, to Fort Snelling, Minn., for duty.

Haig, Chester R., M.R.C., having completed the course of instruction at the army medical school in this city will report to the surgeon-general of the army for assignment to temporary duty as assistant to the attending surgeon in this city.

Feely, James F., acting dental surgeon, May 31, reported for temporary duty at Fort Totten, N. Y.

Knoderer, Arthur T., acting dental surgeon, June 1, reported for duty at Fort Oglethorpe, Ga.

Leary, Thomas J., first lieut., June 4, ordered to proceed from his home to the Walter Reed General Hospital, D. C., for duty, relieving First Lieut. John R. McKnight. Lieutenant McKnight on being thus relieved will proceed to Fort Andrews, Mass., for duty, relieving Capt. Hiram A. Phillips. Captain Phillips on being thus relieved wil proceed to Fort McIntosh, Tex., for duty.

Wertenbaker, C. I., M.R.C., May 29, orders directing him to accompany the 16th infantry from Alaska to their destination in the United States is revoked.

Harris, Jesse R., captain, May 29, ordered to accompany the 16th infantry from Alaska to their destination in the United States; then to report to the adjutant-general of the army for further orders.

Squires, William A., acting dental surgeon, June 1, reports for duty at Fort D. A. Russell, Wyo.

Dunbar, Leo R., lieut., June 4, granted thirty days' leave of absence.

Jueneman, George F., captain, June 4, granted two months and fourteen days' leave of absence.

Boyer, Perry L., Phelan, James M., and Tasker, Arthur N., June 4, ordered to report on August 28 at West Point, N. Y., for temporary duty until Nov. 12, 1912.

Sheep, William L., lieut., June 4, ordered to report, on August 28, at West Point, N. Y., for temporary duty until Oct. 10.

Stone, Frank P., dental surgeon, June 3, granted thirty days' leave of absence.

White, Albert, acting dental surgeon, June 3, reported for duty at Fort Des Moines, Iowa.

Stone, Frank P., dental surgeon, June 5, left from temporary duty at Fort Screven, Ga., en route to station, Fort Barrancas, Fla.

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### U. S. P. H. and M.-H. Service

Changes for the seven days ended May 29:

Cofer, L. E., assistant surgeon-general, directed to proceed to Arundel Cove, Baltimore, to confer with the revenue-cutter officers relative to repairs on the bark *Chase*, destined for use at the Cape Charles quarantine station.

Kerr, J. W., assistant surgeon-general, detailed to represent the service in the House of Delegates of the American Medical Association, in Atlantic City, June 3-7.

Rucker, W. C., assistant surgeon-general, detailed to represent the service in the Section on Preventive Medicine and Public Health at the annual meeting of the American Medical Association, at Atlantic City, June 4-7.

Goldberger, J., P. A. surgeon, detailed to represent the service in the Section on Preventive Medicine and Public Health at the annual meeting of the American Medical Association, at Atlantic City, June 3-7.

Earle, B. H., P. A. surgeon, directed to take charge of the marine hospital station at Port Townsend, Wash., in addition to his present duties.

Warren, B. S., P. A. surgeon, relieved from further duty in the hygienic laboratory and directed to report to the bureau for temporary duty.

Creel, R. H., P. A. surgeon, relieved from further duty at the Ellis Island immigration station, about June 5, 1912, and directed to proceed to Providence, R. I., and assume the functions of quarantine officer for that port.

Roberts, Norman, P. A. surgeon, directed to accompany the steamer *Bratton* on her trip to Norfolk, Va., for the purpose of continuing the experiments of the Harker disinfecting apparatus recently installed on board that vessel.

Hotchkiss, S. C., assistant surgeon, directed to proceed to Birmingham, Ala., at the request of the director of the bureau of mines, on or about June 1, 1912, to make an examination of the sanitation of mines and housing and sanitary conditions in mining camps; also to attend the annual

(Continued on next page)

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(Continued from preceding page)

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WANTED—SITUATION—A WOMAN PHYsician of good address, 28 years of age, graduate from one of the best eastern medical colleges, desires a salaried position as assistant to a physician or in a hospital or sanitarium; experience in hospital and private practice; licensed in Illinois; state salary and particulars in first letter. Add. 2844 I, % AMA.

WANTED — ASSISTANTSHIP OR PARTnership to a surgeon or general practitioner doing surgery, by a university and medical graduate of A1 schools; one year laboratory experience; two years' internship in a large Chicago hospital; three years in general practice and surgery; prefer city of 20,000 or more. Add. 2797 I, % AMA.

WANTED—POSITION AS ASSISTANT TO eye, ear, nose and throat or ear, nose and throat man in Chicago; am experienced in fitting, adjusting and mounting glasses; graduate of homeopathic and regular medical colleges; have done four months' hospital work and given over 200 anesthetics; will call at your convenience. Add. 2957 I, % AMA.

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FOR SALE—COLORADO — IN ONE OF the best growing railroad towns in state; 4,000 population; moderate competition; best location in town; several good appointments to transfer; practice mostly office work; practically no country driving; paid $3,200 cash last year; will do better this year; reason for selling, going to specialize; price, $750 for office fixtures and introduction. Add 2872 N, % AMA.

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(Continued on next page)

## THE PUBLIC SERVICE

*(Continued from preceding page)*

meeting of the Alabama Coal Operators Association, to be held in Birmingham, June 11, 1912.

Slamberg, N. L. A. K., acting assistant surgeon, granted thirty days' leave of absence from May 26, 1912.

Warner, H. J., assistant surgeon, commissioned a passed assistant surgeon, to rank as such from April 4, 1912.

Dr. Charles L. Williams and Dr. Howard A. Knox, commissioned assistant surgeons.

## Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

PSYCHOTHERAPY. Including the History of the Use of Mental Influence, Directly and Indirectly, in Healing and the Principles for the Application of Energies Derived from the Mind to the Treatment of Disease. By James J. Walsh, M.D., Ph.D., Dean and Professor of Functional Nervous Diseases and of the History of Medicine at Fordham University School of Medicine. Cloth. Price, $6. Pp. 806, with Illustrations. New York: D. Appleton & Company, 1912.

QUAIN'S ELEMENTS OF ANATOMY. Edited by Edward Albert Schäfer, LL.D., Sc.D., M.D., F.R.S., Professor of Physiology and Histology in the University of Edinburgh, and Others. Eleventh Edition. Volume 2, Part 1, Microscopic Anatomy, by E. A. Schäfer. Cloth. Price. 25 shillings. Pp. 739, with 1022 Illustrations. New York: Longmans, Green & Company, 1912.

MASSAGE AND THE ORIGINAL SWEDISH MOVEMENTS. Their Application to Various Diseases of the Body. Lectures Before the Training School for Nurses Connected with the Hospital of the University of Pennsylvania. By Kurre W. Ostrom. Seventh Edition. Cloth. Price, $1 net. Pp. 202, with 115 Illustrations. Philadelphia: P. Blakiston's Son & Company, 1912.

DIAGNOSTIC METHODS: Chemical, Bacteriological and Microscopical. A Text-Book for Students and Practitioners. By Ralph W. Webster, M.D., Ph.D., Assistant Professor of Pharmacological Therapeutics, Rush Medical College. Second Edition. Cloth. Price, $4.50 net. Pp. 682, with 201 Illustrations. Philadelphia: P. Blakiston's Son & Company, 1912.

THE HEALTHY BABY. The Care and Feeding of Infants in Sickness and in Health. By Roger H. Dennett, M.D., Instructor in Diseases of Children in the New York Post-Graduate Medical School. Cloth. Price, $1 net. Pp. 235. New York: The Macmillan Company, 1912.

EPIDEMIC DROPSY IN CALCUTTA. By Major E. D. Greig, M.D., D.Sc., I.M.S. Scientific Memoirs of the Medical and Sanitary Departments of the Government of India, No. 49, New Series. Paper. Price 2 shilling 6 pence. Pp. 79 with Illustrations. Calcutta, 1912.

WHO'S WHO IN AMERICA. A Biographical Dictionary of Notable Living Men and Women of the United States. Edited by Albert Nelson Marquis. Volume 7, 1912-1913. Cloth. Price, $5 net. Pp. 2640. Chicago: A. N. Marquis and Company.

THE INFLUENCE OF CAFFEIN ON MENTAL AND MOTOR EFFICIENCY. By H. L. Hollingworth, Ph.D., Instructor in Psychology, Barnard College, Columbia University. Cloth. Price, $1.75. Pp. 167. New York: Archives of Psychology, 1912.

DIE CHIRURGISCHEN UNTERSUCHUNGS-METHODEN. Lehrbuch für Studierende und Ärzte. Von Prof. Dr. Hubert Gebele. Paper. Price, 8 marks. Pp. 192, with 198 Illustrations. Munich: J. F. Lehmanns, 1912.

LUCE'S DIRECTORY OF DAILY NEWSPAPERS. Arranged to Aid Especially in the Placing of Advertisements. Paper. Pp. 142. Luce's Bureau, New York, 66 Park Place, 1912.

A PLAN OF EXAMINATION OF EMPLOYEES FOR TUBERCULOSIS. By Theodore B. Sachs, M.D. Published by the Committee on Fac-

*(Continued on next page)*

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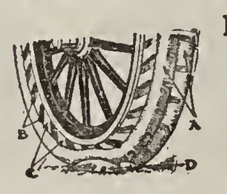

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FOR SALE—CENTRAL ILLINOIS—$4,000 practice in town of 300; no competition; collections 95 per cent.; fine large territory in rich farming community; $550 cash for office fixtures, fine x-ray machine, large stock of drugs and introduction to practice; my residence and office optional at $1,650 on easy terms; going west; unless you mean business, have the money and can come at once, don't answer. Add. 2966 N, % AMA.

FOR SALE—ILLINOIS—PRACTICE AND neat drug store in town 50 miles from Chicago; three railroads, city water, electric lights, large territory, rich community; good pay; competition easy; can make $4,000 first year; drug stock clean, well assorted and adapted to this community; terms, $600 cash, $700 time; building rented; have insurance and railroad appointments transferable; reason, health. Add. 2934 N, % AMA.

FOR SALE—EASTERN INDIANA—$3,000 practice, 9-room residence, 2-room office, good barn, 2 lots, on C. & O. R. R.; price, $2,500; part cash; balance time. Add. J. A. Kramer, M.D., Blountsville, Ind. N

FOR SALE—IOWA—$2,500 PRACTICE IN 2,000 Iowa town; established 30 years; good pay; fine well-settled country; mixed nationality; ideal town to live; fine water system; electric lights; public hot-water heating system; sanitary sewer; good schools and churches; bears inspection; price, invoice of office outfit, about $600; mostly medicines. Add. M. R. Karterman, M.D., Ida Grove, Iowa. N

FOR SALE—IOWA—HAVE PROPOSITION that would make competent medical man independent in three years in nice railroad town of 700 in Iowa; within 10 miles of one of Iowa's best educational institutions; $1,500 cash required. Add. 2971 N, % AMA.

FOR SALE—EASTERN IOWA — UNOPPOSED well-established village and country practice; rich Germans; large territory; collections 100 per cent.; money from start; will turn over practice to purchaser of driving outfit and small drug stock; am going to take postgraduate work and locate in city; this will appear but once. Add. 2960 N, % AMA.

FOR SALE—IOWA—$3,500 UNOPPOSED general practice; town 300; rich farming community; nearest M.D., 7 to 20 miles; no competition; new modern home, garage, office fixtures, etc., for $3,200; less than cost of house alone; this will stand investigation; terms reasonable; other information on request; reason, wish to specialize. Add. 2841 N, % AMA.

FOR SALE—NORTHERN IOWA—UNOPPOSED $3,500 to $4,500 practice; good town, fine country, largely English-speaking Germans; good stock drugs, office equipment and furniture, except library and instruments, with practice, for $650; collections 95 to 98 per cent.; large territory; sure money maker from start; can introduce; reason, other business. Add. 2943 N, % AMA.

FOR SALE—NORTHERN IOWA—A $2,000 practice established 20 years and residence; 10 rooms; town of 450; no better farming district in Iowa; for value of property, $3,000; people mostly German Catholics; fine chance for German Catholic doctor; wish to retire. Add. with stamp, 2710 N, % AMA.

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*(Continued on next page)*

## BOOKS RECEIVED

*(Continued from preceding page)*

tories of the Chicago Tuberculosis Institute, Otis Building, Chicago. Paper. 1912.

SEWAGE DISPOSAL. By George W. Fuller, Consulting Engineer. Cloth. Price, $6 net. Pp. 767, with Illustrations. New York: McCraw-Hill Book Company, 239 W. Thirty-Ninth Street, 1912.

CENTRAL INDIANA HOSPITAL FOR THE INSANE, INDIANAPOLIS. Report of the Pathological and Clinical Psychiatry Departments, 1909-1911. Volume 4. Cloth. Pp. 344, with Illustrations.

DISPENSARY CONTROL OF TUBERCULOSIS. Fourth Annual Report of the Association of Tuberculosis Clinics of New York City, 105 E. Twenty-Second Street, 1911. Paper.

EXAMINATION OF EMPLOYEES FOR TUBERCULOSIS. Published by the Committee on Factories of the Chicago Tuberculosis Institute, Otis Building, Room 1351. Paper.

DIE KARLSBADER KUR IM HAUSE. Ihre Indikationen und ihre Technik. Von Dr. Oscar Simon. Paper. Price, 2.40 marks. Pp. 85. Berlin: Julius Springer, 1912.

HENRY PHIPPS INSTITUTE FOR THE STUDY, TREATMENT AND PREVENTION OF TUBERCULOSIS. Sixth Annual Report, 1908-1910. Paper.

## *New Patents*

| | |
|---|---|
| 1,012,980 | Artificial palate. Truman W. Brophy, Chicago. |
| 1,012,653 | Massage brush. Burton D. Knickerbocker, Chicago. |
| 1,012,700 | Syringe. Joseph Payne, Melrose, Mass. |
| 1,012,923 | Pharmaceutical product. Walter Schoeller, Charlottenburg, and W. Schrauth, Berlin-Malensee, Germany. |
| 1,013,079 | Face bandage. Lucius A. Smith, Kansas City, Mo. |
| 1,012,788 | Medicinal composition containing oil. Otto K. Zwingenberger, New York. |
| 1,013,097 | Physical exerciser, straightener and heightener. Thomas M. Allan, Toronto, Ont., Canada. |
| 1,013,722 | Air-purifying inhaler attachment. Samuel Banta and B. L. Stowe, Jersey City, N. J. |
| 1,013,541 | Breathing attachment. Henry A. Fleuss, Thatcham, and R. H. Davis, London, England. |
| 1,013,782 | Mechanical vibrator. John Koch, New York. |
| 1,013,791 | Making hydrogen peroxid from impure persulfuric acid solutions. Leo Lowenstein, Vienna, Austria-Hungary. |
| 1,013,514 | Poison receptacle. Frank P. Rand, Spokane, Wash. |
| 1,013,824 | Massage machine. Willis G. Shockey, Chicago. |
| 1,013,715 | Receptacle for bandage rolls, gauze and cotton wool. Eloy C. Yuste and F. Del Collado, Mexico, Mexico. |
| 1,013,924 | Surgical appliance. Albert Bitterlick, Cassel, Germany. |
| 1,014,228 | Syringe. John F. Kellogg, Guthrie, Okla. |
| 1,014,076 | Nasal expander. Franz M. McConnell, Longview, Tex. |
| 1,014,607 | Nozzle for water bags. Ernest Over, Portland, Ore. |
| 1,014,608 | Syringe. Nicola Pernice, Atlantic City, N. J. |
| 1,013,900 | Surgical belt or device for the treatment of movable kidneys and other like purposes. Edward W. Salt, Birmingham, England. |
| 1,013,913 | Iodin solution. John Wemer, New York. |
| 1,014,198 | Non-toxic suprarenal preparation. Georg Zuelzer, Berlin-Charlottenburg, Germany. |
| 1,014,799 | Surgical instrument. Richard S. Arthur, Newark, N. J. |
| 1,015,163 | Localizing stethoscope. Daniel O. Fosgate, Chicago. |
| 1,015,187 | X-ray operating table. Edwin W. Kelly, Philadelphia. |
| 1,014,758 | Nostril-expanding device. Annie Knowlson, Ann Arbor, Mich. |
| 1,015,046 | Cuspidor. Henry C. Lovis, New York. |
| 1,014,837 | Venereal bag. William H. Merrill, St. Louis. |
| 1,015,276 | Hypodermic and similar syringe. John A. Rowse, Newquay, England. |
| 1,015,253 | Medicating dilator. Theodore Weaver and D. M. Ennis, Cleveland. |

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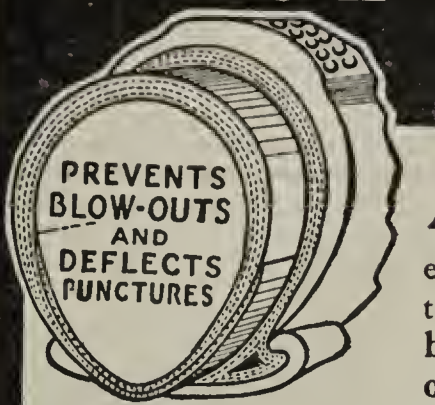

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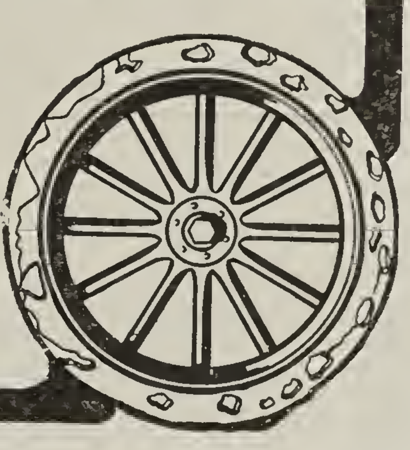

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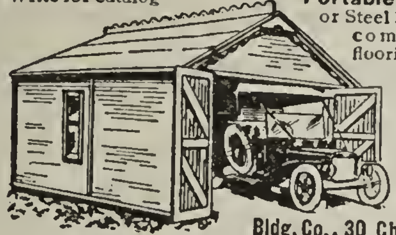

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*(Continued from preceding page)*

FOR SALE—IOWA—BEAUTIFUL MODern home producing cash income of $137 per month; best part of city; $25,000,000 water power under construction; $6,000 practice; will sell on easy terms to reliable physician. Dr. W. Frank Brown, 318 N. Fifth St., Keokuk, Ia. N

FOR SALE — NORTH CENTRAL IOWA—$3,500 unopposed practice in town of 275; large territory; 6-room house, barn, garage, stock of drugs and office fixtures; price $1,800; a snap; property worth more; reason, poor health; two automobiles, buggies, horses, etc., optional; no triflers. Add. 2927 N, % AMA.

FOR SALE—IOWA—$4,000 PRACTICE IN good German town of 2,000; rich farming community; competition light; money from start; collections 98 per cent.; a German-Catholic preferred, and one who can do some surgery can increase practice to a great extent; $900 cash; that is about office invoice; will give introduction; reason, wish to specialize. Add. 2926 N, % AMA.

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. Apply a loose wet boric acid pack.
5. **Inject subcutaneously 1500 units antitetanic serum.**
"6. In no case should the wound be closed; it should be allowed to heal by lation. The dressing and packing should be removed every day."—Ed., *.M.A.*, 1909, vol. ii, page 954.

**"Tetanus Antitoxin is effective** * * * * * This agency is no longer 'of doubtful value' or 'in the experimental stage;' indeed, in our belief, this has now been so well demonstrated that the physician neglecting its use would be held legally negligent in the event of any suit."—Ed., *Boston Med. and Surg. Jour.*, 1910, vol. i, page 684.

## Intravenous Administration of Antitoxin in the Treatment of Diphtheria and Tetanus

Dr. Wm. H. Park of New York, in a lecture delivered before Harvard Medical School, March 13, 1912, states that the amount of antitoxin in the blood during the first day after its intravenous injection is far greater than after subcutaneous injection (at end of 24 hours 20 units by subcutaneous, 72 units by the intravenous injection).

The intravenous method is imperative in tetanus—not to use it is in Park's opinion almost criminal. Park "advises surgeons to keep antitoxin on hand and at the very first sign of tetanus—without waiting for certainty of diagnosis—to inject at once intravenously 20,000 units. This will save many that would otherwise die. In continuing rigidity Park advises injection every 12 hours for several days."

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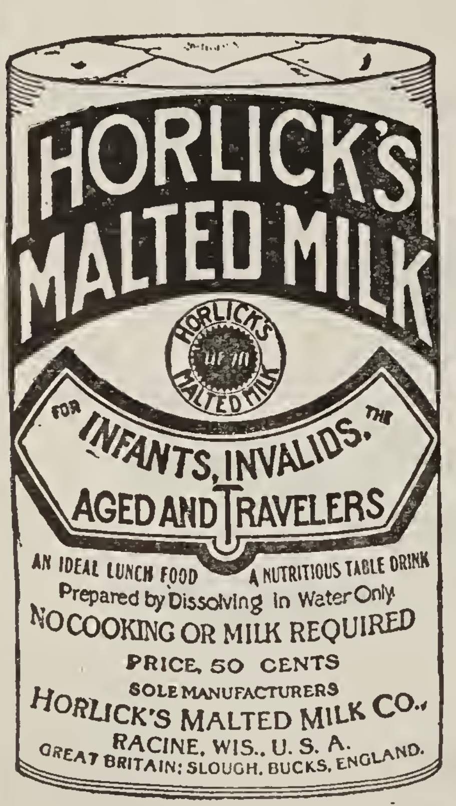

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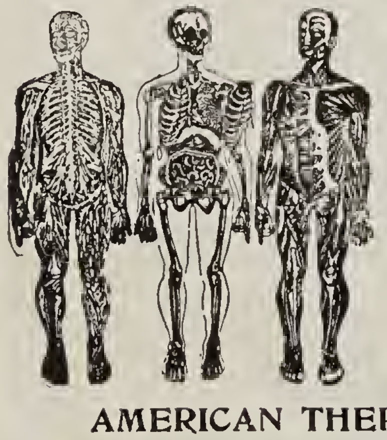

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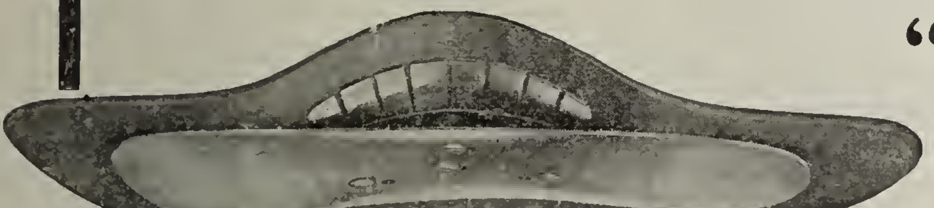

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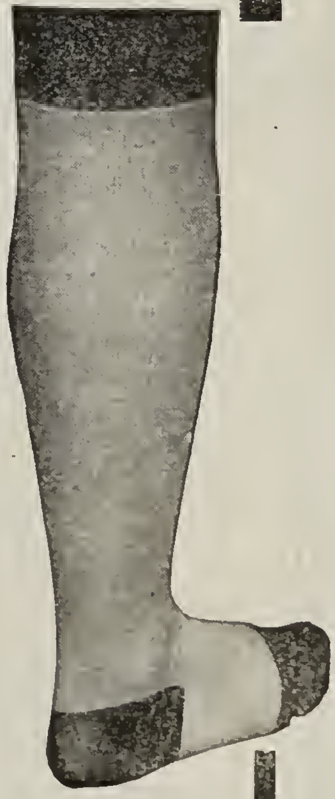

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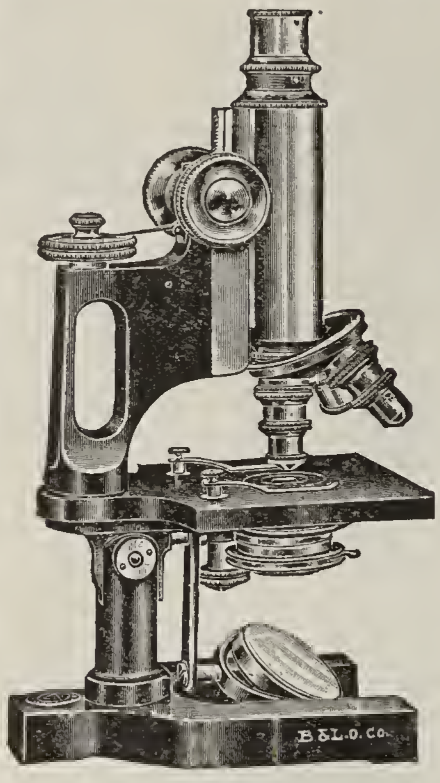

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*(Continued on page 22)*

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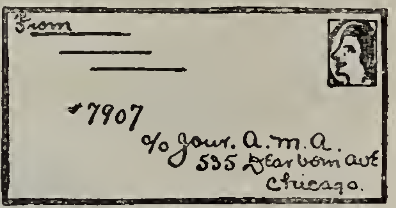

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## ASSISTANTS WANTED

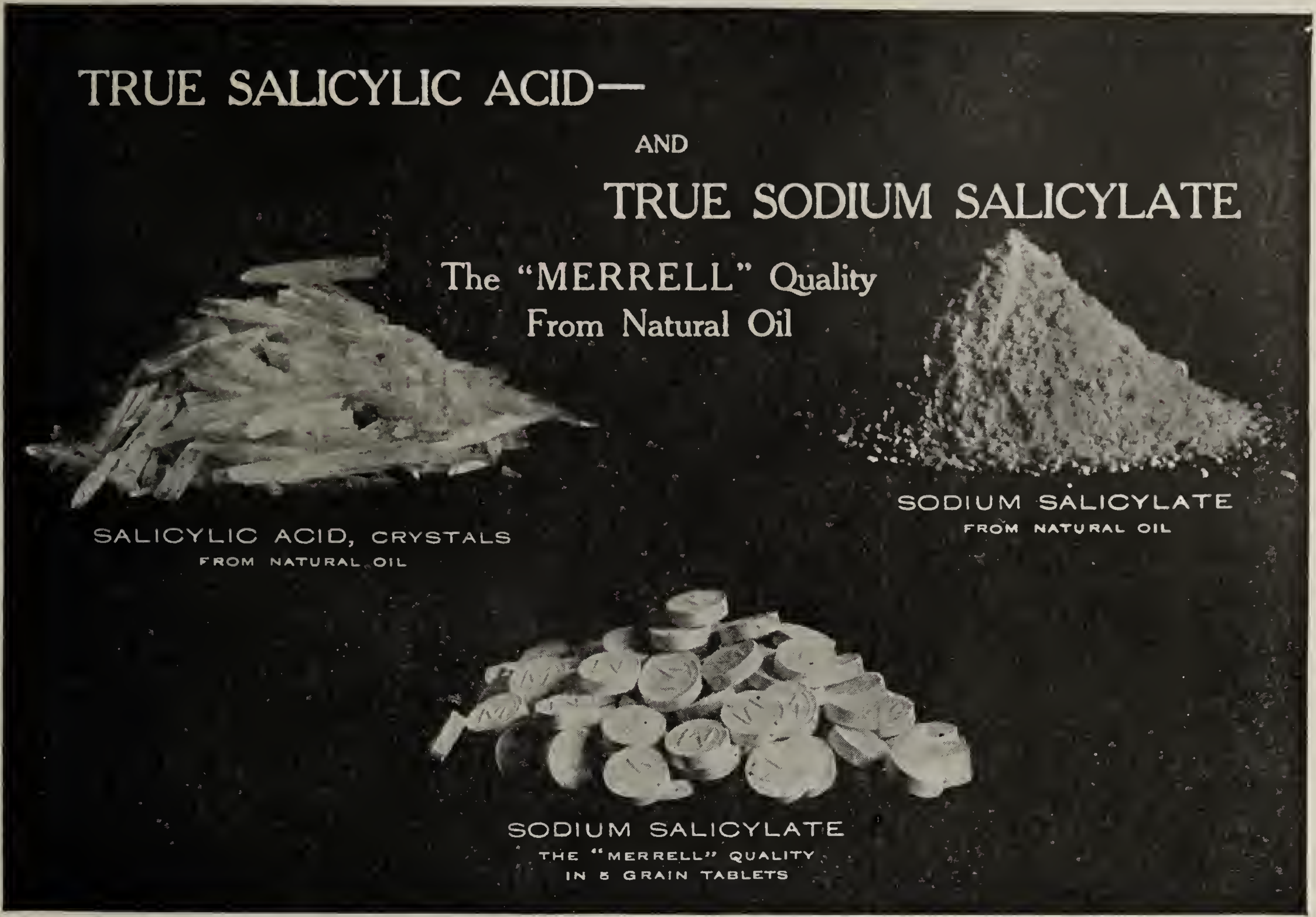
WANTED—ASSISTANT IN SMALL HOSPITAL in the northwest, who is qualified to do cystoscopic and radiographic work; state qualifications and salary expected. Add. 3022 B, % AMA.

WANTED—ASSISTANT PHYSICIAN AT the Northampton State Hospital. Add. the Superintendent at Northampton, Mass., stating qualifications and experience; give references and send letters of recommendation. B

WANTED — NURSE FOR SEVEN-BED hospital; some out-patient work; must have good personality, ability, character and training; willing to work; state age, weight, height, preliminary education, training and salary expected; send photo and references in first letter; monthly salary, $25 to $50, as per ability; board and room furnished. Add. Odebolt Hospital, Odebolt, Iowa. B

WANTED—INDIANA — AN ASSOCIATE for ear, nose and throat work by established, ethical doctor doing general work and surgery in splendid Indiana city; exceptional opportunity to clean, hustling young man with hospital training; will guarantee expenses first year to right man and give short time for preparation; give all details first letter. Add. 3007 B, % AMA.

*(Continued on page 22)*



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## KNOCKS AND BOOSTS

(Continued from page 20)

to read every issue and store away the most useful things found therein. As it is, the weekly edition comes so quickly and piles up so fast that many numbers are never read. At least, this has been the case with myself, and I fear the same is true of many of my colleagues. B. F. Myers, M.D., Chambersburg, Pa.

—o—

### SPLENDID DIRECTORY

*To the Editor:*—The copy of the new American Medical Directory has been received and I take pleasure in congratulating the Association on having produced such a splendid book. E. H. Porter, M.D., Tiffin, Ohio.

—o—

### LITERATURE INDEX SAVES LABOR

*To the Editor:*—I want to express my rapidly growing appreciation of the aid which I am receiving from your current literature index. It has supplanted all of my other methods of looking up literature, as it is very complete and saves one an immense amount of labor. Daniel N. Eisendrath, M.D., Chicago.

—o—

### THE JOURNAL NEARLY IDEAL

*To the Editor:*—Permit me to extend my felicitations and congratulations. THE JOURNAL, progressive, aggressive, fearless, practical, scholarly and scientific, is to me as nearly ideal as human erudition and human skill can make it. Theodore F. Livengood, M.D., Elizabeth, N. J.

## *Jokes — New and Old*

### BY A MORE PONDEROUS NAME

Bartleson—"What did your new doctor say was the matter with you?"

Updegraff—"He said—wait a minute; I wrote it down—he said I had symptoms of hemoglobinocholia. My old doctor said nothing ailed me except that my liver wasn't working properly."

—o—

### SPECIALISM

A poor woman went to a nearby dispensary to ask aid for her little son who had one of his fingers smashed with a baseball bat. At the first room where she applied a curt attendant told her that the boy could not be treated there.

"Wrong place," he explained; "this is the eye and ear department."

"Vere is der thumb and finger department?" inquired the woman, simply.

—o—

### TO AVOID OVEREXERTION

A hungry typhoid convalescent demanded something to eat. The nurse gave him a spoonful of tapioca.

"Now," he said, fretfully, "I want to read a little. Bring me a postage stamp."

—o—

### WHERE THE DOCTORS ARE MORE SUCCESSFUL

A lawyer got into an argument with a physician over the relative merits of their respective professions.

"I don't say that all lawyers are crooks,' said the doctor, "but you'll have to admit that your profession doesn't make angels of men."

"No," retorted the attorney, "you doctors certainly have the best of us there."

## *Books Received*

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

HANDBUCH DER GESAMTEN MEDIZINISCHEN ANWENDUNGEN DER ELEKTRIZITÄT. EINSCHLIESSLICH DER RÖNTGENLEHRE. Herausgegeben von Prof. Dr. Med. H. Boruttau, Privatdozent für Physiologie an den Universität Berlin, und Prof. Dr. Med. L. Mann, Privatdozent für Nervenheilkunde an der

(Continued on next page)

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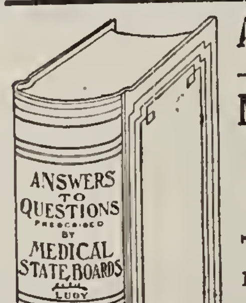
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(Continued from page 20)

WANTED—WASHINGTON—OCULIST ON salary basis for Pacific Coast city; must be a good refractionist, of pleasing personality and able to pass examination before State Board of Medical Examiners; state age and history. Add. 3009 B, % AMA.

WANTED—IOWA — ASSISTANT PHYSICIAN in State Hospital; salary, $900, with maintenance for the first year; capacity of institution, 1,000 beds. Add. 2997 B, % AMA. B

WANTED—RESIDENT PHYSICIAN FOR one year's service at the Children's Free Hospital; must be single man of good character, recent graduate and competent to do laboratory work; stipend, $300 a year, with room and board. Send qualifications and references to Dr. Ray Connor, Washington Arcade, Detroit. Mich. B

## INTERNS WANTED

WANTED—INTERNS — TWO INTERNS at once to complete staff of ten; hospital 200 beds; service largely surgical; term one year; board, room, laundry; chance of promotion to senior position with expense allowance; give age, date, place of graduation and reference. Grace Hospital, Detroit, Mich. D

## LOCATIONS WANTED

WANTED—LOCATION—COLORADO. WYoming; general practice of not less than $2,500 in modern city; would consider partnership with elderly physician; will turn my $2,000 practice, unopposed, to person who will buy my outstanding accounts amounting to $125. Add. Dr. G. F. Kimball, Dalton, Mo. E

WANTED — IN FLORIDA—GOOD LOCAtion and established practice; would buy office outfit or pay bonus for location; must bear strict investigation; give full particulars and details first letter; can give best references as to character, ability and experience. Add. 3029 E, % AMA.

WANTED — TO BUY AN ESTABLISHED eye, ear, nose and throat practice in city of not less than 10,000, or will give $50 to any doctor, druggist or other person who will inform me of some such suitable location as soon as accepted. Add. 2855 E, % AMA.

WANTED — LOCATION—BY GRADUATE of first-class school; also B.S. degree; 18 months' internship; 4 years' general practice; best references; town 2,000 or more; Kansas, Nebraska, Texas or any reciprocating state preferred; would like partnership or assistantship for surgical and general practice; cash for suitable proposition; prefer no real estate in beginning. Add. 3024 E, % AMA.

WANTED — A CAPABLE, ENERGETIC and trustworthy physician wants location in railroad town; 300 to 1,000 people; good surrounding country and roads; northern Illinois or southern Wisconsin preferred; first payment must be reasonable; can furnish references as to character, ability, integrity and honesty; will come for personal interest. Add. 2986 E, % AMA.

WANTED—UNOPPOSED PRACTICE AND drug store in Kansas, Minnesota or North Dakota, or practice alone; town 400 or more; English-speaking locality; large territory; practice must be worth $2,500 per year; no real estate considered; give full particulars first letter. Add. Doctor, Box A, Gary, Minn.

WANTED—A LOCATION OR PARTNERship by a radiographer; graduate of an A1 eastern medical school; hospital and sanitarium experience; have had charge of a prominent $x$-ray laboratory for the past few years; references of the best; have some money to invest if necessary. Add. 2942 E, % AMA.

FOR SALE — GLASS-TOP OPERATING table, wheel stretcher, large glass-top dressing table; small glass-top dressing table, operating stool, irrigating stand, double solution bowl stand; must all be sold; will not break the set; in first-class condition; $100; draying and crating, $10. Add. Mitchell Van & Storage Co., Salt Lake City, Utah. E

(Continued on next page)

## BOOKS RECEIVED

(Continued from preceding page)

Universität Breslau. Volume 2, Part 2. Paper. Price, 30 marks. Pp. 1102, with illustrations. Leipzig: Werner Klinkhardt, 1911.

SCHUTZFERMENTE DES TIERISCHEN ORGANISMUS. Ein Beitrag zur Kenntnis der Abwehrmassregeln des Tierischen Organismus Gegen Körper-, Blut- und Zellfremde Stoffe. Von Emil Abderhalden, Direktor des Physiologischen Institutes der Universität zu Halle a. S. Paper. Price, 3.20 marks. Pp. 110, with 8 illustrations. Berlin: Julius Springer, 1912.

ASSOCIATION TESTS. Being a Part of the Report of the Committee of the American Psychological Association on the Standardizing of Procedure in Experimental Tests. By R. S. Woodworth, Columbia University, and Frederic Lyman Wells. Psychological Monographs, Volume 13, No. 5. Paper. Price, $0.75. Pp. 85. Baltimore: Psychological Review Company.

SOCIAL PROBLEMS: THEIR TREATMENT, PAST, PRESENT AND FUTURE. A Lecture Delivered at the Galton Laboratory for National Eugenics. By Karl Pearson, F.R.S., Galton Professor of Eugenics. Questions of the Day and of the Fray, No. 5. Paper. Price, 1 shilling net. Pp. 40, with 6 illustrations. London: Dulau & Co., 1912.

ORAL SURGERY. A Text-Book on General Surgery and Medicine as Applied to Dentistry. By Stewart LeRoy McCurdy, Professor of Anatomy and Oral Surgery, School of Dentistry, University of Pittsburgh. Cloth. Price, $3. Pp. 469, with 228 illustrations. New York: D. Appleton & Co., 1912.

TUBERCULOSIS, HEREDITY AND ENVIRONMENT. A Lecture Delivered at the Galton Laboratory for National Eugenics. By Karl Pearson, F.R.S., Galton Professor of Eugenics, University of London. Paper. Price, 1 shilling net. Pp. 46, with illustrations. London: Dulau & Co., 1912.

THE PREVENTION OF DENTAL CARIES. By J. Sim Wallace, D.Sc., M.D., L.D.S., Dental Surgeon and Lecturer on Dental Surgery and Pathology, London Hospital. Second Edition. Cloth. Pp. 70, with illustrations. London: The Dental Record, Alston House, Newman Street, W., 1912.

THE FIFTEENTH INTERNATIONAL CONGRESS ON HYGIENE AND DEMOGRAPHY, Washington, 1912. Preliminary Announcement. Paper. Pp. 103. Address: Senate Annex, Washington, D. C.

THE CLASSICAL PSYCHOLOGISTS. Selections Illustrating Psychology from Anaxagoras to Wundt. Compiled by Benjamin Rand, Ph.D. Cloth. Price, $3.50 net. Pp. 734. Boston: Houghton Mifflin Company, 1912.

## *The Public Service*

### Medical Department, U. S. Army

Changes during the week ended June 22:

Greenleaf, Henry S., major, June 15, relieved from duty at Madison Barracks, N. Y., and ordered to the Pacific branch, U. S. military prison, Alcatraz Island, Cal., for duty.

Buck, Carrol D., major, June 15, relieved from duty at the Pacific branch, U. S. military prison, Alcatraz Island, Cal., and ordered to Fort Mackenzie, Wyo., for duty.

Ekwurzel, George M., major, June 15, relieved from duty at Fort Mackenzie, Wyo., and ordered to Fort Andrews, Mass., for duty.

Rukke, Guy V., captain, June 15, granted two months' leave of absence.

Straub, P. F., major, June 15, granted two months' leave of absence.

Baker, Carroll R., M.R.C., June 15, granted thirty days' leave of absence on surgeon's certificate of disability.

Ingalls, R. E., dental surgeon, June 17, granted two months' leave of absence, about July 1, 1912.

Boerner, Morris H., M.R.C., June 20, resignation accepted.

McAlister, John A., dental surgeon, June 16, returned to Jefferson Barracks, Mo., from leave of absence.

Snapp, John H., acting dental surgeon, June 10, reported for duty, Camp E. S. Otis, Canal Zone, Panama.

Trinder, John H., M.R.C., June 15, ordered to Jefferson Barracks, Mo., for temporary duty.

(Continued on next page)

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(Continued from preceding page)

WANTED — LOCATION, PRACTICE OR partnership by eye, ear, nose and throat specialist; graduate of leading college, with 10 years' experience in special work, including year's internship as resident surgeon of large eastern eye hospital, and postgraduate courses in Harvard, London and Berlin; only first-class practice will be considered; give full particulars in first letter. Add. 2948 E. % AMA.

WANTED—GENERAL PRACTICE—GOOD city or county seat, preferably in central Indiana; must be a live business, not less than $3,500; have had 14 years' successful village practice; money to invest in suitable property with modern conveniences; prefer house and office connected. Add. 2987 E, % AMA.

### LOCUM TENENS WANTED

WANTED—SOUTH DAKOTA — LOCUM tenens, 6 months to 1 year; small town, unopposed; business runs about $3,000 year; buy drugs and dressings at $250 and pay $30 rent for office and furniteure; a snap for anyone, especially recent graduate; can increase business by surgery; postgraduate work. Add. 3016 F, % AMA.

### PARTNERS WANTED

WANTED—KANSAS — SMALL TOWN— Wheat belt; partner in $4,000 practice; nothing to sell; want sober, regular, Protestant-American, who can register in Kansas and can come at once; prefer married man that will do general practice and can do refracting; give full description of yourself and history; also references. Add. 3039 G, % AMA.

WANTED—ADVERTISER WISHES PARTner in electrotherapeutic supply business; established same location 6 years; live western city; would prefer physician wanting to give up practice with knowledge of electrotherapeutics; capital required $2,000; state full particulars first letter; same will be given in return. Add. in confidence, 2996 G, % AMA.

WANTED—AN ENERGETIC YOUNG MAN who wishes to specialize, with some cash to buy an interest in $7,000 a year eye, ear, nose and throat practice; established 12 years; in south Georgia town of 5,000, with half dozen good towns near by; practice gets larger every year; I need a partner or assistant; good opportunity for right man; I prefer young man who has just graduated, wishing to specialize; best reference given and required. Add. 2923 G, % AMA.

### SITUATIONS WANTED

WANTED—POSITION, CONTRACT WORK, mines or other corporations; have developed psoriasis which makes it impossible to continue general practice because of the appearance of the rash; 36 years old, married; 11 years' successful practice; postgraduate 1911; abdominal surgery and gynecology; perfect health; strictly temperate; do not use tobacco or liquor in any form; best of references; can go at once on trial if necessary; salary enough to live on; correspondence solicited; prefer Iowa or reciprocating state. Add. 3037 I, % AMA.

WANTED—POSITION AS LOCUM TENens, assistantship, salaried position or location; graduate Tulane University; one year's experience private practice; three months' postgraduate work; aged 29, single; healthy; good habits; prefer Louisiana, Mississippi, Texas or some state reciprocating with Louisiana; give particulars. Add. Box 417, Zachary, La. I

WANTED — SALARIED POSITION BY willing worker; 18 months' coal mine experience; 18 months' private practice; graduate University of Maryland, 1909; also graduate registered pharmacist; married; aged 32; registered in Virginia and West Virginia; prefer position with surgeon or busy practitioner; references given and required. Add. 3019 I, % AMA.

WANTED—POSITION AS SUPERINTENDent or salaried intern in hospital or assistant to physician or surgeon by woman physician; aged 30; licensed in Ohio; experience in hospital and private practice; can give reference as assistant from one of best diagnosticians of middle west; expect to earn about $1,000 per year. Add. 3026 I, % AMA.

(Continued on next page)

## THE PUBLIC SERVICE

*(Continued from preceding page)*

Ford, Harry G., lieut., June 14, relieved from temporary duty at Vaucouver Barracks, Wash., and will return to presidio of Monterey, Ca., his proper station.

Mabee, James I., captain, June 14, granted leave of absence for one month with permission to apply for an extension of one month.

Shockley, M. A. W., major, June 14, ordered to duty with Second Battalion, 29th Infantry, from Fort Niagara, N. Y., to camp of instruction, Mount Gretna, Pa., from July 5 to Aug. 3, 1912.

Bailey, Howard H., captain, June 14, ordered to duty with First Squadron, 15th Cavalry, from Fort Myer, Va., to camp of instruction, Mount Gretna, Pa., from July 5 to Aug. 3, 1912.

Chilton, Frank N., lieut., June 14, ordered to duty with battery E, 3d Field Artillery, from Fort Myer, Va., to camp of instruction at Mount Gretna, Pa., from July 5 to Aug. 3, 1912.

Brown, O. G., captain, June 15, left from detached duty with troops to Fort Bliss, Tex., on thirty days' leave of absence.

Stone, Frank P., dental surgeon, June 18, left Fort Barrancas, Fla., on thirty days' leave of absence.

Boak, S. D., dental surgeon, June 20, left West Point, N. Y., on thirty days' leave of absence.

Foucar, F. H., lieut., June 21, left Fort DuPont, Del., on detached duty to Porto Rico.

### Medical Corps, U. S. Navy

Changes for the week ended June 22:

Dragoo, C. H., asst. surgeon, ordered to receiving ship, navy yard, New York.

Edgar, J. M., medical director, detached from naval hospital, Boston; granted leave until Sept. 1, 1912.

Stoops, R. E., P. A. surgeon, detached from disciplinary barracks, Port Royal, S. C., and ordered to naval training station, Chicago.

Brown, H. L., P. A. surgeon, detached from naval hospital, Norfolk, Va., and ordered to disciplinary barracks, Port Royal, S. C.

Hayward, A. B., P. A. surgeon, detached from *Maryland* and ordered home to await orders.

Manchester, J. D., P. A. surgeon, detached from naval training station, North Chicago, Ill., and ordered to the *Maryland*.

Cuthbertson, Roy, P. A. surgeon, detached from *St. Louis* and ordered home to await orders.

Wood, C. C., asst. surgeon, ordered to naval hospital, Norfolk, Va.

Garrison, H. A., P. A. surgeon, detached from naval recruiting station, Cincinnati, and ordered to the *Maryland*.

Little, J. C., A. A. surgeon, ordered to navy recruiting station, Cincinnati.

Edgar, J. M., medical director, transferred to the retired list from Sept. 1, 1912, on his own application; thirty years' service.

Pugh, W. S., P. A. surgeon, detached from naval hospital, Puget Sound, and ordered to the *Buffalo*.

Phelps, J. R., P. A. surgeon, detached from naval hospital, Boston, and ordered to naval hospital, Puget Sound, Wash.

Giltner, H. A., P. A. surgeon, detached from *Iris* and ordered home to await orders.

Boland, Micajah, P. A. surgeon, detached from naval recruiting station, Dallas, Tex., and ordered to the *Iris*.

Smith, C. W., asst. surgeon, ordered to receiving ship, navy yard, Mare Island, Cal.

Allen, D. G., asst. surgeon, detached from *Buffalo* and ordered home to await orders.

Riker, G. A., asst. surgeon, ordered to naval hospital, Boston.

Sinclair, J. A. B., asst. surgeon, ordered to the *Dixie*.

Pollard, J. B., asst. surgeon, ordered to naval recruiting station, Dallas, Tex.

Wilson, G. B., medical inspector, detached from receiving ship at Boston and ordered to command naval hospital, Boston.

Phelps, J. R., P. A. surgeon, orders of June 18 revoked.

Riker, G. A., asst. surgeon, orders of June 18 revoked.

Lanning, R. H., asst. surgeon, detached from *Elcano* and ordered to *Quiros*.

Lane, H. H., P. A. surgeon, detached from *Villalobos* and ordered home to await orders.

O'Malley, J. J., asst. surgeon, detached from the *Quiros* and ordered to the *Elcano*.

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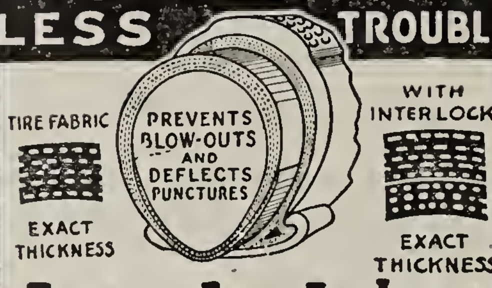

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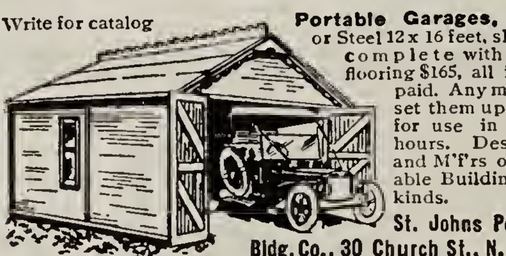

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*(Continued from preceding page)*

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WANTED—YOUNG WOMAN PHYSICIAN wishes substitute work for three months in sanitarium, hospital or asylum; remuneration necessary; has had hospital experience. Add. 3015 I, % AMA.

WANTED—POSITION—SALESMAN WITH 15 years' experience, detailing physicians and selling to drug trade is desirious of position; best of references. Add. 2747 I, % AMA.

WANTED — OCULIST, WHO HAS HAD the best training in eye work obtainable in America, including service as house surgeon in one of the largest eye hospitals, desires a position as assistant or associate with an elderly oculist in New York or other large city where there is considerable operative work. Add. 2777 I, % AMA.

WANTED — SITUATION AS LABORATORY or hospital assistant; recent graduate of an A1 school; one year hospital experience; three months' private practice; good laboratory training; single, excellent habits; best references; prefer middle west; give particulars in first letter. Add. 2964 I, % AMA.

WANTED—POSITION AS SUPERINTEDENT of hospital, by a woman physician who is also a trained nurse; experienced, executive ability, capable of taking full charge and managing all departments; can furnish excellent testimonials. Add. 2913 I, % AMA.

WANTED—A POSITION AS AN ASSISTANT to an eye, ear, nose and throat specialist, by thoroughly competent man; graduate class A school, temperate, of good address and married, or will pay small sum for good location or buy a practice if cheap, but prefers a position; references furnished. Add. 2921 I, % AMA.

WANTED—POSITION AS WOMAN PHYSICIAN in state hospital for insane; experienced; charge of acute service in large institution making all mental and physical examinations for women and managing hydrotherapeutic department; also tubercular, inebriate, epileptic and general sick wards; best references and reasons for desiring change. Add. 2854 I, % AMA.

WANTED—WITHIN CONVENIENT MOTORING distance of Boston, position with physician of good professional ideals and standing; want compensation enough to meet moderate expense account and opportunity to take certain postgraduate courses, beginning September; I am a practicing physician in Colorado and professionally well connected. Add. 2928 I, % AMA.

## MISCELLANEOUS—WANTED

WANTED — NEW MEXICO—IN PRETTIEST and healthiest town; sanitarium is needed; have 2 fine stone and brick buildings suitable, with 20 acres ground, young orchard; 600 trees will pay big; official value, $25,000; will sell for $12,500; favorable terms; absolute title; this is a real opportunity; investigate at once. Add. Dr. B, Drawer S, Alamogordo, N. M. J

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*(Continued on next page)*

FOR SALE — A BARGAIN — COMPLETE set of surgical and other instruments, with electrical appliances, vibrator, battery, ready for use; office furniture, including $50 operating chair, manikin, etc.; some splendid medical books; drug stock, worth $200; death of doctor reason for selling; good location; one doctor. Box 275, Farnam, Neb. K

## PRACTICES FOR SALE

FOR SALE — CALIFORNIA — TO PURchaser of new, finely furnished 10-room house, in most beautiful city in southern California; growing rapidly; will give my $7,000 yearly cash practice; excellent reasons for selling; splendid opportunity for one wishing to specialize in nose, throat, etc., or tubercular conditions; $15,000 cash. Add. 3035 N, % AMA.

FOR SALE — COLORADO — LUCRATIVE practice, office furniture and fixtures, household goods, select library, automobile and desirable appointments, all for $1,800 cash; competition just right; make money from start; new growing town of 2,000 in rich irrigated valley; good roads and climate; collections 95 per cent. Add. 3027 N, % AMA.

FOR SALE—COLORADO—A GOOD EYE, ear, nose and throat practice; established 4 years; collections over $4,500; will sell for invoice of office furniture, which will be about $500; must sell soon. Add. 3014 N, % AMA.

FOR SALE — COLORADO — $2,000 UNOPposed mountain practice; 700 people; mining camps; good fees and collections; healthy climate; hunting and fishing; just the place to gain experience or health; money from the start; don't write unless you mean business; price $500 cash; going to city. Add. 2796 N, % AMA.

FOR SALE—CONNECTICUT—HAVE YOU $5,000. I have made a competency and so can you. Retire because of ill health. Mostly office work; outside practice if wanted. Knowledge of eye, ear, nose and throat necessary. Hospital appointment. Cash or good security required. Add. 2982 N, % AMA.

FOR SALE—ILLINOIS — A FINE RESIdence in a beautiful home town of 3,000 in the finest farming district in northern part of Illinois; fine schools and churches; good country roads; wealthy town; collections first class; reason, doctor left on account of health; terms very reasonable. Add. Illinois State Bank of Crete, or Dr. Charles Blinn at Crete, Ill. N

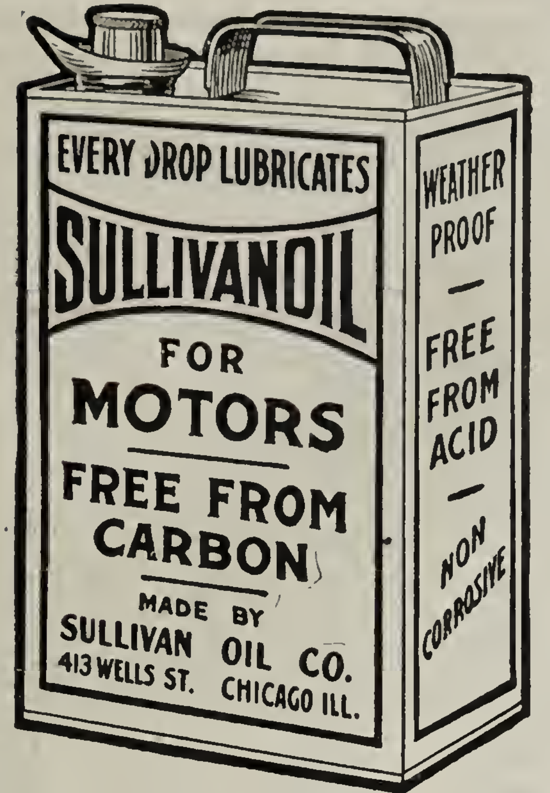
FOR SALE—ILLINOIS—$7,000 EYE, EAR, nose and throat practice free to the purchaser of my new $10,000 residence; must show ability to do all kinds of operative work in the above line; one-half cash; will stay with purchaser three to four months; good reasons for selling; only men of ability need answer. Add. 3004 N, % AMA.

FOR SALE—ILLINOIS — IN THE RICH corn belt; less than 100 miles from Chicago; I wish to retire from practice; will sell at once and introduce you to a $3,000 practice; all that any good man would want in every way; $500 cash and $500 time; your terms. Add. 3005 N, % AMA.

FOR SALE—ILLINOIS—PRACTICE $2,000 a year in small country town; 70 miles from St. Louis in good farming community; collections gilt edge; beginner make money from start; outfit of 2 horses, 2 buggies, harness, excellent supply of drugs, surgical instruments and sundries; all for $600 cash; must leave by July 15; good reasons for selling; if you mean business, write. Add. 3006 N, % AMA.

FOR SALE—CENTRAL ILLINOIS—$3,500 unopposed well-established general practice; town 200; large territory; rich community; good fees; collections 98 per cent.; no competition; price, $2,200, includes large drug stock, office fixtures, two horses, buggy, 7-room house and large new barn; half cash if necessary; reason, poor health. Add. 3012 N, % AMA.

FOR SALE—INDIANA—EYE, EAR, NOSE and throat practice paying from $4,000 to $5,000 a year with full equipment and introduction for $1,500 cash; only those with the money need apply. Add. 3010 N, % AMA.



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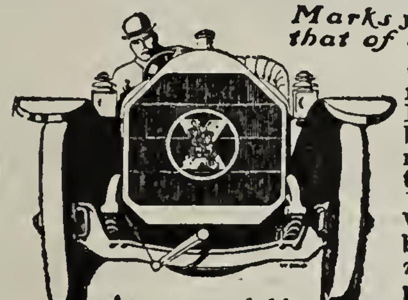

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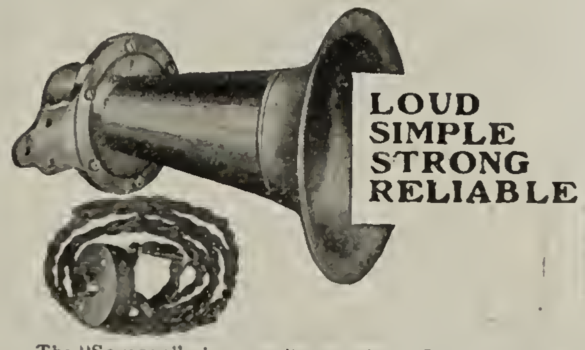

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FOR SALE — SOUTHERN INDIANA— $2,500 business in pleasant village of 300; easy competition; gravel roads; best schools and churches; good collections; sell or lease building office; sell office fixtures, drugs, etc., at less than invoice (about $300); cash or good paper; thorough introduction; going to city. Add. 2988 N, % AMA.

FOR SALE—EASTERN INDIANA—$3,000 practice, 9-room residence, 2-room office, good barn, 2 lots, on C. & O. R. R.; price, $2,500; part cash; balance time. Add. J. A. Kramer, M.D., Blountsville, Ind. N

FOR SALE—NORTHERN IOWA—UNOPposed $3,500 to $4,500 practice; good town, fine country, largely English-speaking Germans; good stock drugs, office equipment and furniture, except library and instruments, with practice, for $650; collections 95 to 98 per cent.; large territory; sure money maker from start; can introduce; reason, other business. Add. 2943 N, % AMA.

FOR SALE—IOWA — UP-TO-DATE EYE, ear, nose and throat practice; established 10 years; city of 20,000 and fine surrounding country to draw from; large refraction list; fine location and office fully equipped with new and up-to-date equipment; $1,000 buys the outfit and furnishings; must be taken at once. Add. 3028 N, % AMA.

FOR SALE—IOWA—WANTED— PHYSIcian to take over my practice at once; best growing town in Iowa; $5,000 last year; new office and $4,000 residence; salaried appointments; $3,000 cash necessary; don't answer unless you have the money and mean business. Add. 3036 N, % AMA.

FOR SALE—IOWA—$5,000 CASH PRACtice for sale; town 800 population in central part of state; one other doctor; collections 98 per cent.; fine farming community; price, $5,000, for 9-room modern house, first-class modern office equipment; best location in state for general practice; do not write unless you mean business; must be competent man. Add. 3008 N, % AMA.

FOR SALE—IOWA—$2,000 PRACTICE— $3,600 practice; $5,000, $2,250 drug stock; $5,500 practice; others everywhere costing $250 upward to land; particulars. Opportunity Agency, E. 17th St. Pike, Little Rock, Ark. N

FOR SALE—IOWA—HAVE PROPOSITION that would make competent medical man independent in three years in nice railroad town of 700 in Iowa; within 10 miles of one of Iowa's best educational institutions; $1,500 cash required. Add. 2971 N, % AMA.

FOR SALE—IOWA—$4,000 PRACTICE IN good German town of 2,000; rich farming community; competition light; money from start; collections 98 per cent.; a German-Catholic preferred, and one who can do some surgery can increase practice to a great extent; $900 cash; that is about office invoice; will give introduction; reason, wish to specialize. Add. 2926 N, % AMA.

FOR SALE—SOUTHEASTERN KANSAS— Established practice, 12 years, in county seat of 15,000; two railroads, interurban; good opening for surgeon; good roads, churches, schools; practice last year $10,000; cash collections, $7,000; 10-room modern residence four blocks from business center in best residence district; office rooms well located up town; part cash and terms for balance. Add. 2991 N, % AMA.

FOR SALE—NORTHERN KANSAS—$2,800 cash practice; town 600; two railroads; rich farming community; competition the best; will sell dispensary drugs at list price; driving conveyance, office fixtures on agreement with purchaser; no real estate; good fees, collections; immediate possession; business from the start; invoice about $1,250 cash; write for particulars; going abroad. Add. 2961 N, % AMA.

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FOR SALE — MARYLAND—$2,500 PRACTICE given to purchaser of my farm; unopposed established practice; will introduce purchaser; price, $4,000; one-half cash; balance on time; good reasons for leaving; write at once for particulars. Add. 2819 N, % AMA.

FOR SALE—MINNESOTA—$3,000 PRACTICE; established 12 years; in city of 2,000; railroad division point; practice goes to purchaser of complete splendid office equipment, *x*-ray, high frequency, galvanic-faradic wall plate, vibrator, microscope, blood-pressure apparatus, instrument stands and cabinets, everything complete; also enclosed coupé; a large variety of instruments and apparatus; one active physician in competition; large territory; splendid opportunity for man who can do surgery; price, $1,500. Add. 3011 N, % AMA.

FOR SALE—MINNESOTA — SOUTHERN part; $3,000 unopposed practice in growing town of 300; large territory; wealthy community; good roads; excellent collections; complete office outfit and instruments; price, $400 cash. Add. 3034 N, % AMA.

FOR SALE—MINNESOTA—$3,000 UNOPPOSED practice in exceptionally prosperous farming community; beautiful lakes and lofty trees; 35 miles from Minneapolis, with excellent train service; ideal location for advantages of both city and country life; drugs, instruments, office equipment and automobile for $2,000. Add. 2832 N, % AMA.

FOR SALE—SOUTHWEST MISSOURI—$5,000 practice, established 12 years, by Rush graduate in a town of 5,000; only a corporation line separating it from a town of 12,000; 7 miles from a town of 13,000 and only 6 miles from a city of 45,000; all these towns are connected by an interurban railroad and a 15-minute service; 1½ miles from a hospital, first class, and in working distance of two others on the car line; the very heart of the richest zinc and lead mines in the U. S.; natural gas; my modern 8-room residence, garage, office outfit with drugs for $6,000; $3,500 cash, balance time. The best opening in the southwest for a man who can do surgery; specializing; introduction till September 1. Add. 3038 N, % AMA.

FOR SALE—MISSOURI — $3,500 PRACTICE; good roads, school and churches; collect 98 per cent.; $1,000 cash or bankable paper, buys location, 6-room residence, 1 acre ground well improved, office chair and drugs; splendid place to live; make and save money. For further information write Dr. E. E. Evans, West Plains, Mo. N

FOR SALE—MONTANA — $2,200 UNOPPOSED practice in eastern Montana; town of 300, with rich country growing up around, both irrigated and unirrigated; best prospects in state; will sell to purchaser of house; price, $2,000 cash. Add. 2956 N, % AMA.

FOR SALE—MICHIGAN—NEAR GRAND Rapids; $3,500 practice in thriving railroad town to the purchaser of my property, consisting of an elegant office, residence and barn; furnace, acetylene gas, private waterworks supplying house, office, barn, garden and lawn; splendid opportunity for Holland or American physician; terms to suit; am retiring. Add. 2779 N, % AMA.

FOR SALE — CENTRAL MICHIGAN — $4,000 practice in fine village of 1,000; surrounding country the garden of Michigan; in center of sugar beet industry; modern residence ten rooms, furnace, acetylene gas, hot and cold water, barn, garage, two lots; office four rooms, one lot, good location; all for $5,000, one-half cash, or will sell practice with either office or residence; do not answer if you cannot pay the price. Add. 2978 N, % AMA.

FOR SALE—NEBRASKA — $3,000 UNOPPOSED practice; established 21 years; town of 300; in best part of Nebraska; land sells from $100 to $150 per acre; collections good; must buy residence, modern; will accept $1,000 down, balance on easy terms; will rent or sell office as desired; no trades. Add. 2856 N, % AMA.

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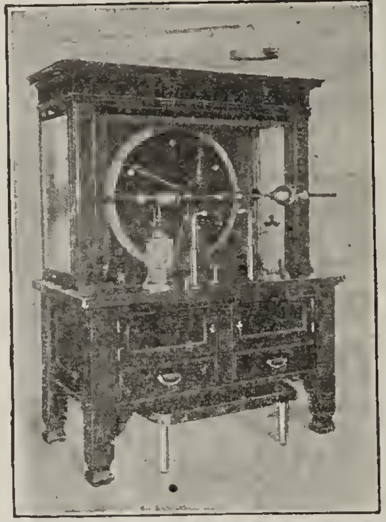

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FOR SALE—NEBRASKA — $5,000 GENERAL practice; established 10 years; in livest town southeastern part of state; population 1,600; no real estate; office equipment complete; reasons for selling given to buyer, who must satisfy me that he is professionally competent and reliable; will take $1,750 to deal, but can give more than value received; am not in any particular hurry to leave and will remain sufficient time to establish purchaser. Add. 2944 N, % AMA.

FOR SALE—NEW MEXICO—$2,500 UNOPPOSED practice and drug store; only one in county seat town of 600; nearest doctor and store, 21 miles; finest climate in southwest; 300 days of sunshine; winters warm, summers unexcelled; practice, $1,800 cash collections yearly; store clears $65 monthly; office, store and residence in centrally located building and rents for $21 monthly; will sell for invoice of store, about $3,000, and $500 for practice; two railroad appointments; county health office and auto; going to city; will introduce; $1,500 down and balance in bankable paper; do not apply unless you mean business and have the cash. Add. 3033 N, % AMA.

FOR SALE — NEW YORK — 80 MILES from New York City; my practice of $2,500 in town of 600; prosperous dairy country; collections 90 per cent.; $300 buys practice with office furniture, instruments, drugs, wagons, etc.; real estate optional; must sell immediately; first come, first served. Add. 3013 N, % AMA.

FOR SALE—NEW YORK—$10,000 PRACTICE established 16 years, with 12-room house, bath, all improvements; in prosperous manufacturing town 30,000 on Hudson River, near New York City; can turn most all over to buyer; reason for selling, sickness; price, $13,000; $5,000 down; will introduce thoroughly. Add. 2969 N, % AMA.

FOR SALE—NEW YORK—MY GENERAL practice, established 16 years, free to purchaser of my 12-room corner house, with all modern improvements, electric lighting, hot-water heating and fireproof garage; property faces city park; restricted neighborhood; will retire from practice. Add. Doctor, 500 Jamaica Ave., Brooklyn, N. Y. N

FOR SALE—NORTH DAKOTA — PRACTICE paying $3,000 yearly in town of 1,000 in one of the oldest and best farming sections in the state for the cost of the equipment; one competitor; large territory; good schools, roads and churches; Scandinavian preferred. Add. 2887 N, % AMA.

FOR SALE — NORTH DAKOTA—PRACTICE and hospital in city of 2,000; hospital has 20 rooms fully equipped; modern in every respect; large territory; no competition; several railways; prosperous farming community; mixed population; splendid schools and churches; practice averages $18,000 per year; will introduce purchaser; price, $7,500; title clear; $4,000 handles deal; possession any time; here is first-class opportunity for a strog, active man and one who can do successful surgery; am retiring; please do not bother unless you have the cash. Add. 2995 N, % AMA.

FOR SALE — NORTH DAKOTA — $4,500 practice established five years in growing division town on coast line of Milwaukee Railroad; fine climate; good fees; collections good. Purchase of new, modern $4,000 dwelling optional. Am moving to city. Must deal immediately. Will introduce. Consideration $600. A good snap. Add. F. C. Rodda, Marmarth, N. D. N

FOR SALE—CENTRAL OHIO — $3,000 practice; $800 appointments transferable; population 5,000; main roads piked; will lease or sell modern home; large lot and barn; office outfit and practice, $800; with property, $4,500; snap for experienced married man. Add. 3032 N, % AMA.

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FOR SALE—NORTHERN OHIO—A FINE location, paying practice, office furnishings, drugs and supplies in a beautiful village of 1,000, with electric lights, city water and pavements; one hour by steam from Cleveland; price, $400 cash; good reason for selling; an investigation of this will convince one of its merits. Add. 3031 N, % AMA.

FOR SALE—DELAWARE, OHIO—INTRODUCTION to a $3,000 practice free to the purchaser of my home and office; an ideal town with splendid roads and best of schools, including Ohio Wesleyan University. Add. Dr. W. H. Woodworth, Delaware, Ohio. N

FOR SALE—OHIO — SPLENDID PRACTICE free to purchaser of my residence on easy payments; practice established 28 years; have made enough to retire; fine community; good people; good collections; near steam and electric roads; first grade high school; churches, lodges, etc.; will take other property or automobile in exchange. Add. 2990 N, % AMA.

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FOR SALE — CENTRAL OHIO — $4,000 yearly practice, established seventeen years, free with introduction to purchaser of my ten-room house; hustling, growing town of 550 on electric railroad; very thickly settled; good farming and dairying country; collections 97 per cent.; competition light; several appointments transferable; retiring; a real money maker. Add. 2977 N, % AMA.

FOR SALE — NORTHWESTERN OHIO—Town 400; a $4,000 unopposed practice; 95 per cent. collectable; practice established; Catholic community; rich farming district; fine roads (stone); large territory; fees good; good introduction; price, $750 cash; write for particulars at once; reason for leaving, going to city. Add. 2970 N, % AMA.

FOR SALE — OKLAHOMA — AN UNOPPOSED practice of $2,800 cash to the purchaser of my property; good all-white town of 800; roads, schools, churches and people the best; immediate possession; no competition; business immediately; act quick, but don't answer if you cannot pay the price, $1,200 cash; circumstances force quick deal. Add. 2785 N, % AMA.

FOR SALE—PENNSYLVANIA — $4,000 practice; city of 20,000; fees very high; good man doing surgery can increase income very much; $800 for office equipment, household furniture, drugs, etc. Add. 3025 N, % AMA.

FOR SALE—PENNSYLVANIA—GROWING practice in lake region of northwestern section of state; town of 1,100, electric lights, city waterworks, 4 churches, fine school, trolley line, 4 railroads; to the purchaser of property, consisting of 14-room house, separate 3-room office and barn; best location in town; $2,800; half cash. Add. 3020 N, % AMA.

FOR SALE—PENNSYLVANIA — $3,500 practice in railroad town; pike and trolleys; real estate and office equipment; collections fine; prices right; only 12 miles from large town; wish to retire, but will give thorough introduction to any man I can recommend. Add. Box 34, Lititz, Pa. N

FOR SALE — SOUTH DAKOTA — $3,000 unopposed town and country practice; closest competition, 11 miles; good roads; high school; no saloon; thickly settled; collections 95 per cent.; $1,200 cash takes practice, office equipment, new auto, instruments; reason for leaving, want to specialize; fine opening for Scandinavian; answer quick for a snap. Add. 2846 N, % AMA.

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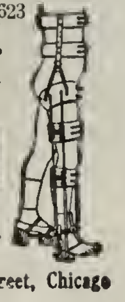

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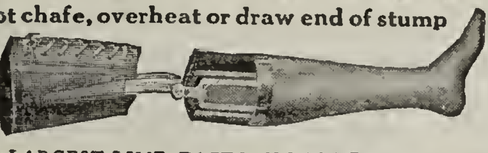

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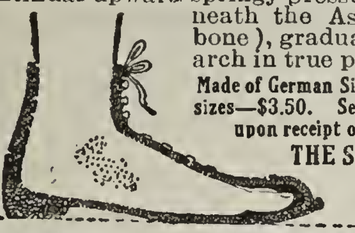

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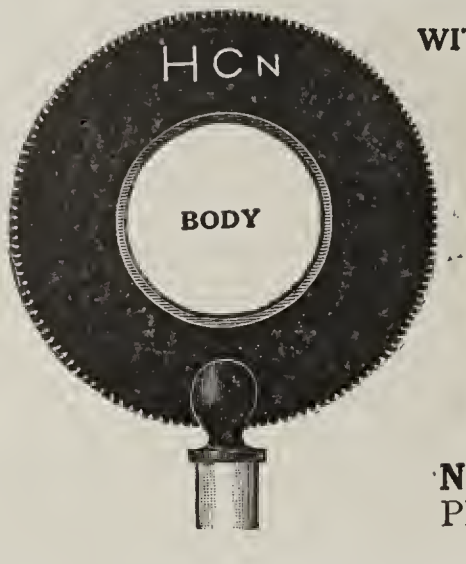

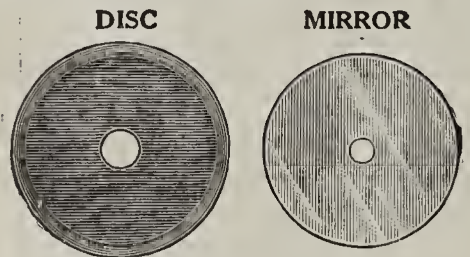

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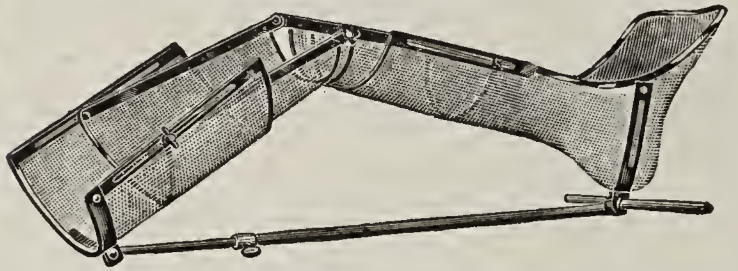

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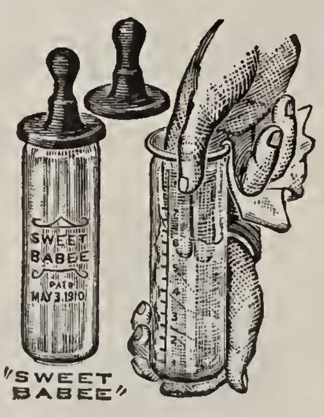

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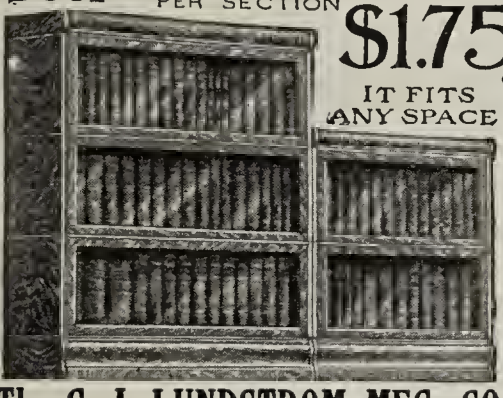

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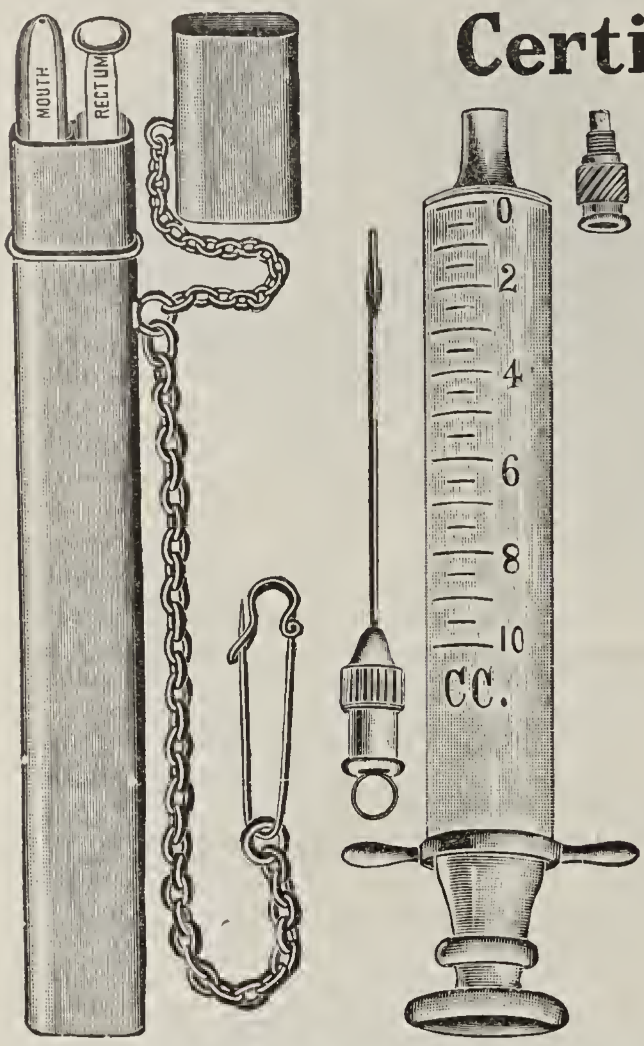

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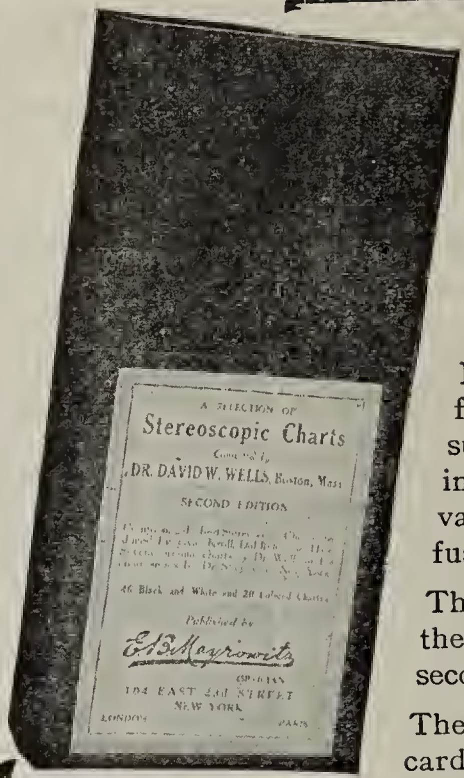

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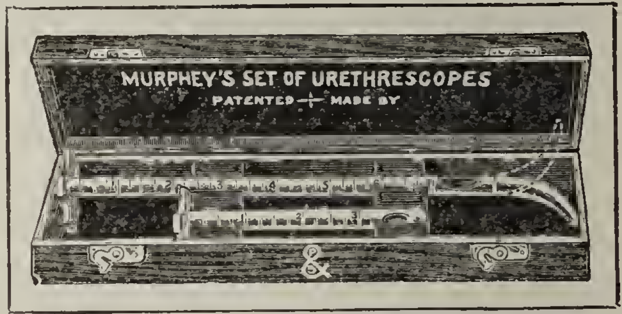

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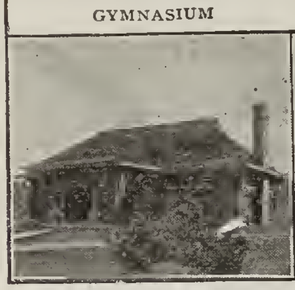
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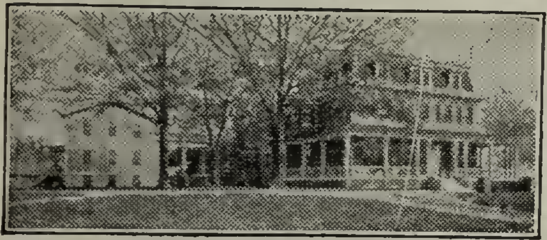

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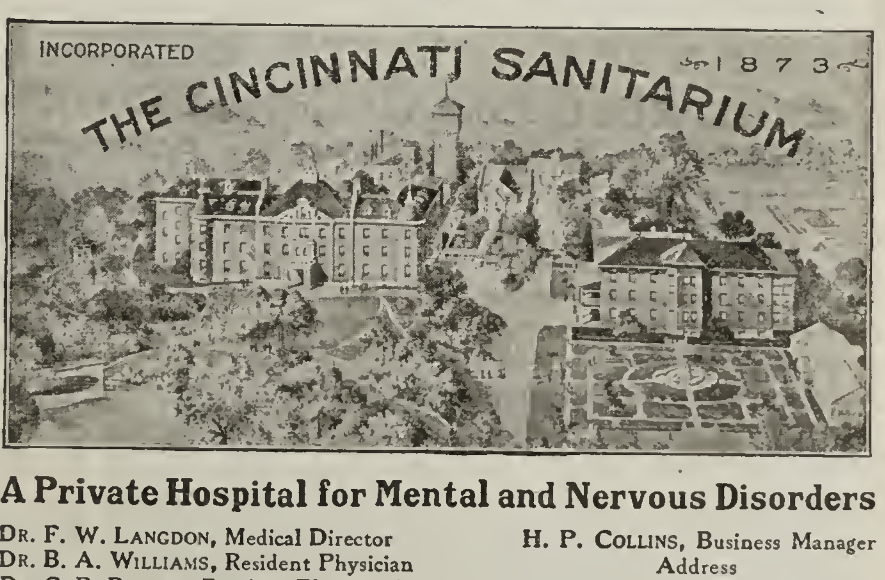

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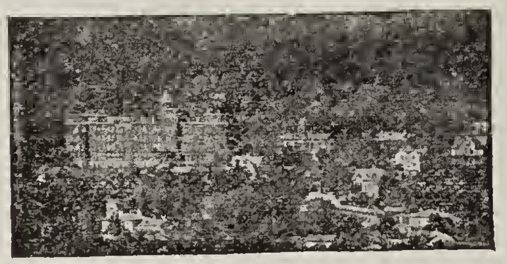

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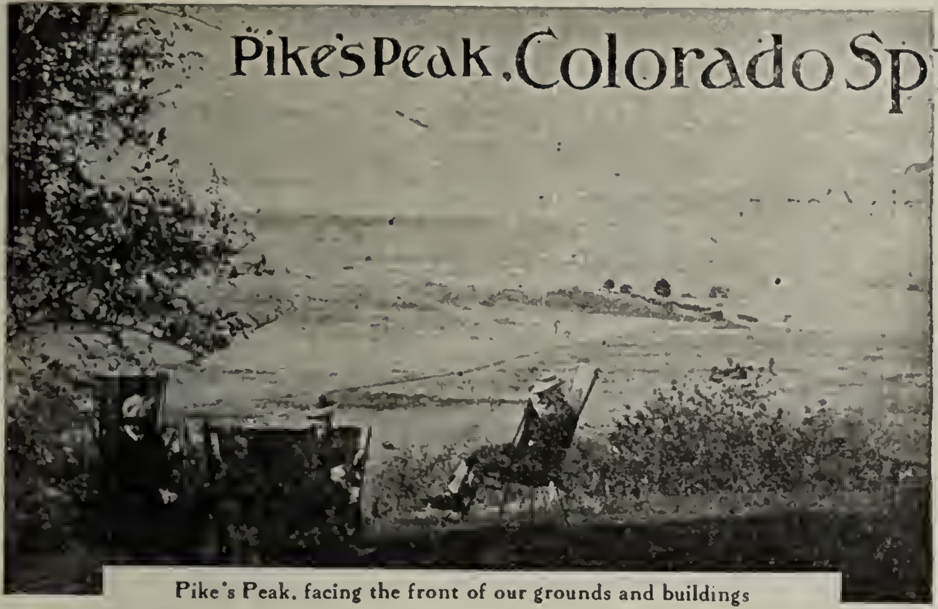

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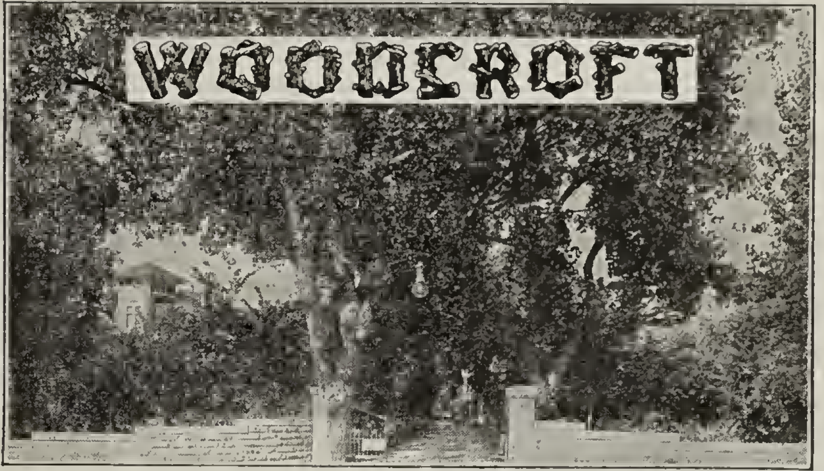

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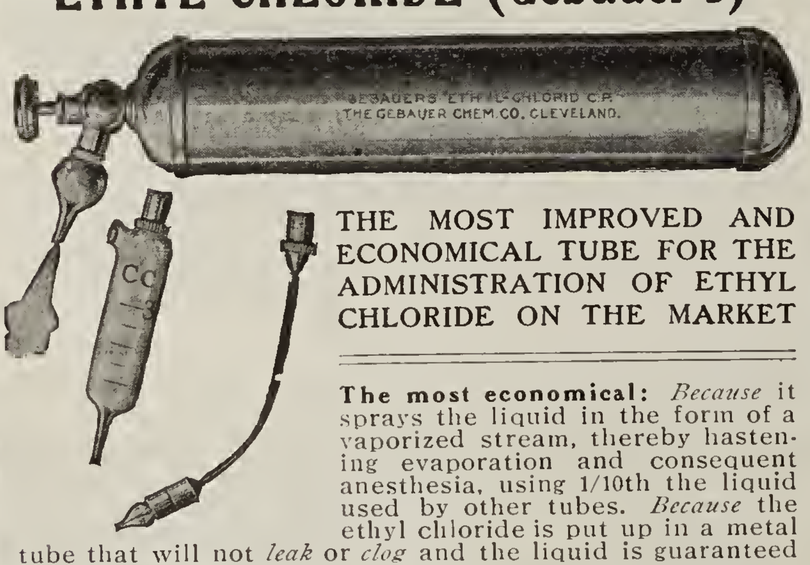

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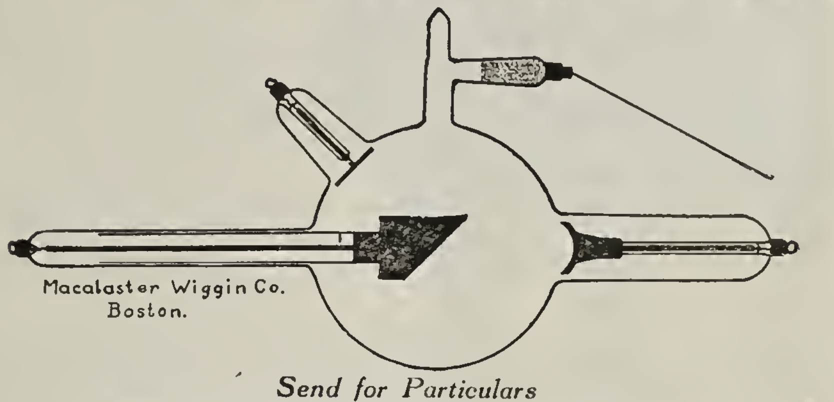

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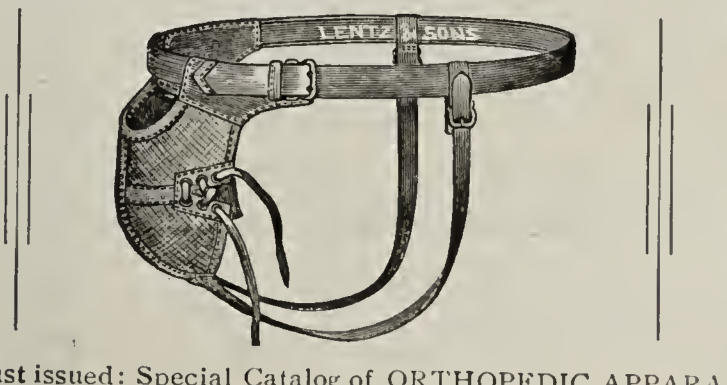

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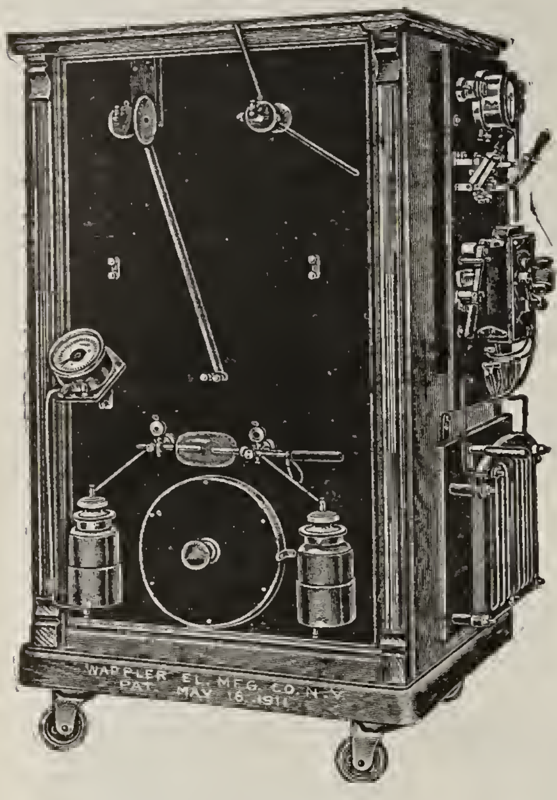

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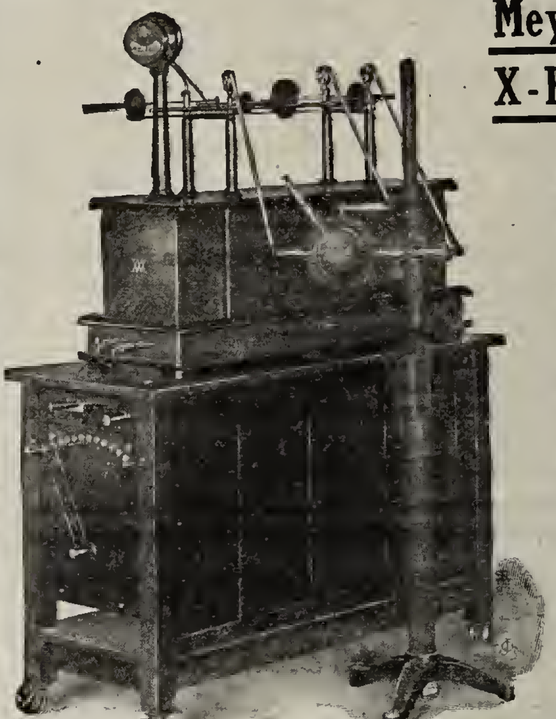

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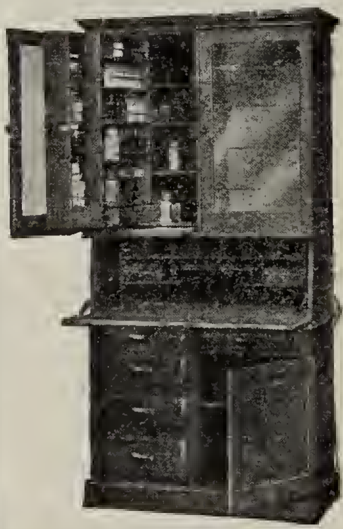

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# FAUGHT POCKET BLOOD PRESSURE APPARATUS

**FOR SALE BY ALL SURGICAL DEALERS**

Built like a watch on the Aneroid principle, not a Spring Instrument. Can be carried in the pocket. Simple, accurate and easy to use. Always reliable. Adjusted in a moment. Just like taking a pulse. Price, complete, with arm band and inflating pump, in durable morocco case . . . . . . . . . **$22.50 net.**

also

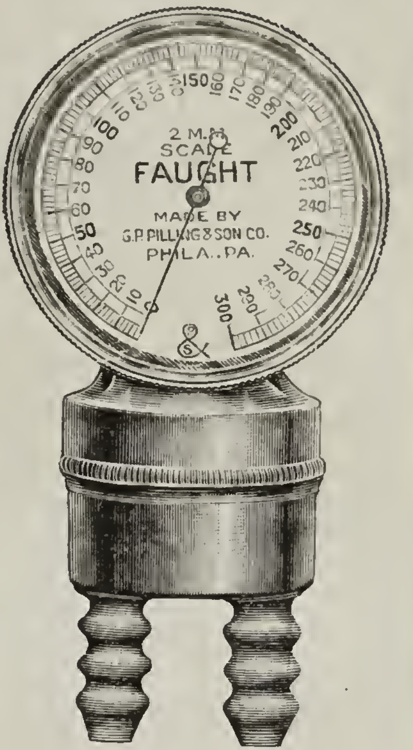
| | |
|---|---|
| Faught Standard Mercury, | $20.00 net. |
| Pilling Special No. 1 Mercury, | 15.00 net. |
| Pilling " No. 2 " | 12.00 net. |
| Faught's Book on Blood Pressure, | 25 cts. |

*Signed certificate by Dr. Faught with every instrument*

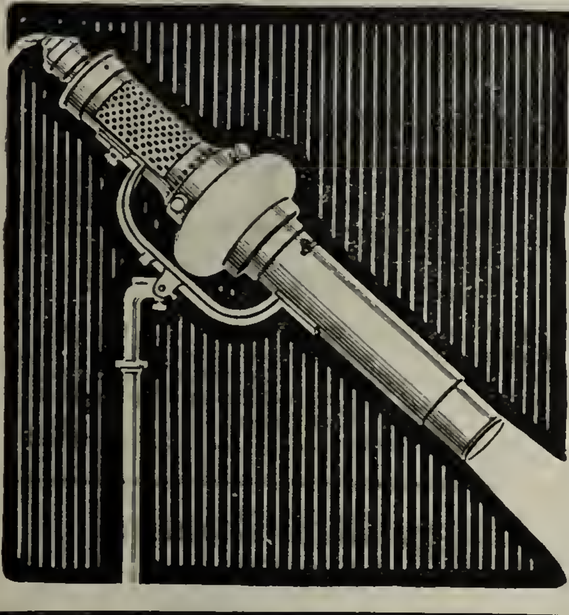
FAUGHT'S BOOK ON BLOOD PRESSURE FREE WITH EVERY APPARATUS

Made only by

**G. P. PILLING & SON CO., Philadelphia, Pa.**



ACTUAL SIZE



# The Medico Lamp

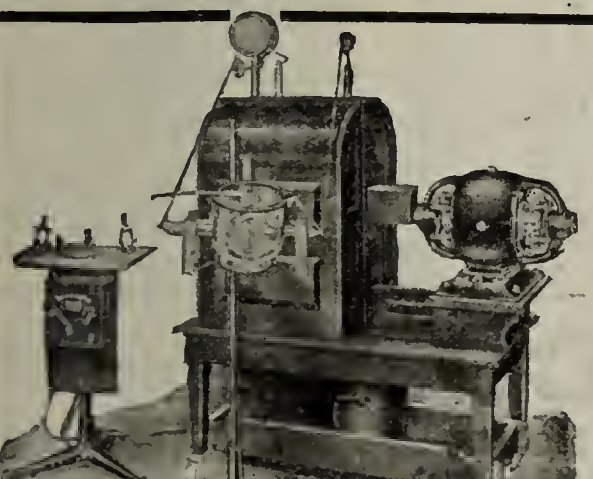
## The Light That Helps

**THE GENERAL PRACTITIONER** in the office for diagnosis and minor operations.
**THE SURGEON** for direct illumination of the operative field.
**THE SPECIALIST** in gynecological, rectal, eye, ear, nose and throat surgery, where a steady, intense, white light, free from shadows, is of paramount importance.

Beams focused horizontally, perpendicularly, or from any angle.

Mounted on extension bracket or stand. Operates on either 110 or 220 volts, alternating or direct current. *Write nearest office for descriptive folder.*

**PITTSBURGH ELECTRIC SPECIALTIES CO.** 927 French Street **PITTSBURGH, PA.**
NEW YORK. BOSTON. CHICAGO. CLEVELAND. SAN FRANCISCO. SEATTLE.



# Snook Roentgen Apparatus

HAS DISPLACED THE INDUCTION COIL *in Many of the Largest Hospitals and X-Ray Laboratories of Philadelphia and other Eastern Cities.*

We especially request that all physicians who are interested in X-Ray and High Frequency work write us for copies of our illustrated circulars.

We are originators of reliable X-Ray apparatus. Every appliance of our manufacture is fully guaranteed.

**Roentgen Manufacturing Co.,** Mariner and Merchant Bldg.
PHILADELPHIA PENNA.

# Aloe's Page of Bargains

*(In order to obtain these prices this advertisement must be mentioned.)*

Illustration half size. Knives are 5 inches long.

## Operating Knives 75c

Hand forged out of a single piece of English Steel. The handles are satin finished. The blade is guaranteed to take and hold a razor-like edge. This is as fine a knife of its kind as can be produced at any price. It is a far better knife than the same price ever bought before. The illustration shows the shapes of the different blades, and is just one-half actual size. Order by letters. Hand forged one-piece Operating Knives. Our price, cash with order .............. **75c**

**Three Operating Knives $2.00**

## Operating Gowns

## $1.25

Operating Gowns, full cut, of fine quality and good weight, white material. Double seams, open back, short sleeves. The finest gown ever sold at the price. Operating Gowns, our price cash with order, each.............. **$1.25**

**One Dozen Gowns $13.50**

## $8.50 Acid Proof Table for $5.00.

Top (16x20 inches) is of finest white steel porcelain, acid and solution proof. Legs and shelf are white enameled.

Acid Proof Snow-White Enamel Table, sold everywhere else at $8.50, Our price, cash with order....... **$5.00**

## $3.50 Waste Bucket $2.50

Put your foot on pedal and lid opens. Remove your foot and it closes. Pedal operates lever concealed under false bottom. Finished in baked-on white enamel, both outside and inside. Better than other waste buckets and cheaper.

Aloe White Enameled Waste Bucket, full four-gallon capacity. Waste Buckets not as good as this one sell everywhere else at $3.50. Our price, cash with order...... **$2.50**

## Salvarsan Outfit $9.50

## (Boehm Pattern)

Just like the apparatus that sells everywhere else at $16.50. Complete with two glass containers, rubber tubing, triple cock system, etc.

Boehm Pattern Salvarsan Outfit complete. Our price, cash with order.......... **$9.50**

## Rubber Gloves 60c

*By the dozen, 50c.*

Full size, fine, pure fresh rubber. As fine as any glove on the market and just about half the usual price. Price, cash with order, per pair.......................... **60c**

**One Dozen Pairs $6.00**

## 3 Thermometers $1.00

One minute magnifying certified thermometer in metal case with chain and pin. Ordinary price 75c each. Our price, cash with order, 3 thermometers, each with metal case, chain and pin, 3 for.............. **$1.00**

## Hypodermic Outfit 50c

Perfect working Glass Hypodermic Syringe, asbestos packed. 25m. capacity, and two needles. Complete on metal rack. You'll have trouble in duplicating this at $1.00. Our price, cash with order.................. **50c**

## Combination Offer—$12.95 Worth of Supplies for $7.95

| | | |
|---|---|---|
| 5 | lb. Aseptic Cotton, worth | $ 1.25 |
| 100 | yd. Roll yard wide Gauze, worth | 3.50 |
| 5 | lb. Gauze bandages, worth<br>(Either all one size or assorted.) | 3.50 |
| 1 | pr. Rubber Gloves, worth | .85 |
| 3 | Fever Thermometers in cases, worth | 2.25 |
| 3 | Soft Rubber Catheters, worth | .60 |
| 1 | Hypodermic Syringe, worth | 1.00 |
| | Total | $12.95 |

**$7.95** { **Entire Assortment worth $12.95. Our price, cash with order** } **$7.95**

## $8.50 Enameled Wash Stand Outfit $5.00

A light, portable, sanitary, white enameled, all metal Stand. White enameled Pitcher, Bowl, Soap Dish and Towel Rack included. Height 30 inches, diameter at top, 14 inches. Washstand Outfit, complete, our price, cash with order........ **$5.00**

**Your Money Refunded on Any Purchase Not Satisfactory**

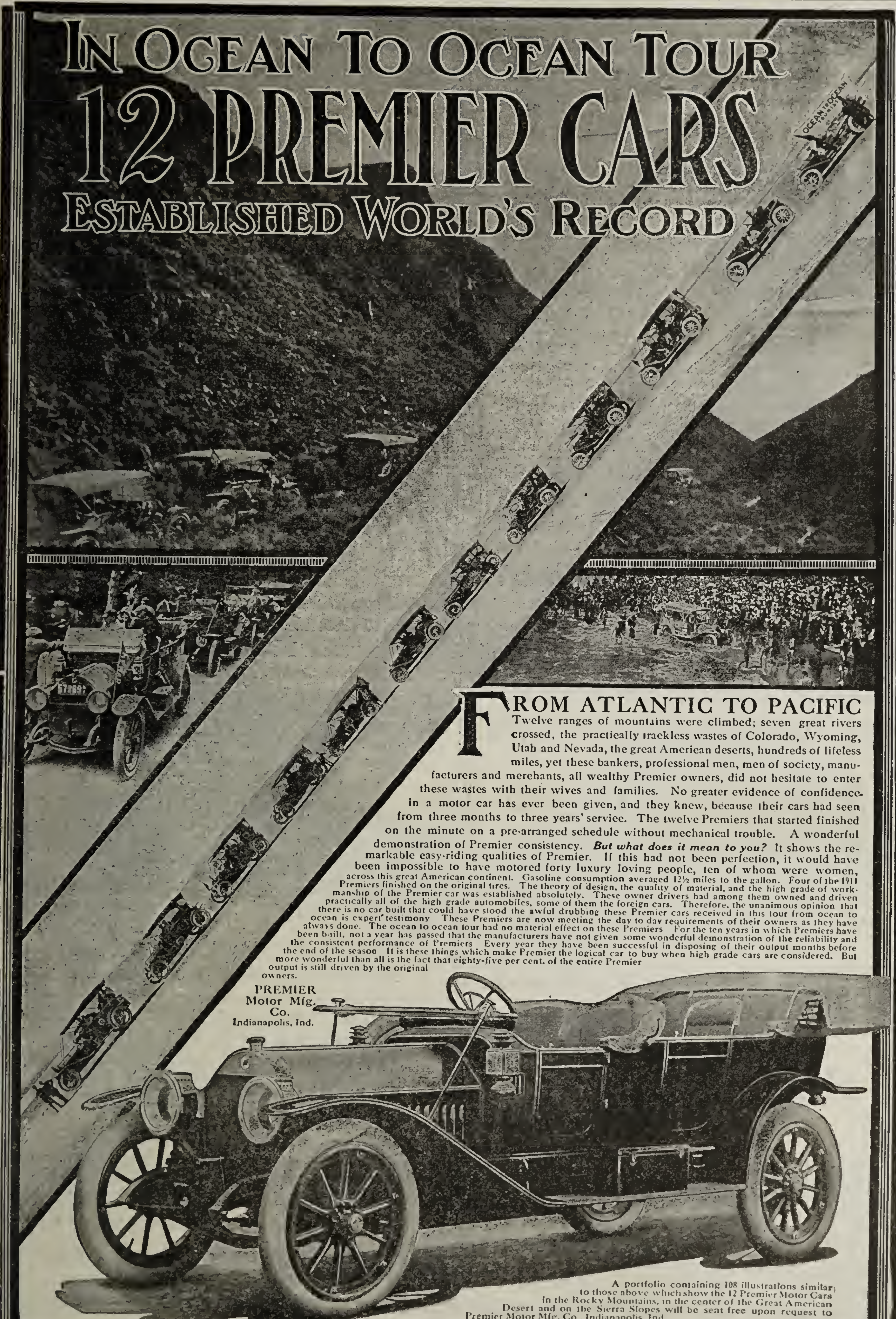
# A. S. ALOE CO.

**Surgical Instrument Supply House**

**515 Olive Street ST. LOUIS, MO.**

**Established 1860 Largest and Oldest House in America**

**THE LARGEST SURGICAL SUPPLY HOUSE IN THE UNITED STATES. CAPITAL $150,000.00**



## FROM ATLANTIC TO PACIFIC

Twelve ranges of mountains were climbed; seven great rivers crossed, the practically trackless wastes of Colorado, Wyoming, Utah and Nevada, the great American deserts, hundreds of lifeless miles, yet these bankers, professional men, men of society, manufacturers and merchants, all wealthy Premier owners, did not hesitate to enter these wastes with their wives and families. No greater evidence of confidence in a motor car has ever been given, and they knew, because their cars had seen from three months to three years' service. The twelve Premiers that started finished on the minute on a pre-arranged schedule without mechanical trouble. A wonderful demonstration of Premier consistency. ***But what does it mean to you?*** It shows the remarkable easy-riding qualities of Premier. If this had not been perfection, it would have been impossible to have motored forty luxury loving people, ten of whom were women, across this great American continent. Gasoline consumption averaged 12½ miles to the gallon. Four of the 1911 Premiers finished on the original tires. The theory of design, the quality of material, and the high grade of workmanship of the Premier car was established absolutely. These owner drivers had among them owned and driven practically all of the high grade automobiles, some of them the foreign cars. Therefore, the unanimous opinion that there is no car built that could have stood the awful drubbing these Premier cars received in this tour from ocean to ocean is expert testimony These Premiers are now meeting the day to day requirements of their owners as they have always done. The ocean to ocean tour had no material effect on these Premiers For the ten years in which Premiers have been built, not a year has passed that the manufacturers have not given some wonderful demonstration of the reliability and the consistent performance of Premiers Every year they have been successful in disposing of their output months before the end of the season It is these things which make Premier the logical car to buy when high grade cars are considered. But more wonderful than all is the fact that eighty-five per cent. of the entire Premier output is still driven by the original owners.

PREMIER
Motor Mfg.
Co.
Indianapolis, Ind.

A portfolio containing 108 illustrations similar to those above which show the 12 Premier Motor Cars in the Rocky Mountains, in the center of the Great American Desert and on the Sierra Slopes will be sent free upon request to Premier Motor Mfg. Co , Indianapolis, Ind.

# Cool Hands In Warmest Weather

Style

V 4920

Don't do without the protection of a glove because other gloves you have worn were hot and uncomfortable. Grinnell ·VENTILATED Gloves never get sweat-soaked but keep your hands cool in warmest weather.

**GRINNELL VENTILATED GLOVES**

are very stylish and distinctive. Long stiff cuffs are kept up comfortably in place by the "Rist-Fit." They are made of real velvet coltskin, soft and pliable, guaranteed never to harden, peel, shrink or crack. They wear like iron.

If your dealer doesn't sell Grinnell Gloves get a pair on approval. Style Book and samples of leather on request. Send us size, style, color—black, gray or tan—and dealer's name. We'll send a pair on approval, prepaid.

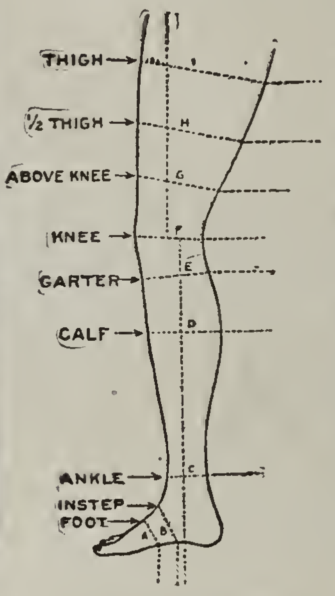
**Morrison-Ricker Mfg. Company,**

**92 Broad St., Grinnell, Iowa.**

*Makers of special gloves for driving, motoring and recreation*

# "Master" Elastic Stocking

**THE STANDARD OF QUALITY AND EFFICIENCY FOR THIRTY YEARS**



*Write for Catalogue.*

**Physicians' Net Prices**

| | |
|---|---|
| **Garter Stocking, A to E** | |
| Heavy Silk | $3.56 |
| Fine Silk | 3.00 |
| Thread | 1.88 |
| **Garter Legging, C to E** | |
| Heavy Silk | $2.62 |
| Fine Silk | 2.25 |
| Thread | 1.65 |
| **Knee Stocking, A to G** | |
| Heavy Silk | $5.62 |
| Fine Silk | 4.87 |
| Thread | 3.37 |
| **Knee Legging, C to G** | |
| Heavy Silk | $4.69 |
| Fine Silk | 4.12 |
| Thread | 3.15 |
| **Knee Caps and Anklets** | |
| Heavy Silk | $2.25 |
| Fine Silk | 2.06 |
| Thread | 1.57 |

On receipt of price we deliver the goods by mail.

It Pulls on Likea Boot
Trade Mark

**POMEROY COMPANY**

**34 East 23d St.
NEW YORK**

# MAGNETOS

**FOR
FORD—Models N, R, and S
MAXWELL—2-Cylinder
REO—2-Cylinder Cars**

**PRICE, $20.00**

No special coil required. Works with your present equipment. Brackets and everything necessary for installation furnished. Easily installed.

*Write for catalog M-J*

**WHICH CAR HAVE YOU?**

**Hercules Electric Co.**

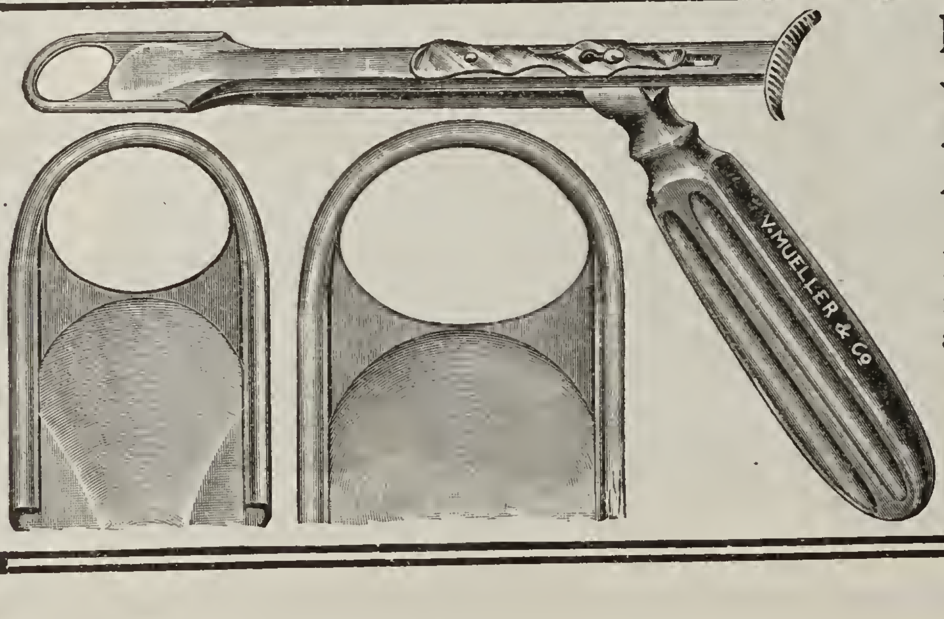
**Indianapolis : : : : : Indiana, U.S.A.**

**Stock Coupes Immediate Delivery**

**Popular Prices on Ford Coupes**

*Write us today*

**ROBBINS & CO., 10th St. & Canal, INDIANAPOLIS**



# DR. GREENFIELD SLUDER'S NEW GUILLOTINE

*As described in the Journal of the A. M. A. Mar. 25, 1911. Page 877*

The original models were worked out by us for Dr. Sluder and we can now supply the instruments in the sizes described in his article and as shown above.

**V. MUELLER & CO.**

**1775-1781 Ogden Ave., CHICAGO**

**Makers of Instruments for the specialist in every branch of surgery**

# Guaranteed 5000 Miles Without Puncture

Your tire expense is now the tremendous sum of 1½ to 4 cents per mile every mile your car travels. This depends upon the size of your tires. Just think that over, Doctor!

These figures are facts. They prove that your tire expense is greater than that of gasoline and oil combined.

This expense can be eliminated by *Durable Treads.* For with these tire protectors punctures, blow-outs and tire wear are made impossible.

You need no longer buy new tires every season. *Durable Treads* will preserve the set you have and will do it without puncture and without repair expense. You can save $50.00 to $200.00 this season.

If your tires are now old, *Durable Treads* are guaranteed to make them run *5000 miles more without puncture.*

### READ THIS BROAD LEGAL GUARANTEE

With *Durable Treads* we give a written, iron-clad guarantee for 5000 miles without puncture. This is binding whether your tires are new or old, rut-worn, rim cut or tread-worn. It further guarantees that *Durable Treads* will not chafe, rot or heat your tires. Our pecular rim-anchorage makes slip impossible.

This guarantee is the most liberal and binding offered with a tread. It is really a guarantee against tire expense.

## *Durable Treads*

### What We Do!

*No. 1*—We use extra Tread Strip to cover wearing surface, adding 50% to life of protector. *No. 2*—We use 3 to 5 plies of Tire Fabric to prevent stretching or sagging. *No. 3*—We use hardened Steel Rivets, closely set on wearing surface, to prevent skidding. *No. 4*—We use Full leather cover to protect tire from ruts and blow-outs. *No. 5*—We use nickel steel Rim Attachment which places strain on wheel, instead of on worn, weakened wheel. It also prevents rim-cuts and blow-outs.

### Test at Our Risk

We will ship to any registered physician a pair or full set of *Durable Treads, expense prepaid*, for *inspection.*

You pay nothing in advance—you assume no obligations. If you think they are not as we claim, return them. This test will cost you nothing.

Remember that *Durable Treads* are guaranteed 5000 miles without puncture. If they fail, *we* lose *not you!*

**Colorado Tire & Leather Co.**
**Main Office 1203 Majestic Bldg., CHICAGO, ILL.**
**Branch Factory at Denver, Colo.**

### Special Discount to Doctors

If *Durable Treads* are not already represented in your vicinity, we will allow our *full dealers' discount* on this initial shipment. This is merely to introduce *Durable Treads.* It's an opportunity for you, doctor, to equip your car with the best protector at almost cost.

Send the coupon below for our booklet and other facts that will show you how to save the money your tires are now wasting.

**Colorado Tire & Leather Co.** (Send Coupon to main office.)
**Main Office 1203 Majestic Bldg., Chicago, Ill.**

Dear Sirs: Send me at once, without obligating me, your valuable *Booklet*, "5000 Miles Without Puncture," copy of your *Guarantee, Test Offer, Special Discount to Doctors, Prices* and *Sample of Leather.*

Name........................................................
St. Address..................................................
City..............................State..........................
My Tire Sizes are ........................................ 4

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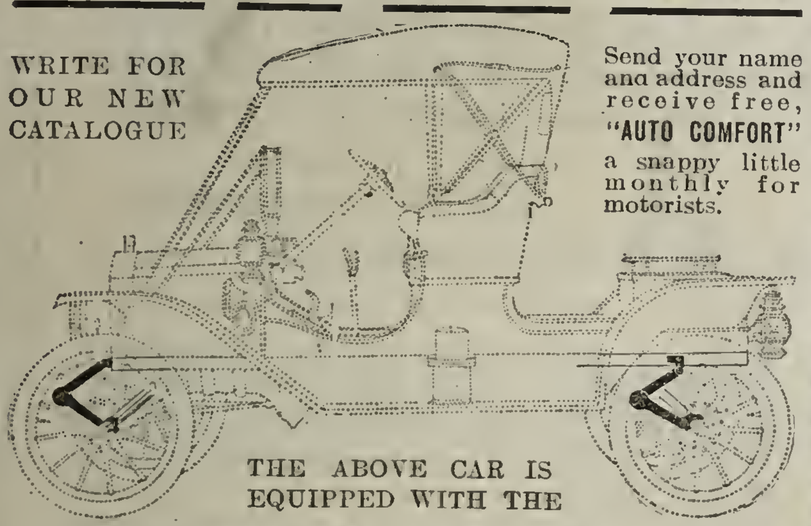
# READY FOR ROUGH ROADS

WRITE FOR OUR NEW CATALOGUE

Send your name and address and receive free, **"AUTO COMFORT"** a snappy little monthly for motorists.



THE ABOVE CAR IS EQUIPPED WITH THE

## *Truffault-Hartford*
## SHOCK ABSORBER

*"MAKES ALL ROADS SMOOTH ROADS"*

**It's Ready! How About YOUR Car, Doctor?**

You can drive it over the roughest road in your vicinity if you Truffault-Hartford-equip it. A small car like Ford Model T, Maxwell AA, Buick No. 10 or any car of similar size and weight can be equipped for $15, the price of a set of the "Juniorette." Then you can count on *Solid Comfort and Lower Upkeep Cost.*

**HARTFORD SUSPENSION COMPANY**
**182 Bay Street, Jersey City, N. J.**

Branches: New York, 1700 Broadway and 212-214 W. 88th St. Jersey City, 141-143 Morgan St. Boston, 319-325 Columbus Ave. Chicago, 1458 Michigan Ave. Detroit, 803 Woodward Ave. Kansas City, 1524 Grand Ave. Newark, 289 Halsey St. Philadelphia, 1437 Vine St.

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| **Colonial Coupe,** | | **$1,400** |
| **Touring Car** | - | **1,150** |
| **Roadster** | - - | **950** |

## Herreshoff

## FOR THE MEDICAL MAN

who wants power, style, reliability and efficiency in his car, we recommend the Herreshoff.

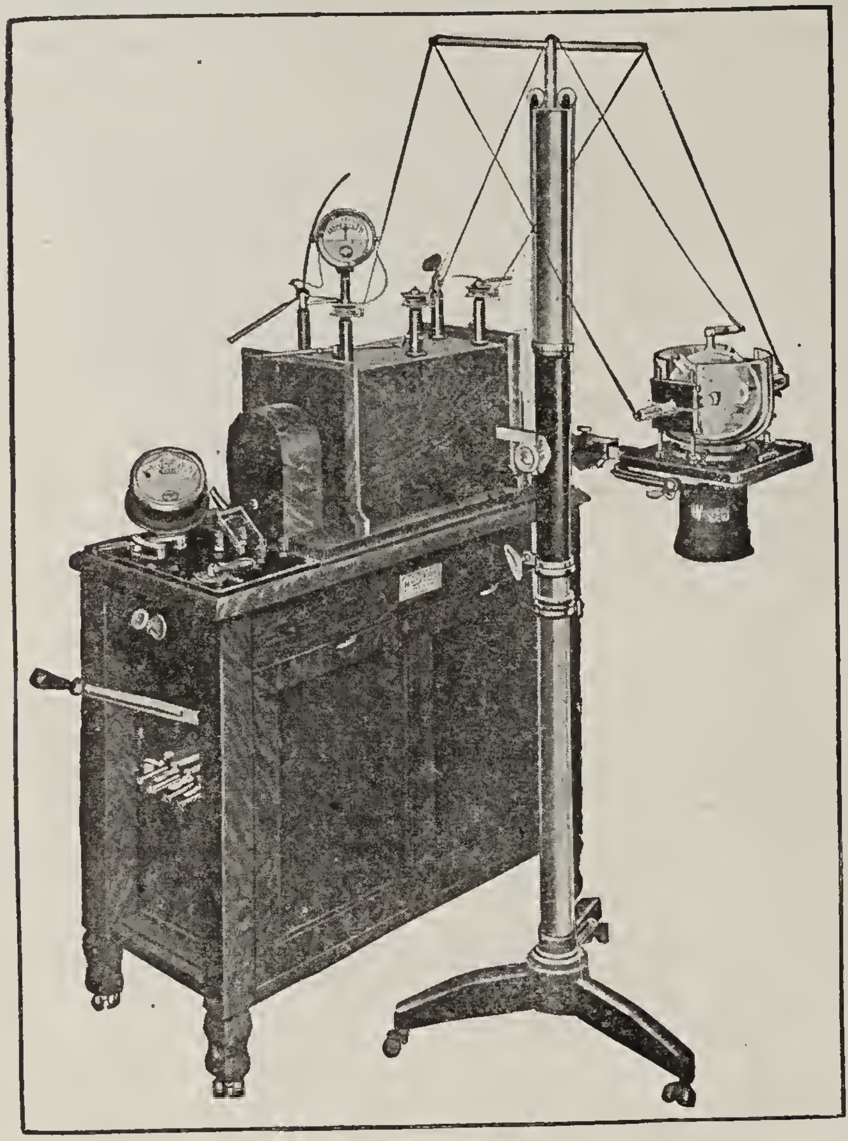
For the medical man who wants a car that will meet all reasonable demands, without trouble to its owner, or without unnecessary wear or tear to the car, the Herreshoff is surely the car.

Consider the comfort of the Colonial Coupe for the medical man on wintry days, wet days and windy days.

The Herreshoff has an abundance of power—is easy-riding and posesses all the features of the most successful cars.

*Send a postal for our catalog and name of our nearest representative.*

**HERRESHOFF MOTOR COMPANY** DETROIT, MICH.



ATTENTION! RADIOGRAPHERS, HOSPITALS, AND SURGEONS

**Do not purchase or even recommend an x-ray equipment until you have investigated the merits of the**

Wantz INTENSIVE RADIOGRAPHIC APPARATUS

**NOTE:** Electrically speaking, it is an open circuited transformer, but from a radiographic standpoint it is so far ahead of any induction coil or transformer in power, range, flexibility and efficiency that it should have an isolated classification.

**Wantz Epigrams**

In cases of renal calculi, a "Wantz" radiograph will conclusively show whether or not a stone is present.

Radiography of visceral tissue, including the pulmonary region, is easy.

Exposures of skeletal tissue are made practically as quick as the switch can be thrown.

With the "Wantz" the operator is enabled to do just as fast work on alternating current as can be done on direct current.

**A Few Mechanical Hints**

Variable inductance—High "secondary" milliamperage—A uniquely designed core—Improved type of interrupter—Centralization of control.

*Full particulars given in our new X-Ray Catalogue (5th Edition) just off the press—send for it.*

**VICTOR ELECTRIC COMPANY**

**Jackson Blvd. and Robey St.** **Chicago, Illinois**

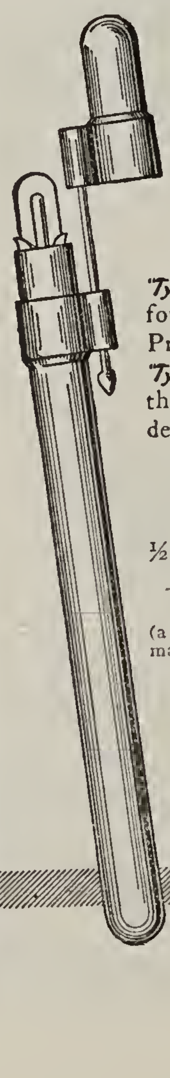
Waterproof Artificial Limbs

From the beginning of the artificial limb industry the call for waterproof legs and arms has been loud and clear.

The **MARKS** house is the only one that has responded to the demand. After years of thought and experiment the practical leg and arm which can be worn in wet places is now offered. Write

**A. A. MARKS, 701 Broadway, NEW YORK**

for MANUAL OF ARTIFICIAL LIMBS, containing 416 pages, with 724 cuts. Instructions are given how to take measurements and obtain artificial limbs without leaving home.



Save Yourself from "Wild Goose" Calls

A true, accurate Fever Thermometer in the hands of your patients will let them know when they need you. Suggest the use of a standard

"Tycos" FEVER THERMOMETER

Perfectly accurate forever. Guaranteed against everything except breakage.

Send for booklet on Fever Thermometers. "Tycos" Safety Case clips on the pocket—like a fountain pen. Thermometer can't fall out. Practitioners find it a protection against breakage. "Tycos" **FEVER THERMOMETERS** are sold by the better class drug stores, surgical instrument dealers, jewelers, opticians and department stores.

If your dealer can't supply you, write us.

**In "Tycos" Safety Case:**

**½-minute, $1.75; 1-minute, $1.50; 2-minute $1.25**

**In plain hard rubber case, 25c less.**

"BLOOD PRESSURE TECHNIQUE SIMPLIFIED" (a book), just what its title implies. Full of practical information. Price $1.00.

*Taylor Instrument Companies*

Rochester, N. Y.

*"Where "Tycos" Thermometers Come From."*

TAYLOR THERMOMETERS TELL THE TRUTH "Tycos" IS THEIR "STERLING" MARK

Chicago Office—109 N. Wabash Ave.

OTHERS ASK

About $100 for the Cabinet or Table Alone

We Offer the Cabinet and Table, Both for $70

**THE CABINET** is made entirely of steel and polished crystal-plate with five heavy crystal glass shelves, full nickel trimmed, Pasquil bank lock, stands 70-in. high, 26 wide and 14 deep.

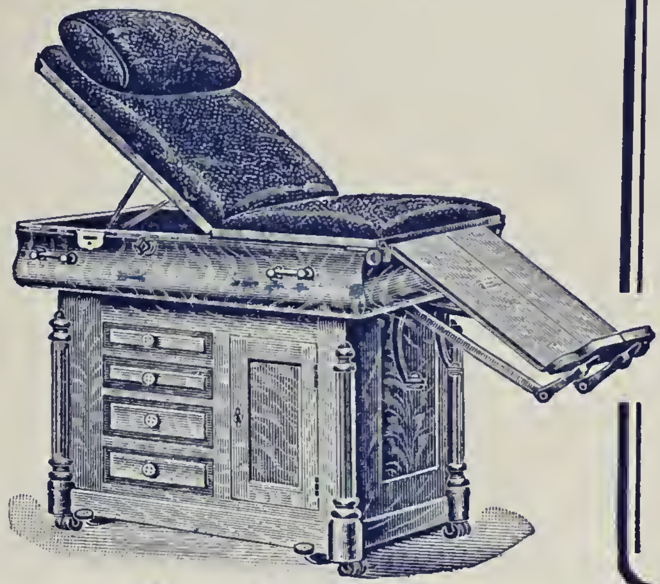
**THE BOSTON TABLE** is made of the best kiln-dried Oak, or Imitation Mahogany. Has full set drawers, swinging trays and instrument section, all attachments, imitation leather cushion, etc., with **Genuine Leather Cushion and Pillow, only $6.50 extra.**

**Remember the CABINET and TABLE both for $70 for the next 30 days. Send $25 with your order.**

Ask for our special on Lane's and Sherman's Hand-Forged, English Steel Instruments, pertaining to bone surgery.

OVER 40 OTHER SPECIALS FOR NEXT MONTH

FRANK S. BETZ CO.
Hammond, - Ind.



IN FEEDING A BABY

*Why not Follow Lines of Least Resistance?*

MEAD'S DEXTRI-MALTOSE
(MALT SUGAR)

*Removes Obstacles from the Path of the Infant's Nutrition, As Does no Other Form of Sugar.*

Various investigators report that malt sugar is 100% more assimilable than cane or milk sugar. Mead's Dextri-Maltose has been adopted as the best carbohydrate for infants, by many hospitals, asylums and "homes" throughout the United States.

MEAD JOHNSON & CO., JERSEY CITY, N. J.

**Desiccated** **U. S. P.**

# Thyroids

# and Thyroid Tablets

**Standardized**

ARMOUR'S desiccated THYROIDS contains 0.2 PER CENT. ORGANIC IODIN in Thyroid combination. TABLETS equal 1 grain and 2 grains Standardized THYROIDS. In the Armour Laboratory all THYROID glands are rigorously inspected, and nothing but healthy material is used.

To insure reliability, specify ARMOUR'S.

**ARMOUR AND COMPANY**

# NEW YORK POST-GRADUATE

## MEDICAL SCHOOL AND HOSPITAL

**Second Avenue and Twentieth St., New York City**

With the opening of the *new attached 12-story* School and Hospital Building, January 11th, 1912, new Courses and Teaching Methods are inaugurated.

In addition to the various Courses regularly conducted, there are being given Advanced Special Courses in:

**Stomach Diseases**
**Rectal Diseases**
**Infant Feeding and Diagnosis**
**Dermatology**
**Diseases of Heart and Circulation**
**Dietetics**
**Neurology**
**Abdominal Diagnosis & Metabolism**
**Surgical Diagnosis**
**Cystoscopy**
**Anesthesia**
**Orthopedics, etc.**

The *New Laboratories* are now opened, and ***special courses*** are being given in:

**Hæmatology**
**Bacteriology**
**Immunology and Vaccine Therapy**
**Histology and Pathology**
**Pathological Chemistry**
**Tropical Diseases**

The Eye, Ear, Nose and Throat Departments now occupy a separate New School, with unequalled facilities and equipment (Special Booklet).

Practically all courses are continued throughout the ***Summer Session***, June 1st to October 1st.

State particular information desired when writing.

**H. T. Summersgill, M.D., Medical Superintendent**

**50% Better**

# Prevention Defense Indemnity

1 All claims or suits for alleged civil malpractice, error or mistake, for which our contract holder,

2 Or his estate is sued, whether the act or omission was his own

3 Or that of any other person (not necessarily an assistant or agent)

4 All such claims arising in suits involving the collection of professional fees

5 All claims arising in autopsies, inquests and in the prescribing and handling of drugs and medicines.

6 Defense through the court of last resort and until all legal remedies are exhausted

7 Without limit as to amount expended.

8 You have a voice in the selection of local counsel.

9 If we lose, we pay to amount specified, in addition to the unlimited defense.

10 The only contract containing all the above features and which is protection per se. *A sample upon request.*

**The MEDICAL PROTECTIVE CO.**
***of* Fort Wayne, Indiana**
**Professional Protection, Exclusively**

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